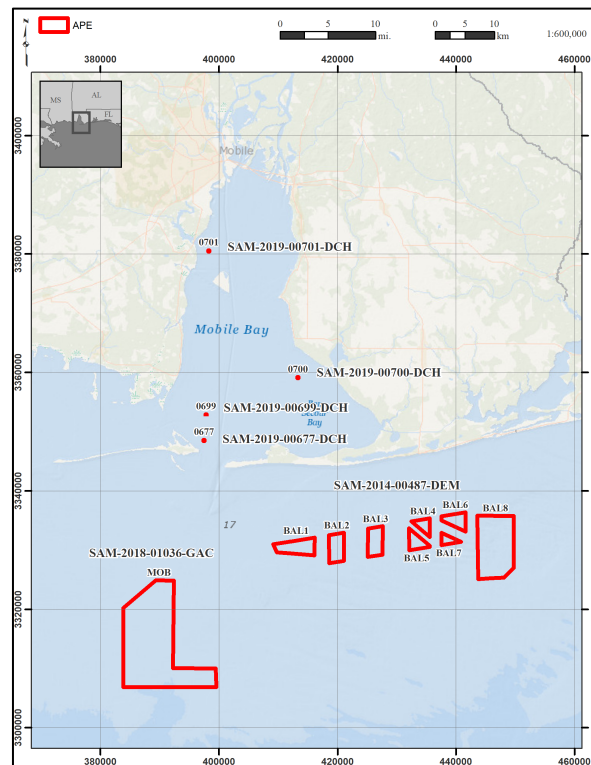


## PHASE 1 ARCHAEOLOGICAL MARINE SURVEY FOR PROPOSED ARTIFICIAL REEF ZONES IN MOBILE BAY & GULF OF MEXICO OFFSHORE ALABAMA

### PROJECT NO. 2-MR-205



**PREPARED FOR:**  
Marine Resources Division  
Alabama Department of Conservation and  
Natural Resources

**PREPARED BY:**  
Panamerican Consultants, Inc.  
Memphis, Tennessee

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**DRAFT REPORT**

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**PROJECT NO. 2-MR-205  
PANAMERICAN PROJECT NO. 39151.MAR**

**PREPARED FOR:**

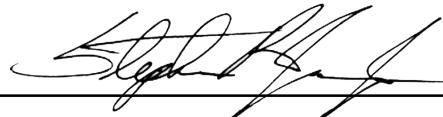
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**JANUARY 2021**

## **ABSTRACT**

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Panamerican Consultants, Inc. (Panamerican) conducted a comprehensive submerged cultural resources assessment survey for the Alabama Department of Conservation and Natural Resources / Marine Resources Division (ADCNR) of six Artificial Reef Zones slated for possible reef placement. Comprising thirteen cells, the proposed Artificial Reef Zones cover approximately 115 square miles of water bottoms with four small cells located in Mobile Bay, and nine much larger cells located offshore of Mobile Bay. Comprised of a magnetometer, sidescan sonar, and a subbottom profiler survey, the nearly 7 month-long investigation of approximately 3,700 survey line miles, that was conducted from 1 April 2020 to 22 October 2020, recorded a total of 829 magnetic anomalies and 417 acoustic contacts. Comprehensive analysis of data identified 16 targets that represent significant and potentially significant sites including two WWII Liberty Ships, several wooden and metal barges, M60 Tanks, at least one unknown shipwreck, and several anomalies that may represent potentially significant cultural resources but remain unknown. These significant and potentially significant targets are all recommended for avoidance. There are no subbottom features present that are considered to have the potential to contain prehistoric remains.

## ACKNOWLEDGEMENTS

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The successful completion of this project is the direct result of the input and hard work of numerous individuals. The authors would first like to thank the ADCNR and specifically Mr. Craig Newton, for allowing Panamerican the opportunity to conduct this investigation. The agency has to be proud of individuals like Mr. Newton, whose dedication to projects such as this ensures their successful completion.

The authors would also like to thank the Panamerican archaeological crew who partook in this investigation. The remote sensing survey crew consisted of Mr. William Wilson, M.A., RPA who served as Lead Remote-Sensing Specialist and overall Field Director; Mr. Andy Derlikowski, M.A., RPA, and Mr. Jeff Pardee, M.A., RPA, who both served as Remote-Sensing Specialists; and Mr. Dillon Roy who served as Remote-Sensing Technician. A seasoned crew of professional maritime archaeologists, they are thanked for their hard work, endurance, and especially for maintaining safety at all times.

The survey was performed aboard the RV *Kimberly Dawn* that was based out of Bayou La Batre, Alabama. An excellent survey vessel and work platform, it was captained by Captain Perry Zirlott whose experience on Gulf waters ensured the safe completion of the survey. He was aided over the course of the project by seasoned crewmembers “Snake,” “Ollie,” and “Wally.” Ms. Jan Zirlott, although not aboard, was perhaps the most critical member of the crew, as she ensured scheduling and proper provisioning.

In-house Panamerican personnel, who must be thanked for their assistance with this report production, include Kate Gilow, Office Manager, and Stephanie Manousakis, Editor. Thanks also go to Mr. William Wilson and Mr. Andy Derlikowski for data processing and production of the associated survey products. There was a lot! Mrs. Erica K. Gifford, M.A., RPA, is thanked for conducting archival research for the project.

Finally, the good people of Bayou La Batre, Alabama and surrounding area are thanked for the southern hospitality shown to the field crew during their stay. We hope to return in the future to sample that hospitality once again.

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# 1. INTRODUCTION

The Alabama Department of Conservation and Natural Resources / Marine Resources Division (ADCNR) has submitted six applications to the U.S. Army Corps of Engineers, Mobile District to designate water bottoms in Mobile Bay and offshore of Alabama in the Gulf of Mexico as Artificial Reef Zones. Up to approximately 25 nautical miles offshore of Alabama in the Gulf of Mexico and four ten-acre areas in Mobile Bay, the proposed Artificial Reef Zones cover approximately 115 square miles of water bottoms. Proposed reef zone of the six applications are identified in Table 1-01 with their locations presented in Figure 1-01 below. A total of thirteen (n=13) cells comprise the six “Zones,” four small cells (n=4) in Mobile Bay, and nine cells (n=9) located offshore of Mobile Bay, one in Mobile County, and eight in Baldwin County. Table 1-01 shows ADCNR designate for the zones as well as the designations given to each cell for survey and report purposes.

- 4 Inshore Areas – Located in four different areas within Mobile Bay, each of these relatively small areas is 10 acres in size. These are designated Ghost Rig Reef SAM-2019-00677-DCH, Wellhead Reef SAM-2019-00699-DCH, Bon Secour Reef SAM-2019-00700-DCH, and Dog River Reef SAM-2019-00701-DCH. We have labeled these cells for survey and report purposes as 677, 699, 700 and 701 respectively.
- 9 Offshore Areas – Located well offshore the mouth of Mobile Bay, eight of these polygon areas or cells are located to the southeast of the mouth in Baldwin County and are designated SAM-2014-00487-DEM. We have labeled these cells for survey and report purposes as BAL1 through BAL8. Located to the southwest of the mouth in Mobile County, the largest polygon of the survey is designated SAM-2018-01036-GAC. This cell has been labeled for survey and report purposes as MOB.

**Table 1-01. ADCNR Zone Designation along with Report & Survey Cell Designation.**

ADCNR Reef Zone Designation	Survey Cell/Zone Designation*
SAM-2019-00677-DCH “Ghost Rig Reef”	677
SAM-2019-00699-DCH “Wellhead Reef”	699
SAM-2019-00700-DCH “Bon Secour Reef”	700
SAM-2019-00701-DCH “Dog River Reef”	701
SAM-2014-00487-DEM	BAL1
SAM-2014-00487-DEM	BAL2
SAM-2014-00487-DEM	BAL3
SAM-2014-00487-DEM	BAL4
SAM-2014-00487-DEM	BAL5
SAM-2014-00487-DEM	BAL6
SAM-2014-00487-DEM	BAL7
SAM-2014-00487-DEM	BAL8
SAM-2018-01036-GAC	MOB

\*MOB= in Mobile County, BAL= in Baldwin County

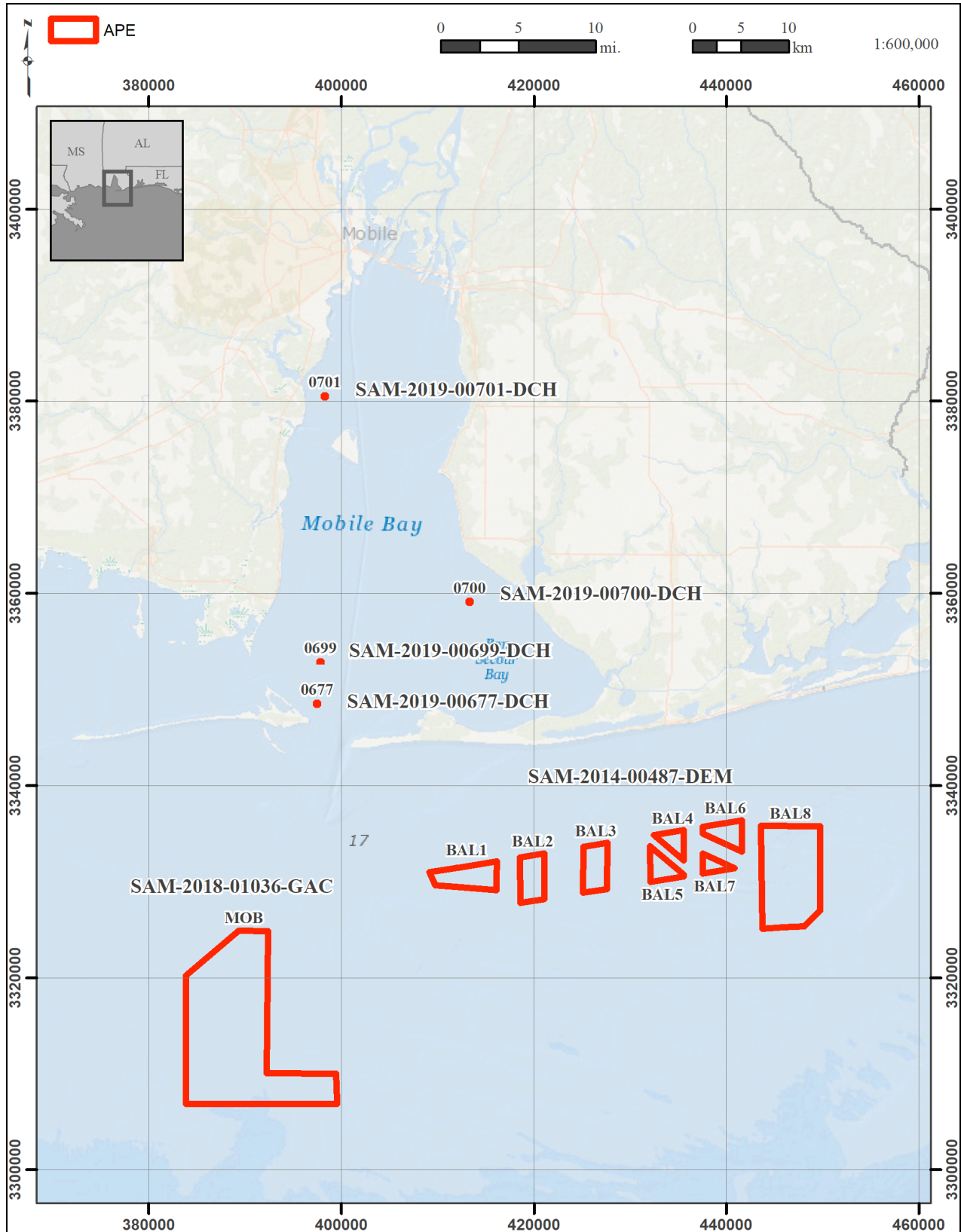


Figure 1-01. Proposed Artificial Reef Zones selected for survey (ESRI World Ocean Base map).

The placement or construction of reefs within the approximately 115 square miles of water bottoms has the potential to adversely affect historic properties that might be present within the Artificial Reef Zones. Subsequently, the ADCNR is responsible for identifying and determining if there are any properties within the project area eligible or potentially eligible for listing on the National Register of Historic Places (NRHP) prior to placement of any proposed reef. The federal statutes regarding these responsibilities include: Section 106 of the National Historic Preservation Act of 1966, as amended (PL 89-665); the National Environmental Policy Act of 1969; the Archaeological Resources Protection Act of 1987; the Advisory Council on Historic Preservation Procedures for the Protection of Historic and Cultural Properties (36 CFR Part 800); and the Abandoned Shipwreck Act of 1987, as well as of U.S. Army Corps of Engineers, and the Alabama Historical Commission requirements.

In order to comply with the ADCNR's responsibilities towards cultural resources, Panamerican Consultants, Inc. (Panamerican) of Memphis, Tennessee, was contracted to conduct a comprehensive remote sensing survey of the Artificial Reef Zones. The nearly 7 month-long investigation of approximately 3,700 survey line miles was conducted from 1 April 2020 to 22 October 2020. Comprised of a magnetometer, sidescan sonar, and a subbottom profiler survey, a total of 829 anomalies and 417 acoustic contacts, were recorded during the current survey. Comprehensive analysis of data identified 16 targets that represent significant and potentially significant sites including two WWII Liberty Ships, several wooden and metal barges, M60 Tanks, at least one unknown shipwreck, and several anomalies that may represent potentially significant cultural resources but remain unknown. These significant and potentially significant targets are all recommended for avoidance. There are no subbottom features present that are considered to have the potential to contain prehistoric remains.

Divided into chapters on Historical Context, Field Methods, Investigative Findings, and Conclusions and Recommendations, the following report presents the conduct and the results of the investigation.

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## II. HISTORICAL BACKGROUND

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While the maritime history and potential for shipwrecks are a traditional focus of maritime cultural resource investigations such as this, the potential for submerged prehistoric sites must also be taken into account. Therefore, the background presented for the inshore and offshore project areas to be used to model site potentials includes brief discussions and relevant citations on the paleoenvironment, sea level rise history, and local prehistory relevant to modeling for submerged prehistoric sites; a discussion of the history of Euro-American maritime activities; and the types of vessels expected.

### ***ENVIRONMENTAL SETTING***

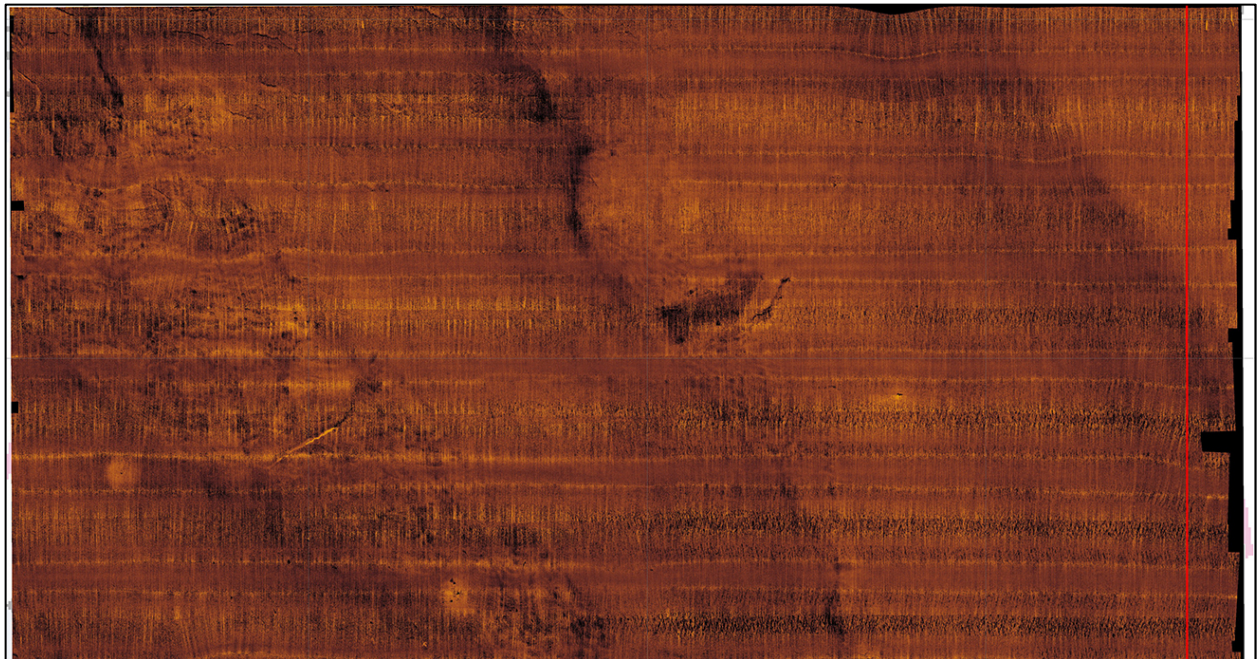
During the Pleistocene era (up to 1,000,000 years before present [YBP]), a series of glacial and interglacial climatic episodes occurred, causing substantial sea level fluctuations. Glacial periods brought about substantial lowering of sea levels, as glaciers encompassed seawater. During glacial periods, sea levels fell as much as 100 to 200 meters (300 to 600 feet), resulting in increased stream velocity, erosion of stream valleys, and deposition of sediments. Rapid rises in sea level were associated with interglacial periods and resulted in flooding of stream valleys and bays, greatly reducing stream velocity and filling valleys with sediments of the Citronelle Formation. Citronelle Formation sediments, which blanket the region, have continually eroded since their deposition during the Plio-Pleistocene epoch, approximately 1,200,000 YBP (Puri and Vernon 1964). Drifting sediments in the shallow waters of the Gulf of Mexico also regularly formed barrier islands during the Pleistocene interglacial periods. Each succeeding interglacial period resulted in lower sea levels, where previous peninsulas and barrier islands became incorporated into the mainland, and former sounds and bays became filled with sediments. Dauphin Island and Fort Morgan Peninsula are existing remnants of the final period of glaciation. Dauphin Island being a barrier island itself. Illustrating the sea level fluctuations for the area, relic cypress forests recently found approximately 10 miles offshore Fort Morgan in 60 feet of water, show that the area was at one time a fresh water swamp. Describing the find, Obelcz et al. states that:

“A well-preserved late Pleistocene forest predominantly composed of bald cypress (*Taxodium distichum*) stumps was recently found in 18 m water depth located 13.5 km offshore of Gulf Shores, Alabama, USA. A 2012 geophysical survey showed that the trees were located within a ~150 m long bathymetric trough with 1–2 m relief relative to the surrounding seafloor. Subsequent geophysical surveys (bathymetry, sidescan sonar, chirp subbottom) were conducted in 2015 and 2016 that reoccupied the 2012 study site, in addition to ~1 km<sup>2</sup> grids to the east and south of the forest. The new surveys were designed to elucidate what factors(s) preserved the forest during sea level fluctuations, what event(s) recently exposed the forest, and whether this forest is unique in the northern Gulf of Mexico. Seafloor mapping revealed that the trough containing the exposed tree stumps is located within a set of northwest-southeast-trending ridges and troughs (~1 km long, 0.5-1 km wavelength) typical of the Mississippi-Alabama-Florida shelf sand sheet. Subbottom data show a coherent reflector throughout the entire survey area 0–3 m below the seafloor and companion coring efforts indicate a ravinement surface between the late Pleistocene predominantly muddy swamp facies containing the trees below and reworked Pleistocene or Holocene sand above. This sand is thickest at the ridges and thinnest or absent in the troughs. A series of shallow (1–3 m relief) infilled paleochannels truncated by the transgressive surface were identified to the east of the forest, indicating a degree of past fluvial influence. The 2015 and 2016 surveys did not identify any trees exposed on the seafloor outside the area mapped in 2012; however, a method is being developed to identify still-buried trees in the chirp data. These observations provide information on the conditions that led to the well-preserved ancient forest on the inner continental shelf” [Obelcz et al. 2016].

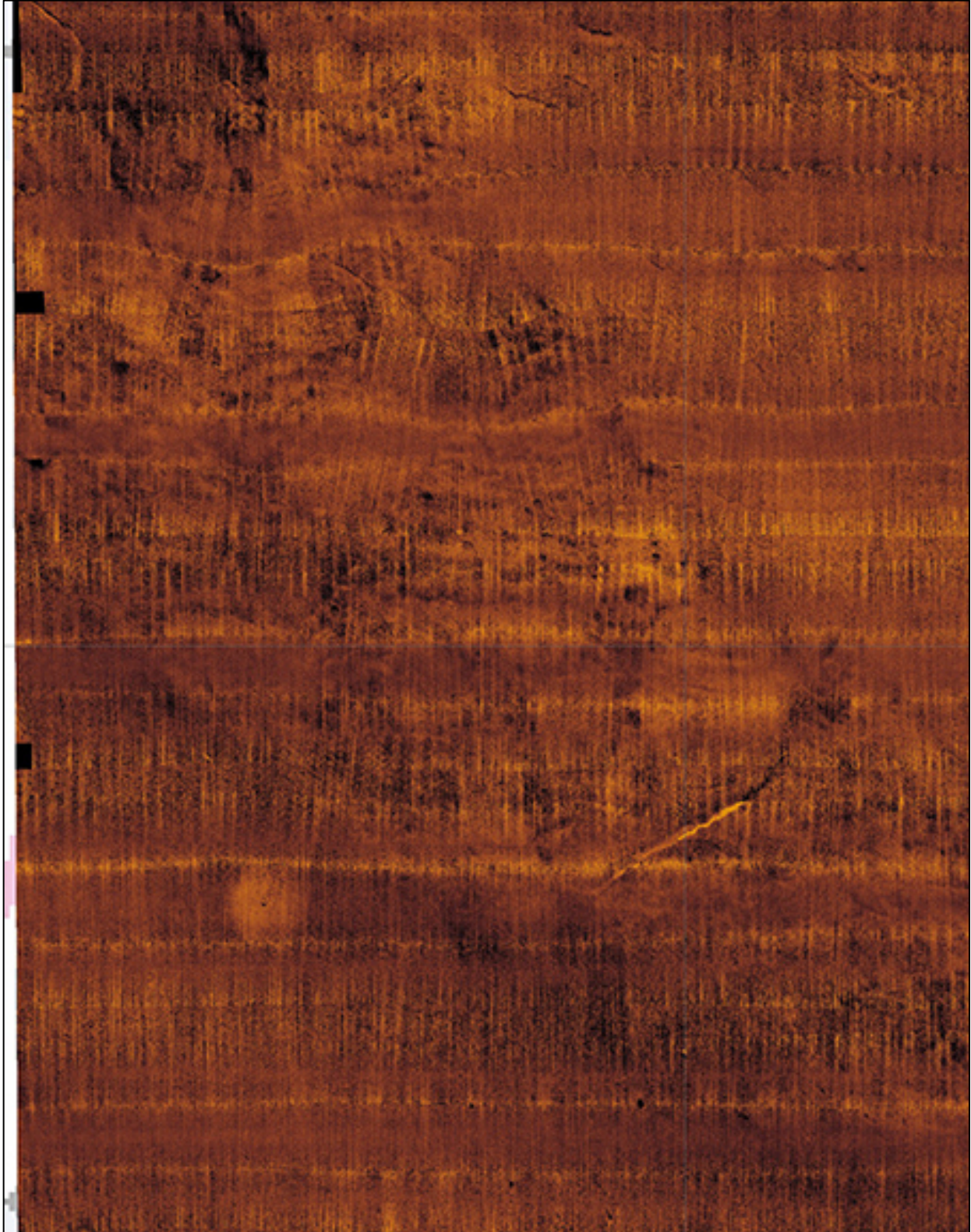
Illustrated in Figures 2-01 and 2-02 are sonar images provided to Panamerican by ADCNR of an area of cypress forest that shows a stand of these trees located south of Fort Morgan. Contrary to original thought that these trees dated between 8,000 and 14,000 YBP, the samples sent by Louisiana State University (LSU) researchers to the Livermore National Laboratory for radiocarbon dating found them to be at least 50,000 years old (outside the ability of radiocarbon dating methods) indicating a pre-Holocene setting (Raines 2014). Discussions by Panamerican archaeologists with Bureau of Ocean Energy Management (BOEM) personnel confirmed that the stand dates to over 40,000 YBP, precluding human habitation (Alicia Caporaso, BOEM personal communication).

The climate of the Project Area is characterized as warm, temperate, and humid. Warm weather temperatures average about 82°F, while winters average about 57°F. A typical year has about 300 frost-free days, and annual precipitation, which is evenly distributed throughout the year, normally exceeds 60 inches. These modern climatic conditions have existed for about 1,500 years, but during earlier prehistoric periods they did not. The terminal Pleistocene climate (15,000 to 12,000 B.C.) was much cooler and drier and was followed by warmer and drier conditions that culminated in the Altithermal period (7000 to 3000 B.C.). A period of fluctuating but generally cooler and wetter conditions followed the warmer, drier Altithermal, which led to the modern conditions described above (Frelund and Johnson 1993; Muto and Gunn 1982).

In terms of permanent human settlement and subsistence, the Project Area currently offers a less than ideal environment. The marine/estuarine habitat may contain a potentially rich aquatic resource base, but access to potable water, shelter, and other necessities are limited. The exposed environment found in the region would lend itself more for seasonal marine resource recovery camps than permanent settlements.



**Figure 2-01. Acoustic image of exposed cypress stumps near the Baldwin County Cells of the Offshore Project Area. Exposed swath of stumps and logs is on left side of image, both of which have been ground-truthed with the use of an ROV (acoustic image courtesy of The Alabama Department of Conservation and Natural Resources, Marine Resources Division).**



**Figure 2-02. Excerpt from above acoustic image of exposed cypress stumps south of Fort Morgan. One log and several stumps are visible (acoustic image courtesy of The Alabama Department of Conservation and Natural Resources, Marine Resources Division).**

## ***GEOLOGICAL SUMMARY***

Mobile Bay, or more properly, the Mobile Bay Estuary, is a shallow, north-south elongated estuarine environment, protected from the Gulf of Mexico by Dauphin Island to the west and Morgan Peninsula to the east. Mobile Bay is 46 kilometers long north-south and 32 kilometers wide east-west, which includes Bon Secour Bay. Four small survey areas are within Mobile Bay, while the seven larger cells are located south of Mobile Bay. Eighty-five percent of the water from the Mobile-Tensaw delta region flows through Main Pass Inlet, between Dauphin Island and the Fort Morgan Peninsula, with the majority of the rest flowing into Mississippi Sound to the west. The northern boundary of Mobile Bay consists of the modern bay-head delta, with the western and southeastern shorelines containing low-lying topography and tidal marshes, while the northern part of the estuary has considerably steeper topography.

The continental shelf south of Alabama and Mississippi is characterized by a network of valleys that formed during the last lowstand (during the Late Glacial Maximum, approximately 29,000 YBP), also known as the “Oxygen Isotope Stage 2” (Figure 2-03). Incised into the coastal plain during this time period, these channels have been extensively mapped and characterized (Bart and Anderson 2004; Bartek et al. 2004; Hummel and Parker 1995a, 1995b; Kindinger 1988; Kindinger et al. 1994; Mars et al. 1992; Roberts et al. 2004; Sager et al. 1999). These valleys differ from typical river valley systems in that they branch seaward just north of the modern shoreline, becoming more complex rather than more organized, as do other Gulf channel systems.

While previous studies differ slightly with regard to the precise location and depth of the Oxygen Isotope Stage 2 Mobile valleys, they generally agree that the channel bifurcates about two-thirds of the way toward the southern end of the estuary, with the western branch passing out into the Gulf at the western end of Morgan Peninsula and the eastern branch passing through Bon Secour Bay and out under Morgan Peninsula (Figure 2-03). Estimates on the depth of this valley range from 13 to 15 meters (Davies and Hummel 1994; Hummel and Parker 1995a, 1995b) to 25 to 45 meters (Kindinger et al. 1994). According to Greene et al. (2007:141), these conclusions were reached by studying the same datasets, illustrating the difficulty of characterizing the stratigraphy of Mobile Bay. According to Greene et al. (2007), these channels, developed during the last lowstand, are reflective of older underlying topography. That is to say, channel development was somewhat guided by the morphology of the underlying sediment, and understanding the character of this underlying sediment is essential to understanding the subsequent morphologies (Greene et al. 2007:17).

In a 2007 seismic and vibrocore study, Green et al. (2007) outlined four regional seismic units across Mobile Bay and Mississippi Sound, each bounded by an unconformity, referred to as “Sequence Boundaries.” The two most shallow Sequence Boundaries, A and B, were the only ones mapped, as seismic attenuation tended to obscure the lower units. This phenomenon was recognized in the data from the current investigation. Sequence Boundary B is present throughout Mobile Bay and characterized by broad valleys ranging in size from 0.8 to 7.7 kilometers in width, coinciding with modern La Batre, Dog, Fowl, Fish, Magnolia, and Mobile/Tensaw river systems, with thalwegs of 20 to 35 meters (Green et al. 2007:143; Figure 2-04). Between these valleys are broad interfluvial areas at 10 to 15 meters below the current sea level. Noteworthy are the incised valleys running through both the eastern and western portion of the bay. Depths below sea level are 25 to 33 meters for the eastern valleys and 20 to 25 meters on the west. Radiocarbon dates of material from Seismic Unit A (representing Central Basin sediments) generally indicate Holocene, although Green et al. (2007) were not able to precisely date Sequence Boundary A (i.e., the boundary between Seismic Unit A and Seismic Unit B [with B being older]). Although they indicate Seismic Unit B to be Pleistocene, with Sequence Boundary A coinciding with Oxygen Isotope Stage 2 (approximately 19,000 YBP), previous studies suggested that Sequence Boundary B coincides with Oxygen Isotope Stage 2

and Sequence Boundary A is a transgressive surface (Kindinger et al. 1994), indicating the difficulty of dating the sediment progression in Mobile Bay.

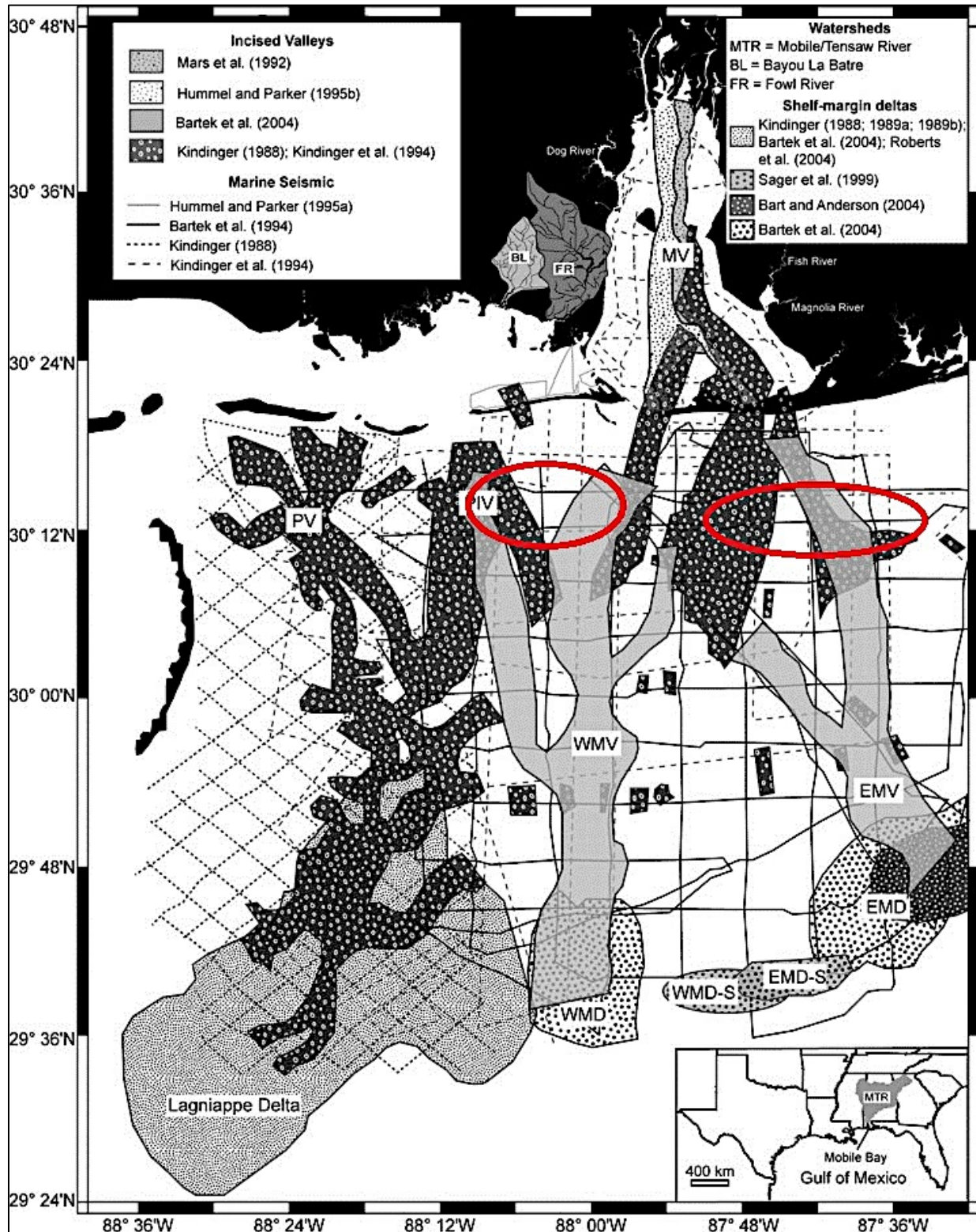


Figure 2-03. Map of valleys formed during last lowstand with the Project Areas circled in red (Green et al. 2007:140).

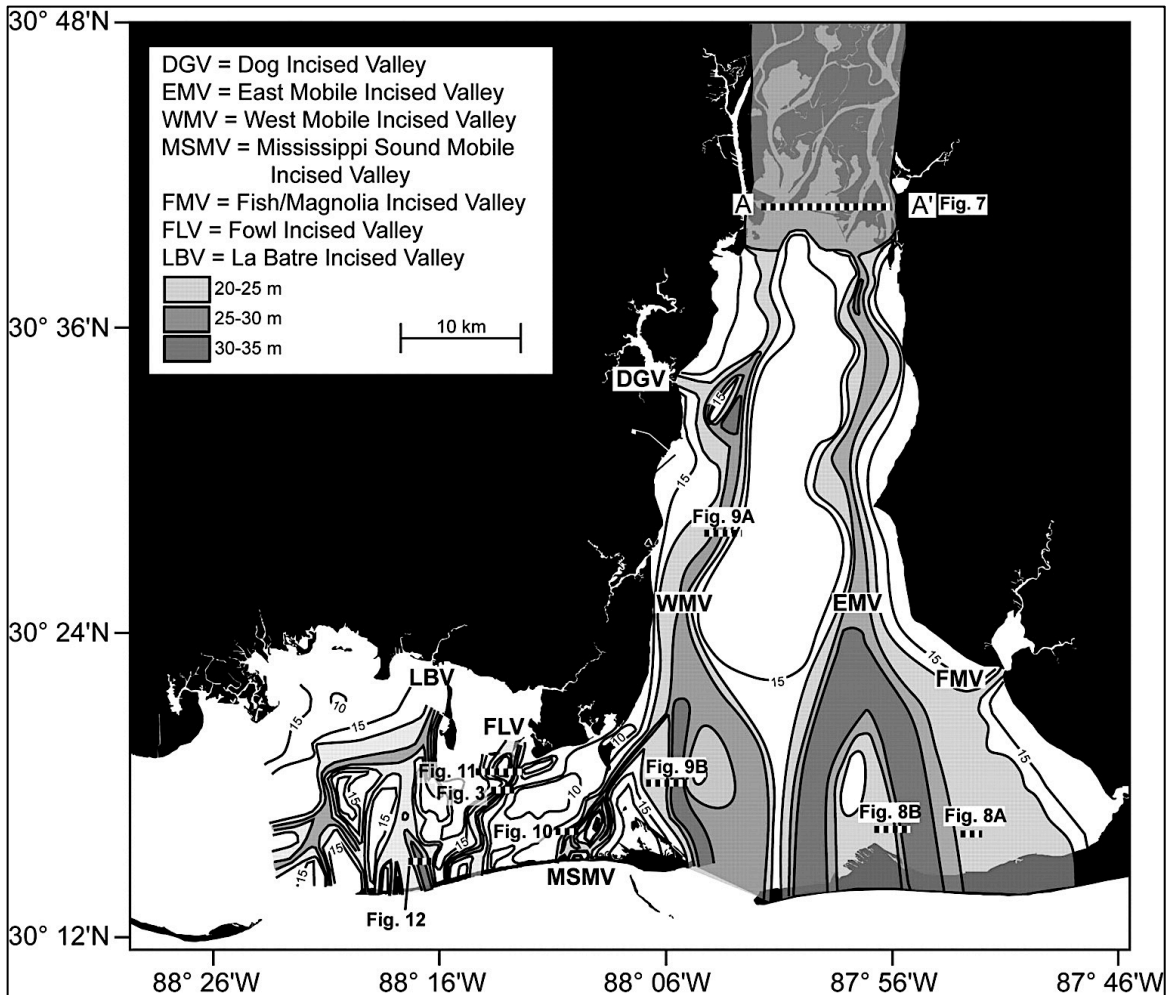


Figure 2-04. Map of channels represented by Sequence Boundary B (base map: Greene et al. 2007:145).

Sequence Boundary A, which overlies Seismic Unit B and forms the boundary between Seismic Unit A (Central Basin marine sediments) and Seismic Unit B, is also characterized by multiple incised valleys that extend from the modern La Batre, Fowl, Dog, Fish, Magnolia, and Mobile-Tensaw rivers. The main valleys, incised into Seismic Unit A, are in the same location as the valleys in B, with thalwegs in the 10 to 25 meter range. The main difference is the lack of a bifurcation in Bon Secour Bay, instead being a broad flat interfluvial area at 10 meters below sea level (Figure 2-05).

Sequence Boundary A, which represents the boundary between Seismic Unit A and Seismic Unit B, formed in response to the Oxygen Isotope Stage 2 (Late Glacial Maximum) lowstand. It is, essentially, the last exposed Mobile Bay/Mississippi Sound surface, and dates to 17,000 to 22,000 YBP at the oldest to 9,000 YBP at inundation (Greene et al. 2007:149). Previous investigations (Bard et al. 1990; Davies and Hummel 1994; Hummel and Parker 1995a, 1995b; Kramer 1990; Mars et al. 1992; McBride et al. 1991) have produced datable, organic material indicating sediments above Sequence Boundary A to be Holocene, and all dates below, Pleistocene. Greene et al. (2007) did not obtain radiocarbon datable samples from below Sequence Boundary A, and indicated previous investigations (including Grootes 1983) have demonstrated that contamination of samples with 1% modern carbon would result in a date of 37,000 YBP. The one date obtained by Greene et al. (2007) yielded 38,400 YBP, which they considered contaminated.

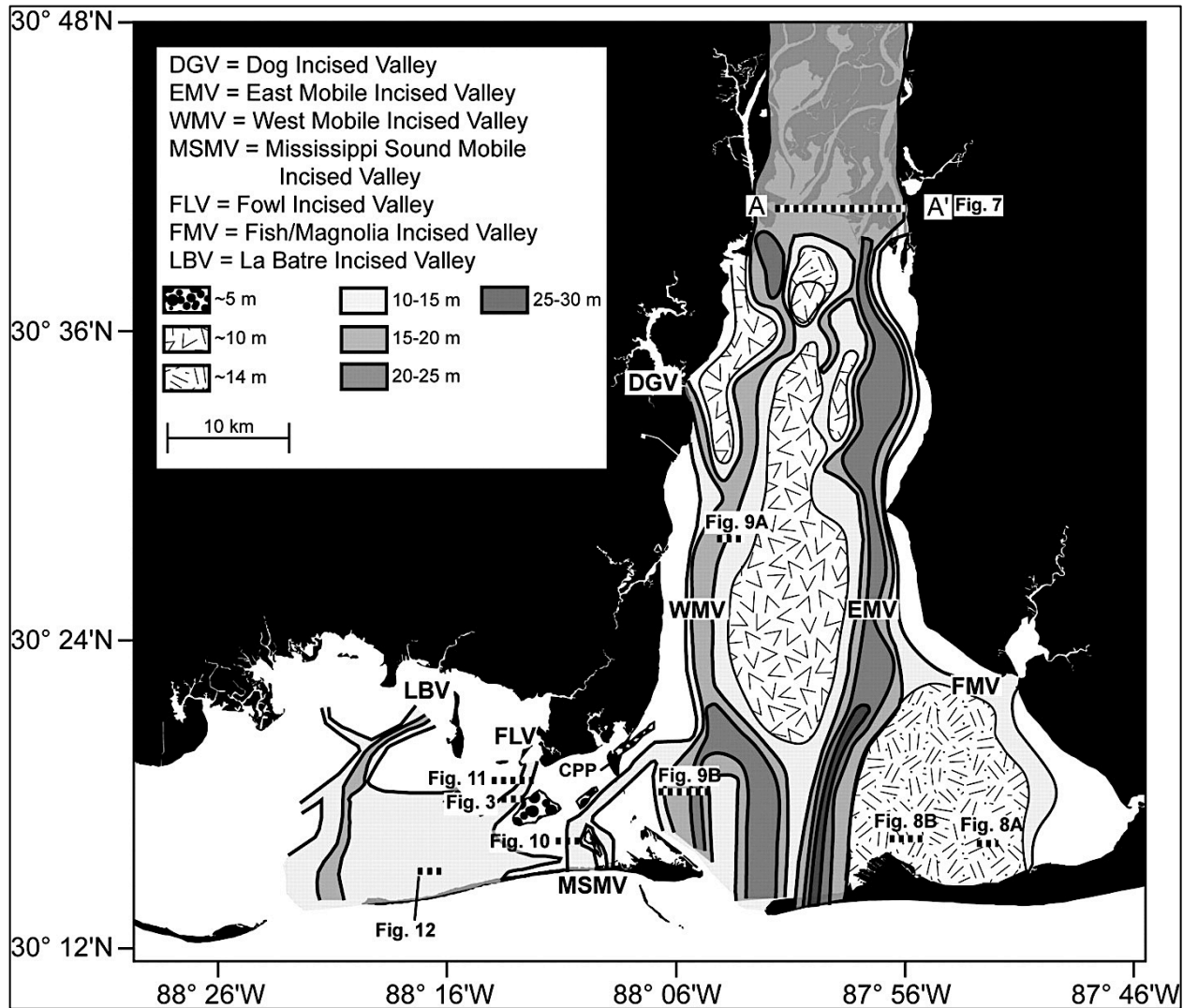


Figure 2-05. Map of incised channels in Sequence Boundary A (as presented in Greene et al. 2007:147).

Seismic Unit A, as presented in Greene et al. (2007), was sampled in nine cores, which revealed the presence of whole oysters, shell hash, and *Ophiomorpha*, *Chondrites*, and *Thalassinoides* burrows (Greene et al. 2007:145), indicating a marine environment. Greene et al. (2007), along with Bartek et al. (2004) and Kindinger et al. (1994), interpreted the sediment as Central Basin. Several cores contained peat directly above Sequence Boundary A. Radiocarbon samples from this location yielded dates of 9,000 to 9,260 YBP (Greene et al. 2007:145). These results indicate inundation of the current Project Area by 9,000 YBP.

Sediments below Sequence Boundary A, those of Seismic Unit B, consist primarily of foreset beds of previous iterations of bay head delta formed during marine regression preceding the Late Glacial Maximum lowstand. Deltaic sediments are particularly well formed in the western half of the bay and fill the previously incised valleys shown in Figure 2-04. Generally speaking, during the lowstand that is associated with Sequence Boundary B prior to Oxygen Isotope Stage 2, valleys were incised by the La Batre, Fowl, and Mobile/Tensaw river systems. During the subsequent transgression, the valleys associated with the Fowl and Mobile rivers were filled completely with alluvial sediments that now make up Seismic Unit B. During the Oxygen Isotope Stage 2 lowstand, these river systems reoccupied the same valleys.

Given the fairly firm dating of Sequence Boundary A at 9,000 YBP and the determination that Central Basin sediments overlying Sequence Boundary A are marine in nature, Sequence Boundary A is likely to contain prehistoric archaeological sites in such high-probability landforms as channel margins, barrier islands, and back bay features, so long as the upper margins of those features are at or near Sequence Boundary A itself.

### **SEA LEVELS**

Sea level curves for the Gulf of Mexico constructed by Balsillie and Donoghue (2004) and global eustatic estimates by Siddall et al. (2003) are shown in Figure 2-06. Post-glacial sea level rise (not shown in the figure) was rapid before 7,000 YBP and Figure 2-06 shows that it was slower thereafter. Much of the data for the Balsillie and Donoghue averaging procedure come from research conducted in southern Florida, so the curves are somewhat relevant. They show a fluctuating sea level curve (history) after 7,000 YBP, when base levels were approximately 6 meters (20 feet) below today's, when people are known to be living on the coast in this area, to 4,800 YBP, when levels were still approximately 2 meters (6 feet) below today's (Figure 2-06).

Widmer (1988), using data specific to the southwestern Florida, showed sea levels between 20 and 4 meters below today between 7,600 and 4,000 YBP. Walker et al. (1995) summarized geoarchaeological data for the southwestern Florida gulf coast and showed that some sites were formed when sea levels were lower (because their lower stratigraphic levels were flooded).

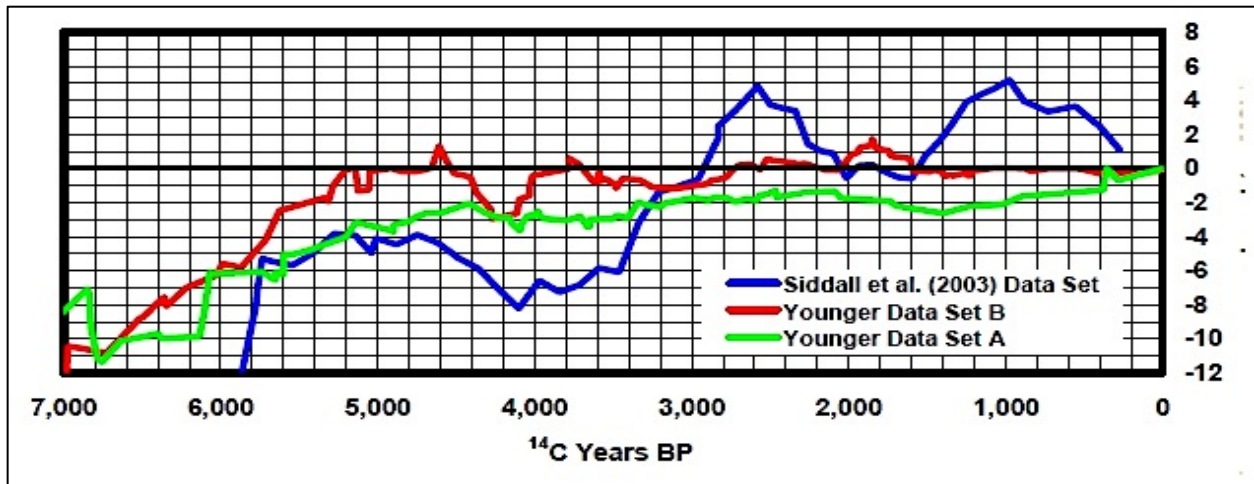


Figure 2-06. Balsillie and Donoghue's (2004:Figure 10) "Younger Data Set," the green line represents sample sets collected offshore, the red line includes data sets collected onshore. The blue line represents a worldwide, eustatic estimate published by Siddall et al. in 2003. Areas of agreement occur at 5,800 and 3,100 YBP.

### **CONSIDERATIONS OF SEA LEVEL FLUCTUATION**

In order to understand past landscape configurations in the Project Area, it is helpful to know the local sea level rise chronology and magnitude from the latest Pleistocene through the Holocene, but none have been published. By local, we are indicating that the local apparent sea level curve is the desired indicator for landscape reconstruction, rather than a strict eustatic sea level curve (global ice melted sea level). The latest Holocene fluctuations are of most import to this investigation. In general, and on average, global eustatic sea levels were about 20 meters below the present sea level due to a third pulse of glacial melting around 8,000 YBP. This sea level rise, that slowed between 6,000 and 7,000 YBP, resulted in sea levels somewhat lower than today's

(DePratter and Howard 1981; Faught and Donoghue 1997; Hoyt et al. 1990; Siddall et al. 2003). This can be considered to be roughly true for the current Project Area, because the region is considered stable (from isostatic and tectonic forces).

### ***PREHISTORIC BACKGROUND***

Consideration of the potential for cultural resources within the Project Area focuses on two distinct types: prehistoric sites and historic shipwrecks. Although the location of shipwreck sites can be obtained through the employment of an array of remote-sensing equipment, such as that utilized within the Project Area, the location of submerged prehistoric sites with current technology is highly unlikely. Rather, the emphasis during a study of this nature is more hypothesis than reality, with the investigation basing potential submerged site locations on known above current sea level site locational parameters (i.e., land forms such as river terraces), as well as data on Pleistocene environments and resources for the area (e.g., estuaries, food types). However, it is possible to identify relict submerged landforms to some extent with the sidescan sonar, and then apply known parameters from above-sea-level sites to these landforms.

Although no submerged prehistoric site is known for the offshore waters of Alabama, past research indicates that portions of the reported archaeological sites in the nearby waters of Florida are prehistoric. Several submerged prehistoric sites have been found and investigated in Florida. Most artifacts have not been found by archaeologists, but by diver/collectors. Some of the extinct faunal remains found in a submerged context show evidence of butcher cuts and other evidence of human shaping (Faught 2001). However, in general, the present Florida environment, rivers and caves, is much more benign than the conditions found off Mobile Bay, which is exposed to sea level change and dramatic effects of the occasional hurricane.

Other coastal Atlantic regions have produced underwater prehistoric sites. Over 800 submerged archaeological sites are known to be located in North Carolinian waters, a vast majority being historic shipwrecks and landings. Approximately 50 (less than 7%) of these sites are from a prehistoric context. Most, if not all, of these come from a lachstring or riverine context (Richard Lawrence, personal communication 2002). Further north in Virginia, there are at least 283 underwater sites on file. While 90 have prehistoric components, only three are totally submerged. The bulk is eroding out of present shorelines. Only one confirmed prehistoric site is located on the Atlantic Ocean, and that is on the eastern shore of Virginia (Blanton and Margolin 1994:ii). Thus, the presence of known marine prehistoric resources in Virginia is exceedingly rare. "It is conceivable that large portions of the home range of some Paleoindian bands are now submerged on the continental shelf, particularly for any that may have adopted a partial coastal subsistence focus" (Blanton and Margolin 1994:10).

Farther north, it is believed that past dredging activity off Sandy Hook, New Jersey may have exposed and redeposited portions of a prehistoric site. An assemblage of over 200 prehistoric artifacts was collected in an area that had been renourished by material dredged from an area approximately 1 mile offshore in depths of 35 to 40 feet below mean low water. It is believed that the artifacts came from a layer within the first 5 feet of the seabed from the Weeks 1 Borrow Area (U.S. Army Corps of Engineers, New York Memo, 21 September 1995). Other artifactual materials in the New England/Long Island Sound area were located due to dredging activity; many were assigned to the Archaic period (Stright 1990:441-442).

Thus, it is known that submerged prehistoric sites have been located or intuited through the evidence from Mississippi to New England; however, how can these sites be recognized? The equipment utilized for this project—a magnetometer—cannot positively identify prehistoric sites that are non-magnetic, nor protruding from the seabed. Alternate methods and techniques may have better results. The application of a subbottom profiler survey, with parameters to identify relict landforms, in conjunction with coring could possibly identify likely locations for

submerged prehistoric sites. Rather than using these instruments in a broad survey to look for specific sites, which would be difficult, their application should be to indicate past submerged Holocene landforms with the potential to contain cultural material. Subsequent testing for prehistoric sites (e.g., coring) could concentrate on the areas of higher potential, increasing the chance to contact these materials. With that said, buried oyster or shell middens will present as a recognizable feature in the subbottom record and, if exposed, as a recognizable feature in the sidescan sonar record.

It is generally accepted that the first people to enter North America traveled overland from Asia across what is now the Bering Strait on a land bridge that formed when vast quantities of the Earth's water were concentrated in glacial masses. The warming trend that began at the end of the Pleistocene epoch and continued through the early Holocene melted glacial water, caused sea levels to rise. That rise in sea level coincided with the arrival of the earliest peoples in the Americas and possibly the earliest human arrivals to the inundated prehistoric areas that extended out onto the continental shelf in the Gulf of Mexico, south of modern shores of Alabama.

#### ***EARLIEST ARRIVALS***

The arrival of prehistoric peoples to the northern Gulf Coast is considered to have occurred between 25,000 and 10,000 YBP. Within a geologic time frame, this falls within the late Pleistocene or early Holocene epochs. Sea levels fluctuated significantly during these periods, and reached sufficiently low levels to expose the continental shelf as much as 100 kilometers south of the present Gulf shoreline. All of what is now the present Project Area, a few miles from the Alabama shore, is considered to have been above sea level at a portion of the time when aboriginal peoples representing the Paleoindian and Archaic periods first arrived in the region.

Specific evidence of early human presence near the Project Area dates to the Early Archaic stage. This evidence is in the form of distinctive Dalton, Hardaway, and Big Sandy projectile point types recovered from upland areas (Trickey and Holmes 1971:124). The accurate dating of those projectile point types at other locations has provided a comparative date of 9,000 to 10,000 YBP for the minimum earliest arrival of man in the Mobile area. These upland sites have been interpreted as former hunting-foraging stations used on a seasonal basis by Archaic nomadic bands. By 3,000 YBP, the general geomorphology of modern Mobile Bay had formed and the lower bay area had become the focus of a somewhat sedentary aboriginal occupation with notable utilization of oysters (*Crassostrea virginica*) and/or marsh clams (*Rangia cuneata*) as a major food resource. While aboriginal material culture and society changed through time, the exploitation of rich estuarine food resources was characteristic of the Prehistoric period.

Archaeological materials pre-dating 10,000 YBP have yet to be located in the immediate offshore area, and are presumed to lie within areas now inundated by changes in sea level. Evidence such as fluted projectile points indicative of a Paleoindian presence has been located in nearby Escambia and Covington counties (Futato 1982). If Paleoindians were present in the offshore area before 10,000 YBP, the evidence of their presence may be expected near water and estuarine food resources that, at the time, were perhaps most abundant along waterways at the bottom of the now inundated valley that lies under Mobile Bay and the Mobile River Delta (Trickey and Holmes 1971:124).

At present, however, no submerged prehistoric cultural resources have been documented in the Project Area. It is not argued that submerged prehistoric sites could be present in an offshore-submerged context. The archaeological community has established that prehistoric materials can be found within sites that are below sea level (Bullen 1969; Emery and Edwards 1966; Powell 1971; Salwen 1967). Indeed, the area of the continental shelf between the relict terraces bordering Desoto Canyon offshore and the current shoreline has been identified by

Coastal Environments, Inc. (1977) as a high-probability zone for the presence of such sites. Of interest here, however, is the argument by Mistovich and Knight (1983) that prehistoric occupation may have occurred virtually anywhere within the present confines of near shore areas of the Gulf of Mexico off Alabama. Underscoring this statement is the fact that it is known that they did exist as evidenced by artifacts recovered during shell mining and dredging for past road construction. Artifacts have also been recovered by Mobile Bay and Mississippi Coast oystermen tonging on oyster reefs that appear to cap drowned terrestrial sites comprised of shell middens (Lewis 2000:534).

#### ***ARCHAIC PERIOD***

While the presence of Paleoindian materials is theorized as possible in the Project Area, and Early Archaic materials have been documented nearby, there is a relative scarcity of Early and Middle Archaic materials that have been found in abundance in other areas of the Gulf Coastal Plain. It is uncertain whether this lack of representation is merely due to a gap in the recovered and published data, or whether there was an actual low population presence in the area (possibly related to local climate). As with the Paleoindian evidence, these sites may exist submerged and buried under Holocene sediments (Mistovich and Knight 1983:9). There have been small quantities of fiber-tempered ceramics found that may have affiliation with either the Wheeler or Norwood ceramic series that correlate with suggested dates of 1400 to 700 B.C. The significance of those ceramic finds may lie in the location of some at estuaries rather than at inland or river environments. This significance lies in the importance of estuarine food resources successfully exploited by subsequent groups.

#### ***WOODLAND PERIOD***

The Early Woodland period followed the Late Archaic and continued until about 100 B.C. The Early Woodland is well represented in the archaeological record and is identified in the Mobile area by the Bayou La Batre ceramic series from the Bayou La Batre type-site (1MB12), which encompasses the Mobile River Delta and Mobile Bay areas (Wimberly 1960:64-74). The Bayou La Batre ceramics are characterized by coarse-grit tempers with tripod and tetrapod bases decorated with shell impressions and scallop shell rocker stamping (Trickey and Holmes 1971:126). The culture represented by the Bayou La Batre ceramics series is shown by extensive archaeological evidence (e.g., large shell middens) to have exploited the fish and shellfish of the Bay area; the estuarine environment was a major, if not the primary, source of subsistence. Mistovich and Knight (1983:10) point out that the archaeological evidence, both the subsistence materials recovered and the presence of Bayou La Batre materials on Dauphin Island, “strongly suggests the development at this time of a watercraft technology accompanying the estuarine economic orientation of these peoples.” While there is no direct evidence for the development of prehistoric watercraft technology in the Mobile area at this time, it is strongly suggested and implies a potential for aboriginal sites at any location within the estuarine environment following its introduction.

The Middle Woodland period is characterized by Porter phase ceramic types. Present from roughly 100 B.C. to A.D. 500, it has been suggested the Middle Woodland peoples of the Mobile area had a cultural continuity with the peoples that produced the preceding Bayou La Batre ceramic series, as well as influence from the Santa Rosa culture to the east (Walthall 1980:156; Wimberly 1960). While estuarine exploitation continues in this period (e.g., shell middens), it is also characterized by the appearance of inland settlements that might be described as villages and by the presence of some burial mounds. Excavations in these mounds have shown artifacts which suggest the widespread exchange of trade goods at this time with both the Santa Rosa culture and the Marksville culture in the west, perhaps in part due to the extensive river connection with the interior (Walthall 1980:161; Wimberly 1960:12-30; Wimberly and Tourtelot 1941).

Widespread interaction between groups on the Gulf Coast during the Late Woodland period of A.D. 400 to 800 was evidenced by material from a mound excavated on the eastern shore of Mobile Bay at Starkes Wharf at the turn of the century (Moore 1905:287). Similar evidence was recovered at excavations by the Alabama Museum of Natural History at other mounds on the Fort Morgan Peninsula in 1937 (DeJarnette and Buckner 1937). The interaction between Gulf Coast peoples was shown by the similarities between the Tates-Hammock phase pottery of this time, which resemble the earlier Santa Rosa, and the Weeden Island sand tempered ceramics of Florida (Walthall 1980:171-2). Overall, the period was similar to the preceding, with mortuary and village patterns and considerable exploitation of estuarine food resources, as evidenced by substantial shell middens. That agricultural development is not yet clearly evidenced and Late Woodland society shows no clear signs of developing a social hierarchy may be due to the reliable and abundant food resources available in the Mobile Bay area.

### ***MISSISSIPPIAN PERIOD***

Significant changes occurred when Woodland culture was replaced by Mississippian ca. A.D. 900 to 1200, lasting until European influence reached the Americas. Distinctive new pottery forms were introduced, as well as major social changes evidenced by the construction of cultural centers of earthen platforms surrounding a central plaza. The Mississippian culture also introduced the bow, floodplain horticulture, ceremonialism, long distance trade, organized chiefdoms, and increased warfare (Walthall 1980:185). Walthall (1980) has suggested that the changes were gradual, supplanting existing local groups through acculturation and internal development, rather than by invasion and displacement. In the Mobile area, Mississippian culture is expressed most profoundly in the Bottle Creek site, a large ceremonial mound complex located in the very center of the Mobile River Delta, an area curiously subject to annual flooding (Curren 1976:79). The Bottle Creek site has been dated to A.D. 1250 to 1600, with the last 150 years associated with a later manifestation of the Pensacola culture identified as the Bear Point complex.

### ***TRANSITIONAL PERIOD***

The Protohistoric period for the native inhabitants of the Mobile area is poorly documented, although some collections exist from Fort Conde, as well as the site of an early French warehouse on Dauphin Island and from the D'Olive site (DeJarnette 1976; Harris and Nielsen 1972; Knight 1976). The Contact period ceramics from those sites reflect the arrival of new people who introduced non-indigenous forms with western influences (Knight 1976:145).

The thousands of years of cultural change and adaptation to the local environment abruptly ended during a relatively short period following the arrival of European colonists in the eighteenth century. The local cultures had already been affected by the shock of Spanish expeditions through the southeastern United States and had undoubtedly suffered from European diseases brought directly by the Spaniards or contracted through other indigenous peoples. When a European colony was finally established in the Mobile area, the native cultures were rapidly displaced. Eventually, the remaining communities of native tribal peoples were forcibly removed to what was once known as the Indian Territory of Oklahoma (Walthall 1980:275).

The Prehistoric period of the Mobile Bay area is acknowledged to be poorly understood by the archaeologists and anthropologists most closely associated with its study (Knight 1976). The limited knowledge about the peoples who inhabited this region for thousands of years is partly due to both the lack of systematic surveys for the area and a scarce number of detailed excavations with published reports.

## **HISTORIC PERIOD BACKGROUND**

### **THE ERA OF EXPLORATION**

It is possible that the northern coast of the Gulf of Mexico, including Mobile Bay and Dauphin Island, was explored by unknown parties before any of the recorded expeditions. The earliest period of exploration, during the very late-fifteenth century and the first decade of the sixteenth century, is characterized by a scarcity of documentation. That the area may have been explored prior to any documented expeditions is seen as possible in some of the earliest maps of the Americas. The maps of La Cosa (1500), Cantino (1502), Caniero (1502), and Waldseemuller (1507) each contain elements that illustrate a knowledge of the Florida peninsula and the gulf coast to the west. It has been suggested by Summersell (1949) that a bay depicted by Waldseemuller represents Mobile Bay. Although, it has been pointed out that in that earliest era of exploration, claims were still being made that the new lands were the fringes of the Orient, which Columbus claimed to have discovered, and that those early maps may have depicted the southwestern coast of Asia as it was known from overland journeys preceding the Columbian voyages (Fite and Freeman 1926:16, 26, 34).

Regardless of whether the early maps depicted geographic knowledge brought back from the New World or were merely misplaced representations of old knowledge, there is evidence for the unrecorded presence of early voyages on the Gulf Coast. The first European known to explore the Gulf of Mexico was Ponce de León. With permission from the King of Spain to find new lands, de León left Puerto Rico in 1513 to search for land, wealth, and the Fountain of Youth. After exploring portions of the eastern coast of the modern state of Florida, de León coasted approximately one-third of the way up the Gulf coast of the peninsula. After being rather savagely attacked by the local inhabitants, who had no knowledge of the Fountain of Youth, de León decided to leave Florida in mid-June after six weeks of exploration (Morison 1974:507-511). Three years later Diego Miruelo, who had sailed with de León, explored far enough north into the Gulf to find what most likely would be named Pensacola Bay. In 1521, de León attempted to set a colony in the gulf, but after receiving a fatal wound from the natives died (Morison 1974:515). Thus began the Spanish exploration of the North American mainland.

Spanish persistence in the Gulf kept explorers busy. In 1519, an expedition under the command of Alonso Álvarez de Pineda again entered the Gulf of Mexico. Landing in southwestern Florida the explorers made contact with the natives. Hostile to this European encroachment, they protested with violence. The Spaniards sailed northwest and were the first to sail the coast of the Gulf and must have passed Mobile Bay as they encountered the mouth of the Mississippi on their travels. Sailing from Jamaica with four ships, de Pineda became the first recorded European to enter *Bahia del Espiritu Santo* (or *Spirito Sancto*), the name given to Mobile Bay by de Pineda. The de Pineda expedition, ordered by the Spanish Governor Garay of Jamaica, mapped the bay and described its inhabitants. This expedition is accepted as the first thoroughly documented exploration of that body of water (Scaife 1892:149). They sailed on into Mexico where Pineda and many of the crew met the same fate as de León (Morison 1974:517-518).

Following the de Pineda expedition of 1519, the next two Spanish groups to visit the Mobile Bay area were the Pánfilo de Narváez and Francisco Maldonado expeditions. De Narváez apparently stopped at Mobile Bay in October of 1528 while navigating toward Mexico on makeshift boats, following an ill-fated expedition to the east. De Narváez was met by a force of natives who may have retained two of the expedition members as captives following an aborted effort by the Spaniards to obtain water (Smith 1967:242). The de Narváez visit to Mobile Bay was brief, and it appears that the two lost members of the expedition may have been the only ones to go ashore. In 1540, Maldonado also may have stopped at Mobile Bay with several brigantines during an effort to meet and resupply the expedition of Hernando de Soto. The failure of these early

expeditions to locate any easily obtainable wealth contributed to a general lack of activity in the area by Spaniards who were more profitably occupied elsewhere.

There was a delay of 18 years before further interest in the area brought another Spanish expedition. In 1558, Guido de Las Bazaes was sent from Vera Cruz, Mexico with three small vessels on an expedition to examine the northern Gulf coastline for the purpose of locating an appropriate site for the establishment of a colony. Las Bazaes explored Mobile Bay and wrote a favorable account of it (Hudson et al. 1989:124). The Bazaes account gave considerable attention to navigational advantages, noting details concerning the entrance to the bay, water depths within the bay, and a favorable anchorage. Additionally, the Las Bazaes account of the land emphasized the abundance of specific tree species suitable for the building of ships, and noted that the Natives were on the bay in large canoes and that they used fish traps (Nuzum 1971:29).

Despite the glowing account given to the Mobile Bay area by Las Bazaes, the colonization fleet that set out the following year selected another location. The Tristán de Luna y Arellano expedition of 1559 set sail with 11 vessels, 1,000 colonists and servants, 500 soldiers, and 240 horses (Hudson et al. 1989:124). Missing their intended destination, the de Luna fleet did, temporarily, put into Mobile Bay where they remained from 17 July to 14 August while a vessel was sent in search of the bay intended for the location of the colony. This was to be the largest group of Europeans to enter the bay for some decades. Archival evidence indicates that the de Luna colony was established on Pensacola Bay, although the actual site has not yet been discovered (Hudson et al. 1989:126). When the expedition departed Mobile Bay, some men were left on the eastern shore to travel overland with all of the surviving horses. Following an early loss of vessels and supplies to a hurricane, unprofitable excursions into the interior, and periods of starvation, the colony at Pensacola Bay failed, and the colony was all but abandoned by 1561.

For more than a century following the de Luna colonization attempt, the central Gulf Coast and the Mobile area were virtually ignored by the Spanish. Content with possessions in Florida and the western Gulf, the Spanish maintained nominal possession of the central Gulf Coast, but failed to explore further or attempt colonization until foreign competition sparked renewed interest more than a century after the failure of the de Luna colony. That the Spanish had little contact with the Mobile Bay area during this period is reflected in the paucity of archaeological evidence for sixteenth-century contact which, at present, is limited to a single mid-sixteenth-century coin of Mexican origin found at the Shellbanks Bayou site (Lazarus 1965).

### ***THE COLONIAL ERA***

The Gulf of Mexico would be relatively quiet for the Spanish until the French descend the Mississippi River in the mid-seventeenth century. With the intrusion of La Salle, a Frenchman, into the Gulf from the Mississippi River in 1682, Spain had to reassert her sovereignty over the region and reinitiated the development of settlements in the area. The renewed European interest in the central Gulf Coast was stimulated by the failed effort of René-Robert Cavelier, Sieur de La Salle, to expand the area claimed by the French Crown for the territory of Louisiana. In 1685, La Salle attempted to establish a colony on Matagorda Bay, now in eastern Texas, after failing to find the mouth of the Mississippi River, down which he had previously traveled. Although the colony in coastal Texas soon failed and La Salle lost his life in the attempt, the French interest in a territory that the Spanish regarded as their own stimulated a renewed effort by Spain to explore and consolidate their hold on the central Gulf Coast that they had long ignored. The Spanish sent out another expedition in 1686, which ultimately recommended Pensacola Bay to be the best choice for a settlement. The political situation caused the King of Spain to demand that a settlement be placed in the region and another voyage of exploration was undertaken in 1693,

and recommended Pensacola Bay as a settlement site. Finally, in 1698 a settlement was placed in the Florida panhandle at Pensacola (Franklin et al. 1991:25).

### **FRENCH PERIOD**

The French attempt to secure control of the southern terminus of the Mississippi River system came in 1698, with an expedition under the command of Pierre Le Moyne d'Iberville. This expedition was to begin another colony to secure access through the Gulf of Mexico to the vast French territory of Louisiana. Finding that the Spanish had recently established a new foothold at Pensacola, Le Moyne then sailed west, explored Mobile Bay and Dauphin Island, and proceeded to continue on to establish a base at Biloxi. While at Dauphin Island, Le Moyne noted the remains of some 60 skeletons and called the island "Massacre" (Higginbotham 1991:30).

Permanent European settlement of the Mobile area began as a result of the efforts of Jean Baptiste Le Moyne to move the colony to Mobile Bay, a location considered to have conditions better suited to maritime trade. French colonization efforts on Mobile Bay began in 1702 with the establishment of Port Dauphin, on Dauphin Island near the entrance to Mobile Bay, and with the founding of the colony's capitol on relatively high ground in the Mobile River, known as "27-Mile Bluff." The French built a wooden stockade near the river and named it "*Fort Louis de la Louisiane*" in honor of King Louis XIV. From an early point, the settlement was popularly given the more geographically specific name of "*Fort Louis de la Mobile*" after the name of a local Native tribe (Foscue 1989:94).

At the time the colony was established, the entrance to Mobile Bay had a depth of over 10 feet at low tide and could accommodate all but the largest vessels. These found an anchorage in the protected waters of a main harbor established at Pelican Bay, an anchorage protected by barrier islands on the Gulf side of Dauphin Island near the mouth of the Bay (McWilliams 1981:40; Surrey 1916:40). From there, passengers and supplies were offloaded to Port Dauphin and carried aboard smaller vessels to Fort Louis 60 miles through the bay and up the Mobile River. The products of the colony were similarly lightered down to Port Dauphin for export. Coastal trade in small vessels, often locally built, expanded the commerce (Surrey 1916:55-81). The early maritime trade of the French colony included the immigration of colonists and slaves, the importation of supplies and trade goods, and the exportation of natural resources and agricultural products (Surrey 1916:164).

The settlement on Dauphin Island was abandoned by the French in 1719, after being devastated by a hurricane and by shoaling at the entrances of both Pelican and Mobile bays that forced larger vessels to anchor in the open water of the Gulf in order to discharge or receive cargoes (Summersell 1949:2). The French capital was moved to Biloxi in 1720 and then again to New Orleans in 1722. Mobile continued to export the natural resources of the region throughout the remainder of the French period in Alabama, but without remarkable commercial success.

During the French period, navigation on the rivers, the bay, and along the coast was developed and expanded. Inland commerce of this period, largely carried on with the local Indian population, relied on small vessels that could be rowed, punted, or towed and included open flat boats (i.e., pirogues or bateaux) and small-decked vessels (i.e., galere). Bay navigation and coastal trade was carried on in sailing vessels (i.e., barques and brigantines) that generally carried less than 50 tons of cargo. These coasting vessels made voyages to ports as distant as Cuba and Mexico. The ships that brought supplies from France and carried away the exports were not much larger than the coasting vessels during the first few years of the colony. By 1720, vessels over 100 tons burden were standard, and by the end of the French period, ships of as much as 700 tons were involved in the Mobile trade (Surrey 1916:70, 78). Exports were largely restricted to furs traded from the Indians during the first few years of the French period, but

gradually grew to include salted beef, cattle, hides, tallow, ship masts and lumber, tar and pitch, corn, rice, tobacco, indigo, sassafras, cotton, and quinine (Hamilton 1976:290; Surrey 1916:164-166).

Bayou La Batre got its name from a battery the French maintained there; a Frenchmen by the name of Joseph Bousage founded it in the 1780s. By that time France had lost control of the area to the British, but the French/Cajun culture persisted. Many of the place names of the area today are of French origin, such as Coden and San Souci.

**BRITISH PERIOD**

Following the French and Indian War (Seven Years' War), the Treaty of Paris (1763) gave the French territories east of the Mississippi River to Great Britain. When Mobile was taken over by the British, it was incorporated into the administrative district of West Florida. Maritime commerce expanded under British rule. Better charting and increased knowledge of the entrance to Mobile Bay allowed a return of deep draft vessels to a protected anchorage, now in the lower bay rather than near Pelican Island (Figure 2-07). The return of major shipping allowed the commerce of the city to flourish; however, access to the lower bay required lightering of the cargoes of larger vessels to and from the city due to the shallowness of the upper bay (Delaney 1962:43).

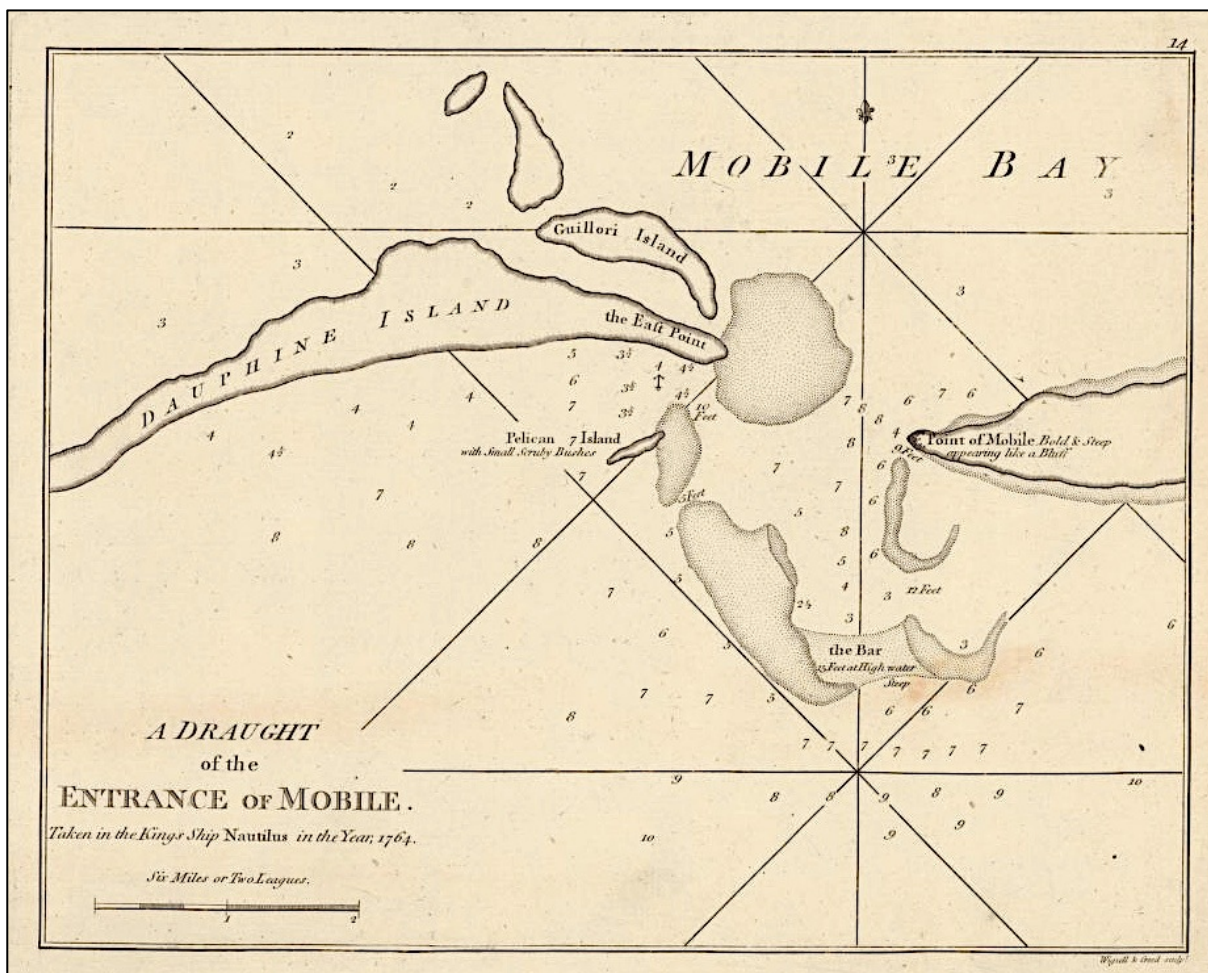


Figure 2-07. 1794 chart of the entrance of Mobile Bay by Thomas Jefferys, illustrating the anchorage between Dauphin and Pelican islands in 1764 (Jefferys 1794). Originally during the French period, the anchorage was south of Pelican Island.

Commerce focused on the export of products obtained in trade with the local Indian tribes, primarily hides and pelts as during the French period. Most of the Indian trade materials came from the interior, which, north of the district border, was closed to colonists and reserved by the British for the indigenous population. While animal skins remained the dominant export product, a greater emphasis was placed on the production of timber, naval stores, indigo, and a growing interest in cotton. During the French period, trade had been a government monopoly, while under British rule; trade was conducted by private enterprise with a resultant increase in capital for local expenditure, investment, and development (Delaney 1962:41).

### ***SECOND SPANISH PERIOD***

During the American Revolution, both Spain and France were allied with the Americans against the British. At the instigation of American revolutionaries, the Spanish governor of Louisiana, Don Bernardo de Gálvez, sailed in the winter of 1780 with a force of 2,000 soldiers to attack the British garrison at Mobile. Following a siege of 14 days, the British surrendered the city to the Spanish forces. De Gálvez then spent a year at Mobile in preparation for an assault on Pensacola, the British capitol of West Florida. During this period of preparation, a fort was constructed next to the Blakeley River east of the Mobile River Delta. The British launched an unsuccessful attack against the fort in January of 1781 and retreated back to Pensacola. In May 1781, de Gálvez captured Pensacola, returning to the Spanish crown control of the Gulf Coast from Mexico to Florida (Harris 1977:50-51).

Although the commerce of Spanish Florida and the Gulf Coast port of Mobile suffered under a return to a restrictive system similar to that which had existed under the French, the colony was now nearly self-sufficient (Mistovich and Knight 1983:17). Trade with the Native tribes continued, and the exportation of furs and hides remained a dominant part of trade. Much of that trade was in the hands of a British trading firm that maintained a virtual monopoly with several tribes and imported vast quantities of British goods to exchange for the Indian furs and deer hides (Hamilton 1910:352-353). It was during this period of Spanish rule that the cotton gin was invented and introduced to the area.

During the second Spanish period, Americans began settling in Spanish western Florida and in the new U.S. territory to the north. By necessity, these settlers exported produce and received supplies through Mobile as the port city at the terminus of the Tombigbee, Alabama, and Mobile rivers. Resentment by the American settlers of heavy Spanish import duties may have been a contributing factor to the U.S. annexation of western Florida during the War of 1812.

### ***AMERICAN ERA***

The city of Mobile became part of the U.S. on the pretense that Spain was then a military ally of England, with which the U.S. was at war. It was, however, almost a year after the annexation before American forces actually occupied Mobile. The American presence in Mobile was soon threatened by British military actions. In 1814, American forces at Fort Bowyer established on Mobile Point in 1813 (Figure 2-08) were involved in combat with a British naval expedition. The American forces repulsed the attack and received credit for the destruction of the HMS *Hermes* at the entrance to the bay. The British returned in 1815, following the Battle of New Orleans, with 38 warships and 5,000 troops. This second British assault captured the fort, but the forces were withdrawn after it was learned that the Treaty of Ghent, which ended the war, had been signed before Fort Bowyer had been taken. Construction of present-day Fort Morgan began in 1818 on Mobile Point at a location immediately northeast of Fort Bowyer.

Following the War of 1812, the American era for Mobile was the start of a half-century of economic prosperity. The dissolution of the international border north of Mobile opened the second largest watershed in the southeast to free trade under one nation. Substantial numbers of

new settlers arrived from the Atlantic states. The government obtained land through Indian treaties, and this opened most of the state of Alabama for settlement (Royce 1899).

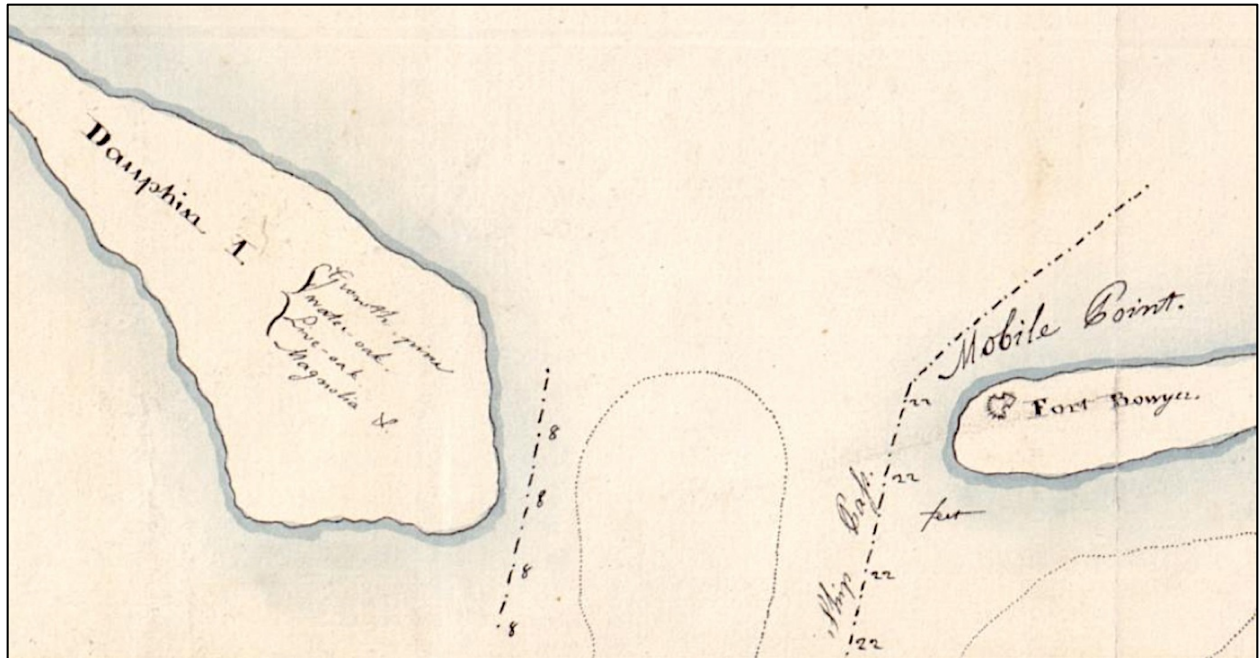


Figure 2-08. 1813 map of Mobile Point with Fort Bowyer (courtesy of the Library of Congress; as presented in Watts 2014).

The arrival of steamboats in 1819 opened the vast inland waterways to practical two-way navigation. When Alabama was granted statehood in 1819, Mobile grew rapidly as an international port, soon to rival New Orleans for supremacy as a center of Gulf Coast commerce.

The influx of settlers opened new land to the cultivation of export crops and led to the establishment of many new towns. Less than five years after the American annexation of Spanish West Florida, the town that was to become Tuscaloosa was founded on the Black Warrior River. Demopolis was established near the confluence of the Tombigbee and Black Warrior rivers, and Montgomery, Selma, and Claiborne were settled on the Alabama River. Each of these towns took advantage of the transportation opportunities that placement on a navigable river provided (Summersell 1949:16). With an expanding interior, there was a concomitant rise in shipping through Mobile Bay and the northern Gulf. Around the mid-1830s, John Sprinkles became a permanent settler on Dauphin Island (Watts 2014). Around the mid-1830s, John Sprinkles became a permanent settler living on Dauphin Island (Watts 2014). On Dauphin, the schooner *Almanda* was lost when traveling from New Orleans to Mobile in 1837, either in the spring or summer (American Seamen's Friend Society 1838:38).

Steamboats steadily increased in capacity, speed, and reliability, although the formative years of the trade were filled with disasters such as boiler explosions, fires, and sinkings that resulted in considerable loss of life and property. Many of the early disasters were due to negligence or incompetence. Federal, state, and local legislation concerning the inspection, certification, and operation of steamboats was slow to effectively develop in most areas. An adequate system of Federal regulation was not passed until 1852, preceded by a largely ineffective act in 1838. Alabama, however, had an advantage over most areas in that the navigable rivers of the area were within the state borders and virtually all of those rivers ultimately came together at the port of Mobile. With an inland navigation system largely separate from other areas of

inland navigation, it was possible for the steamboat laws of Alabama to be effective. Similar laws elsewhere did exist, but were largely ineffective due to the extended lengths of rivers, such as the Mississippi and Missouri, that passed through a number of different states and territories. The Alabama General Assembly was able to pass a law as early as 1826 requiring the annual inspection and certification of steamers by the harbor master and port wardens of Mobile. In 1840, legislation passed by the Alabama State legislature provided penalties relating to boiler explosions and losses caused by overloading. In the following year, the legislature passed laws providing for the examination and licensing of engineers that included penalties for both steamboat engineers and owners who failed to comply (Hunter 1949:521-524).

Prior to the introduction of effective steamboats, river traffic was primarily conducted on keelboats and flatboats. While keelboats could make the round trip from farm or plantation to port and back, it was a slow and labor-intensive process. Flatboats were simply constructed and often made only a downriver run, being sold for lumber after discharging their cargoes. Before steam navigation became effective, planters would send their produce downriver to Mobile, but because of the difficulty of upriver navigation, would generally receive their supplies overland—another slow and expensive process (Abernathy 1922:74-75). The rapid development of the agricultural economy of the interior was due, in large part, to the introduction and development of steam navigation on the rivers. It was primarily cotton, as a high value export crop, that brought in the revenues that supported the development of the river steamers.

The ascendancy of cotton as a profitable export product provided revenues that helped to finance the development of steam navigation. Steam navigation, in turn, provided the means for a genuine reciprocal trade between Mobile and the interior of the state (Mistovich and Knight 1983:18). Cotton, while the most significant export in the antebellum era, was not the sole product of the interior or the only export from Mobile; lumber and naval stores were also exported in some quantity (Summersell 1949:23). Located in the southern pine region of the state, the lumber industry expanded at an amazing rate in the last quarter of the nineteenth century with the 1880s seeing an explosion of the purchase of pine forest acreage for their timber resources, often by northern “timber carpetbaggers” (Outland 2004:135). Brought down the rivers and transshipped from Mobile, lumber increased dramatically in the 1880s (Table 2-01; Figure 2-09). Moreover, from the 1880s to 1920, lumber exports increased ten fold.

**Table 2-01. Annual Lumber Product Data Through the 1880s.\***

Naval Stores		Lumber	
Year	Value of Products	Year	Value of Products
1850	\$17,800	1849	\$1,103,481
1870	\$280,203	1869	\$1,359,083
1873	\$750,000	1879	\$2,649,634
1875	\$1,200,000	1889	\$8,507,971
1883	\$1,109,760		

\*as presented in Patterson et al. 1993:16



**Figure 2-09. Over 1,000,000 board feet of poplar logs and barrel staves (left) awaiting export by schooner at the Campbell Lumber Company in Mobile (from the Overbey Collection, courtesy of the University of South Alabama Archives).**

In addition to the lumber industry in southern Alabama, the naval stores industry (e.g., turpentine and rosin) also focused on the pine stands along the Gulf, and may have been included in the products shipped through the general Project Area. North and South Carolina were the major producers in the early 1800s, and by the 1900s Georgia and Florida dominated the naval stores industry. As Figures 2-10 and 2-11 illustrate, southern Alabama, including the general Project Area, played a key role in this market with Mobile and Pensacola the collection points for cargoes from the state's rivers and surrounding bay side landings. However, unlike lumber production and exports that were increasing dramatically in the last quarter of the nineteenth century, naval stores, while still an important product, began a decline during the same period.

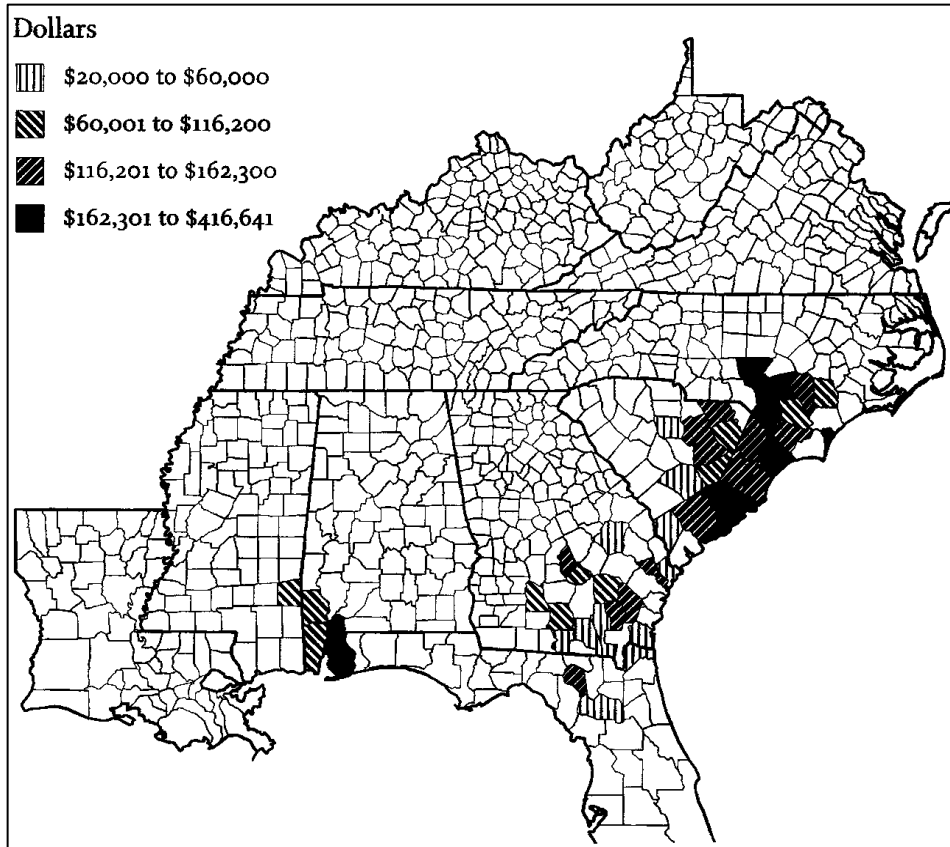


Figure 2-10. Production amounts of naval stores in southeastern states in 1880 (note Mobile and its surrounding counties are the focus for this industry for Alabama; as presented in Outland 2004:131).



Figure 2-11. A.M. Moses and Company naval stores yard in Mobile, Alabama taken between 1885 and 1900 (as presented in Butler 1998:181).

While some local industries were thriving, overseas trade from Mobile, however, continued to suffer from the shallowness of the waterways between the city and the Gulf. Larger oceangoing vessels were still required to anchor in the lower bay and transfer imports and exports via smaller vessels. To alleviate the navigational problems that faced the port of Mobile, the first of many congressional appropriations was made in May of 1826 for harbor and channel improvements. This appropriation and subsequent Federal moneys were used for an expanding series of improvements to navigation that included an opening at Pinto Pass and the dredging of a channel through the Dog River bar. Following a final antebellum appropriation in 1857, a continuous channel 10 feet deep was maintained from the lower bay to the city (Bisbort 1957; Delaney 1981:89; U.S. Army Corps of Engineers 1915:1840-1841). The antebellum improvements made by the Federal government did much to improve navigation, but did not fully open the city docks to oceangoing vessels. These improvements did stimulate the commerce of the city of Mobile and contributed to the decline of Blakeley as a rival port (Mistovich and Knight 1983:19). A navigational improvement by private enterprise that stimulated trade through Mobile Bay was the opening of Grant's Pass in 1839 by a retired army engineer of that name. Located near two of the bay survey cells (Figure 2-12), the pass was created as a toll channel with a 6-foot deep cut at the southwestern corner of Mobile Bay, which provided a direct inland waterway connection between Mobile Bay and the city of New Orleans through the Mississippi Sound.

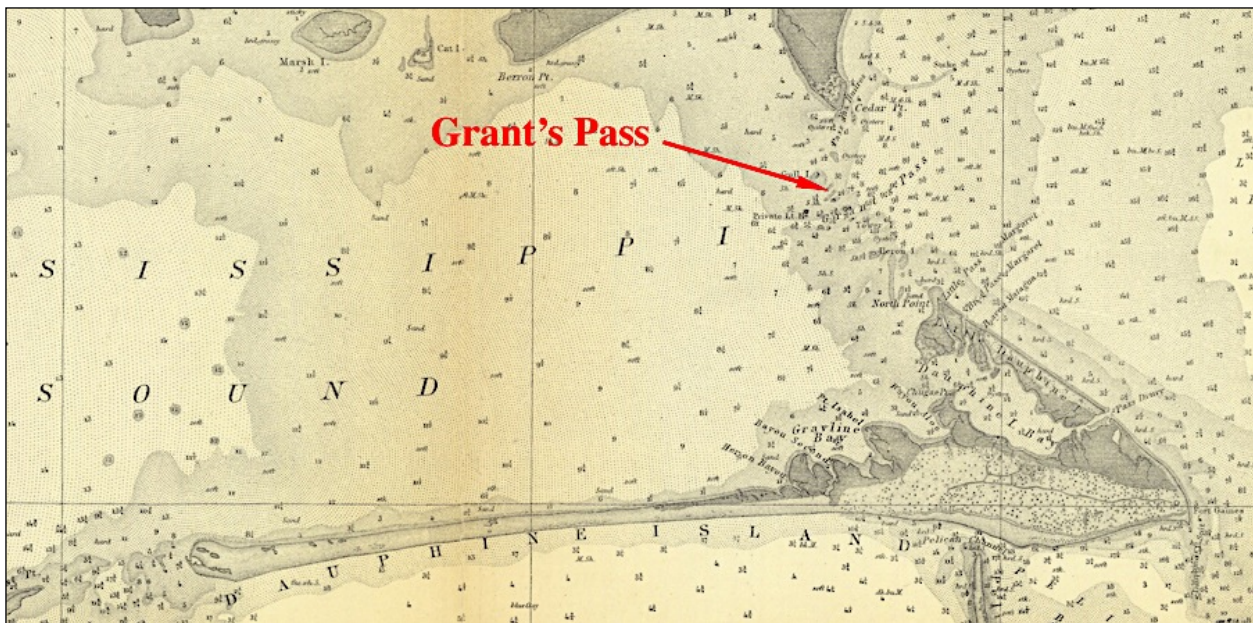


Figure 2-12. 1857 U.S. Coastal Survey Map showing Grant's Pass (National Oceanic and Atmospheric Administration Chart No. AR48-00-1857).

Fueling exports and imports through the Bay's entrance and hence through the Project Area, before the outbreak of the Civil War, perhaps as many as 100 steamboats were in operation at one time on Mobile's river system. The city itself had grown from a population of about 2,000 at the start of the American era to as many as 30,000 by 1860. Exports of pine lumber were in excess of 1,000,000 board feet in 1830 and grew to exceed 10,000,000 board feet annually in the 1850s (Reynolds 1868:7). Annual cotton exports increased dramatically in the Antebellum period. The total number of cotton bales exported in 1818 amounted to fewer than 10,000 bales, but by 1822 exceeded 45,000 bales. Cotton exports exceeded 100,000 bales by 1830 and 300,000 bales by 1840. During the last years before the war, cotton exports exceeded 500,000 bales annually (Reynolds 1868:7). By the start of the Civil War, Mobile had become second in importance only to New Orleans as a cotton shipping port on the Gulf of Mexico.

## CIVIL WAR

Following the secession of Alabama from the Union on 11 January 1861, the outbreak of the Civil War severely affected the maritime commerce of the port of Mobile. Commerce remained largely unchanged in the first few months of the war, but in April of 1861, Lincoln declared a naval blockade of the Confederacy to slow or stop both export of Confederate goods and import of materials that might aid the Confederate war effort. Union warships patrolled off the mouth of Mobile Bay in an increasingly effective effort to intercept, destroy, or deter vessels attempting to run the blockade from the city, which was one of the most advantageous Southern ports for the blockade-runners. Outbound blockade-runners carried valuable cargoes of cotton that provided the revenue to pay for medicines, munitions, and a multitude of other goods, including a considerable proportion of luxury goods, of which the South was in short supply. The goods were brought on inbound runs from Europe, the Bahamas, or Cuba. Following the 1862 capture of New Orleans and Pensacola, Mobile remained the only major port open to the Confederacy on the eastern Gulf Coast and became the focus of blockade running.

To secure the port and city, Confederate defenders established an extensive series of obstructions and fortifications and built up naval and land forces in an attempt to protect the city from Union assault. The protection of Mobile was given a high priority by the Confederate government and considerable expense and effort were devoted to that cause. The defensive preparations began with the strengthening of Fort Morgan and Fort Gaines on opposite sides of the entrance to Mobile Bay, as well as Fort Powell on the northern side of Grant's Pass. However, the fall of similar forts early in the war demonstrated that such masonry fortifications had been rendered obsolete by improvements in naval ordnance. In response, a series of earthen forts and gun batteries guarded an elaborate system of obstructions and explosive torpedoes to stop or delay the advance of Union naval forces. These defensive installations extended from the bay entrance up into the rivers of the Mobile Delta and were complemented by a similarly extensive series of fortifications built on both sides of the bay to defend the city from land assault. On the eastern side were earthworks at Spanish Fort on the Blakeley River and at the nearly deserted site of the former city of Blakeley, north of Spanish Fort on the Tensaw River.

These defenses proved to be an effective deterrent until the Battle of Mobile (5 August 1864). A Union fleet of 30 warships under the command of Admiral Farragut fought its way past Fort Morgan and through the torpedoes at the entrance to Mobile Bay (Figure 2-13). During the forced entry past Fort Morgan, the USS *Tecumseh*, a turreted ironclad, struck a torpedo and quickly sank with most of its officers and crew. After entering the bay, the Union fleet defeated the four Confederate warships that challenged it; though they lost the USS *Philippi*. Complete control of the lower bay was not achieved until combined naval and shore bombardment forced the surrender of Fort Morgan on 23 August.

Following the Union capture of the lower bay, the Confederate defenses in the upper Mobile Bay area remained stubbornly effective, slowing the Union advance against the city until the very end of the war. With the defenses on the western side of the city considered to be nearly impregnable to anything but an extended siege, Union strategy focused on an advance up the eastern shore for an eventual assault against Mobile through the rivers on which the Union had a significant advantage in vessels. A siege at Spanish Fort proceeded through naval and shore bombardments and preliminary assaults when defense of that position no longer seemed likely. The Confederate forces withdrew to the fort at Blakeley under cover of darkness. The last major battle of the Civil War was fought at Blakeley on 9 April 1865, when a vastly superior Union army overran the Confederate defenders only hours after Robert E. Lee had surrendered at Appomattox.



Figure 2-13. An illustrated map of the Battle of Mobile Bay, which largely occurred north of the Project Area (courtesy of the Library of Congress).

During the Union advances against Spanish Fort and Blakeley, Confederate torpedo warfare had considerable success at sinking Union vessels in the Blakeley River. Known today as mines, Confederate torpedoes were of two basic types, floating or fixed, and detonated either by contact or electrical charge. On 12 March 1862, the USS *Althea*, a small screw gunboat mounting one gun, was involved in torpedo removal operations near Battery Huger, on the point of land between the Apalachee and the Blakeley rivers, when a torpedo detonated under the port side behind the pilot house and quickly sank the 72-ton vessel (Perry 1965:184). On 29 March, the USS *Milwaukee*, a double-turreted 972-ton river ironclad, went up the Blakeley River to shell a Confederate transport and was sunk by a torpedo that exploded under the port side 40 feet from the stern (Perry 1965:185; Way 1983:401). On 1 April, the USS *Rodolph*, “a small, stern-wheeled, tinclad gunboat with six cannon, picked up a large load of salvage gear for the *Milwaukee* and towed it toward the hulls. She never completed her mission, however; at 2:40 that afternoon, midway between the *Chickasaw* and the *Winnebago*, a torpedo blew a ten-foot hole in her bottom. The *Rudolph* sank rapidly...” (Perry 1965:186; see also Sheliha 1971:276-277).

After the fall of the fort at Blakeley and the surrender of Lee in Virginia, Confederate forces withdrew from Mobile and scuttled their last two armored gunboats, the *Huntsville* and *Tuscaloosa*, in the Spanish River. On 12 April 1865 the war was essentially over and Union troops entered Mobile, accepting its surrender without firing a shot.

#### **FROM RECONSTRUCTION TO THE TWENTIETH CENTURY**

During the period of Reconstruction that followed the war, Mobile continued to be an important port city. Both the city itself as well as the interior of the state suffered considerably less damage than many other areas of the South. Shipping soon returned, for example, the important Mobile to New Orleans trade through Mississippi Sound, which was re-opened by the Morgan line in mid-1865 and had at least three vessels in operation on that route by 1866 (Pearson et al. 1994:5.54-55). There was, however, a general decline in the commercial traffic of the port in comparison to the pre-war era due, in part, to war efforts that left the entire Bay area less accessible to commercial navigation. The extensive series of obstructions that had been established in order to prevent the passage of warships was still in place, and shoaling had built up during the war years. To deal with these and other problems facing the port, the Mobile Board of Trade was organized in 1868 (Hamilton 1913:376-377). Following an unsuccessful plan to improve the channel below Mobile through the use of jetties, the USACE began a program of dredging that has continued harbor improvement to the present.

In 1870, the renewed Federal program of harbor improvements was initiated, and by 1876 the channel from the Gulf to Mobile was increased from 10 to 13 feet in depth, with a width of 200 feet through the Dog River Bar. Between 1878 and 1886 appropriations were made for the creation of a channel 17 feet deep, and in the year 1888, the first oceangoing steamship docked at Mobile (Summersell 1949:48-49). The depth of the channel was increased again to 23 feet by the River and Harbor Acts of 1888 through 1897, which also provided for the upriver extension of the shipping channel to Chickasaw Creek above Mobile (U.S. Army Corps of Engineers 1915:1840-1841). By the late 1930s, channel depths had been increased to 30 feet or more. Between 1936 and 1940, the Gulf Intracoastal Water Way (GIWW) was opened by the USACE, allowing barge and increased vessel traffic between Gulf Coast ports (Mistovich and Knight 1983:21-22).

Following the Civil War, there was a considerable increase in vessel traffic on the waters of the Mobile area, particularly by local steamers and small boats involved in transportation and the collection of seafood. The development of resorts and summer homes on the eastern shore led to a number of cross-bay ferries and excursion steamers that became a major part of life for the people of Mobile and the Mobile Bay area.

Local lighthouses included light on San Island, Dog Ricer-Bar, Choctaw Pass, Battery Gladden, and Mobile Point at Fort Morgan (Sweetser 1891). Point Clear offered a saltwater summer resort community for residents of New Orleans, Mobile, and other areas of the Cotton Belt. Large-scale resort hotels such as the Hotel Joullian, Villa Alba, and the Rolston Hotel were constructed along Portersville Bay. By 1909, the dirt road from Mobile down the Bay Shore had been improved for automobile use—possibly, with shell dredged from middens. During the winter season, Coden and other areas in the Gulf Coast offered hunting. The streams, bays, and inlets of the area served as winter nesting grounds for wild ducks and other waterfowl, and in the uplands quail and dove shooting was ample. In less populated areas, deer hunting was available, as well as limited access to bear.

The bay ferries and excursion boats, known locally as “bay boats,” that serviced many of these communities developed a substantial and regular service until a rapid decline following the opening of Cochrane Bridge across the lower Mobile River Delta in 1927 (Anthony 1991:part 4). At the same time cross-bay traffic was developing, private yachts and sailing clubs were being introduced to the bay area, which continue to exist there today. Access to Dauphin Island was granted to small vessels only through a shallow passage between Dauphin and Petit Bois islands (U.S. Hydrographic Office 1902:114). The bay waters also saw the development of a seafood industry involved in fishing, oystering, and shrimping. By the early-twentieth century, substantial fleets of locally built small schooners and sloops were active on the bay. In the off seasons, these vessels were commonly involved in charter service and transporting farm produce and timber (Mistovich and Knight 1983:22).

The local shallow bay waters were renowned for its oyster beds, where there was no closed season (Holt 1909:1). The Portersville, Mobile, and Montgomery stage line connected steamboats from New Orleans with Bayou La Batre (Longiaru and Griffin 2005). Oystering developed into an export industry and thrived until the early twentieth century, when siltation brought about a decline in the oyster population. It was, however, also early in this century that the development of the otter trawl brought about the shrimping industry that continues to work out of Mobile Bay area today; especially out of Bayou La Batre, which has become one of the nation’s largest commercial fishing ports.

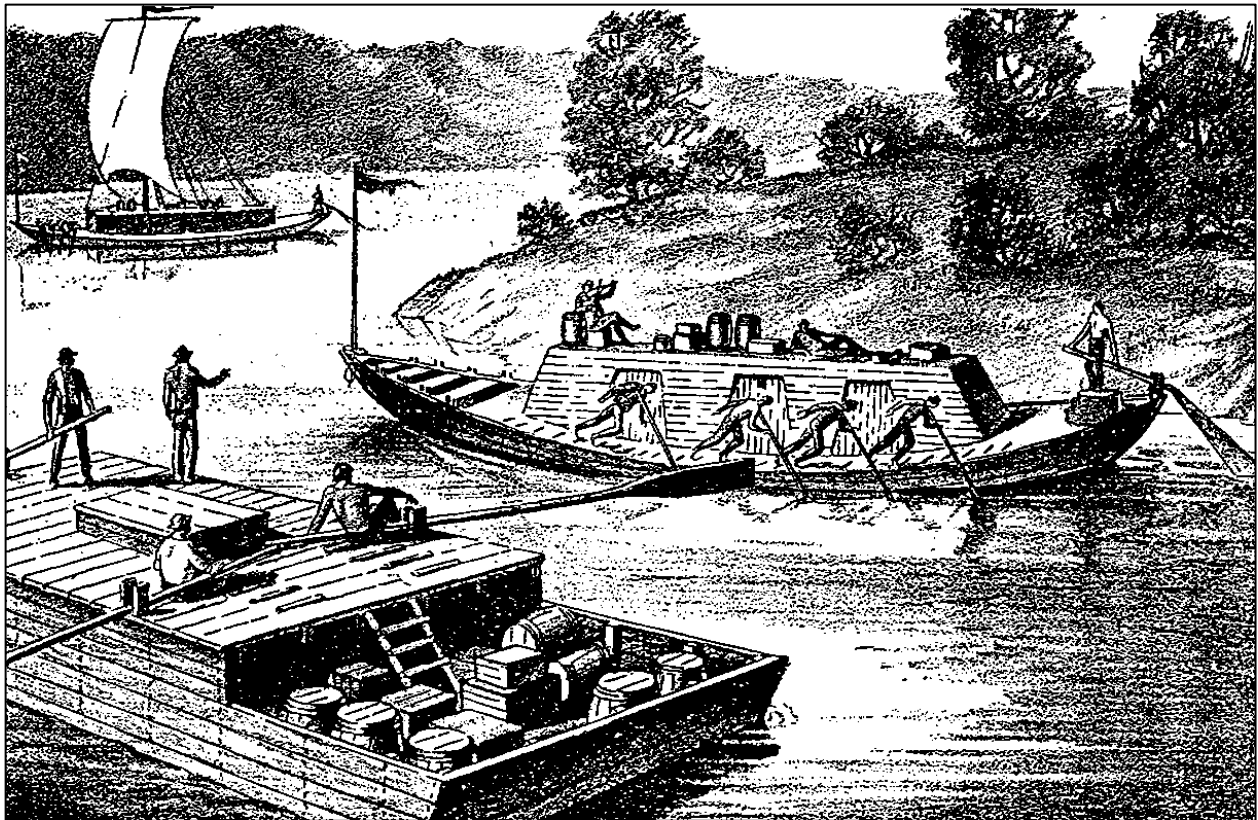
Cotton and timber steadily declined as maritime exports from Mobile, largely due to the regional development of railroads, which soon made connections with the rest of the country. By the 1880s, the coal, iron, and steel industries of Birmingham were contributing to national and international trade through the port. Barge traffic in these commodities had been made possible by a series of locks and dams that extended the navigable waters beyond the shallows and rapids that had previously set the upriver limit of vessel traffic directly connecting with Mobile Bay. Additional commercial growth influencing maritime traffic in the region during the twentieth century included wood products, shipbuilding, and the seafood industry. Shipbuilding, in particular, reached significant proportions during both World War I (WWI) and World War II (WWII). Steady improvements in the economy of the area during the twentieth century were matched by upgrades in harbor facilities and increases in vessel traffic.

### ***VESSEL TYPE POTENTIAL FOR THE AREA***

With the advent of the Colonial era, the maritime character of the area witnessed an increasing influx of watercraft types and numbers. Vessel types present during the Colonial era were all powered by sail and/or current, and included small coastal merchant vessels rigged as sloops and schooners, large merchantmen and warships, small local fishing craft, and early river craft, which brought commodities to Mobile. During the nineteenth and early-twentieth centuries other vessel types emerged in use in the area including: river and coastal steamers; sailing craft such as lugers, sloops, schooners, ships, and barks; unpowered river craft of the flatboat family;

Civil War vessels such as monitors and rams; small vernacular craft and fishing vessels such as bateaux, oyster boats, and bay shrimpers; and harbor craft like steam tugs and barges also traversed these waters.

Before the introduction of steam, the bulk of farm products from the interior were shipped downriver on rivercraft of the flatboat family. Often referred to as “flats,” “family boats,” “New Orleans,” “Orleans boats,” “arks,” “Kentucky boats,” and “tobacco boats,” flatboats were used to transport settlers, household goods, and livestock downriver to market (Figure 2-14). In addition, they were used to transport various types of cargo, including cotton, flour, bacon, whiskey, cider, pottery, and the like. When the cargo was sold, the flatboats were either sold for lumber or abandoned, and their owners would return home (Baldwin 1941).



**Figure 2-14.** River scene showing a flatboat and two keelboats (as presented in Baldwin 1941:43).

The historic steamboat was one of the most prominent vessel types employed throughout the region. There were essentially two types of steamboats employed in the area: the shallow-draft western rivers sidewheelers and sternwheelers; and the deeper draft eastern seaboard sidewheelers (Figure 2-15). These eastern seaboard designs had long, narrow, heavily framed, flat-bottomed hulls, and were not adapted to the western rivers’ low water depth. Engines, furnaces, and boilers were placed within the hull of these vessels along with the cargo. The most common engine type employed on eastern steamers was a centrally located, low-pressure, walking beam engine.

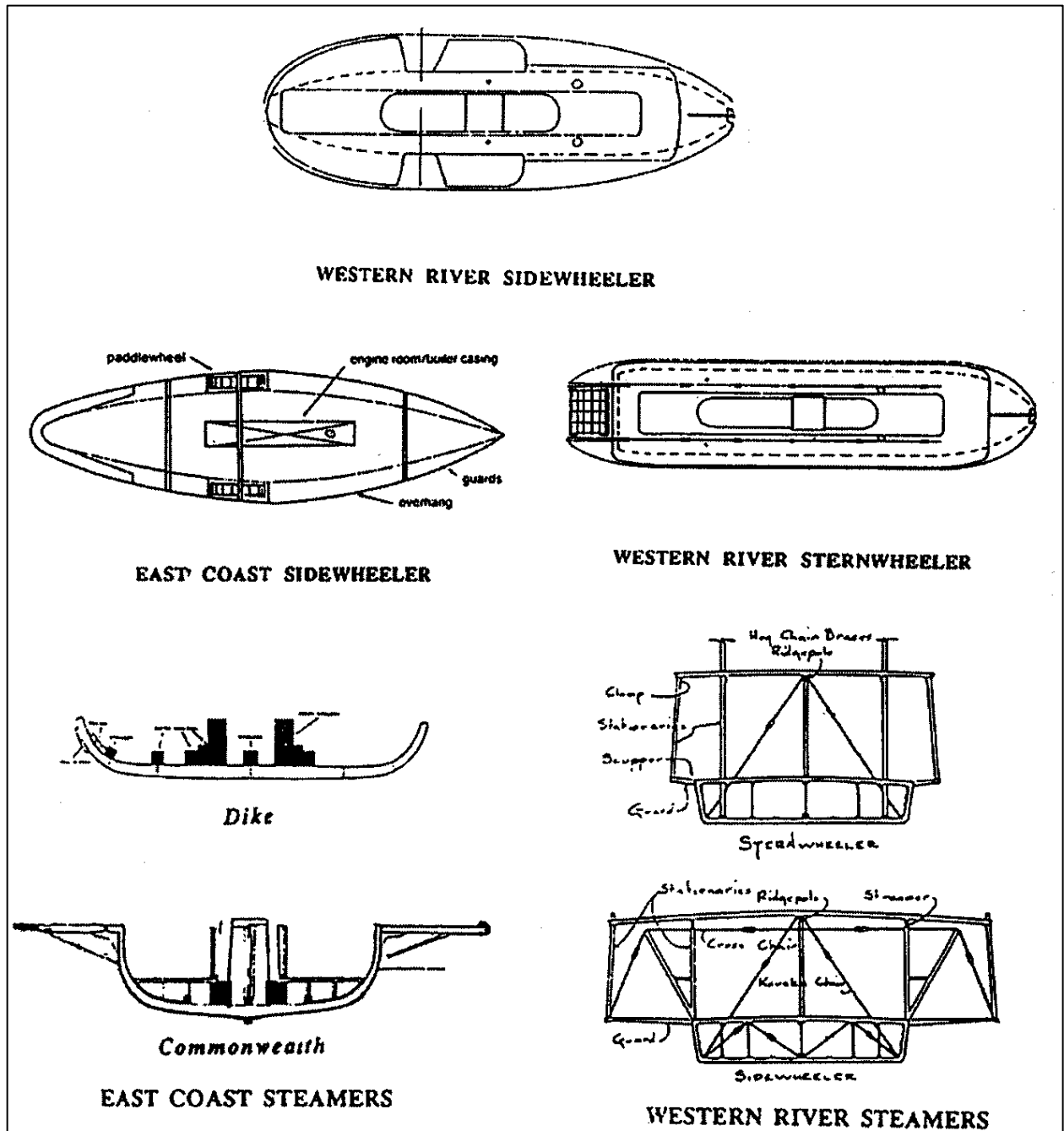


Figure 2-15. Comparison of hull shapes (top) and hull cross sections (bottom) of eastern seaboard and western river steamboats (as presented in Pearson et al. 1993).

The eastern-built, coastal sidewheelers were well represented in the Gulf Coast area, serving as passenger and freight carriers, bay ferries and pleasure cruise boats. Steamers like the *Louis D'Olive*, built in Wilmington, Delaware, plied the waters of Mobile Bay (Figure 2-16). Steamers like the *Mary*, a 234-foot iron-hulled sidewheeler, also built at Wilmington, along with the *Alabama*, the *Francis*, and the *Louise*, were part of the Charles Morgan fleet of coastal vessels that operated in the Mobile–New Orleans trade (Pearson et al. 1994).

Though less romanticized than the steamboats that plied the bay and rivers, one of the most prolific classes of vessels found in the area's waters were schooners. These included large blue-water schooners, coastal schooners, and locally built fishing schooners. Figure 2-17 shows a three-masted lumber schooner with a full cargo shortly after the turn of the century. These large schooners played a significant role in the local economy, as lumber and lumber products such as staves and shingles were one of the main exports from the area.

Another type of schooner used in the area was the light-drafted coasting schooner. Flat-bottomed with a centerboard, it was designed to operate in the shoal water situations prevalent along the Gulf Coast waters and bays. Figure 2-18, a plan of the Bethune Blackwater Schooner, is representative of this now-extinct type. Archaeologically documented in the Blackwater River near Pensacola Bay, Florida, the Bethune Schooner was involved in the lumber and brick industry that flourished in Pensacola. The vessel may even have frequented Mobile Bay, as large amounts of the lumber and bricks from the Pensacola Bay area were transported to Mobile for transshipment (Baumer 1990).

Besides the vessels employed to carry the products of the major industries in the Mobile area, there were a number of utility vessels that were used in day to day activities, including tugboats, pilot boats, river and sound freighters, sloops, catboats, launches, skiffs, and dugouts.

Typical of the tugboat style, the iron-hulled *Leo* was built in 1882, in Philadelphia. It was a steam-powered, single screw vessel 83 feet in length, 19 feet in beam, and 7 feet deep from deck to keel (U.S. Bureau of Customs 1889:306). It followed the typical tugboat morphology, with a forward wheelhouse, and center engine room and stack. A locally constructed tugboat, the *Eva*, was similar in construction, with a 56-foot length, 16-foot beam, and 4.5 feet from deck to keel.

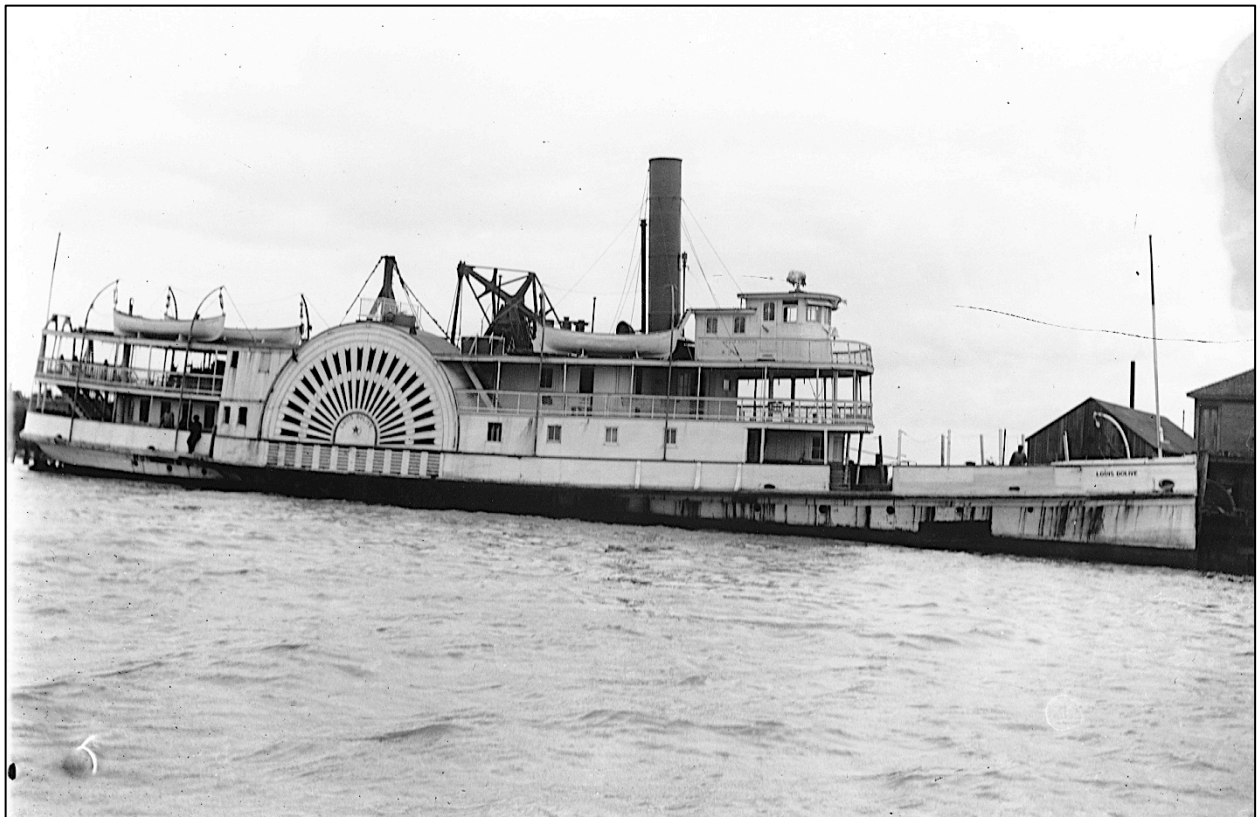


Figure 2-16. Steamboat *Louis D'Olive*, an eastern seaboard-type sidewheeler, built in 1861 (courtesy of the Overbey Collection, University of South Alabama Archives).

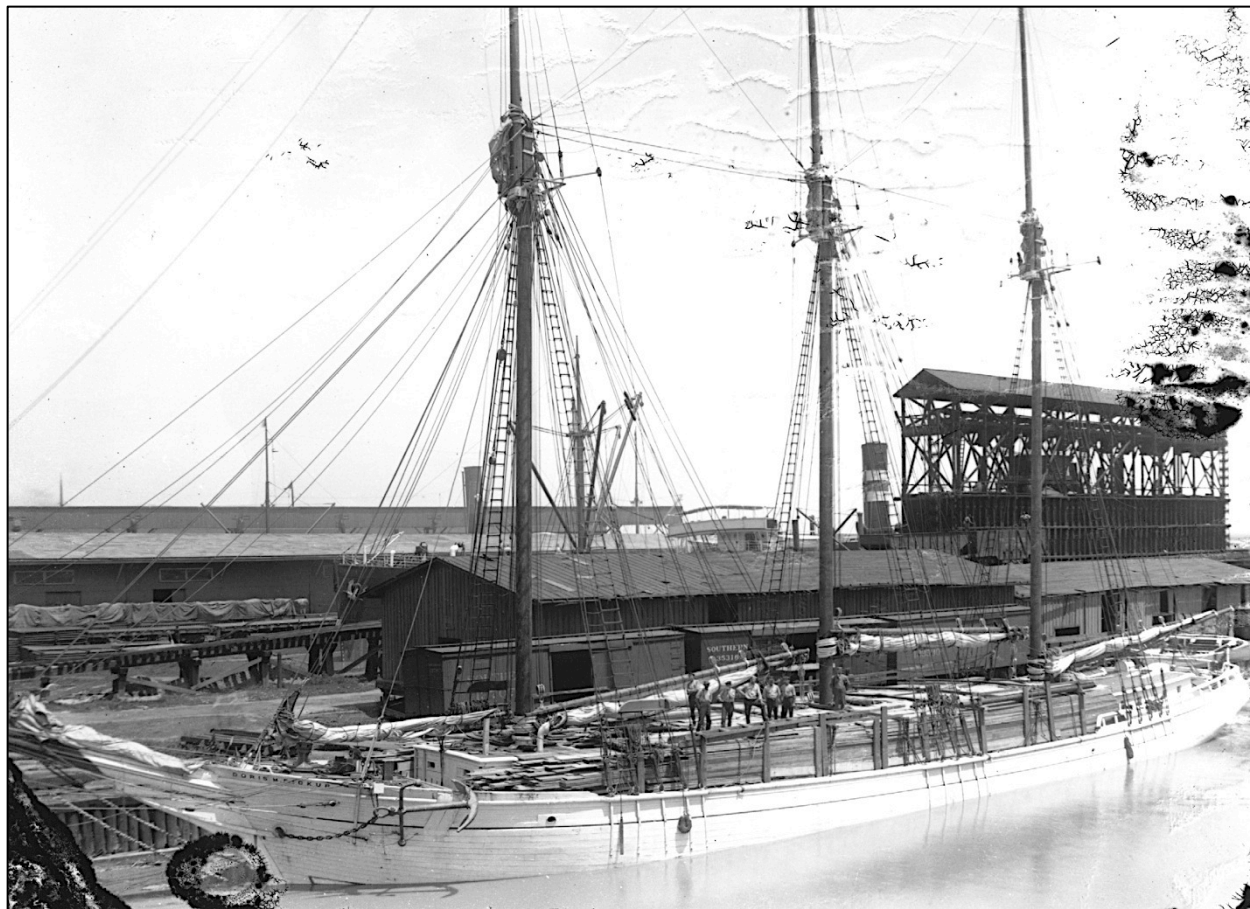


Figure 2-17. A triple-masted lumber schooner fully loaded at Mobile Bay (courtesy of the Overbey Collection, University of South Alabama Archives).

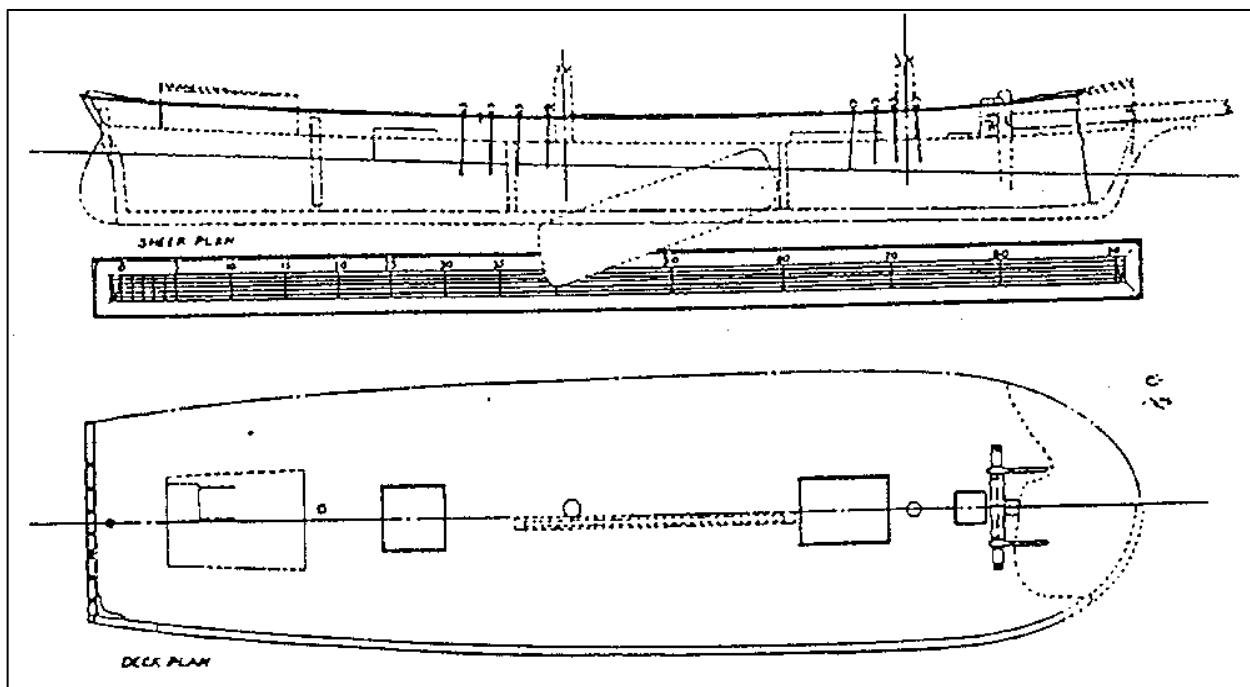


Figure 2-18. The double-masted Bethune Blackwater Schooner (as presented in Baumer 1990).

Sailboats, usually sloop- or cat-rigged, used both for work and recreation, were built and used in many areas of the Gulf Coast. The cat-rigged sailboat was popular around the turn of the century for use in organized sailing races. It has since faded from popularity, and the sloop-rigged sailboat is now the popular choice of small recreational sailboats.

Two types of small vessels were used all over the Gulf Coast area for fishing, recreation, and the short-distance transportation of people and goods. Small, engine-powered launches, like the one pictured in Figure 2-19, were a common means of over-water transportation in the late nineteenth and early twentieth centuries. Most were around 35 feet in length with a narrow hull and a canvas or wooden canopy. Small, oar-powered skiffs, which were sometimes rigged with a sail, were often used in the same manner.



**Figure 2-19. Early twentieth-century small vernacular craft in the Mobile Bay area (courtesy of the University of South Alabama Archives).**

In 1937, offshore shrimp grounds were discovered and vessels called “shrimp trawlers” began to be fabricated. Initially built of wood, after 1945 the trawlers were made of steel. In the late 1930s, Florida fishermen:

“...introduced the “South Atlantic Trawler” when the potential for offshore shrimping in the Gulf was discovered. Begun as a variation of a powered vessel originally derived from the design of Greek sponge boats used on the west coast of Florida, the South Atlantic Shrimp trawler generally measured between 50 and 65 ft. long. The shrimp boat reached its present characteristic form and style in the very short period of time between the end of World War II and about 1950. Possibly as a result of the need for maximum rear deck working space, it was among the first powered fishing craft to have a forward-located pilot house. The hull, however, retained characteristics of the old Greek sponge boats with its full body, sweeping sheer line, and fine entrance” [Pearson et al. 1993:114].

The small versions of shrimp trawlers, commonly called “bay shrimpers” or “shrimp boats,” can still be found fishing the bay in and adjacent to the Project Area. Generally these vessels, because of their relatively recent age, would not be considered historically significant if their remains were

encountered in the Project Area. However, the earliest examples of this vessel type might be considered significant relative to NRHP criteria, based on their evolving, yet distinctive, construction characteristics (Figure 2-20).

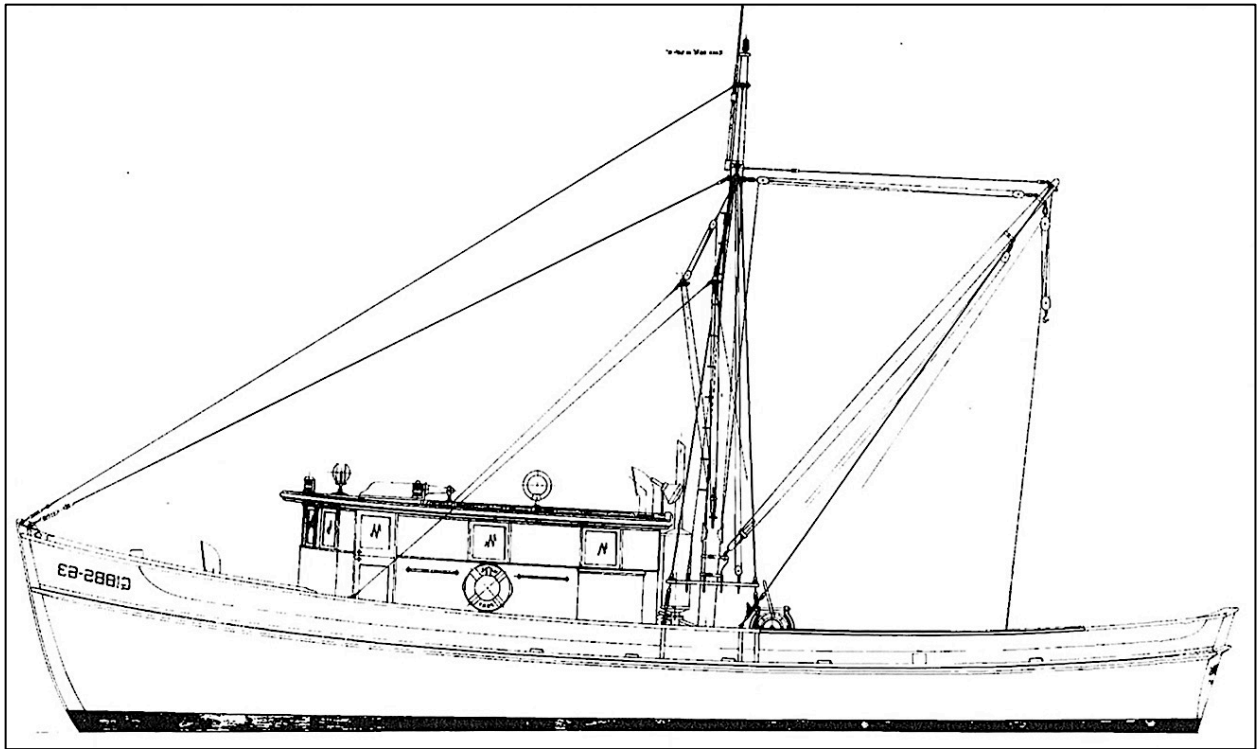


Figure 2-20. Profile of a Greek-type shrimper of the late 1920's and 1930s (as presented in Fleetwood 1995:199).

### ***PREVIOUS INVESTIGATIONS AND HISTORIC SITES INVENTORY***

One of the best tools for accurately assessing the potential for unknown submerged cultural resources is to compare the Project Area with findings and results of previous investigations, including both remote sensing and cultural resources surveys that have been completed in or near the Project Area. Varying in degree of applicability to the current research, these studies allow for the identification of potentially significant resources, and the studies aid in the recognition of specific problems or aspects inherent in the assessment of the present survey data and in the identification of potential resources. While several of the studies have been conducted for the USACE, Mobile District (see Irion 1985, 1986; Irion and Bond 1983; Lydecker 2001), the majority of the previous investigations have been conducted for various permitted projects that trigger the Section 106 process (see James 2014; James and Faught 2007). Copies of these studies, conducted for the Oil and Gas industries, beach renourishment, and island or wildlife area restoration, etc.; however, are not centralized or easily obtained (i.e., are not present at Alabama State Site Files at Moundville).

In addition to reviewing previous investigations, in order to ascertain the presence of submerged archaeological sites and investigations in or adjacent to the Project Area, the Alabama State Site Files (ASSF) at Moundville was queried for archaeological sites within the immediate Project Area. No submerged site with a state trinomial is known to be within or adjacent to the Project Area.

Perhaps the earliest submerged archaeological work in Mobile Bay was implemented by the USACE, Mobile District in the early 1980s. Conducted by OSM Archaeological Consultants, the remote sensing survey identified seven potentially significant anomalies in Upper Mobile Bay in an area scheduled for construction of a turning basin. Several anomalies were identified as potentially significant in the Lower Bay in a proposed transshipment facility and channel location (Mistovich and Knight 1983). Subsequent investigation of the 12 potentially significant anomalies was performed by underwater archaeologists with Espey, Huston & Associates of Austin, Texas (now The Atkins Group). Five of the 12 anomalies were located near the western end of the current Main Disposal Area at and east of the entrance channel to the Bay. While these were all non-significant, one of the Upper Bay anomalies, TB-4-3, was identified as a possible brick-laden vessel in the Confederate defensive harbor obstructions, put in place by Confederate Army Corps of Engineers. Identified as the potential remains of either the *Cremona* or the *Carondelet*, both steamboats, it was recommended for further investigation (Irion and Bond 1984). The Phase II investigation of the TB-4-3 anomaly/wreck site was conducted in 1984 and concluded that the brick-filled vessel was the remains of the sternwheeler steamboat *Cremona*, one of many vessels that were sunk as the northern obstruction to the entrance channel to the City of Mobile. Known as the “Confederate Obstructions” and given the state trinomial of 1MB28, it was thought that a brick-filled flat was located just north of the *Cremona* and the remains of the brick-filled sidewheeler, the *Carondelet*, were located just to the south (Irion 1985).

Espey, Huston & Associates’ archaeologists returned in 1985 to test 22 additional magnetic anomalies as well as conduct further assessment of the Confederate Obstructions (1MB28). The latter task was to survey and accurately delineate the number and location of vessels within the obstruction, one of which was the unfinished iron clad-ram CSS *Phoenix* (Irion 1986).

At the entrance to Mobile Bay, East Carolina University conducted an investigation and assessment of Civil War shipwrecks off Fort Morgan under a National Park Service American Battlefield Protection Program grant (Watts et. al. 1998). They looked at the *Tecumsah*, USS *Phillipi*, and CSS *Gaines*, all having been sunk during the Battle of Mobile and all being near the bay’s entrance, but south of the western end of the Main Disposal Areas. Additionally, Florida State University Master’s student, Shea McLean, performed a search for the 1725 wreck of the *Bellone* (Greg Waselkov, personal communication 2015). The 370-ton pinnacle (cutter) was reported sunk off Dauphin Island while at anchor in calm weather (Krivor et al. 2011). McLean’s survey for the *Bellone* did not identify the vessel’s location.

Several other smaller surveys have been conducted over the years such as: a survey of two borrow sites offshore of Dauphin Island (Watts 2014); and the identification of magnetic targets in Dog River (Lydecker 2001). Though illustrating that work has been conducted in Mobile Bay, they are too far afield to have direct relevance to the current undertaking.

There have also been at least three submerged cultural resources surveys in the general vicinity of the western end of the Optional Disposal Areas conducted by Panamerican. An early study was the intensive remote-sensing survey of a construction corridor for a proposed out-flow pipe for a wastewater treatment plant on the bay side of the Bayou La Batre, coming out in Portersville Bay in 2007. Performed under contract to Goodwyn Mills Cawood, Inc., of Montgomery, Alabama, the remote-sensing survey recorded 26 magnetic anomalies in the project corridor (James and Faught 2007). Based on signal characteristics, these anomalies appeared to be generated from multiple single-point sources and were not considered to have the potential to represent significant cultural resources.

In the summer of 2014, Panamerican examined the proposed Marsh Island Restoration project area for Portersville Bay, just north of the western end of the Optional Disposal Areas (James 2014). Twelve magnetic anomalies were recorded with an anomaly cluster at the northeastern

end of the Marsh Island survey corridor recommended as potentially significant. Earlier in 2009, Panamerican conducted a similar remote-sensing survey of a proposed fish and shellfish habitat project just to the west of the Bayou La Batre Channel and just south of Little Bay (James and Faught 2009). Performed under contract to Volkert Environmental Group, Inc. of Mobile, Alabama for the Alabama Department of Conservation and Natural Resources Post-Katrina Shellfish & Fish Recovery Project, the survey was negative for the presence of submerged cultural resources.

In 2015, Panamerican focused on the maritime disposal areas of the GIWW in the southern portion of Mobile Bay, north of the current Project Areas (James et al. 2015). Two groups of GIWW Disposal Areas were comprised of the Main Disposal Area located to the east of the entrance channel into Mobile Bay and just north of the Fort Morgan Peninsula. In total, 351 survey line miles were examined using a magnetometer, sidescan, and subbottom profiler. A number of anomalies were recorded with none affecting the current Project Area.

Most relevant to the current Project Areas was Panamerican’s 2017 intensive cultural resources remote-sensing survey of seven proposed artificial reef sites in the Gulf of Mexico, south of Mobile Bay (Wilson et. al 2017). Specifically, the sites were located approximately 9 miles offshore (Figure 2-21), two of which were located to the southwest of the bay’s entrance (Areas W1 and M1) and five located to the southeast of the entrance (Areas E1 to E5). Performed under contract to Gustin, Cothorn & Tucker, Inc. of Niceville, Florida, the investigation was conducted for the Alabama Marine Resources Division of the Alabama Department of Conservation and Natural Resources (ADCNR). The investigation, which was designed to determine the presence or absence of targets within the survey area that might represent potentially significant cultural resources in the form of shipwrecks or submerged prehistoric sites, was comprised of a site file check, archival research, and an intensive remote-sensing survey of the Project Area. Remote-sensing equipment employed during the survey included a magnetometer, a sidescan sonar, a subbottom profiler system, and a Differential Global Positioning System (DGPS).

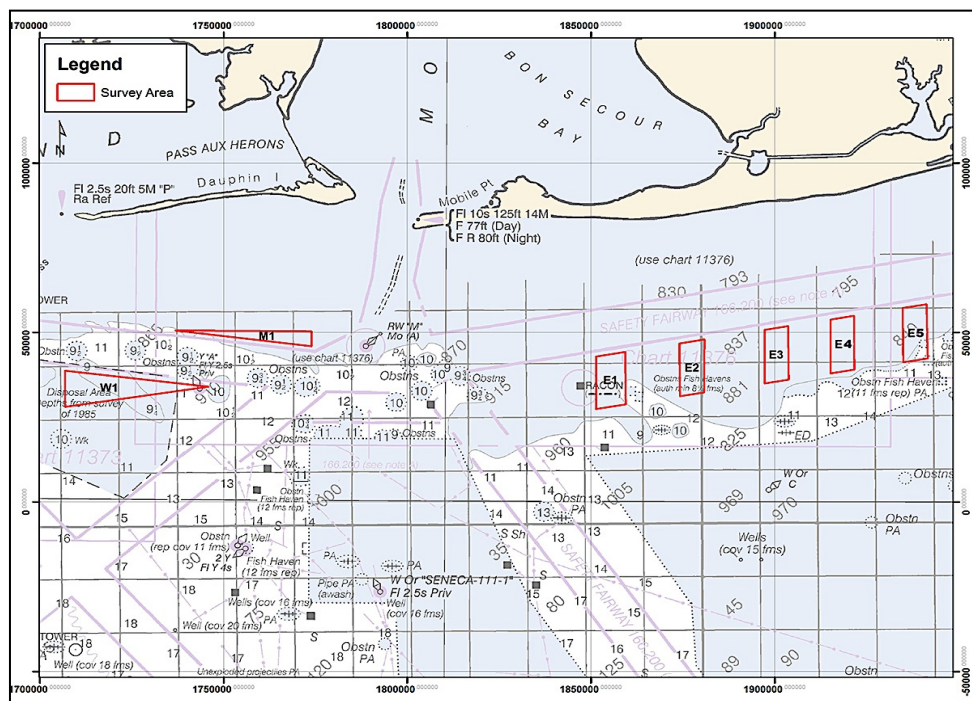


Figure 2-21. Location of the 2017 remote sensing survey of the 9-mile Artificial Reef Project Area offshore of Mobile, Alabama (as presented in Wilson et al. 2017:1).

During the remote-sensing survey, 383 magnetic anomalies, 128 sidescan sonar images, and several subbottom features were recorded in the survey areas. The 128 sonar contacts and the subbottom features were considered nonsignificant for the potential for cultural resources sites. Analysis of the magnetic data resulted in the identification of a single cluster comprised of four magnetic anomalies that lacked any acoustic image. Because of the large size of the anomalies, and the fact that the sources remain unknown, the anomalies were considered potentially significant, and therefore recommended for avoidance or further investigation. Because the cluster was situated in the northeastern corner of Area E3 (Figure 2-22), archaeologist's recommended 1,000-foot diameter avoidance area centered on X-1902608.3, Y-49063.5. If it could not be avoided, the source for the anomalies was to be investigated by archaeological divers under an approved research design. Figure 2-23 shows a comparison of the 9-mile Artificial Reef Area with the current offshore Project Areas.

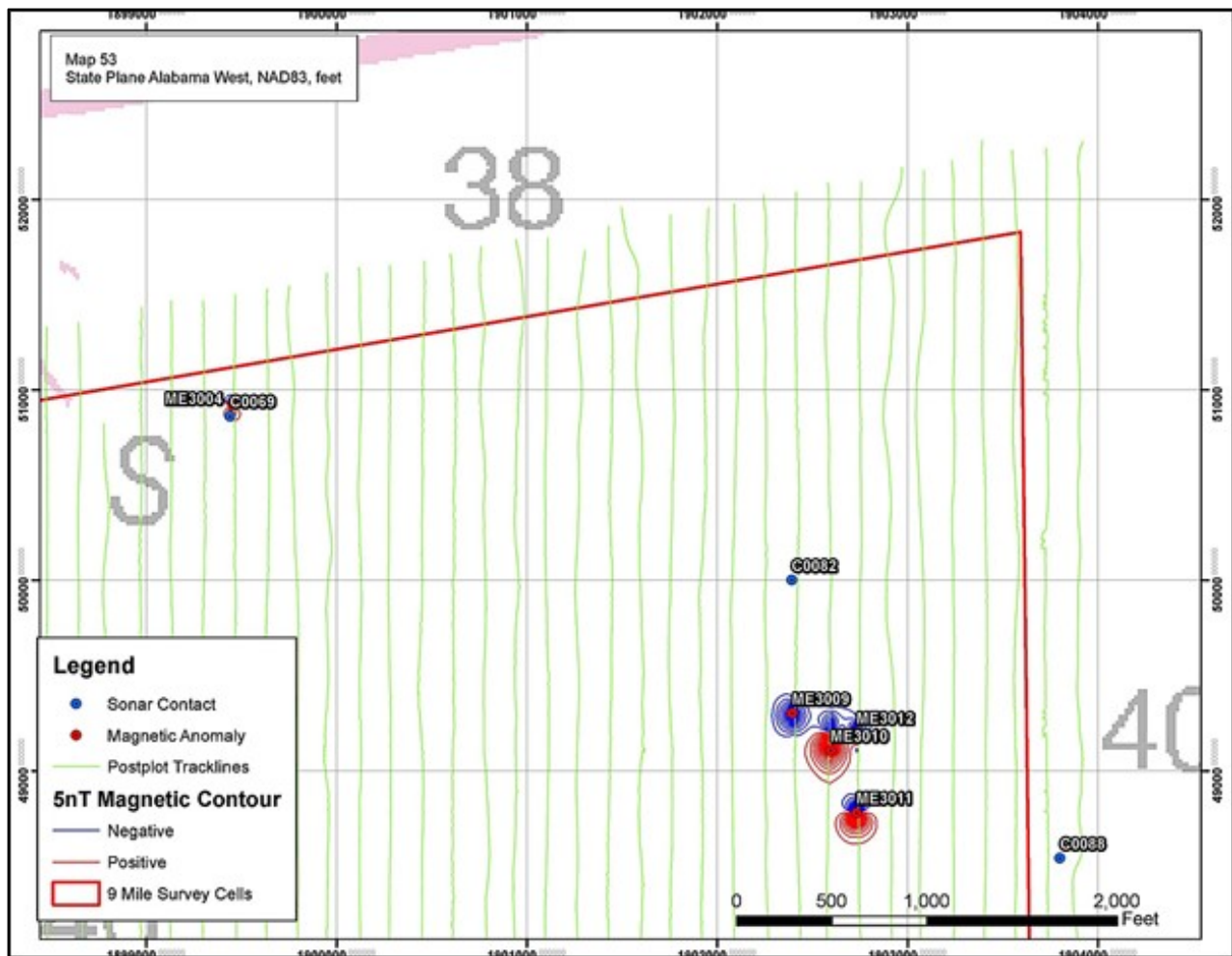
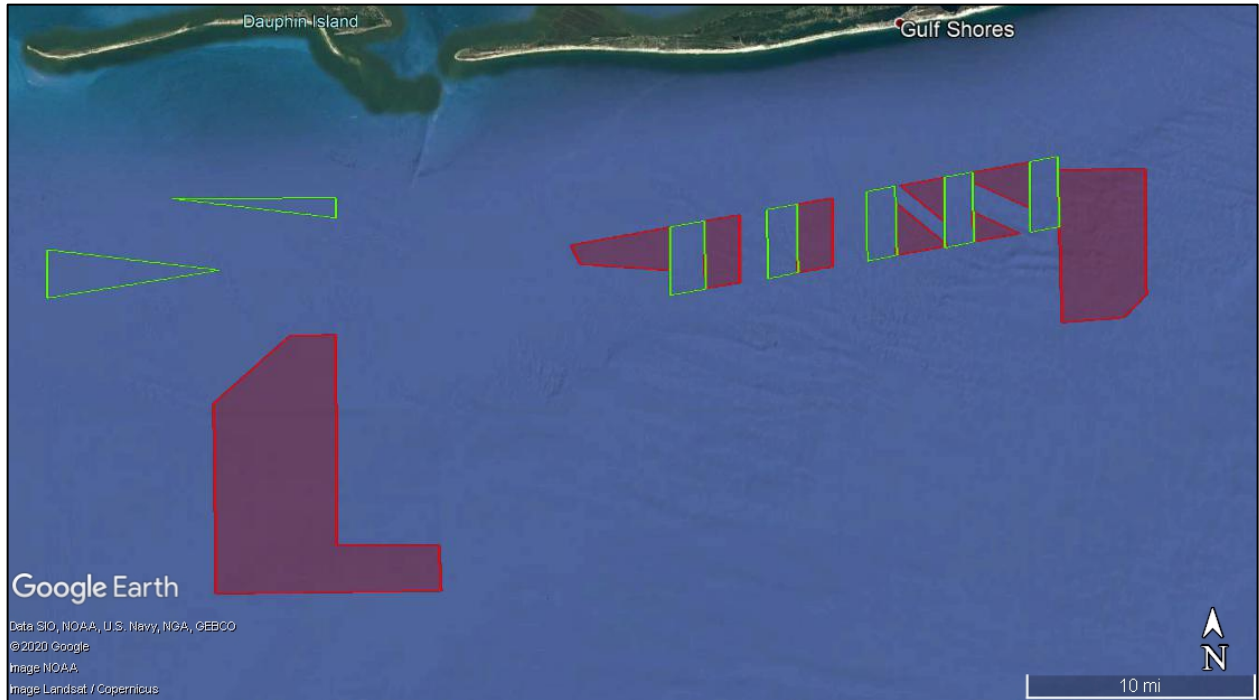


Figure 2-22. Potentially significant anomaly cluster identified within the northeastern corner of the E3 Survey Area in Panamerican's 2017 9-Mile Artificial Reef Survey (as presented in Wilson et al. 2017).



**Figure 2-23. Google Earth image showing the 9-Mile Artificial Reef 2017 survey areas (green outline) compared to the current offshore Project Areas (red outline).**

Another project relevant to the current undertaking was the identification of areas for priority water bottoms in the Mobile Bay area of Alabama by the Mobile Bay National Estuary Program. As shown in Figure 2-24, the project area consisted of a strip of bay waters from shore extending out to a distance of 1,800 feet in Mobile Bay and portions of the shoreline in Mississippi Sound in Mobile and Baldwin Counties. In order to comply with the Mobile Bay National Estuary Program’s responsibilities towards cultural resources Panamerican was contracted to conduct a comprehensive remote sensing survey of the priority water bottoms (James et al. 2018). The 5 month-long survey of approximately 3,000 survey line miles was conducted between mid-March and mid-August, 2018. Comprised of a magnetometer, sidescan sonar, and a subbottom profiler survey, a total of 8,899 anomalies and 443 acoustic contacts, were recorded during the current survey. Comprehensive analysis of data identified 17 targets that represent significant wreck sites like the USS *Tecumseh* and CSS *Gaines*, wreck sites as yet unidentified like the lower hulls of wooden sailing vessels, and anomalies and sonar contacts that may represent potentially significant cultural resources but remain unknown. Additionally, there was one subbottom feature that should be considered to have the potential to contain prehistoric remains. These significant and potentially significant targets were recommended for avoidance.

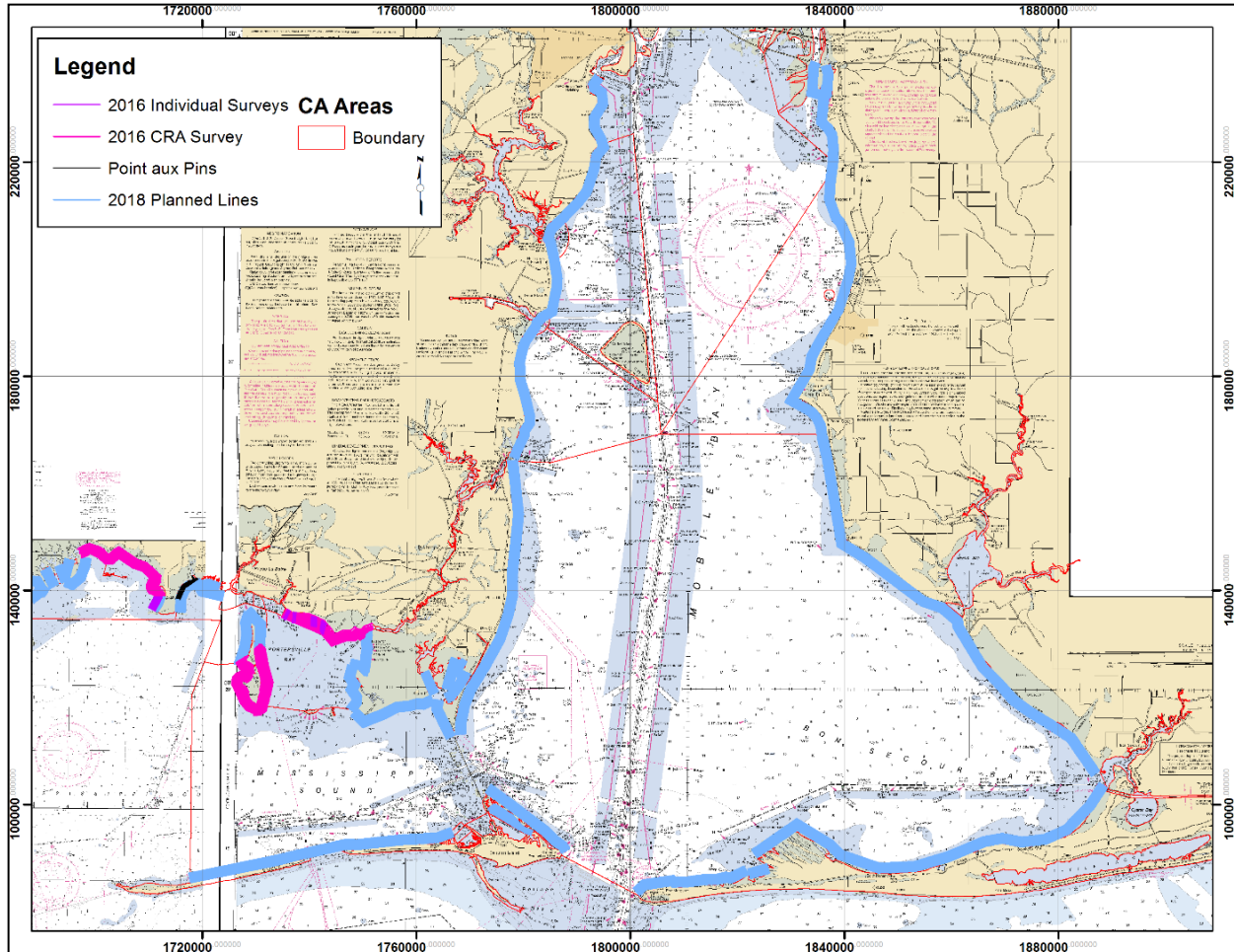


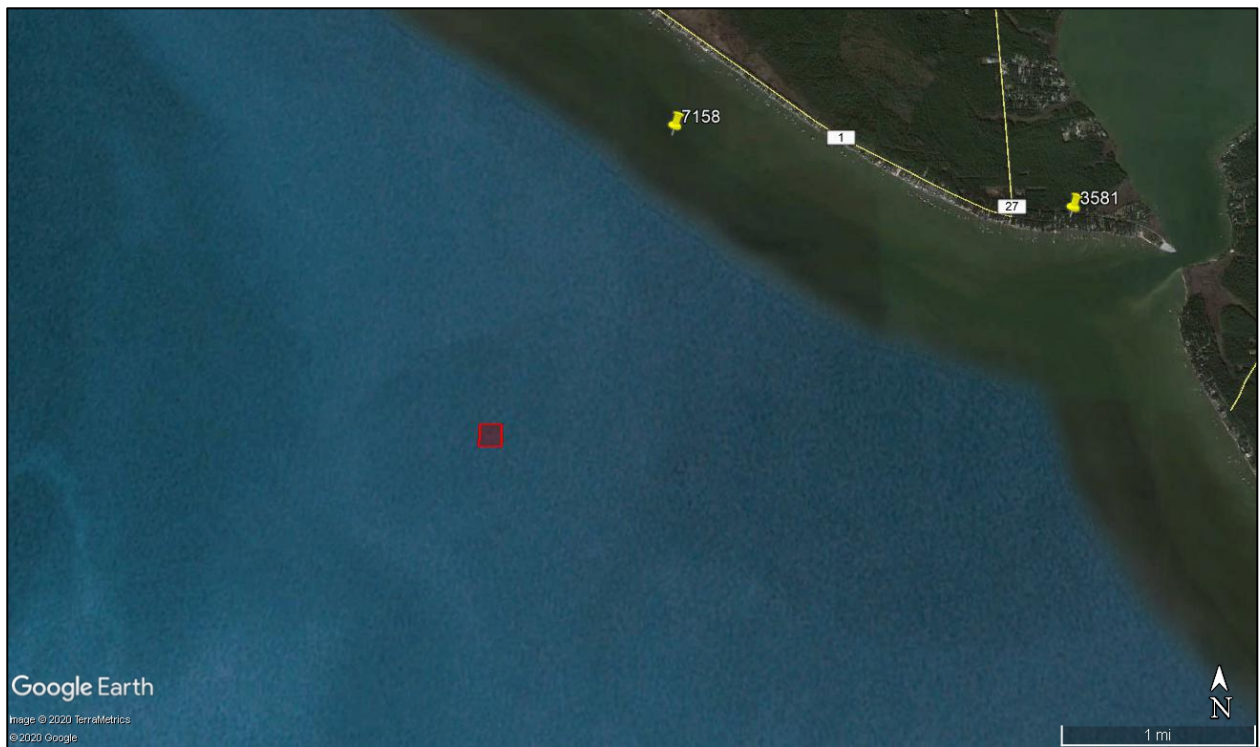
Figure 2-24. Mobile Bay National Estuary Program’s 2018 assessment survey focused on the priority water bottoms. A strip of bay waters (blue) from shore extending out to a distance of 1,800 feet, consisted of the shoreline area in Mobile Bay and portions of the shoreline in Mississippi Sound in Mobile and Baldwin Counties (as presented in James et al 2018:1).

### ***AUTOMATED WRECK AND OBSTRUCTION INFORMATION SYSTEM AND DOCUMENTED VESSEL LOSSES***

To aid in the determination of the potential for shipwrecks within the Project Area the Automated Wreck and Obstruction Information System (AWOIS) list was reviewed. The current online edition of the National Oceanic and Atmospheric Administration’s (NOAA’s) AWOIS list was consulted relative to known wreck sites or obstructions within or near the Project Area. The AWOIS database contains information on over 10,000 wreck sites and obstructions/hangs in the coastal waters of the U.S. Information within the database includes latitude and longitude of each feature along with any known historic and/or descriptive details. The website allows researchers to simply type in either a known chart number or Latitude/Longitude coordinates to receive a list of all reported hangs, obstructions, and wrecks within a given area.

Listed in Tables 2-03 and 2-05, and illustrated in Figures 2-25 through 2-31, the review of the AWOIS records revealed several wrecks and obstructions recorded in and nearby the inshore and offshore Project Areas; however, it must be stated that position accuracy of AWOIS wrecks and/or obstructions is highly variable and usually poor. It also appears the AWOIS program routinely includes wrecks, obstruction, and unknowns located outside the prescribed coordinates or chart.

In the north end of Mobile Bay, four inshore areas were examined measuring approximately 600 feet square: Bon Secour Reef, Dog River Reef, Wellhead Reef, and Ghost Rig Reef. AWOIS data does not identify the areas containing obstructions or wrecks, however others are found nearby. Figures 2-25 through 2-27, along with Table 2-02, show the known AWOIS wrecks and obstructions immediate to the targets.



**Figure 2-25. Automated Wreck and Obstruction Information System wreck and obstruction data plotted in the vicinity of the current Bon Secour Reef Project Area cell (SAM-2019-00700-DCH, red outline).**



Figure 2-26. Automated Wreck and Obstruction Information System wreck and obstruction data plotted in the vicinity of the Dog River Reef Project Area cell (SAM-2019-00701-DCH, red outline).



Figure 2-27. Automated Wreck and Obstruction Information System wreck and obstruction data plotted in the vicinity of the Wellhead Reef Project Area (SAM-2019-00699-DCH, top APE red outline) and Ghost Rig Reef Project Area cell (SAM-2019-00677-DCH, bottom APE red outline).

Table 2-02. Wrecks and Obstructions in the Four Inshore Project Areas.\*†

Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
3581	30.379364	-87.846933	Obstruction	Bon Secour Reef APE. Unknown source, report 1974.
7158	30.386744	-87.885311	<i>Miss Ashley</i> , Shipwreck	Bon Secour Reef APE. Shrimp boat, <i>Miss Ashley</i> , ran aground in this area 2008.
3545	30.565192	-88.070553	Obstruction	Dog River Reef APE. Submerged Pile.
3547	30.538247	-88.028606	Obstruction	Dog River Reef APE. Stationary tree stump.
3548	30.536581	-88.059164	Obstruction	Dog River Reef APE. Submerged Pile.
3551	30.568803	-88.029994	Obstruction	Dog River Reef APE. Possible Deadhead.
3582	30.561025	-88.047219	<i>Carolyn A</i> , Shipwreck	Dog River Reef APE. 22-foot cabin cruiser sunk in 7 feet of water about 1 mile, 270 degrees from Mobile Channel Light 33. About 3 foot of bow, antenna, and mast are report visible above water previously. Visible wreck revised to submerged dangerous wreck.
11633	30.545	-88.023333	Unknown, Shipwreck	Dog River Reef APE. 30-foot fishing vessel reported sunk in 1992 adjacent to Mobile Channel in approximate position 30-32-42N, 88-01-24W (NAD 83).
12387	30.552778	-88.026667	Unknown, Shipwreck	Dog River Reef APE. Dangerous wreck, 18-foot Pleasure Craft.
3517	30.274644	-88.096664	Obstruction	Wellhead & Ghost Rig Reefs APes. Unidentified submerged obstruction.
3519	30.270494	-88.102775	Obstruction	Wellhead & Ghost Rig Reefs APes. Boiler, appears to remains of a wreck used as a signal on H2939 (1908) and bears no relationship with heavy iron obstruction on H6686 (1941) on South shore of Dauphin Island.
3524	30.258536	-88.041664	<i>Bunge 401</i> , Shipwreck	Wellhead & Ghost Rig Reefs APes. Sunken hopper barge "Bunge 401" sunk west of the ship channel.
3532	30.2802	-88.059997	Unknown, Shipwreck	Wellhead & Ghost Rig Reefs APes. Wreck reported in 1972, at LAT 30-16.8N, LONG 88-03.6W.
3533	30.283256	-88.043053	<i>CBC-21</i> , Shipwreck	Wellhead & Ghost Rig Reefs APes. Reported barge CBC-21 sunk in March 23, 1979 sunk in approximately 18 feet of water.
12348	30.297425	-88.09	Obstruction	Wellhead & Ghost Rig Reefs APes. Submerged pipe.
12349	30.298333	-88.088333	Obstruction	Wellhead & Ghost Rig Reefs APes. Submerged pipe.
14621	30.296139	-88.088167	Obstruction	Wellhead & Ghost Rig Reefs APes. Charted Pipe.
15165	30.281583	-88.099972	Unknown, Shipwreck	Wellhead & Ghost Rig Reefs APes. Unknown shipwreck.

\*Source: NOAA's AWOIS, †Coordinates presented in WGS84 meters

Offshore, the western portion of the Project Area (SAM-2018-01036-GAC) contains one shipwreck and five obstructions (Table 2-03; Figures 2-28 and 2-29). All wrecks appear to be a part of fishing or reef havens created by the ADCNR. Some of these fishing haven wrecks are listed as obstructions in AWOIS, but are defined as wrecks in their descriptions. Wrecks inside or immediately nearby the western portion of the Project Area include AWOIS Nos. 436 and 3604. AWOIS Nos. 3615, 7370 through 7373 are listed as obstructions in the survey area.

**Table 2-03. Wrecks and Obstructions in the Western Portion (SAM-2018-01036-GAC) of the Offshore Project Area.\*†**

Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
436	30.018025	-88.107817	<i>Tulsa</i> , Shipwreck	Located on 4/23/87 chart at LAT 30-01-04.15N, LONG 88-06-28.15W. Fathometer depth of 70 Feet. Cargo 607 Gross Tons; sunk 3/11/1943 by marine casualty. Large debris field (approximately 100 feet in diameter).  The Alabama Public Reef list the <i>Tulsa</i> enhanced with approximately 65 pieces of concrete pipe in 2018. The vessel is described as a steam powered tug boat with a wooden-hull.
3604	30.021456	-88.119608	Unknown, Shipwreck	Position of sunken drydock as fish haven. Sunk as “Snapper Bank” on July 8, 1959; wooden hull at LAT.30-01-20N, LONG.88-07-11W, cleared to a depth of 67.5FT, wooden framework determined to be hazardous to fishing vessels. Evaluator consisted it doubtful that this wreckage is either the <i>Tulsa</i> or the sunken drydock, consensus that “wooden framework” above is dry dock.  The Alabama Public Reef list the location as a wooden drydock wing from Alabama Drydock and Shipbuilding.
7365	30.04819	-88.3293	Unknown, Shipwreck	Evaluator recommends charting and obstruction as surveyed and investigating at an opportune time. Feature found at 30°02'53.5"N, 088°19'45.3"W. Revised obstruction to wreck with least depth of 64ft.
3600	30.04243	-88.2967	Obstruction	Well, covered (Charted depths 70-73 ft) in LAT.30-02-32N, LONG.88-17-48.
3601	30.04243	-88.2722	Obstruction	Well, covered 65 ft in LAT.30-02-32N, LONG.88-16-20W.
3603	30.0179	-88.1076	Obstruction, (Dry dock)	Fish Haven, LAT.30-01-06N, LONG. 88-06-24W, possibly sunken dry dock.
3605	30.02687	-88.11	Obstruction, (Wreck)	Fish Haven, wooden hull – 36 feet; sunk 7/21/1977. Ship sunk in approximately LAT.30-01.6N, LONG.88-06.6W before reaching authorized fish haven.
3606	30.02104	-88.0833	Obstruction	Fish Haven, LAT.30-01-15N, LONG.88-05-00W.
3607	30.00021	-88.1125	Obstruction, (Liberty Ship)	Fish Haven (Liberty Ship Hull), LAT.30-00-00N, LONG.88-06-45W, in 84 feet, extends 15 feet off bottom with 69 feet clearance depth.

2-MR-205 Artificial Reef Zones Marine Survey

Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
3608	30.00437	-87.9875	Obstruction	Fish Haven, consists of washing machines, stoves, tires, etc. in LAT.30-00-15N, LONG.87-59-15W.
3615	29.95909	-88.1167	Obstruction, (Liberty Ship)	Fish Haven (Liberty Ship), LAT.29-57-32N, LONG.88-07-00W, survey depths 99-100 feet. Listed as <i>William H. Edwards</i> in BOEM data.
7350	30.08021	-87.9917	Obstruction	Anchor hung at 60 feet in LAT. 30-04-48.0N, LONG. 87-59-30.0W, protrudes 1.5 feet off bottom.
7366	30.0612	-88.2881	Obstruction	Obstruction added during office processing, echo sounder depth of 62 feet.
7367	30.03803	-88.2777	Obstruction	Obstruction added during office processing, echo sounder depth of 74 feet.
7370	29.95994	-88.1617	Nail Ship, Obstruction	AWOIS listed obstruction added during office processing, echo sounder depth of 97 feet.  The Alabama Public Reef lists location as a lost 1930s cargo barge loaded with cotton bales and kegs of nails, found in the 1960s by a shrimp boat. Depth 102 feet.
7371	29.98319	-88.1572	Obstruction	Obstruction added during office processing, echo sounder depth of 89 feet.
7372	30.04457	-88.116	Obstruction	Obstruction added during office processing, echo sounder depth of 72 feet.
7373	30.04125	-88.1162	Obstruction	Obstruction added during office processing, echo sounder depth of 73 feet.
7374	30.05236	-88.1017	Obstruction	Obstruction added during office processing, echo sounder depth of 70 feet.
7375	30.03346	-88.089	Obstruction	Obstruction added during office processing, echo sounder depth of 69 feet.
7377	30.021714	-88.062117	Obstruction	Obstruction added during office processing, echo sounder depth of 64 feet.
7379	30.067561	-88.043522	Obstruction	Obstruction added during office processing, echo sounder depth of 55 feet.
7402	29.984639	-88.072419	Obstruction	Obstruction (spike on echogram) located in LAT 29-59-03.96N, LONG 88-04-20.73W, covered 72 feet in 82 feet.
8615	30.05222	-88.1697	Obstruction	Obstruction located by side scan sonar. Dive investigation found a large metal cylinder with several lightening holes in the sides; length 20.3 meters, height 3 meters. Lat. 30-03-07.99N, Long 88-10-10.99W

\*Source: NOAA's AWOIS

†Coordinates presented in WGS84 meters

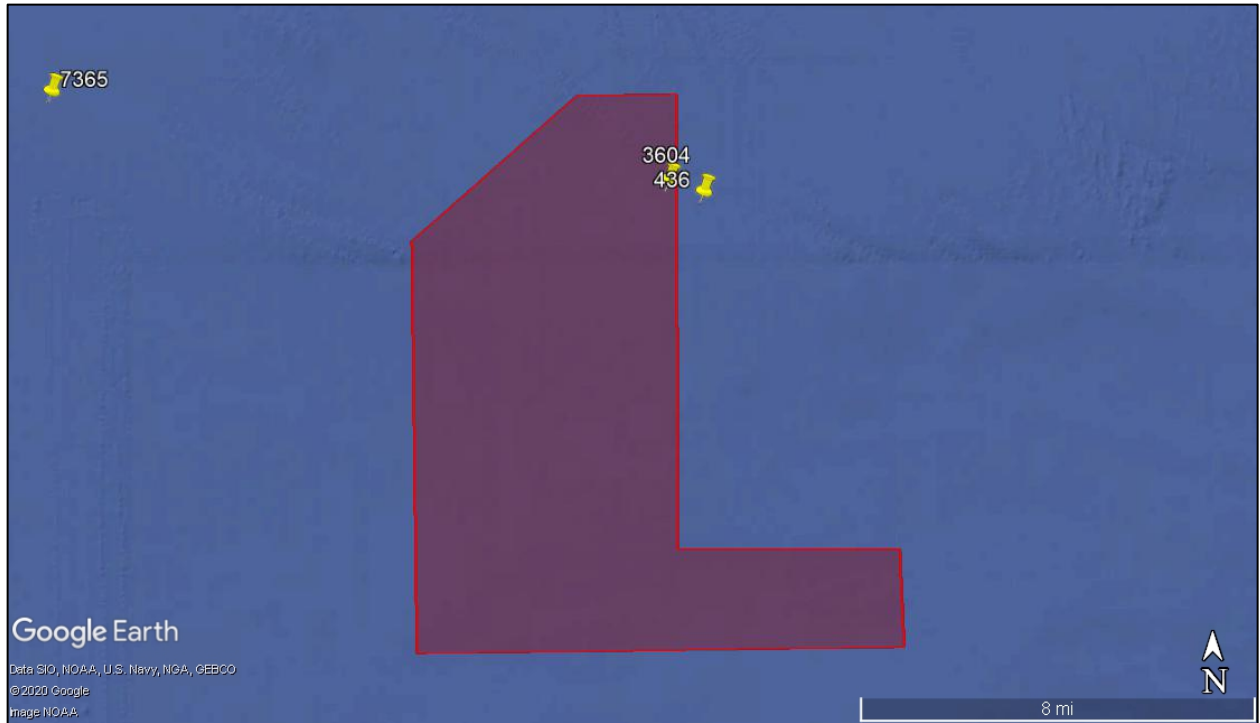


Figure 2-28. Automated Wreck and Obstruction Information System wreck data plotted in the vicinity of the Mobile Cell in the Offshore Project Area (SAM-2018-01036-GAC).



Figure 2-29. Automated Wreck and Obstruction Information System obstruction data plotted in the vicinity of the Mobile Cell in the Offshore Project Area (SAM-2018-01036-GAC).

The eastern portion of the offshore Project Area (SAM-2014-00487-DEM-1 through SAM-2014-00487-DEM-8) also notes several wrecks and obstructions in and within the vicinity (Table 2-04; Figures 2-30 and 2-31). Wrecks inside or immediately nearby the eastern portion of the Project Area include AWOIS Nos. 3612, 3628, 3909, 7012, and 7297.

**Table 2-04. Wrecks and Obstructions in the Eastern Portion of the Offshore Project Area (SAM-2014-00487-DEM-1 through SAM-2014-00487-DEM-8).\*†**

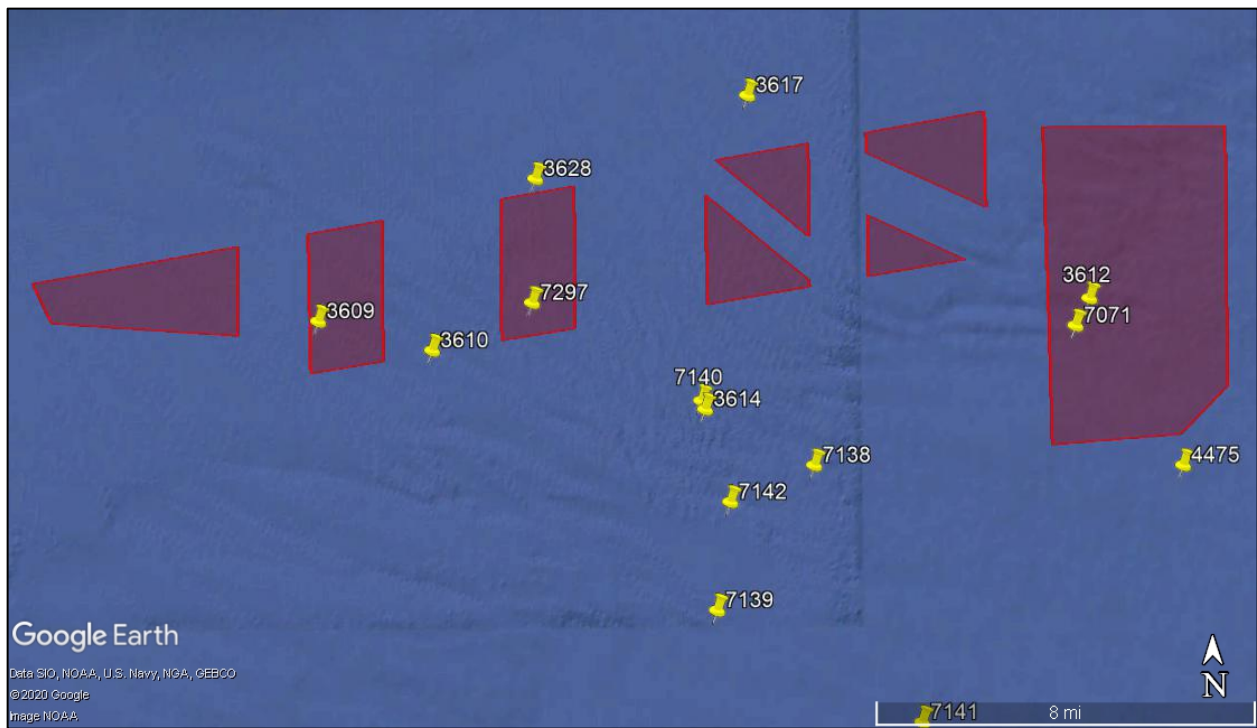
Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
3609	30.090461	-87.843583	Unknown Shipwreck	Fishing haven, 40 ft. steel hull of Coast Guard boat sunk in 1979.
3610	30.081369	-87.803414	Unknown Shipwreck, Lipscomb Tug	Fishing haven known locally as "Lipscomb Tug", Steel tug 42 ft. wreck charted at LAT. 30-04-52.19N, LONG. 87-48-12.34W.
3612	30.095842	-87.571583	Unknown Shipwreck, 10-Mile Barge	AL. Dept. of Conse. Hopper Barge 100 x 40 ft., sunk in LAT. 30-05-12N, LONG. 87-34-30W (9/15/83) East Wallace Reef, in 92 ft. Known locally as "10-Mile Barge".
3614	30.062897	-87.707308	Unknown Shipwreck	105 ft. tug boat sunk as fish haven in 72 ft. in LAT.30-03-30N, LONG. 87-42-25W. Wreck was unable to be located and believed to be broken up.
3617	30.158536	-87.69165	Unknown Shipwreck	240 ft. barge at LAT. 30-09.5N, LONG. 87-41.5N in depths of 42ft. Bow covered 3 ft., stern covered 10 ft., wreck marked with lighted buoy (flashing red light).
3628	30.133536	-87.766653	<i>Betsy M</i> , Shipwreck	55 ft. fishing vessel sunk in 46 ft. of water. Most of vessel either broken up or buried (no rigging protruding from bottom). Trawler booms partially exposed above bottom.
4475	30.044742	-87.539117	Unknown Shipwreck, Skin-diver Barge	AL. Dept. of Conse. Sunken Steel Barge at LAT. 30-02-40.33N, LONG. 87-32-20.90W. Sand bottom, 100x50 feet with pile of debris off one corner, one end of barge is open. Locally known as "Skin-diver Barge". Charted as "12 WK" on chart 11360 (1989).
7071	30.087578	-87.576594	Unknown Shipwreck (Liberty Ship)	Wreck (Liberty Ship) located in LAT 30-05-14.54N, LONG 87-34-35.81W. Marked with buoys at bow and stern, verified by diver.
7138	30.0456	-87.669	Unknown Shipwreck, Romar Barge	Uncharted wreck located on 5/27/86. Barge is broken up lying upside down and covers 120x50 feet. Echo sounder depths in area range 90-95 feet, visible=60 feet. Known locally as "Romar Barge".
7139	30.001617	-87.703592	Unknown Shipwreck, Tug Commodore and Barge	Locally known as an ocean-going Tug named "Tug Commodore", approximately 150 feet long and a barge containing 2 concrete bridge counterweights. Tug's pilot house and deck caved in; propeller still visible. Total length of tug and barge is 315 feet. Located at 30-00-05.08N, LONG 87-42-12.99W.

Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
7140	30.0655	-87.7086	Unknown Shipwreck, The Trawler	Uncharted wreck located on 4/24/86. Wreck is remains of a steel hulled trawler broken up and partially buried in a sand bottom. Known locally as "The Trawler". Previously reported as a sunken wooden tug converted to a fishing trawler. General bottom depths by diver depth gage and launch fathometer 70 feet, vis = 25 feet. Negligible current, numerous fish. Bottom of sand, broken shell, small stones. Item is described as numerous bits of wreckage, hull wreckage, machinery, pilot house, and many small metal pieces.
7141	29.967161	-87.631717	Unknown Shipwreck, Go Navy Tug	Locally known as "Go Navy Tug", Go Navy is lettered on side of hull. Tug is approximately 140 feet long with four decks; intact ocean-going tug.
7142	30.0346	-87.6987	Unknown Shipwreck (Drydock)	Described as a drydock (Crandall Design), approx. 40x200 feet, sandy bottom at 78-85 feet scoured to 90 feet in some areas. sketch accompanying D.R. shows heavy timbers lashed with cable, and a square steel structure supporting "some kind of deck machinery" south and west of drydock proper. LD on steel structure is 73 feet (uncorrected). Drydock is upside down. This drydock was to be sunk as designated fish haven but accidently sank enroute to the permitted location.
7297	30.095717	-87.768061	Unknown Shipwreck	Uncharted wreck of 60-foot steel tugboat reported by locals. Evaluator recommends charting a dangerous submerged wreck.
2030	30.14364	-87.568	Obstruction, Lillian Bridge Rubble #1	100 tons of scrap concrete pipe dumped in 60 ft. Fish haven by the AL Dept. of Cons. Known locally as "Lillian Bridge Rubble #1".
3611	29.994447	-87.718269	Obstruction, (Liberty Ship)	Liberty ship hull, sunk in 8/13/1974 in LAT.30-00-30N, LONG.87-43-06W. 93 feet long, buoys attached to bow and stern. Locally known as "Sparkman" Fish Haven.
3613	30.0872	-87.577	Obstruction, (Wreck) Wallace Fishing Reef	Fish Haven, (Liberty Ship). Wreck is approx. 350 feet long. Vis=40 feet hor., 30 feet vert. Sand bottom at 89 feet. Ship lies in two halves. Known locally as the "Wallace" (liberty Ship)
3618	30.10159	-87.668	Obstruction (Wreck)	Fish haven, sunken tugboat (wooden-18ft high) in 71 ft. of water.
3619	30.11381	-87.7034	Obstruction (Wreck)	Fish haven, tug boat 105 ft. hull.
3620	30.11132	-87.7164	Obstruction (Wreck)	Fish haven, Barge, 105 ft. long by 10 ft. high.

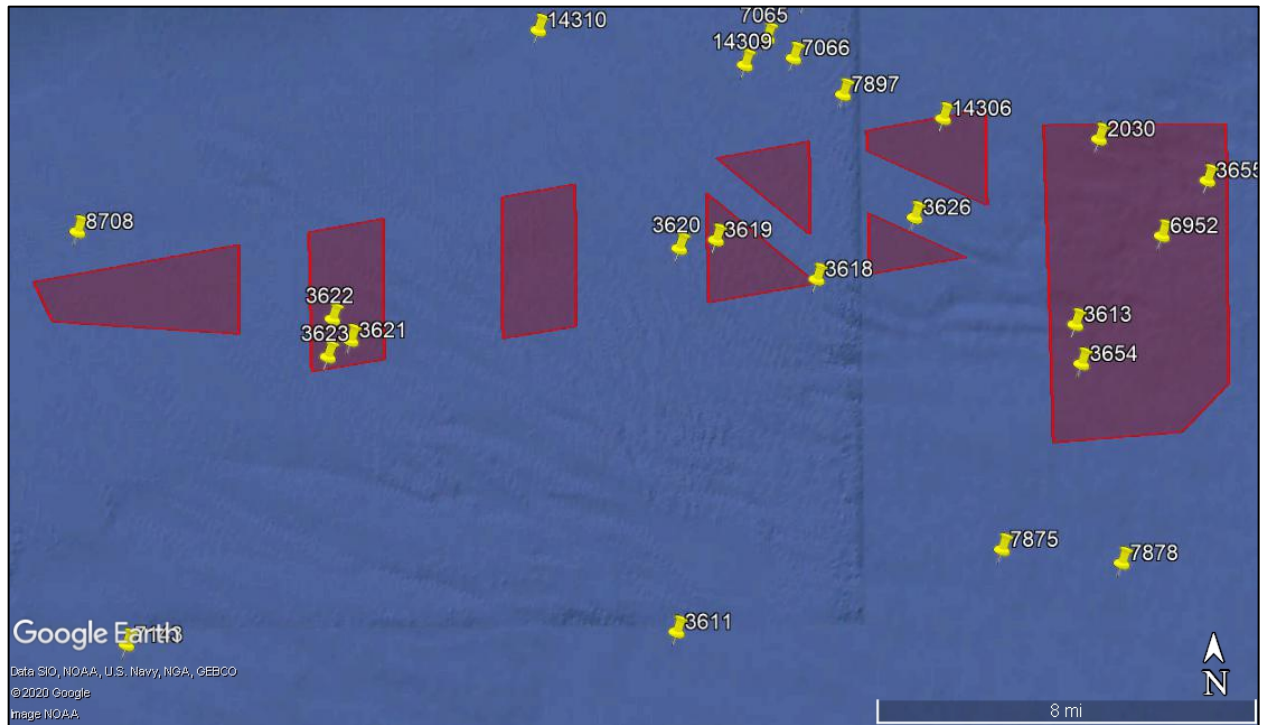
Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
3621	30.08393	-87.8325	Obstruction, (Wreck) Buffalo Barge No. 2	Fish haven, 220 ft. steel barge. Depth 52 ft., barge height 9 ft. Echo sounder investigation, 100-meter line spacing, negative at charted location. Dive ops, located a steel hopper barge in LAT 20-05-01.40N, Long 87-49-57.06W. Wreck is approx.. 220 ft. long, bow buried in sand, mid-portion of side walls collapsed. Known locally as Buffalo Barge No. 2.
3622	30.09048	-87.8389	Obstruction, "Radmoor" or "Fort Morgan Pipes"	Fish haven, 600 tons culvert pipe. Fishing reef 100x600 yards on N-S alignment. Locally known as "Radmoor" or "Fort Morgan Pipes"
3623	30.07896	-87.8406	Obstruction (Wreck)	Fish haven, 200 ft. steel intact barge. Barge height 9 feet, depth 51 feet.
3626	30.12021	-87.6333	Obstruction	Fish haven, 50-100 car bodies to be placed approx. ½-mile intervals along to 60 ft. contour. No evidence of this item found during survey operations; evaluator recommends retaining as charted.
3654	30.07521	-87.575	Obstruction, (Wreck) Wallace Fishing Reef	Liberty ship hull sunk in LAT. 30-04.5N, LONG. 87-34.7W to establish the Wallace Fishing Reef. Least clear depth (SIC.) of 75 FT.
3655	30.130736	-87.529942	Obstruction, (Liberty Ship) Allen Fishing Reef	Liberty Ship Hull sunk in Position LAT. 30-07-24N, LONG. i 87-32-00W in 88 feet to establish the Allen Fishing Reef, marked by buoys.
6952	30.114008	-87.546197	Obstruction, Lillian Bridge No. 2	Fish haven at LAT 30-06-49.70N, LONG i 87-32-46.38W. Reported to be the remains of highway bridge removed from Lillian, Alabama. Rubble covers an area of approx.. 60 feet in diameter with broken concrete, rebars, cable.
7065	30.175258	-87.684872	Obstruction	34 ft hang, not investigated and not cleared located in LAT. 30-10-30.2N, LONG. 87-41-05.6W
7066	30.16912	-87.6755	Obstruction	37ft hang, not investigated and not cleared located in LAT. 30-10-08.1N, LONG 87-40-32.0W.
7875	30.018831	-87.603539	Obstruction, (Wreck) Biplane	Remains of Biplane located in LAT. 30-01-07.05N, LONG. 87-36-12.81W. Includes engine, fuselage, prop, wooden frame, covers area 15 x 15 feet on sandy bottom.
7878	30.014428	-87.561419	Obstruction	Echo sounder of 94.0 feet in LAT. 30-00-51.20N, LONG. 87-33-41.19W. Remains of oil platform support legs lying flat on bottom. Located within limits of fish haven.
7897	30.15787	-87.6582	Obstruction	Uncharted obstruction located in LAT. 30-09-27.60N, LONG 87-39-29.46W. Echo sounder LD of 44 feet.

Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
8708	30.117647	-87.928969	Obstruction	Obstruction located by side scan sonar in LAT. 30-07-03.53N, LONG. 87-55-44.29W. Echo sounder of 15.8 meters.
14306	30.15033	-87.623	Obstruction	Obstruction 38ft rep found at least depth 11.59m measuring 3.44m long, 4.29m wide, and rising 2.33m off sea floor. survey reviewer recommends deleting 38 ft. Obstn and danger curve and adding a 40 ft. Obstn and danger curve in survey position.
14309	30.16714	-87.6928	Obstruction	Obstruction 33ft found by H-11584 and verified by AHB.
14310	30.178259	-87.765595	Obstruction	37- foot obstruction found by survey H11627.

\*Source: NOAA's AWOIS, †Coordinates presented in WGS84 meters



**Figure 2-30. Automated Wreck and Obstruction Information System wreck data plotted in the vicinity of the Baldwin Cells in the Offshore Project Area (SAM-2014-00487-DEM-1 through SAM-2014-00487-DEM-8).**



**Figure 2-31. Automated Wreck and Obstruction Information System obstruction data plotted in the vicinity of the Baldwin Cells in the Offshore Project Area (SAM-2014-00487-DEM-1 through SAM-2014-00487-DEM-8).**

In addition to AWOIS, an in-house Mobile Bay shipwreck map showing the locations of numerous wrecks was reviewed for potential wrecks in or near the Project Area onshore and offshore. Examination revealed no wrecks recorded in the Project Area.

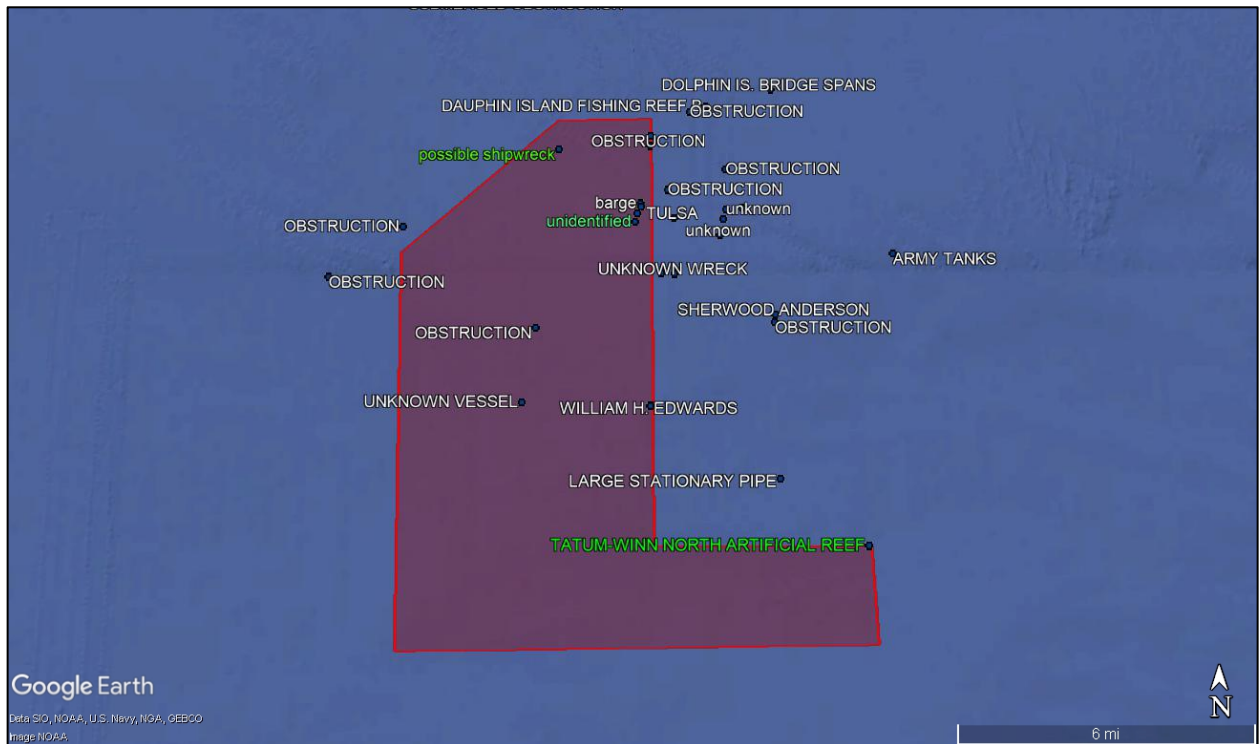
The BOEM wreck database was also queried for further shipwrecks in the offshore survey areas. The majority of the wrecks noted in BOEM’s database were already covered by AWOIS’s wreck and obstruction data by listing the many fishing havens nearby. A few vessels and obstructions were found not associated with AWOIS data. These were located in the western survey area: a possible shipwreck, an unidentified object, and the Tatum-Winn North Artificial Reef (shown with green labels in Figure 2-32 and listed in Table 2-05). No additional wrecks or obstructions were found within the eastern survey areas that had not already been covered by AWOIS (Figure 2-33).

**Table 2-05. Wrecks and Obstructions in the Western Portion of the Project Area (SAM-2018-01036-GAC) according to BOEM.\*†**

Record No.	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description	Comment
3161	29.91667	-88.041656	Tatum-Winn North Artificial Reef	Artificial reef established by the Alabama Dept. of Conservation and Natural Resources. Composed of miscellaneous material covering about 20,2880 acres in about 90 to 204 feet of water.
3276	30.01664	-88.121803	Unidentified	Unidentified sonar contact with no associated magnetic anomalies; water depth 80 feet.
3453	30.040293	-88.1493	Possible Shipwreck	Debris field 164 x 50 ft with a cluster of mag anomalies, largest being 600 gammas for 350 feet. Interpreted as possible shipwreck; water depth 74 feet.

\*Source: BOEM

†Coordinates presented in WGS84 meters



**Figure 2-32. BOEM data showing wrecks and obstruction in the western survey area (SAM-2018-01036-GAC). The three labels listed in green were not previously mentioned in the above AWOIS data; within the Project Area this includes a “possible shipwreck”, an “unidentified” object, and the Tatum-Winn North Artificial Reef.**



**Figure 2-33. BOEM data showing wrecks and obstruction in and adjacent the Baldwin Cells in the Offshore Project Area (SAM-2014-00487-DEM-1 through SAM-2014-00487-DEM-8). No additional wrecks or obstructions are shown here not already covered in the above AWOIS data.**

Much of the AWOIS and BOEM data cover the offshore survey areas. Still a few locations from the Alabama Marine Resources Division Public Reef List do not appear on these databases. A number of bridge span ways, concrete walls and pilings, reef modules, demilitarized army tanks, and decommissioned voting machines are known within the easternmost portion of the SAM-2014-00487-DEM-8 survey area. Many of these structures have been added since 1985 to present-day, including a trolling corridor consisting of reef modules added in 2007.

**Table 2-06. Alabama Offshore Public Reefs within SAM-2014-00487-DEM-8 not listed in AWOIS or BOEM data.\*†**

Reef Name	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description
Tank 90 A	30.065417	-87.56975	United States demilitarized M-60 Army Tank
Tank 90 B	30.064833	-87.569833	United States demilitarized M-60 Army Tank
Tank 90 C	30.0643	-87.570383	United States demilitarized M-60 Army Tank
Perdido Pass Bridge 2	30.14275	-87.571167	Old 2 Lane Bridge Spans and Pilings (Atlantis)
Perdido Pass Bridge 6	30.0605	-87.545267	Old 2 Lane Bridge Spans and Pilings
Perdido Pass Bridge 7	30.140767	-87.565933	Old 2 Lane Bridge Spans and Pilings
Mexico Rock	30.1496	-87.56855	Decommissioned voting machines
Ray Callaway	30.1318	-87.531883	Decommissioned voting machines
Bottom Line	30.132212	-87.535175	Decommissioned voting machines

Reef Name	Latitude (Dec Degrees)	Longitude (Dec Degrees)	Description
Rookie Barge	30.137117	-87.535283	Flat Deck Steel Barge (75' X 25')
Gulf State Park Pavilion 1	30.128943	-87.53417	Gulf State Park Saltwater Pavilion Hurricane Damaged Concrete Walls and Pilings
Gulf State Park Pavilion 2	30.145009	-87.547802	Gulf State Park Saltwater Pavilion Hurricane Damaged Concrete Walls and Pilings
Gulf State Park Pavilion 3	30.136517	-87.53275	Gulf State Park Saltwater Pavilion Hurricane Damaged Concrete Walls and Pilings
Gulf State Park Pavilion 4	30.1334	-87.531333	Gulf State Park Saltwater Pavilion Hurricane Damaged Concrete Walls and Pilings
Perdido Weir	30.131364	-87.532668	Rebar reinforced concrete rubble from the eastern weir at Perdido Pass

\*Source: Alabama Marine Resources Division

†Coordinates presented in WGS84 meters

### **CARTOGRAPHIC REVIEW**

Another excellent tool for identifying shipwrecks within or adjacent to the Project Area is a review of historic navigation maps and charts for the area. Often noting shipwrecks, obstructions, and other various hazards for the mariner, many of these maps can be accessed from NOAA’s Office of Coast Survey’s Historical Map and Chart Collection at [www.historicalcharts.noaa.gov/historicals/search](http://www.historicalcharts.noaa.gov/historicals/search), while others are found in various repositories, publications, or web sites. The NOAA website allows the researcher to specify the area or region of interest and then review all available maps for that area (Figures 2-34 to 2-38). Another valuable utility provided by this site is the virtual magnification feature, which allows the researcher to zoom in and out of specific areas. The following charts illustrate the offshore survey areas. Charts were also examined of the inshore survey areas, but did not note any major differences between the nautical charts and the above AWOIS data, therefore these charts (NOAA charts #'s 1266 and 11376) are not featured.

Illustrated in Figure 2-34, is one of the earliest navigation charts available with a detailed view of the full Project Area (from the NOAA website) dates to 1913. Close examination of the chart includes hydrographic data for the area. No cultural feature (i.e., shipwreck) is represented at or near the Project Area on the map.

Illustrated in Figure 2-35 is an excerpt of the 1933 nautical chart. Hydrographic data is provided and no cultural feature (i.e., shipwreck) are represented at or near the Project Area on the map. One shipwreck (circled blue) is located north and outside of the Project Area, east of Mobile Point.

The next nautical chart illustrates all seven survey areas during 1963 (Figure 2-36). Three shipwrecks are now illustrated on the chart excerpt. One shipwreck, possibly the *Tulsa*, is located just outside the western portion (SAM-2018-01036-GAC).

The next available navigation chart is from 1983 (Figure 2-37) and again appears similar to the previous 1963 chart in Figure 2-36. The chart now illustrates approaching channels into Mobile

Bay, showing the Project Areas just outside. Multiple shipwrecks are shown around the Project Areas; however, none are located within the boundaries.

The most recent navigation chart showing the artificial reef survey areas from the NOAA website, Figure 2-38, dates to 2010. Multiple obstructions are found in the area. One shipwreck is illustrated in the far eastern survey area of SAM-2014-00487-DEM (BAL8). Additionally, two vessels are found in the western survey area SAM-2018-01036-GAC. All of these vessels are described as submerged.

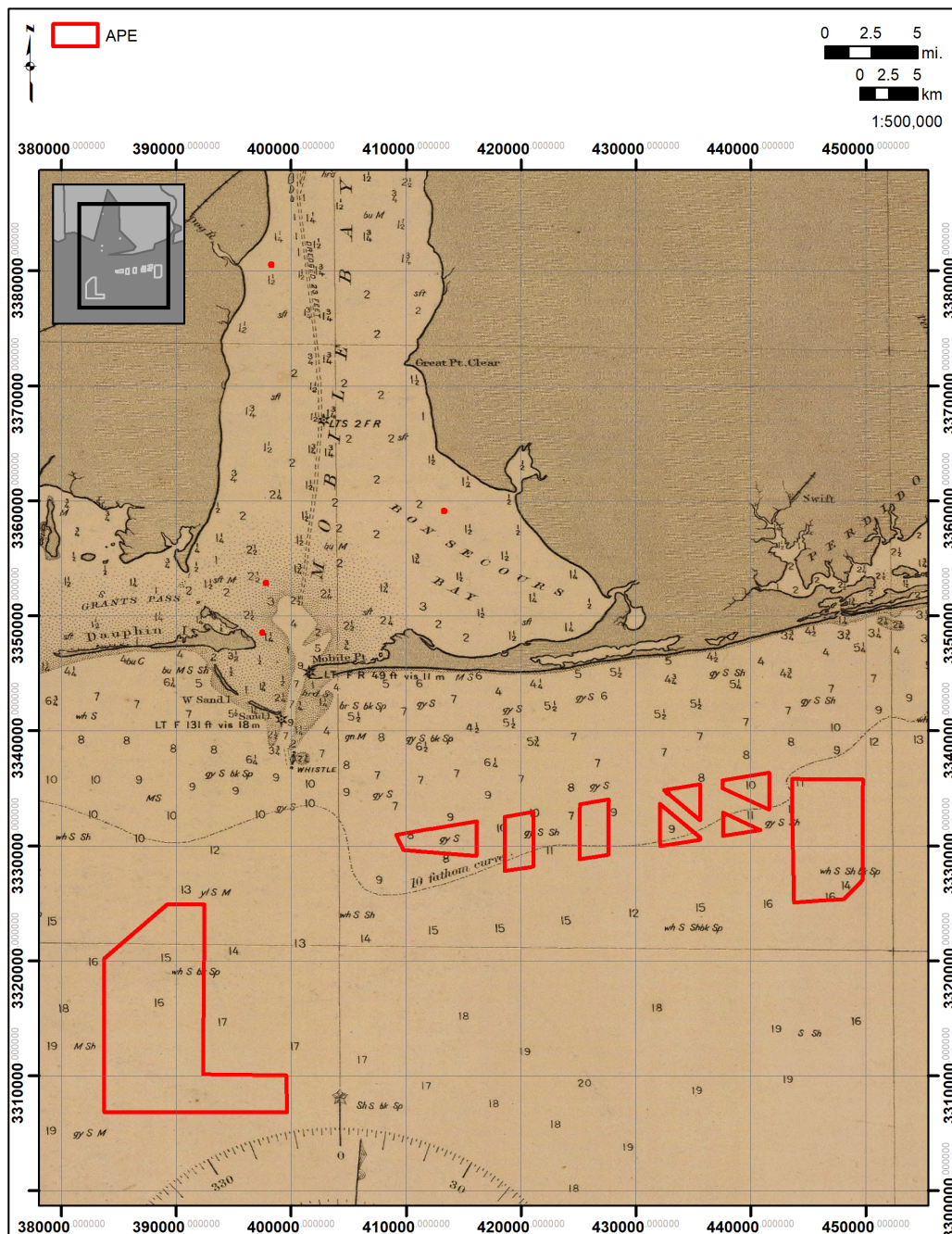


Figure 2-34. 1913 map showing the offshore Project Area with no shipwrecks nearby (Chart 1115 courtesy of National Oceanic and Atmospheric Administration).

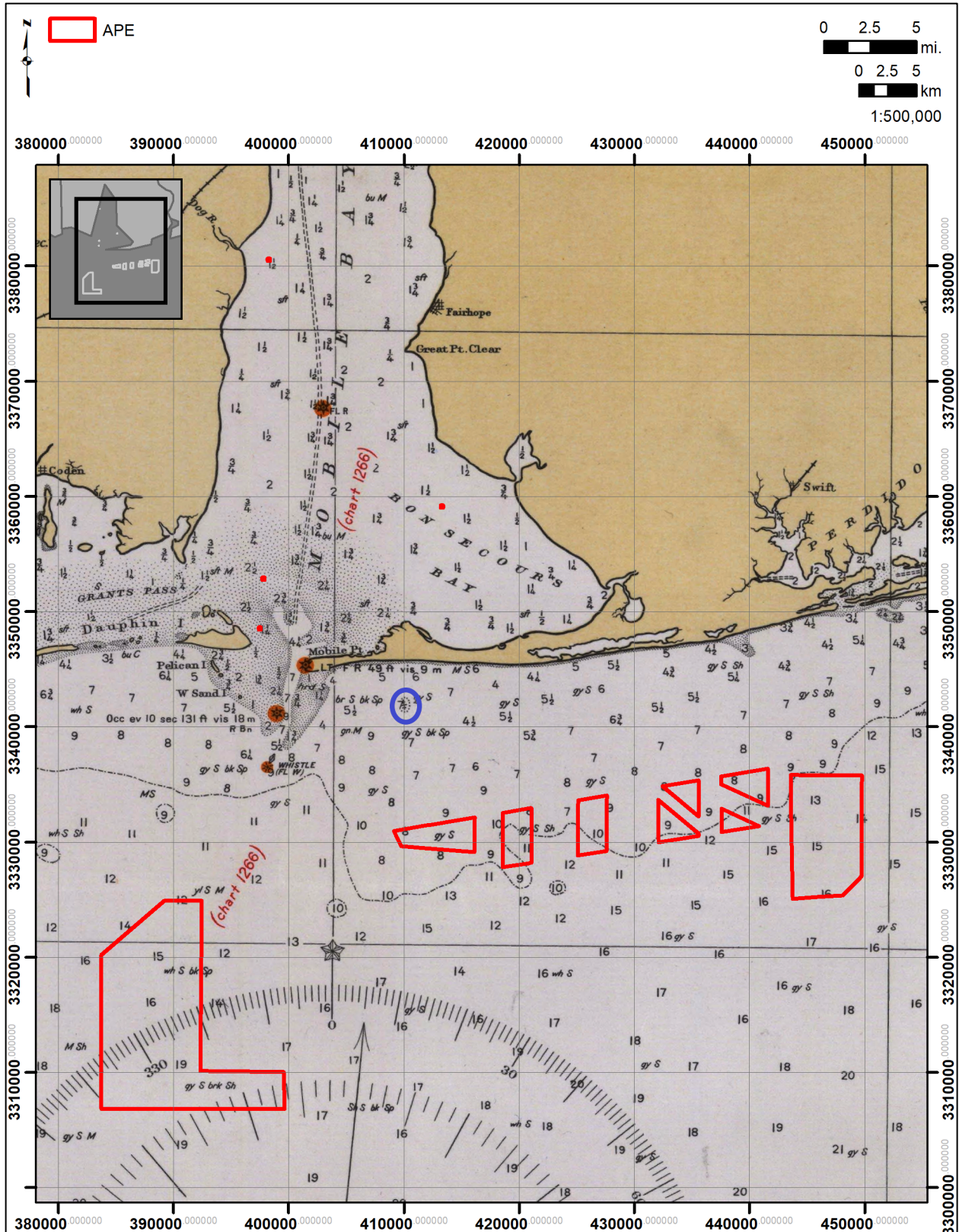


Figure 2-35. 1933 map showing the location of the eastern portion of the Project Area with no shipwrecks nearby (Chart 1115 courtesy of National Oceanic and Atmospheric Administration).

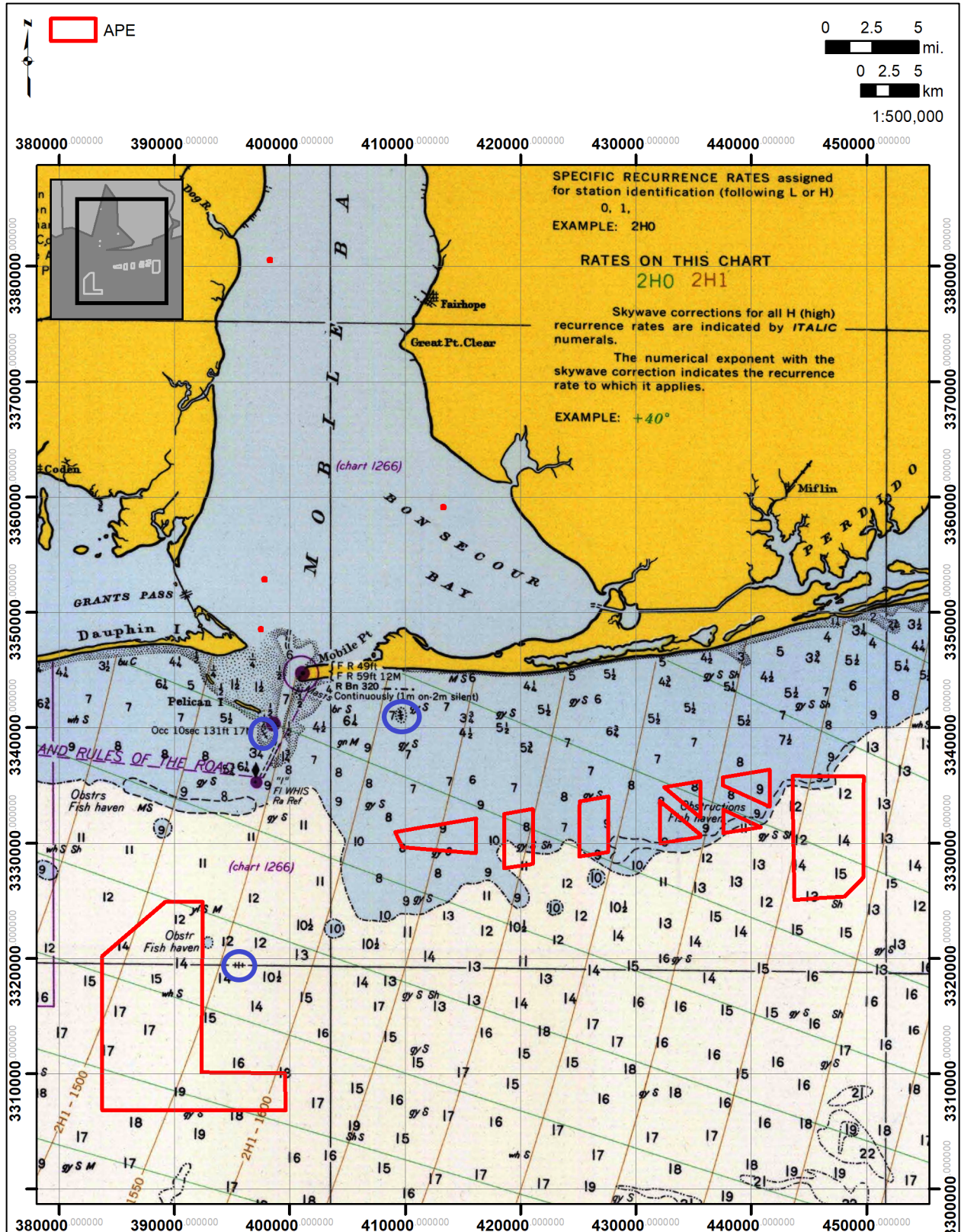


Figure 2-36. 1963 chart illustrating the Project Area with one shipwreck close but outside of the western Project Area (Chart No. 1115 courtesy of National Oceanic and Atmospheric Administration).

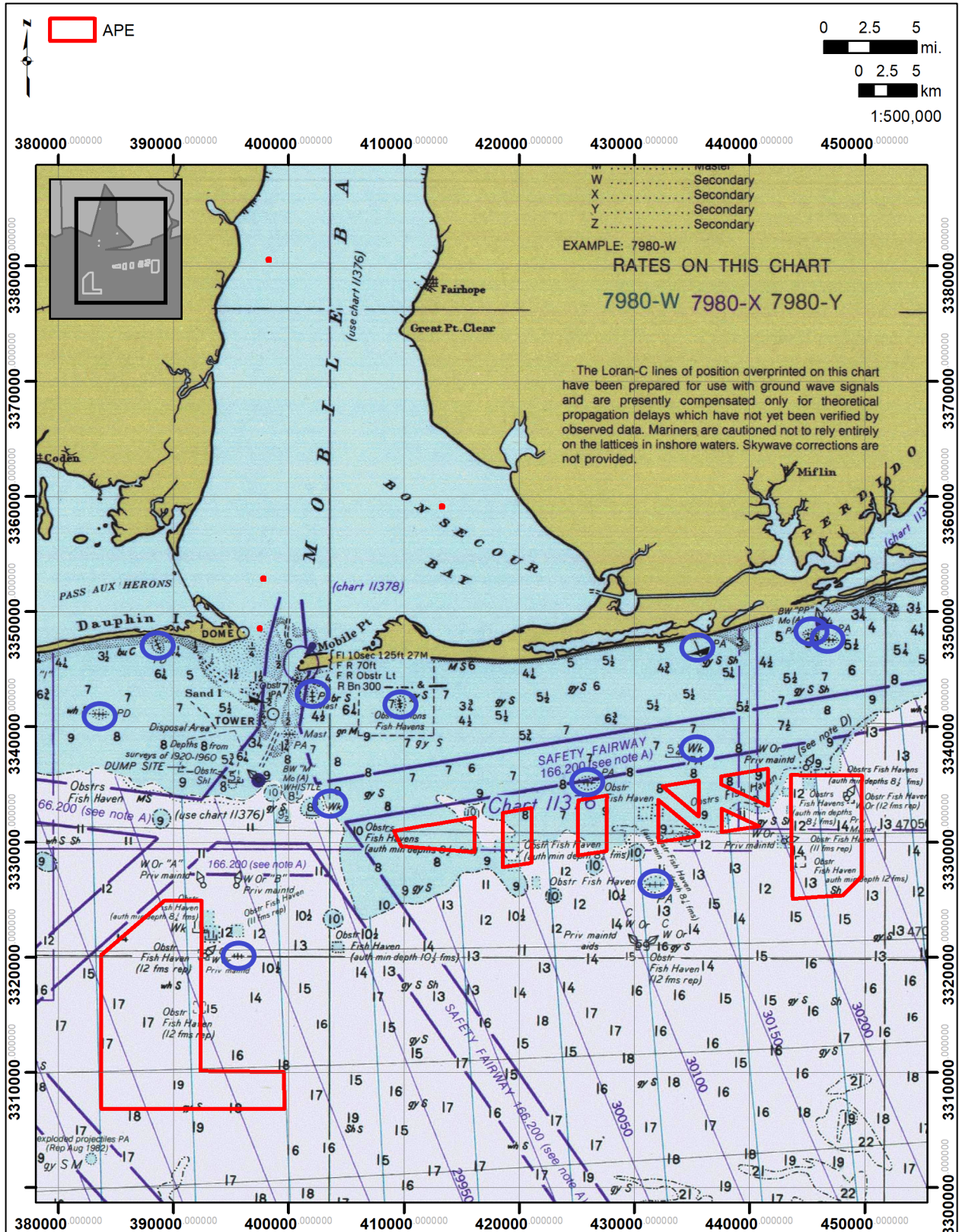


Figure 2-37. 1983 nautical chart excerpt illustrating the artificial reefs Project Area with multiple shipwrecks outside of the survey areas (Chart No. 11360 courtesy of National Oceanic and Atmospheric Administration).

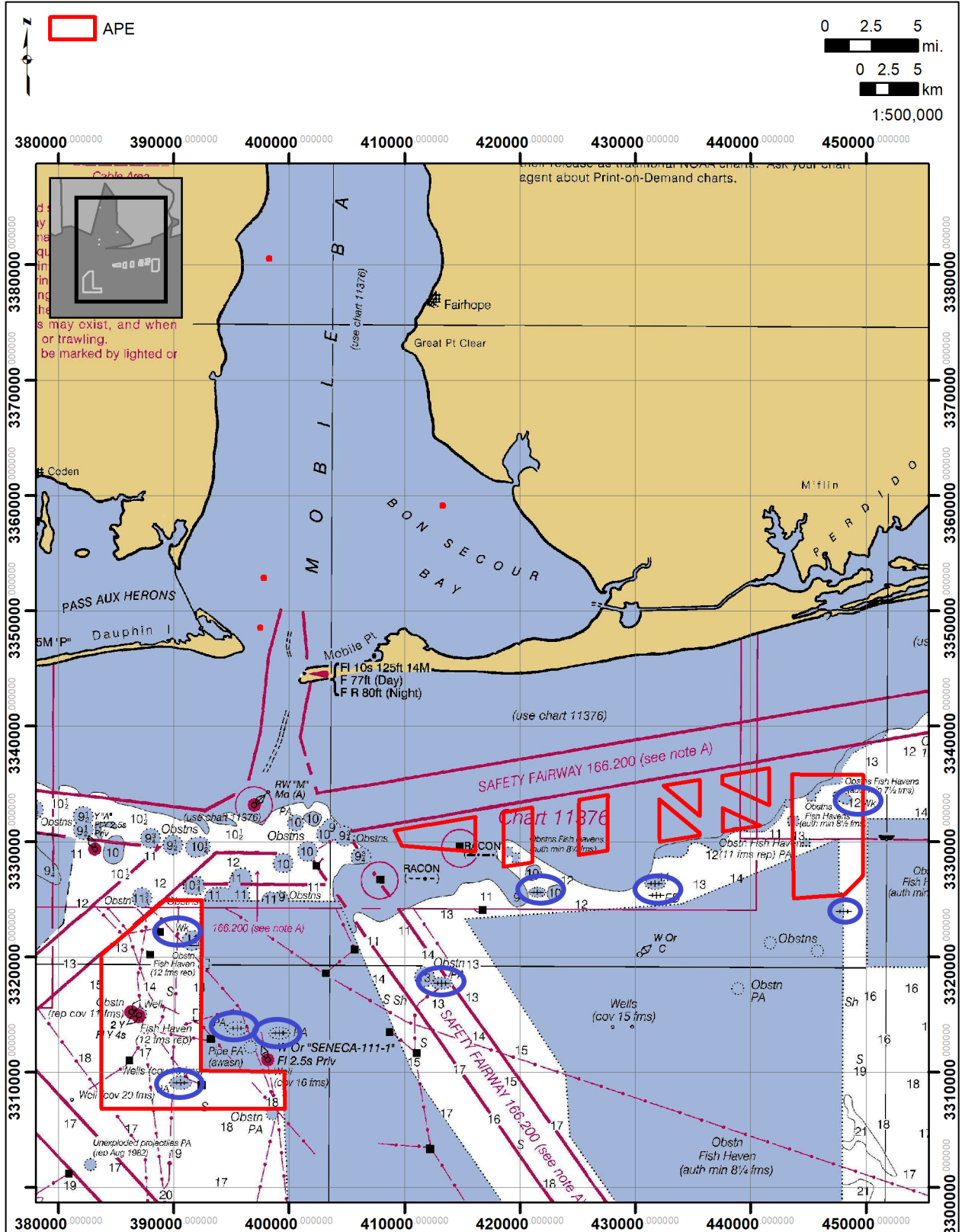


Figure 2-38. 2010 chart illustrating most recent artificial reef survey areas with two shipwrecks inside the Mobile Cell and one wreck within the easternmost Baldwin Cell, BAL8 (Chart No. 11360 courtesy of National Oceanic and Atmospheric Administration).

### III. METHODS

#### *PROJECT AREA ENVIRONMENT*

As illustrated in Figure 3-01, the survey covered four small inshore cells located within the confines of Mobile Bay, and 9 offshore cells located in both Mobile and Baldwin Counties. Because the survey covered both inshore and offshore environments and was conducted over a seven-month period from Spring into Fall changing environmental conditions dictated when surveying could be accomplished, as well as what type of vessel was required. Performed from April 1 to October 22, the survey was truncated at times with the entire months of June, July and September unavailable because of the survey vessel's prior commitments. That said, a total of 74 days were spent in the field not counting travel and mobilization and demobilization. Of these, 50 days were actual survey days operating 24 hours a day, 7 days a week. Twenty-four (n=24) days were lost to weather, with the survey vessel either running back to the dock, or at anchor waiting for conditions to improve. While the majority of days allowed survey to be conducted, all types of adverse weather including high winds, high seas, and thunderstorms were encountered.

The encountered environments for both the offshore and inshore cells are presented in Figures 3-02 through 3-06. The offshore areas were well south of the entrance to Mobile Bay, and commercial vessel traffic was nonexistent, but numerous oil and gas infrastructure including pipelines, wells, and platforms were present within the artificial reef survey areas.

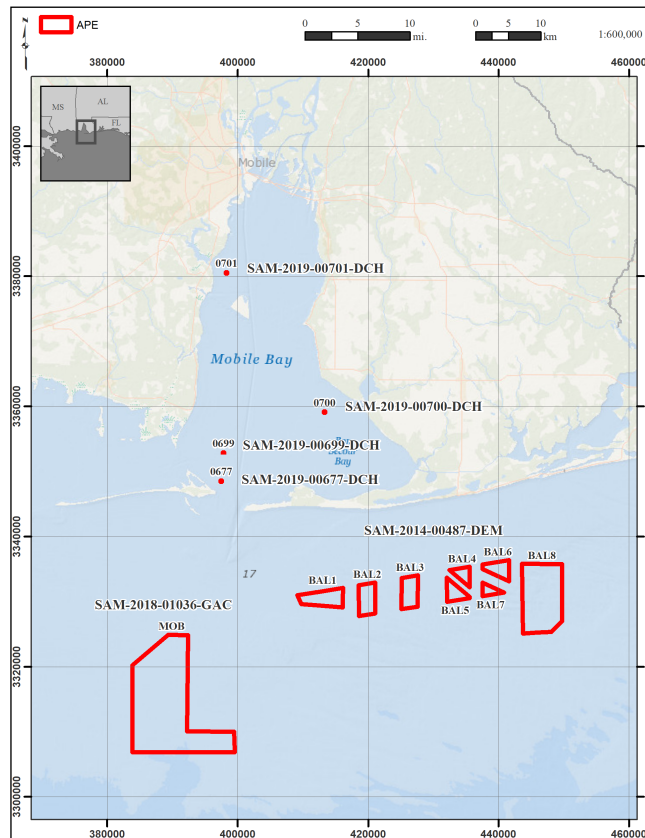
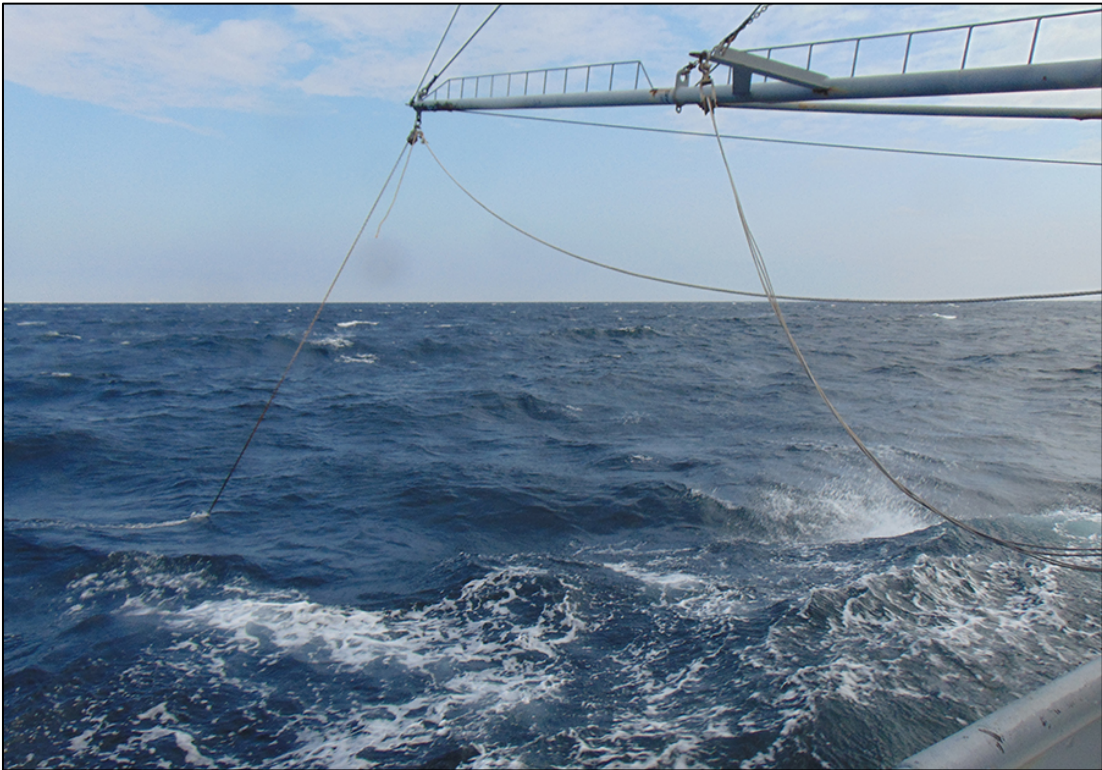


Figure 3-01. Location of the inshore and offshore Artificial Reef Zones selected for survey (ESRI World Ocean base map).



**Figure 3-02. Average conditions witnessed during the survey of the four inshore cells located within the confines of Mobile Bay. Pictured is the shoreline east of the 700 Cell, the proposed “Bon Secour Reef”.**



**Figure 3-03. Semi-rough conditions during survey of an offshore cell. Note the survey vessel’s outrigger deployed for stabilization.**



Figure 3-04. General conditions during survey of an offshore cell. Captain Perry Zirlott shown deploying the subbottom profiler. Magnetometer is on the deck at left.



Figure 3-05. Survey at night showing a calm sea. Tethered to vessel's aft A-frame, deployed remote-sensing devices include sonar cable at right, subbottom in center, and magnetometer cable is at left with line for the cable weight to sink the sensor to depth.



**Figure 3-06. The survey was conducted 24 hours a day, 7 days a week. This night view, besides showing calm seas, shows one of the many oil and gas platforms located in and near the offshore cells**

### ***PERSONNEL***

All personnel involved with the remote-sensing survey had more than the requisite experience to effectively and safely complete the project as proposed. Mr. Stephen R. James, Jr., M.A., Register of Professional Archaeologists (RPA) served as the Project Manager and Principal Investigator; Mr. William Wilson, M.A., RPA served as Lead Remote-Sensing Specialist and overall Field Director; Mr. Andy Derlikowski, M.A., RPA, and Mr. Jeff Pardee, M.A., RPA, served as Remote-Sensing Specialists; and Mr. Dillon Roy served as Remote-Sensing Technicians. The research vessel was captained by Captain Perry Zirlott, aided by “Snake,” “Ollie,” and “Wally.” Both Wilson and Derlikowski analyzed the remote-sensing data and produced the associated products. Mrs. Erica K. Gifford, M.A., RPA, conducted archival research for the project.

### ***REMOTE-SENSING SURVEY EQUIPMENT***

The remote-sensing tools chosen for this investigation were the magnetometer (to detect ferrous materials), sidescan sonar (to create images of the bottom), and the subbottom profiler (to reconstruct the structure of the underlying sediment beds). Positioning control was conducted with DGPS technology. Analysis of the data was conducted with Hypack and SonarWiz.MAP, which are described in detail below. Multiple instruments were on board at all times so as not to impede survey progress if instrument issues occurred.

### ***DIFFERENTIAL GLOBAL POSITIONING SYSTEM***

The primary consideration in the search for any submerged item is positioning. Accurate positioning is essential during the running of survey tracklines, and it is essential in returning to recorded locations for remote sensing refinement or diver investigations. Positioning was accomplished on this project using a SBG Systems Ellipse2-D navigation and inertial compensator with dual-antenna Global Navigation Satellite System (GNSS), with high-speed binary data streams supplied to the navigation, sidescan, and subbottom computers (Figure 3-07).

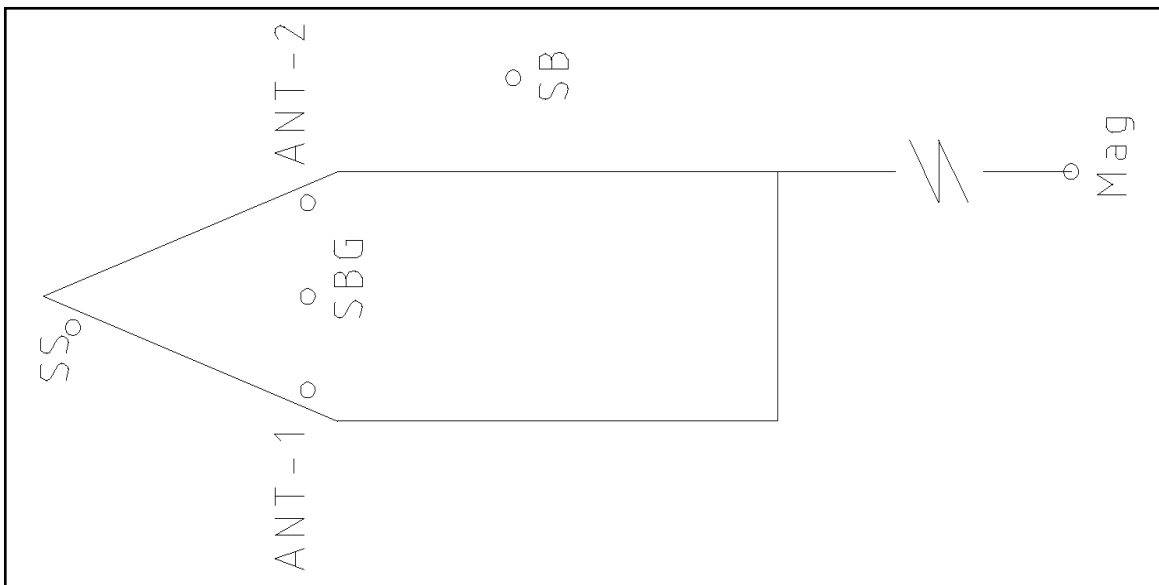


**Figure 3-07. SBG Systems Ellipse2-D navigation and inertial compensator used during the investigation.**

The Ellipse2-D uses an enhanced Extended Kalman Filter (EKF) and contains a Microelectromechanical Systems (MEMS)-based Inertial Measurement Unit (IMU). Thus, the unit can combine GNSS and inertial data. This is perfect for conducting marine remote sensing surveys, which rely on these data streams for accurate positioning and orientation of survey instruments. The unit achieves true heading by its dual antenna, eliminating magnetic calibration issues in areas with unreliable magnetic conditions. The Ellipse2-D integrates real time corrections from base stations (Radio Technical Commission for Maritime Services; RTCM) and satellites (Wide Area Augmentation System; WAAS), allowing for sub-meter accuracy during survey (SBG Systems North America 2018:2-3).

The project was planned in NAD83 Alabama State Plane, survey feet, NAD83, using the 2011 adjustment; all sidescan, subbottom, and magnetometer target data were converted to this Florida East grid. The navigation data streams were in geographic format, WGS84 (i.e., latitude, longitude). The raw data from the sidescan and subbottom devices are archived in this format, and the magnetic data are in the projected format. Navigation was conducted with a Lenovo Thinkpad E520, using HYPACK Max 2019 for navigation. HYPACK, a Xylem company, was written specifically for marine survey applications. The magnetometer data were acquired with this program as well. All positioning coordinates are based on the position of the DGPS antennae relative to the sensor location. Offsets from the antenna to tow point locations, in

conjunction with cable out, are input into Hypack's towed systems driver to determine layback on the fly (Figure 3-08). This layback information is critical for accurate positioning of targets in the data analysis phase and to relocate any targets for additional investigations.



**Figure 3-08. Vessel schematic illustrating instrument positions relative to the tracking point. Key: SS=sidescan sonar, SBG=positioning system receiver, ANANT-1=antenna one, ANANT-2=antenna two, SB=subbottom profiler, and Mag=Magnetometer.**

### **MAGNETOMETER**

Magnetometers measure the intensity of magnetic forces with a sensor that measures and records the ambient (background) magnetic strength and if present, deviations from the ambient background (anomalies) caused by magnetic fields of ferrous objects and other sources such as high voltage cables (Breiner 1973). These measurements are recorded in nanoteslas, the standard unit of magnetic intensity. Anomalies can be recorded as a monopole anomaly, that is a deviation either above (positive) or below (negative) the ambient reading, or a dipole anomaly, that has both a positive and negative deviation from the ambient reading.

The success of the magnetometer to detect anomalies in local magnetic fields has resulted in the instrument being a principal remote sensing tool of maritime archaeologists because anomalies can represent components of shipwrecks and other types of cultural resources or historic debris or objects hazardous to dredging or navigation. While it is not possible to identify specific ferrous objects from the magnetic field contours, it is occasionally possible to approximate shape, mass, and alignment characteristics of wrecks or other structures based on complex magnetic field patterns. In addition, other data (historic accounts, use patterns of the area, diver inspection), which overlap data from other remote sensing technologies, such as the sidescan sonar and prior knowledge of similar targets, can lead to an accurate identification of potential targets.

There are three types of commercially available marine magnetometers: proton precession, cesium vapor, and Overhauser. Panamerican employed a Geometrics 882 cesium vapor magnetometer (Figure 3-09) over the course of the project. Data were stored in the navigation computer and archived. The Geometrics 882, equipped with an altimeter for vertical control, is

capable of sub-second recordation for precise location control, and data were collected at 10 hertz, providing a record of both the ambient field as well as the character and amplitude of the anomalies encountered. A 110-volt gasoline powered generator powered all survey devices.



Figure 3-09. Survey instruments employed during the investigation included (from left to right) the sidescan EdgeTech 4125 sonar, the EdgeTech 424 subbottom profiler, and the Geometrics 882 magnetometer.

### *SIDESCAN SONAR*

The remote sensing instrument used to search for physical features on or above the ocean floor was an EdgeTech 4125 sidescan sonar system (see Figure 3-09). The sidescan sonar is an instrument that, through the transmission of dual fan-shaped pulses of sound and reception of reflected sound pulses, produces an acoustic image of the bottom. Under ideal circumstances, the sidescan sonar can provide a near-photographic representation of the bottom on either side of the trackline of a survey vessel.

The 4125 has internal capability for removal of the water column from the instrument's video printout, as well as correction for slant range distortion. This sidescan sonar was utilized with the navigation system to provide manual positioning of fix or target points on the digital printout. Sidescan sonar data are useful in searching for the physical features indicative of submerged cultural resources. Specifically, the record is examined for features showing characteristics such as height above bottom, linearity, and structural form. Additionally, potential acoustic targets are checked for any locational match with the data derived from the magnetometer and the subbottom profiler.

The EdgeTech 4125 sidescan sonar includes capability of 600 and 1600 kilohertz power settings and a variable side range of up to 100 meters-per-channel (200-meter coverage per line) on each sidescan line run. Data were recorded during this survey using the 600-kilohertz frequency setting, with a range of 70 meters per channel. These settings were chosen to provide detail and abundant overlapping coverage with the survey line spacing to insure full and detailed coverage of the survey area. Note that because this was not a bathymetric survey, sound velocity control was not required. However, the standard value of sound velocity of 1,500 meters per second was employed.

### *SUBBOTTOM PROFILER*

Employed to determine the character of near-surface geologic features over the survey area, subbottom profilers generate low frequency (0.5 to 30 kilohertz) sound pulses capable of penetrating the seabed and reflecting off sediment boundaries or larger objects below the surface. The data are then processed and reproduced as cross sections based on two-way travel time (the time taken for the pulse to travel from the source to the reflector and back to the receiver). This travel time is then interpolated to depth in the sediment column by calculating at 1,500 meters-per-second (the average speed of sound in water).

Subbottom profilers have different ranges of sound wave frequency (sparkers, boomers, pingers, and chirp systems). Sparkers and boomers operate at low frequency (5 hertz to 2 kilohertz) and afford deep geologic penetration and low resolution, useful for deep geologic time. Pingers (3.5 and 7 kilohertz) are more useful to penetrate late Pleistocene- and Holocene-aged deposits or paleolandscape features of interest to prehistoric archaeologists. CHIRP systems sweep multiple frequency ranges and are the most precise and accurate of the subbottom profiler systems, and they operate at ranges of between 3 to 40 kilohertz. The resolution can be on the order of 10 centimeters (6 inches) depending on sediment type and the quality of the acoustic return.

Panamerican employed an EdgeTech 3100 CHIRP subbottom profiler system with a topside power unit, laptop processor and SB-424 towfish (Figure 3-09). The device was operated at a setting of 4 to 16 kilohertz, the lowest setting of the device, for maximum sediment penetration.

Seismic cross sections reconstruct the shapes and extents of reflectors such as facies in channel sediments, rock/sediment interfaces, marine sand bed cover, and so forth. In addition to subbottom profiling, and depending on the density of data points, the first bottom return data can be used for high-resolution bathymetry. Shipwrecks can be studied with subbottom profilers once their location is known. Finding shipwrecks with subbottom profiler survey is less useful.

High and low amplitude reflectors (light and dark returns) distinguish differences of sediment characteristics such as particle size and consolidation (Stevenson et al. 2002). Facies contacts can be identified by discontinuities in the extent, slope angle, or shape of the reflector returns. This latter fact is important when identifying the sinusoidal shapes of drowned channel systems and other relict and buried fluvial system features (e.g., estuarine, tidal, lowland, upland areas around drainage features). Parabolic-shaped reflectors indicate individual objects of sufficient size and consolidation. The parabolic shape is the result of sound propagating outwardly from the item. There are also five types of signals that may cause misinterpretation in the two dimensional records: direct arrivals from the sound source; water surface reflection; side echoes; reflection multiples; and point source reflections. Judicious analysis is required to identify them.

Peats tend to reflect strongly, as do other fine-grained or muddy sediments. Sand and shell deposits like those around and in the Alabama coast are less reflective, and difficult to penetrate without lower seismic frequencies such as those employed by the profiler system used here.

### ***SURVEY VESSEL***

Because of the different depths between the inshore and offshore survey areas, two different vessels were required. The vessel employed for the four shallow inshore cells was Panamerican's 25-foot 2520 Sport Cabin Parker, a modified V-hulled motor vessel powered by a Yamaha 200-horsepower engine (Figure 3-10). The vessel has a covered cabin and an ample, covered-deck area for the operation of all remote sensing equipment.

The vessel employed during the remote-sensing survey of the offshore cells was the R/V *Kimberly Dawn*, leased from We Three, Inc. Based out of Bayou La Batre, Alabama, the 95-foot research vessel that works specifically on research projects in the Gulf of Mexico (formerly a commercial shrimper) provided an extremely stable working platform. Fitted with modern communications and ample deck gear, the vessel is equipped for a wide range of oceanographic and environmental research. The ability to stay out 24/7, along with comfortable accommodations and the experienced professional crew made the R/V *Kimberly Dawn* an ideal choice for this investigation. The vessel conforms to all U.S. Coast Guard (USCG) specifications, according to class, and had a full compliment of safety equipment (Figure 3-11).



Figure 3-10. Panamerican's 25-foot 2520 Sport Cabin Parker.



Figure 3-11. The 95-foot R/V *Kimberly Dawn* employed for the remote-sensing survey.

***SURVEY PROCEDURES***

Spaced at 50 meters intervals (164-foot) for the offshore cells and 15 meters intervals (50-foot) for the inshore cells, 3,690 statute survey line miles were programmed into the navigation computer to effectively cover the survey areas (Figures 3-12 through 3-15). Specifically the acreage for each area consisted of 3.5 survey line miles each for the four Mobile Bay cells 677, 699, 700, and 701, 2,073 survey line miles for MOB, 188 survey line miles for BAL-1, 154 survey line miles for BAL-2, 156 survey line miles for BAL-3, 67 survey line miles for BAL-4, 91 survey line miles for BAL-5, 104 survey line miles for BAL-6, 46 survey line miles for BAL-7, and 797 survey line miles for BAL-8 (see Table 3-01).

**Table 3-01. Survey Line Miles by Proposed Reef Zone and Cell.**

<b>ADCNR Reef Zone Designation</b>	<b>Survey Cell/Zone Designation*</b>	<b>Survey Line Miles</b>
SAM-2019-00677-DCH "Ghost Rig Reef"	677	3.5
SAM-2019-00699-DCH "Wellhead Reef"	699	3.5
SAM-2019-00700-DCH "Bon Secour Reef"	700	3.5
SAM-2019-00701-DCH "Dog River Reef"	701	3.5
SAM-2018-01036-GAC	MOB	2073
SAM-2014-00487-DEM	BAL1	188
SAM-2014-00487-DEM	BAL2	154
SAM-2014-00487-DEM	BAL3	156
SAM-2014-00487-DEM	BAL4	67
SAM-2014-00487-DEM	BAL5	91
SAM-2014-00487-DEM	BAL6	104
SAM-2014-00487-DEM	BAL7	46
SAM-2014-00487-DEM	BAL8	797

\*MOB=Mobile County, BAL=Baldwin County

Once the planned survey lines were programmed into the navigation computer, the magnetometer, sidescan, subbottom, and DGPS were mobilized, tested, found properly operational, and the trackline running began. The helmsman viewed a video monitor, linked to the DGPS and navigational computer, to aid in directing the course of the vessel down the survey tracklines (Figure 3-16). The monitor displayed the pre-plotted trackline, the real time position of the survey vessel, and the path of the survey vessel. The speed of the survey vessel was maintained at approximately three to four knots for the uniform acquisition of data. As the survey vessel maneuvered down each trackline, the navigation system monitored the position of the survey vessel relative to the tracklines every second, each of which was recorded by the computer. Event marks delineated the start and end of each trackline. The positioning points along the traveled line were recorded on the computer hard drive and data from all instruments were also stored digitally. All data were monitored and collected during survey operations by a team of two surveyors, who monitored all instrumentation computers in the *Kimberly Dawn's* survey computer station as shown in Figure 3-17.

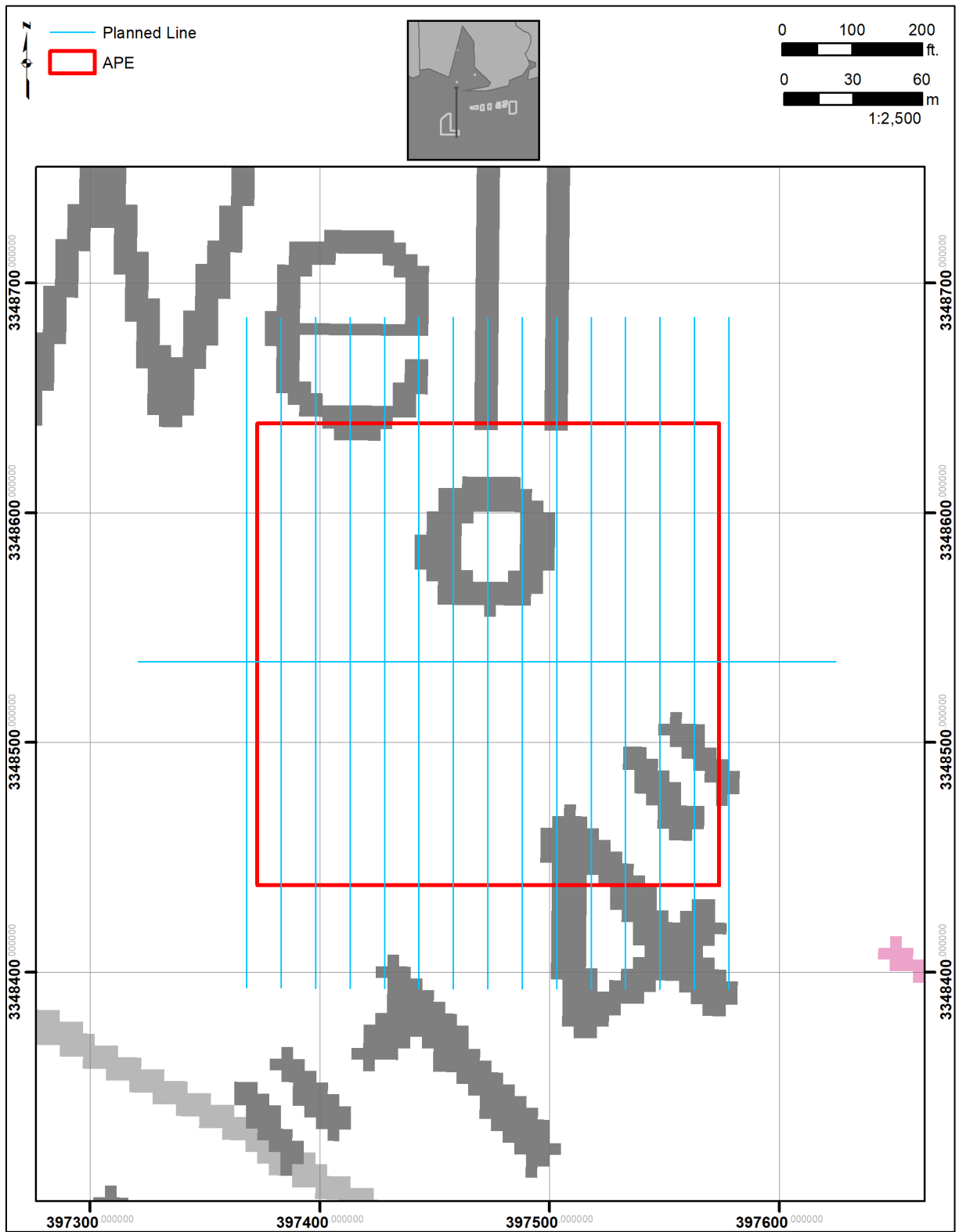


Figure 3-12. Example of planned lines for the survey areas. These lines are for Mobile Bay Cell 677.



Figure 3-13. Actual survey lines run for Mobile Bay Cell 677.

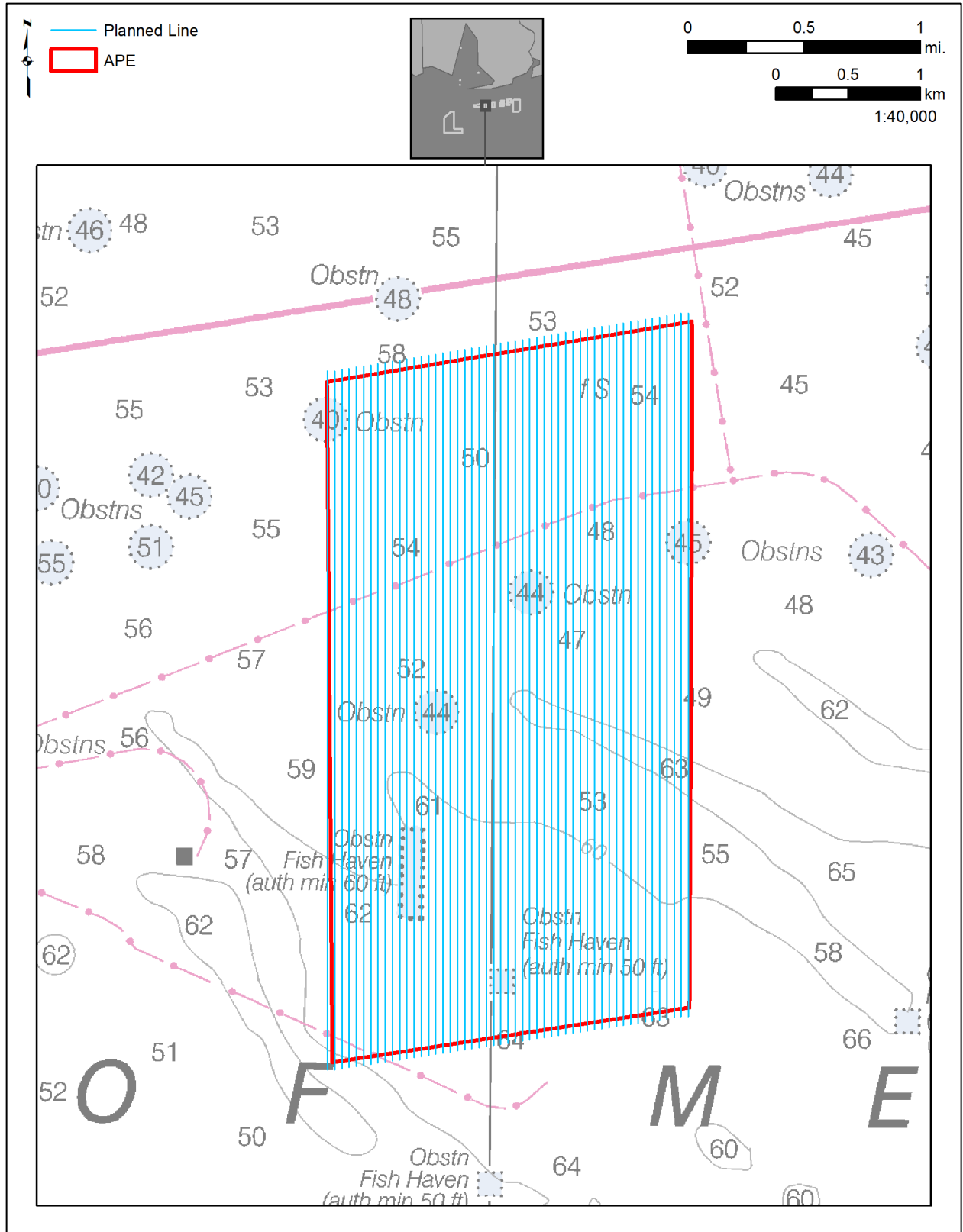


Figure 3-14. Example of planned lines for the survey areas. These planned lines are for the BAL2 cell.

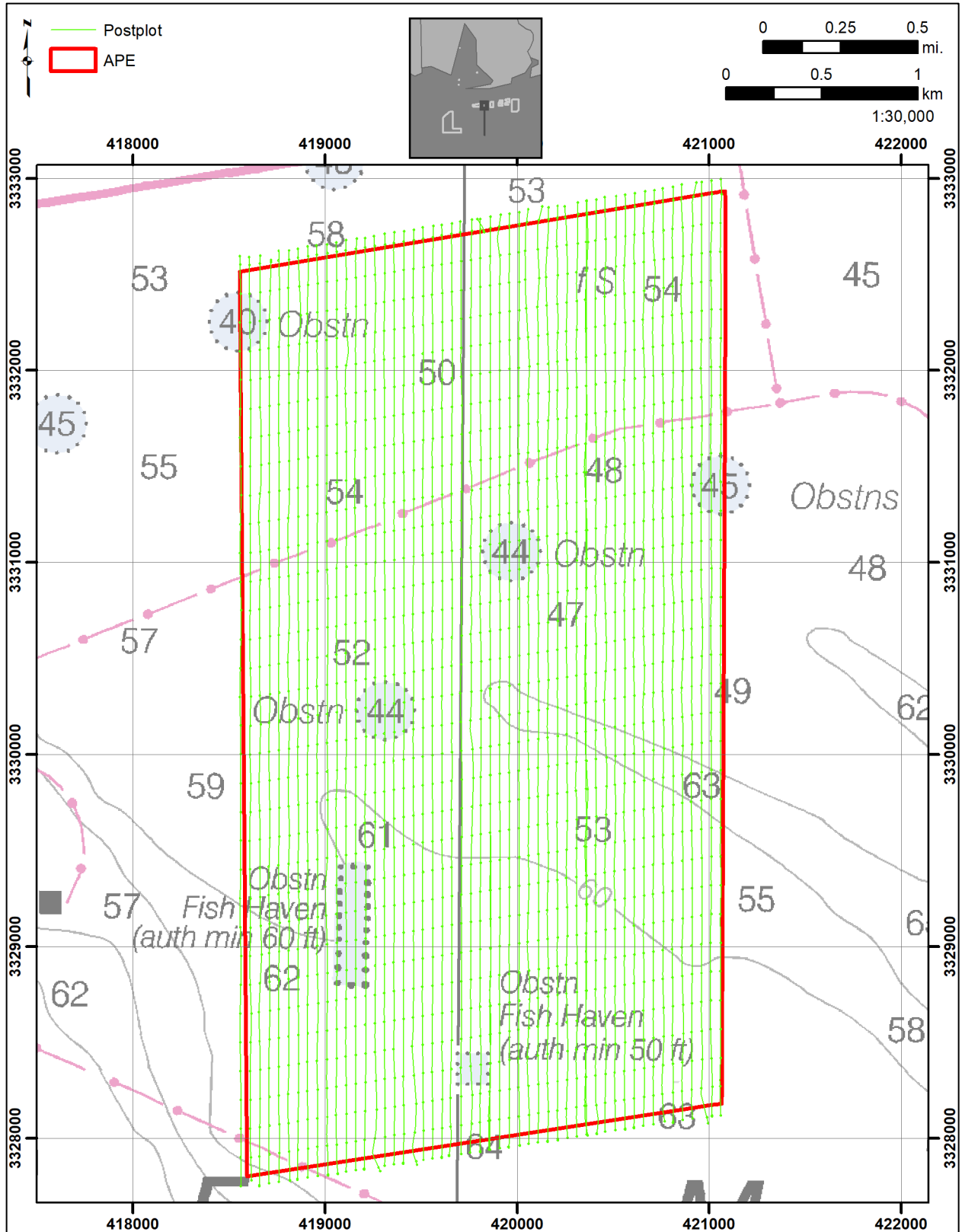


Figure 3-15. Actual survey lines run for the BAL8 cell.



Figure 3-16. Captain Perry Zirlott at the helm of the RV *Kimberly Dawn* viewing the navigation computer screen. The survey vessel was steered along pre-planned survey track lines by autopilot.



Figure 3-17. Survey computer station. From left to right, two positioning and vessel track computers, magnetometer data computer (center), the sonar data computer, and at right the subbottom data computer.

## DATA ANALYSIS

### DATA PROCESSING

Once collected, survey data are processed and analyzed using an array of software packages designed to display, edit, manipulate, map, and compare proximities of raster, vector, and tabular data. These packages include SonarWiz.MAP for mosaicing sidescan sonar and subbottom profiler data, mapping target extents and generating target reports, figure details, and Geographic Information System (GIS) layers; Hypack Single Beam Editor, Hypack TIN Modeler, and Hypack Export for tabulating anomaly characteristics and contouring magnetic data, and generating GIS data layers. ESRI ArcMap and ArcView are used to display the data on background charts, to conduct a “proximity analysis” for each of the three types of targets (e.g., see which magnetometer, sidescan, and subbottom profiler anomalies are near each other and may explain each other) and to create maps and figures for this report.

### MAGNETIC DATA COLLECTION AND PROCESSING

Data from the magnetometer are collected using Hypack Max. The data are stored as \*.RAW files by line, time, and day. Raw data files are opened, and layback parameters are set. Contour maps are produced of the magnetic data with the TIN Modeler. The DXF file is saved and exported into the combined GIS database. The contour maps allow a graphic illustration of anomaly locations, spatial extent, and association with other anomalies. Magnetic data are reviewed by the Hypack Single Beam Editor (Figure 3-18), and the location, strength, duration, and type of anomaly is transcribed to a spreadsheet along with comments.

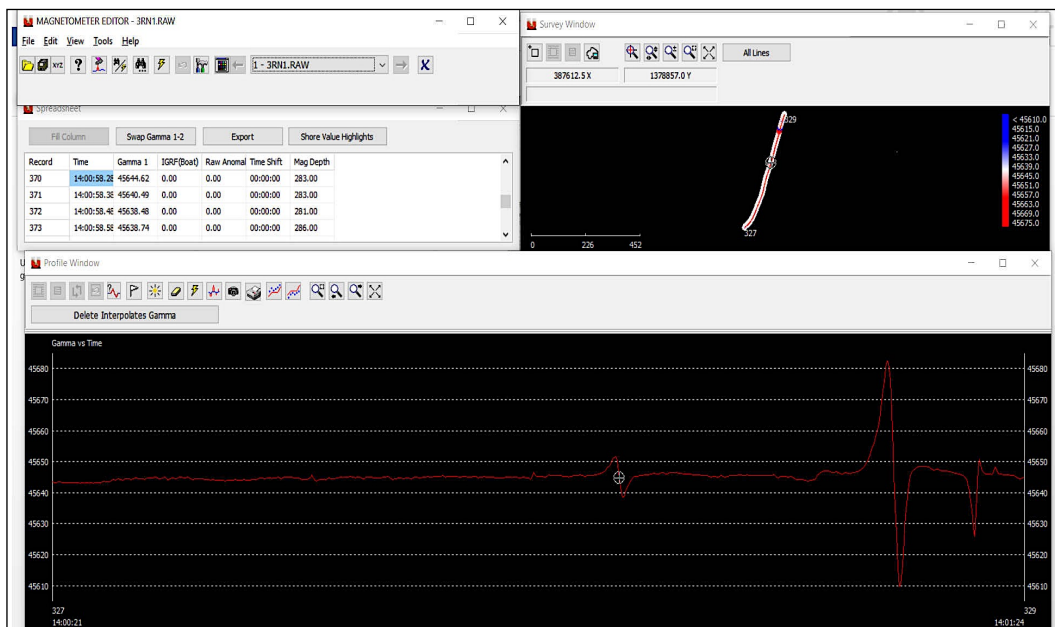


Figure 3-18. HYPACK Magnetometer Editor magnetic data display of a survey line. Using these windows one can analyze anomaly position, strength, duration, and type. Target locations are selected based on their type (see below) and their width is the duration. Shown in the lower panel is a dipole anomaly being marked with the cross hair on the source location, the position of which will be presented in the associated table as coordinates.

### SIDESCAN SONAR DATA COLLECTION AND PROCESSING

Post-processing of sidescan sonar is accomplished using SonarWiz.MAP, a product that enables the user to view the sidescan data in digitizer waterfall format, pick targets and enter target parameters including length, width, height, material, and other characterizations into a database

of contacts. In addition, SonarWiz.MAP “mosaics” the sidescan data by associating each pixel (equivalent to about 10 centimeters) of the sidescan image with its geographic location determined from the DGPS position (layback rectified) and distance from the DGPS position (Figure 3-19). SonarWiz.MAP is the industry standard for mosaicing capability, and the results are exported as geo-referenced \*.TIFFs for importing to the GIS database of the project. SonarWiz.MAP can generate target reports in PDF, Word, and Excel formats. Panamerican utilizes the Word format for reports (Figure 3-20).

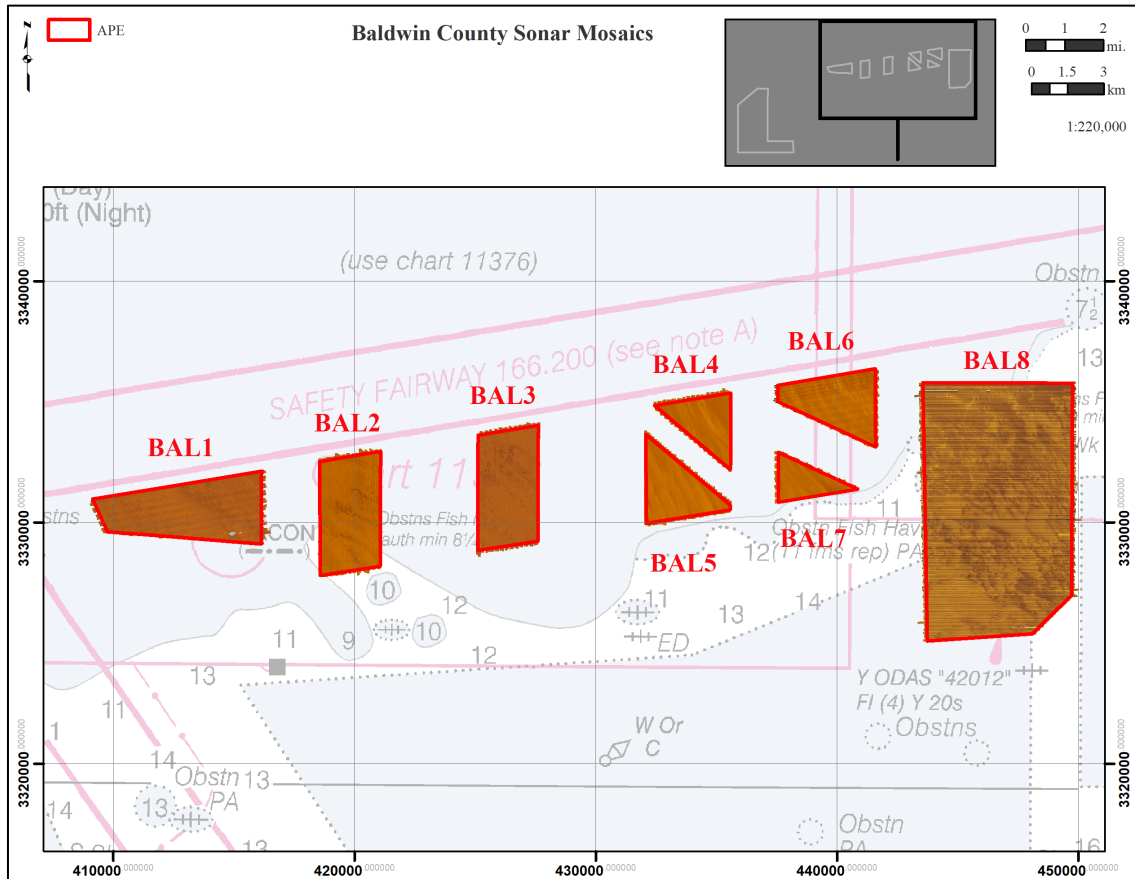


Figure 3-19. Sidescan mosaics of SAM-2014-00487-DEM (Baldwin County Cells) produced with SonarWiz.MAP software.

	<p><b>BAL8.S069</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 3:04:10 PM</li> <li>• Click Position</li> <li>• 30.1307136778 -87.5299473436 (WGS84)</li> <li>• (X) 448954.56 (Y) 3333388.13 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_166.jsf</li> <li>• Heading: 279.000 Degrees</li> <li>• Line Name: BAL8_166</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 18.97 Meters</li> <li>• Target Height: 3.03 Meters</li> <li>• Target Length: 85.06 Meters</li> <li>• Target Shadow: 11.49 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Allen</li> <li>• Classification2:</li> <li>• Description: Liberty Ship <i>Allen</i></li> </ul>
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Figure 3-20. SonarWiz.MAP sonar contact tabular format, automatically generated. The target pictured here represents the remains of the *Allen Reef Liberty Ship (SS William T. Barry)* in BAL8 Cell.



### GEOGRAPHIC INFORMATION SYSTEMS ANALYSIS

A project GIS database is constructed using geo-referenced images and layers generated during the magnetometer, sidescan, and subbottom data analyses. Other layers can be added, such as orthophoto quadrangles, or navigation charts (Figure 3-23). Several important things are accomplished by GIS compilation. First, the collected data are compared to one another and evaluated for accuracy and consistency of the positioning information. Second, magnetic, sidescan and other remote-sensing targets, are compared for relationship (proximity analysis). Employing the data in GIS, one can easily zoom in to further analyze spatial relationships as well as magnetic signature characteristics.

The GIS product showed numerous long, linear anomalies that were obviously pipelines, evidenced by the numerous wells and drilling platforms in the survey areas. Analysis also included correlation with BOEM's Data Center Geographic Mapping Data (<https://www.data.boem.gov/Main/Mapping.aspx>) that showed the great majority of recorded anomalies as being associated with numbered oil and gas infrastructure including pipelines, wells and platforms.

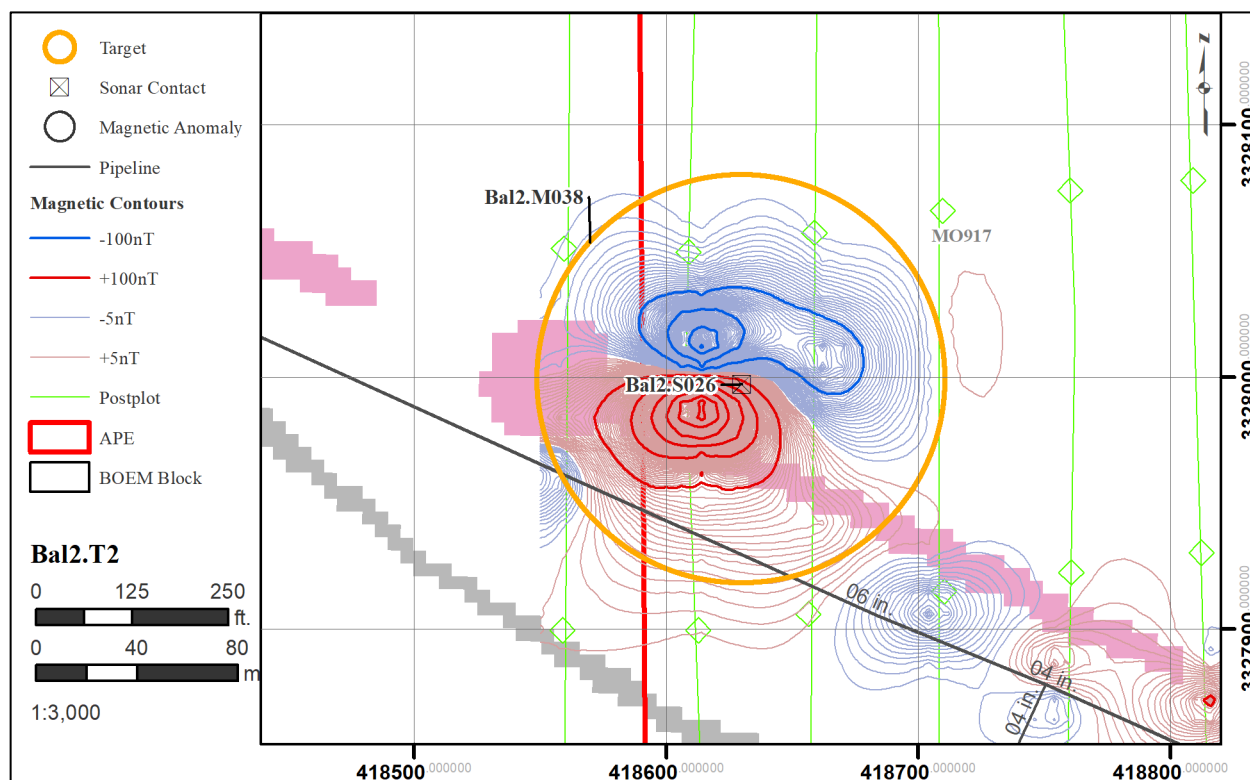


Figure 3-23. A section of the Geographic Information System database of the survey area data showing survey track lines and magnetic contour map with labeled anomalies and sonar targets overlaid on the navigation chart.

### DATA ANALYSIS CRITERIA, THEORY, AND COMMENTARY

The remote-sensing survey of portions of the survey area intended to locate and identify the presence or absence of potentially significant submerged cultural resources, and, if present, might be adversely affected by proposed navigation improvement activities; however, the interpretation of remote-sensing data obtained from both the magnetometer and sidescan sonar, as stated by Pearson et al. (1991), “relies on a combination of sound scientific knowledge and practical experience”. The evaluation of remote-sensing anomalies, with regard to a determination that the

anomaly does or does not represent shipwreck remains, depends on a variety of factors. These include the detected characteristics of the individual anomalies (e.g., magnetic anomaly strength and duration, sidescan image configuration), associated with other sidescan or magnetic targets on the same or adjacent lines, and relationships to observable target sources such as channel buoys or pipeline crossings, etc.

### **MAGNETOMETER**

Interpretation of data collected by the magnetometer, the tool of choice by the underwater archaeologist for locating shipwrecks, is perhaps the most problematic. Magnetic anomalies are evaluated and prioritized based on magnetic amplitude or deflection of nanotesla intensity from the ambient background in concert with duration or spatial extent (distance in feet along a trackline of an anomaly influences the ambient background); they are also correlated with sidescan targets. Because the sonar record gives a visible indication of the target, identification or evaluation of potential significance is based on visible target shape, size, and presence of structure, as well as association with magnetic anomalies. Targets, such as isolated sections of pipe, can normally be immediately discarded as non-significant, while large areas of above-sediment wreckage are generally easy to identify.

The problems of differentiating between modern debris and shipwrecks, based on remote-sensing data, have been discussed by a number of authors. This difficulty is particularly true in the case of magnetic data; therefore, it has received the most attention in the current body of literature dealing with the subject. Pearson and Saltus (1990:32) state “even though a considerable body of magnetic signature data for shipwrecks is now available, it is impossible to positively associate any specific signature with a shipwreck or any other feature”. There is no doubt that the only positive way to verify a magnetic source object is through physical examination. With that said, however, the size and complexity of a magnetic signature does provide a usable key for distinguishing between modern debris and shipwreck remains (see also Garrison et al. 1989; Irion and Bond 1984; Pearson et al. 1993). Specifically, the magnetic signatures of most shipwrecks tend to be large in area and tend to display multiple magnetic peaks of differing amplitude.

In a study conducted for the Minerals Management Service for magnetic anomalies in the northern Gulf of Mexico, Garrison et al. (1989) indicate that a shipwreck signature will cover an area between 10,000 and 50,000 square meters. Using the Garrison et al. (1989) study, as well as years of “practical experience,” in an effort to assess potential significance of remote-sensing targets, the Pearson et al. (1991) study developed general characteristics of magnetometer signatures most likely to represent shipwrecks. The report states that “the amplitude of magnetic anomalies associated with shipwrecks varies considerably, but, in general, the signature of large watercraft or portions of watercraft, range from moderate to high intensity (greater than 50 nanoteslas) when the sensor is at distances of 20 feet or so” (Pearson et al. 1991:70). Employing a table of magnetic data from various sources as baseline data, the report goes on to state that “data suggests that at a distance of 20 feet or fewer, watercraft of moderate size are likely to produce a magnetic anomaly (this would be a complex signature [i.e., a cluster of dipoles and/or monopoles]) greater than 80 or 90 feet across the smallest dimension...” (Pearson et al. 1991:70).

While establishing baseline amounts of amplitude and duration, reflective of the magnetic characteristics for a shipwreck site, the report “recognizes that a considerable amount of variability does occur” (Pearson et al. 1991:70). Generated in an effort to test the 50-nanotesla/80-foot criteria and to determine the amount of variability, Table 3-02 lists numerous shipwrecks as well as single and multiple-source objects, located by magnetic survey and verified by divers. All shipwrecks met and surpassed the 50-nanotesla/80-foot criteria, with one exception. *Emanuel Point II*'s magnetic deviation falls below the cut off, although duration

is above. Subsequent archaeological examinations have determined that *Emanuel Point II* contains very little iron (Greg Cook personal communication, 2011). The majority of single-object readings fell below the criteria (with the exception of the pipeline, the two sections of pipe, and one of the seven rocket motors). However, the signature of the pipeline should appear as a linear feature on a magnetic contour map and not be confused with a single-source object. The strengths of the two sections of pipe represent refinement readings that sought to produce the highest reading possible and should perhaps be discounted from the sample. With respect to the rocket motors, they are single objects that, because of their association with the space program, must be considered potentially significant. While the shipwrecks and most single-source objects adhere to the 50-nanotesla/80-foot criteria, the multiple-source objects do not. If all targets listed on the table required prioritization of potential significance based on the 50-nanotesla/80-foot criteria, the two multiple-source object targets would be classified as potentially significant.

**Table 3-02. Compilation of Table 3-01. Compilation of Magnetic Data from Various Sources.**

Vessel (Object)	Type and Size	Magnetic Deviation	Duration (feet)	Reference
<b>Shipwrecks</b>				
<i>La Belle</i>	54-ft. <i>barque longue</i> (1686)	247	90	Arnold 1996
<i>Emanuel Point I</i>	wooden hulled sailing (1559)	110	200	Cook 2011
<i>Emanuel Point II</i>	wooden hulled sailing (1559)	40	85	Cook 2011
75-D-91A	18 <sup>th</sup> -century wooden wreck	140	120	Cox 2005
<i>Egmont Shoal Wreck</i>	19 <sup>th</sup> century Wooden-hulled copper clad sailing vessel	67	160	Krivor 2005
<i>USS Narcissus</i>	Civil War wooden tug	582	176	Krivor 2005
<i>J.D. Hinde</i>	129-ft. wooden sternwheeler	573	110	Gearhart and Hoyt 1990
<i>Utina</i>	267-ft. wooden freighter	690	150	James and Pearson 1991; Pearson and Simmons 1995
<i>Mary Somers</i>	iron-hulled sidewheeler	5000	400	Pearson et al. 1993
<i>Gen C.B. Comstock</i>	177-ft. wooden hopper dredge	200	200	James et al. 1991
<i>Mary</i>	234-ft. iron-hulled sidewheeler	1180	200	Hoyt 1990
<i>El Nuevo Constante</i>	126-ft. wooden collier (1677)	65	250	Pearson et al. 1991
<i>James Stockton</i>	55-ft. wooden schooner	80	130	Pearson et al. 1991
<i>Homer</i>	148-ft. wooden side-wheeler	810	200	Pearson and Saltus 1990
modern shrimp boat	segment 27-x-5 ft.	350	90	Pearson et al. 1991
Confederate Obstructions	numerous vessels with machinery removed and filled with construction rubble	110	long duration	Irion and Bond 1984
Shrimp Boat	Modern	162	110	Watts 2000
<b>Single Objects</b>				
pipeline	18-in. diameter	1,570	200	Duff 1996
Pipe/mast/davit	18 in. by 26 ft.	475	104	Lydecker 2007
Pipe	3 in. by 10 ft.	55	352	Krivor 2005
anchor	6-ft. shaft	30	270	Pearson et al. 1991
iron anvil	150 lbs.	598	26	Pearson et al. 1991
engine block	modern gasoline	357	60	Rogers et al. 1990

Vessel (Object)	Type and Size	Magnetic Deviation	Duration (feet)	Reference
steel drum	55 gal.	191	35	Rogers et al. 1990
pipe	8 ft. long, 3 in. diameter	121	40	Rogers et al. 1990
railroad rail segment	4-ft. section	216	40	Rogers et al. 1990
7 Rocket Motors	8–34 ft. in length	61 to 422	75 to 180	Watts 2000
Multiple Objects				
anchor/wire rope	8-ft. modern stockless/large coil	910	140	Rogers et al. 1990
cable and chain	5 ft.	30	50	Pearson et al. 1991
scattered ferrous metal	14-x-3 ft.	100	110	Pearson et al. 1991

While the data indicates the validity of employing specific nanotesla strength and duration criteria when assessing magnetic anomalies, other factors must be taken into account. Pearson and Hudson (1990) have argued that the past and recent use of a water body must be an important consideration in the interpretation of remote-sensing data; in many cases, this should supposedly be the most important criterion. Unless the remote-sensing data, the historical record, or the specific environment (e.g., harbor entrance channel) provides compelling and overriding evidence, it is otherwise believed that the history of use should be a primary consideration in the interpretation. The constitution of “compelling evidence” is, to some extent, left to the discretion of the researcher; however, in settings where modern commercial traffic and historic use have been intensive, such as the current Project Areas, the presence of a large quantity of modern debris must be anticipated. In harbor, bay, or riverine situations where traffic is heavy, this debris will be scattered along the channel right-of-way, although it may be concentrated in areas where traffic would slow or halt, and it will appear on remote-sensing survey records as discrete, small objects. This is in fact the case for many of the anomalies recorded during the current investigation.

In addition to anomaly strength and duration considerations, all anomalies were assessed for type (monopole [negative or positive influence], dipole [negative and positive influence], or complex) and association with other magnetic anomalies (i.e., clustering) and sidescan sonar targets. With regard to analysis of these anomalies, relative to potential significance, many will be found to represent a small, single-source object (a localized deviation), and are generally identified and labeled as non-significant, especially in an area of high use, such as adjacent to a navigation channel, similar to the current environment. As seen on contour maps, the contour lines for this type of anomaly can be seen to approach, or go to but not beyond, the adjacent survey trackline on which it is located. This visual interpretation is corroborated during the analysis of the electronic magnetometer strip-chart data of each survey trackline. An examination of the strip chart will show that the target was recorded only on a single transect, and that it was not recorded (i.e., did not influence the ambient magnetic background) on adjacent lines. This is especially true when an anomaly’s readings are large deviations but are recorded on only one line. This indicates the source for this target must be a small, discrete object, and the magnetometer sensor must have passed closely by or directly over the object in order to generate the large readings on this survey line yet not be recorded or have had an influence on adjacent lines, especially relevant when employing a 50-foot transect interval. Because these anomalies represent single-source objects, they are not considered representative of a potentially significant submerged cultural resource and are not recommended for avoidance.

It cannot be overstated that the majority of anomalies recorded during any survey are generated by debris and not shipwrecks or other cultural resources. As stated by Gearhart (2011:91-92), “archaeologists have repeatedly struggled to characterize reliable differences between magnetic

signatures of shipwrecks and debris,” employing amplitude, duration (i.e., spatial extent), and complexity of the signature as vague defining criteria, along with judgmental experience, and further states that “present methods for marine magnetic data interpretation are uncertain at best and scientifically unfounded at worst.” However, and as will be discussed below, the employment of induced magnetism identified over twenty years ago as a potential defining characteristic of an anomaly, can eliminate many anomalies from consideration as shipwrecks.

Briefly, iron atoms are mobile, moving in all directions when heated above 1,418°F (Serway 1992:559). When cooled, these particles orient themselves in line with the Earth's magnetic field. This constitutes the object's permanent field, which subsequently moves and rotates along with the object. However, a small fraction of molecules will be oriented toward magnetic north no matter the object's orientation. This is the object's induced field, which is much weaker than its permanent field (Breiner 1999:8).

In Garrison et al.'s (1989) study to establish an interpretive framework that would help identify the nature of magnetic anomalies, it was predicted correctly that anomalies caused by debris might be differentiated from shipwreck anomalies based on the contrast between permanent and induced magnetism. The study states:

“While it may not be analytically possible to contrast iron and steel by remnant magnetization one may be able to characterize anomalies as to their inductive magnetization...The argument here would rely on the structural complexity of a shipwreck having a large or detectable inductive magnetization. Anomalies without this component could be classified as exclusively ferromagnetic features and by local extension debris” [et al. 1989:2:224].

In his article entitled *Archaeological Interpretation of Marine Magnetic Data*, Gearhart (2011) expands on Garrison et al.'s 1989 premise and convincingly shows that while “one cannot distinguish between the anomaly produced by a shipwreck and one produced by a similarly complex concentration of magnetic debris...shipwreck anomalies can be characterized by their induced magnetic fields and are distinguishable from a significant proportion of simple-source anomalies.” He goes on to state, “the most important parameter to consider when interpreting anomalies based on magnetic induction is the direction of magnetic moment” (Gearhart 2011:106) and “deviation from the northerly magnetic moment direction, common to all induced anomalies, has proven to be the single most powerful discriminator between simple-source anomalies and complex-source anomalies, including shipwrecks” (Gearhart 2011:102).

In simplistic terms, the contour map of the magnetic moment of an induced anomaly will have its negative value to the north and its positive value to the south. Gearhart presents contours of numerous known wreck and debris anomalies and illustrates that magnetic moments of shipwrecks (in the earth's northern hemisphere) are oriented to the north (no more than a 26-degree deviation), as are those of complex debris sites (e.g., large areas of wire rope), while those of simple-source debris anomalies are not. He concludes by suggesting  $\pm 20$  degrees from magnetic north as an orientation that will allow the successful differentiation of simple-source debris anomalies from most complex-source anomalies and virtually all shipwrecks (Gearhart 2011). Several examples from recent Panamerican projects demonstrate the validity of this model (Figure 3-24). While not an exhaustive review, we found these same principles apply with no deviation from Gearhart's findings and leads us to also conclude that identifying and categorizing the magnetic moment of an induced anomaly does allow the researcher the ability to differentiate a large percentage of debris source anomalies from potentially significant resources during analysis. A case in point is the recent diver investigation of 13 magnetic anomalies in the Skyway Gulf Intracoastal Waterway (James et al. 2011). Employing the above criteria of inclination of magnetic moment, of the 13 magnetic anomalies investigated, seven anomalies had

magnetic moments that did not meet the characteristics of complex-source anomalies including shipwrecks, but rather had signatures representative of simple-source debris. Subsequent diver investigation clearly showed that these anomalies did indeed represent debris and were not significant. Representing over half the total number of anomalies, if this inclination of magnetic moment method had been employed they would not have been recommended for avoidance or subsequent investigation. The remaining six anomalies that had magnetic moment characteristics indicative of shipwrecks or complex debris sites were also found to represent debris (James et al. 2011). This, however, is not unexpected given that this method does not rule out complex source debris anomalies or all simple-source debris anomalies, just a much larger percentage than would have been ruled out if the method had not been employed. The inclination of magnetic moment characteristic as an indicator of potential significance will, we believe, be proven and accepted. The end result could well be the reduction of a significant number of anomalies currently recommended for avoidance or subsequent investigation.

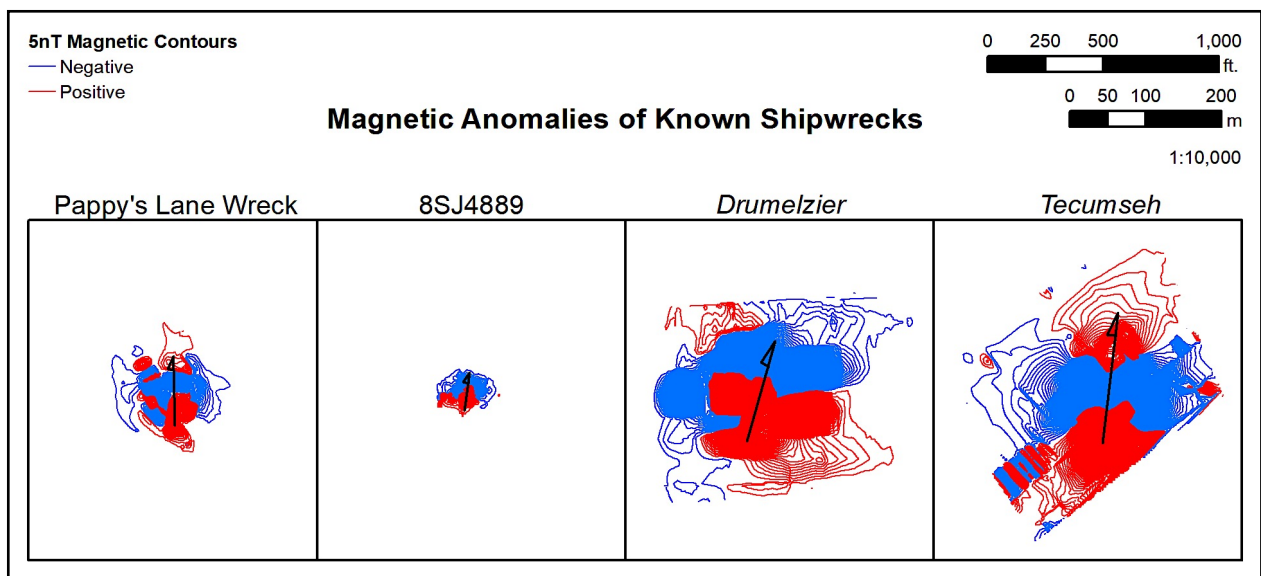


Figure 3-24. Magnetic contour maps of four wreck sites documented during recent Panamerican Projects. Black arrows indicate the inclination of the magnetic anomaly's field. Note that the inclination of all fields tend to orient within 20 degrees of magnetic north. See Tables 3-01 and 3-02 for additional information regarding these shipwrecks.

### *SIDECAN SONAR*

In contrast to magnetic data, sidescan interpretation is less problematic, as objects are reconstructed as they look to the eye. Targets, such as isolated sections of pipe, can normally be immediately discarded as non-significant, while large areas of above-sediment wreckage as well as some exposed paleofeatures are generally apparent. The chief factors considered in analyzing sidescan data, with regard to wreckage, include: linearity, height off bottom, size, associated magnetics, and environmental context. Since historic resources in the form of shipwrecks usually contain large amounts of ferrous compounds, complex sidescan targets with complex magnetic anomalies are of the greatest importance. The usual outcome of targets with no associated magnetics are items, such as rocks, trees, and other non-historic debris of limited interest to the archaeologist.

### ***CLUSTERING***

Since an archaeological remote-sensing survey involves the collection of several different types of data, each of which has the potential to locate significant cultural resources, attention must be given to groups of targets. These groupings, referred to as clustering, occur when a target exists that produces both a sidescan sonar return and a magnetic signature. In addition, a magnetic source that extends across several survey lines will produce an anomaly on each line, and since these anomalies are related they will form a cluster. Previously discovered archaeological sites will also be considered as an aspect of clustering. Although criteria used to determine a cluster is somewhat subjective, anomalies, sidescan targets, and previously identified archaeological sites will generally be included in a cluster if they lie within approximately 65 feet of one another.

### ***SUBBOTTOM PROFILER ANALYSIS***

Subbottom profilers generate low frequency acoustic waves that penetrate the seabed and reflect off boundaries or objects located in the subsurface. The data are then processed and reproduced as a cross section using two-way travel time to determine depth (the time taken for the pulse to travel from the source to the reflector and back to the receiver by a constant). The shapes, relationships, and extents of reflectors are used to infer bottom and subbottom geomorphological characteristics.

In general, high and low amplitude linear reflectors (light and dark lines) distinguish between sediment beds; parabolic reflectors indicate point-source objects with sound propagating out from them; and erosional or non-depositional contacts can be identified by discontinuities in extent, slope angle, and the shape of the reflector morphology. This latter fact is important when identifying buried and drowned channel systems and other relict and buried fluvial system features (e.g., estuarine, tidal, lowland, and upland areas around drainage features).

As a cautionary tale, there are five types of spurious signals that may cause confusion in the two-dimensional records that specialists recognize: direct arrival from the sound source; reflection multiples; water surface reflection; side echoes; and point-source reflections. Judicious analysis is required to identify these sound underwater imagery phenomena. In all cases, precise inference of a sediment bed or other anomaly from the subbottom profiler data would necessitate coring.

While it is challenging to know which reflectors are significant, the intent is to identify paleolandscape features likely to be conducive to human occupation and where preservation may be enhanced based on local geology and archaeology. In analysis, seismic returns indicating positive relief features as possible mounds and negative relief features as a probable channel or other fluvial feature with margins and sediment beds indicate higher potentials for prehistoric remains.

### ***METHOD AND THEORY FOR RECOGNITION OF A SUBMERGED PREHISTORIC SITE***

Panamerican's methodology for identifying submerged prehistoric sites entails developing criteria for the discovery of a "site" in any particular setting. The criteria are based on the geology and archaeology of the Project Area and models of site submergence. Models for the presence and preservation of submerged archaeological sites are discussed by several researchers, including Waters (1992) in his chapter on coastal processes, Kraft et al. (1983), and others. Much of this has to do with the identification of landforms identifiable with remote sensing that have the potential for archaeological site presence. For instance, two models used in this project were horizontal surfaces near channel features and positive relief features considered potentially to represent midden feature(s). Causeways, fishing weirs, or other prehistoric infrastructure features are difficult to identify.

Publications are more limited that are specific to recognizing sedimentary signatures of the deposits that make up sites that have been transgressed by rising sea levels and then remained submerged, perhaps buried, until exposure. One study specifically focused on such information is Gagliano et al.'s (1982) *Sedimentary Studies of Prehistoric Archaeological Sites: Criteria for the identification of submerged archaeological Sites of the Northern Gulf of Mexico Continental Shelf*. This document is one of high value but limited distribution. Gagliano's group chose 15 terrestrial sites in Louisiana and Texas as analogs from eight identifiable and mappable landforms commonly and consistently associated with archaeological sites on land, terrestrially. Their local geomorphic features included major natural levee, minor natural levee, Chenier and accretion ridges, barrier island, salt dome margin, estuarine margin, channel on Pleistocene terrace, and lake margins. They sampled sediments with excavations and box core sampling; recorded color, bedding, and contact descriptions; sorted the sediments to particle size; conducted point count and grain size analysis; and then geochemically analyzed the samples by levels. They showed that the sites were recognized most frequently by shell content, fish bones, and charred wood. Some ceramic and lithic artifacts were identified, but they were rare and often small.

Another aspect to realize about submerged prehistoric sites is that virtually all examples of inundated sites are partially, or wholly, reworked in ways somewhat analogous to deflation (Fischer 1995; Masters and Flemming 1983). This is caused by fluidization of sediments at times of inundation and the removal of fine particles that are often re-deposited with material by subsidence of the inundation or wave action. Faught (1996, 2002–2004) has shown sites with late Pleistocene, early Holocene, and middle Holocene artifacts to be re-worked by sea level rise and submergence, but that artifact arrays remain cohesive as surface and near surface remains.

Because of these factors, recognition that deposits are indeed cultural is not always immediately apparent to the diver, or at first glance of the collected materials. Artifacts are important, but not always part of the site, as Gagliano et al. (1982) have systematically determined. Expectations for midden deposits include dominance of unarticulated specimens of particular mollusk species, faunal bone, and manuports (i.e., geologic items out of place). On the other hand, discovery of any artifact would be important, especially in any sediment bed below a marine bed.

## IV. INVESTIGATIVE FINDINGS

### **INTRODUCTION**

The comprehensive remote sensing survey of the proposed reef zones utilized those tools useful in determining the absence or presence of submerged cultural resources within the project area. Equipment employed during this aspect of the investigation included a magnetometer, sidescan sonar, and a subbottom profiler system, all integrated with a Differential Global Positioning System (DGPS). A total of 829 anomalies were recorded during the survey. As listed in Table 4-01, breakdown of the anomalies by area includes 1 anomaly recorded in Cell 677, 2 anomalies recorded in Cell 699, 1 anomaly recorded in Cell 700, 5 anomalies recorded in Cell 701, 26 anomalies recorded in BAL1, 34 anomalies recorded in BAL2, 69 anomalies recorded in BAL3, 12 anomalies recorded in BAL4, 37 anomalies recorded in BAL5, 9 anomalies recorded in BAL6, 4 anomalies recorded in BAL7, 120 anomalies recorded in BAL8, and 509 anomalies recorded in MOB. Relative to the sonar record a total of 417 acoustic contacts were recorded during the survey. Breakdown of the contacts by area includes 3 contacts recorded in Cell 677, no contacts recorded in Cell 699, Cell 700, or Cell 701, 25 contacts recorded in BAL1, 27 contacts recorded in BAL2, 6 contacts recorded in BAL3, 8 contacts recorded in BAL4, 19 contacts recorded in BAL5, 7 contacts recorded in BAL6, 13 contacts recorded in BAL7, 166 contacts recorded in BAL8, and 146 contacts recorded in MOB.

**Table 4-01. Anomalies and Sonar Contacts Totals by Reef Zone and Cell.**

ADCNR Reef Zone Designation	Survey Cell / Zone Designation*	Anomalies	Contacts
SAM-2019-00677-DCH "Ghost Rig Reef"	677	1	3
SAM-2019-00699-DCH "Wellhead Reef"	699	2	0
SAM-2019-00700-DCH "Bon Secour Reef"	700	1	0
SAM-2019-00701-DCH "Dog River Reef"	701	5	0
SAM-2014-00487-DEM	BAL1	26	25
SAM-2014-00487-DEM	BAL2	34	27
SAM-2014-00487-DEM	BAL3	69	6
SAM-2014-00487-DEM	BAL4	12	8
SAM-2014-00487-DEM	BAL5	37	19
SAM-2014-00487-DEM	BAL6	9	7
SAM-2014-00487-DEM	BAL7	4	13
SAM-2014-00487-DEM	BAL8	120	166
SAM-2018-01036-GAC	MOB	509	146

\*MOB=Mobile County, BAL=Baldwin County

Employing the previous discussions on target analysis, magnetic anomalies were assessed for potential significance based on magnetic deviation (above and/or below ambient background), duration (distance in feet, along a trackline, an anomaly influences the ambient background), type (monopole [negative or positive influence], dipole [negative and positive influence], or complex), and association with other magnetic anomalies (i.e., clustering) and/or sidescan sonar contacts. Sidescan sonar contacts, as visual images, were assessed for linearity, height off bottom, size, associated magnetics, backscatter characteristics, and visual surface associations e.g., jetties, buoys, etc.). Subbottom features were assessed as to feature type, and association with other subbottom features and sidescan targets.

An extensive review and analysis of the 829 anomalies and 417 acoustic contacts indicates that the majority of the anomalies are represented by single point source objects (SPS), nonsignificant debris (e.g., reef material pipelines, and small unknowns, with a large portion represented by reef infrastructure/modules as illustrated in Figures 4-01 through 4-03, all of which are considered non-significant. Presented in Table 4-02, there are however, 16 targets that represent potentially significant cultural resources. These significant and potentially significant sites are presented below in the discussion of the remote sensing results by zone and or cell.

With respect to the subbottom profiler record for all zones, analysis indicated penetration was generally very good throughout the project area, ranging from 6 to 15 meters (20 to 50 feet) below seafloor. The stratigraphy is primarily comprised of incised channel features that terminate at the seafloor or a ravinement surface, and an occasional shallow horizontal reflector representing a peat bed or surface expression. As discussed below, while paleofeatures are present in the data, no further work regarding potential submerged prehistoric archaeological sites is recommended.

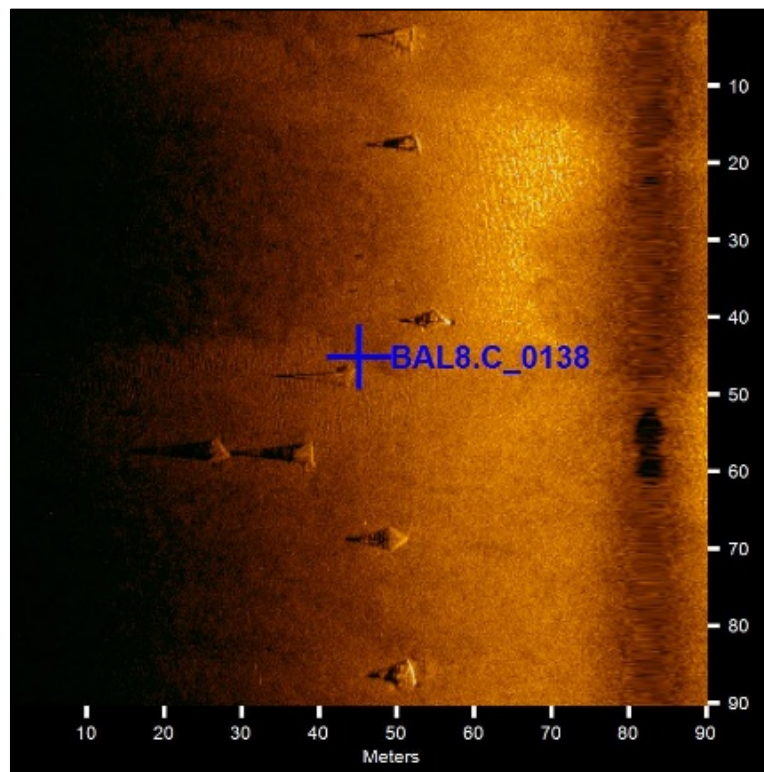


Figure 4-01. BAL8.S138, Artificial Reefing Modules in BAL8.

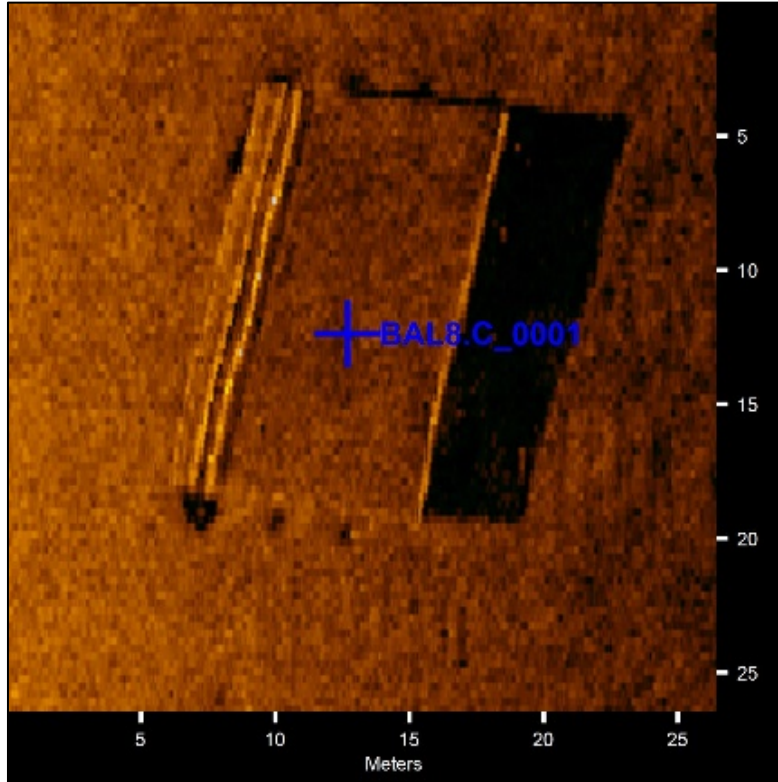


Figure 4-02. Sonar Contact Bal8.S001, Perdido Pass Bridge rubble placed as artificial reef material in BAL8.

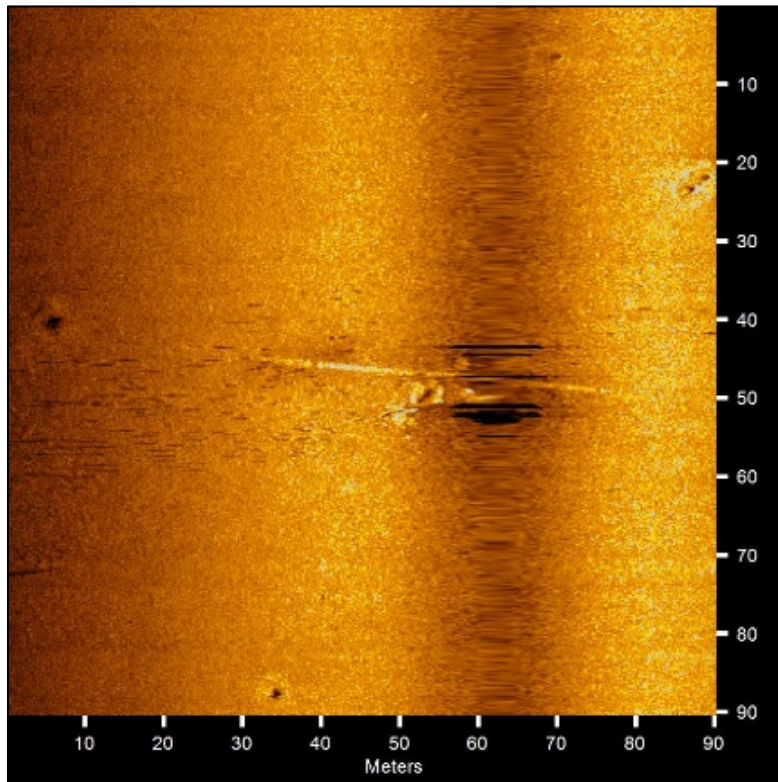


Figure 4-03. Sonar Contact MOB.S110, exposed pipeline at a pipeline crossing (see *Appendix P*, Figure P-31).

Table 4-02. Potentially Significant Targets

Target	Centroid Easting	Centroid Northing	Description	Associations	BOEM Block	Avoidance Radius
700.T1	413399	3359014	Unknown; wreck-like signature	700.M001	N/A	30
Bal2.T1	419761	3328412	Buffalo Barge 1	Bal2.M029, Bal2.M032, Bal2.S024, Bal2.S025	MO917	150
Bal2.T2	418630	3327999	Buffalo Barge 3	Bal2.M038, Bal2.S026	MO917	80
Bal2.T3	418989	3327914	Buffalo Barge 2	Bal2.M039, Bal2.S027	MO917	85
Bal2.T4	419825	3327930	Unknown; wreck-like signature	Bal2.M036	MO917	60
Bal8.T1	448448	3334080	"Rookie Barge" flat deck steel barge	Bal8.M060, Bal8.S091	PE841	100
Bal8.T2	448968	3333397	Liberty Ship <i>Allen</i>	Bal8.M072, Bal8.S069, Bal8.S076	PE841	100
Bal8.T3	444951	3329560	Wrecked barge; in BOEM wreck db as "Unknown Vessel"	Bal8.M110, Bal8.S034	PE885	190
Bal8.T4	444370	3328559	Liberty Ship <i>Wallace</i>	Bal8.M123, Bal8.S017	PE885	230
Bal8.T5	445067	3326182	M60 Tank	Bal8.M137, Bal8.S004	PE929	30
Bal8.T6	445044	3326070	M60 Tank	Bal8.M136, Bal8.S003	PE929	30
MOB.T1	392339	3324420	Unknown; large buried debris field	MOB.M019	MO956	450
MOB.T2	389177	3323816	Listed as possible wreck in BOEM database	MOB.M584	MO955	100
MOB.T3	392008	3321854	Wreck; BOEM entry "barge/unknown vessel"	MOB.M105, MOB.S038	MO1000	100
MOB.T4	391534	3319274	<i>Papa Joe</i> Wreck	MOB.M624, MOB.S053	MO1000	80
MOB.T5	387903	3314888	"Nail Wreck"	MOB.M233, MOB.M234, MOB.M235, MOB.S083, MOB.S106	VK31	80

### **INSHORE MOBILE BAY ZONES**

A total of only 4 magnetic anomalies and 3 sonar contacts were recorded in the four inshore zones. These included 1 anomaly and 3 contacts recorded in Cell 677 (Ghost Rig Reef), 2 anomalies and no contacts recorded in Cell 699 (Wellhead Reef), 1 anomaly and no contacts recorded in Cell 700 (Bon Secour Reef), and 5 anomalies and no contacts recorded in Cell 701 (Dog River Reef). Remote sensing data for four zones are presented in *Appendices A* and *B*. *Appendix A* presents tables of anomaly and sonar contact data, sonar images, and the sonar mosaic. *Appendix B* presents the magnetic contour maps showing anomalies and sonar contact locations, all overlaid onto navigation charts. An extensive review and analysis of the remote sensing data indicates that the majority of the anomalies are represented by single point source objects (SPS), and, as in the case of Cell 677, oil and gas wells and pipelines, all of which are considered non-significant. There is, however, a single target that was recorded in Cell 700 (SAM-2019-00700-DCH/Bon Secour Reef) that has the potential to represent a significant cultural resource in the form of a buried shipwreck. This potential finding is discussed below; associated data are presented in Table 4-03.

**Table 4-03. Potentially Significant Targets in Mobile Bay Cell 700 (SAM-2019-00700-DCH).**

Target	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
700.M001	413399	3359014	C	55	818.3	Y	Unknown; wreck-like signature	N/A	700	N/A

#### ***TARGET 1 – ANOMALY 700.M001***

Illustrated in Figure 4-04, Target 700.M001 is a small complex anomaly in Mobile Bay Cell 700, the proposed Bon Secour Reef (also see *Appendix B*, Figure B-3). Buried without a corresponding sonar contact, the target has a maximum gamma deviation of 818 nT, and covers an area approximately 50 feet by 50 feet. Considered potentially significant, it is located at but mainly outside the southwest corner of Cell 700 and is easily avoidable.

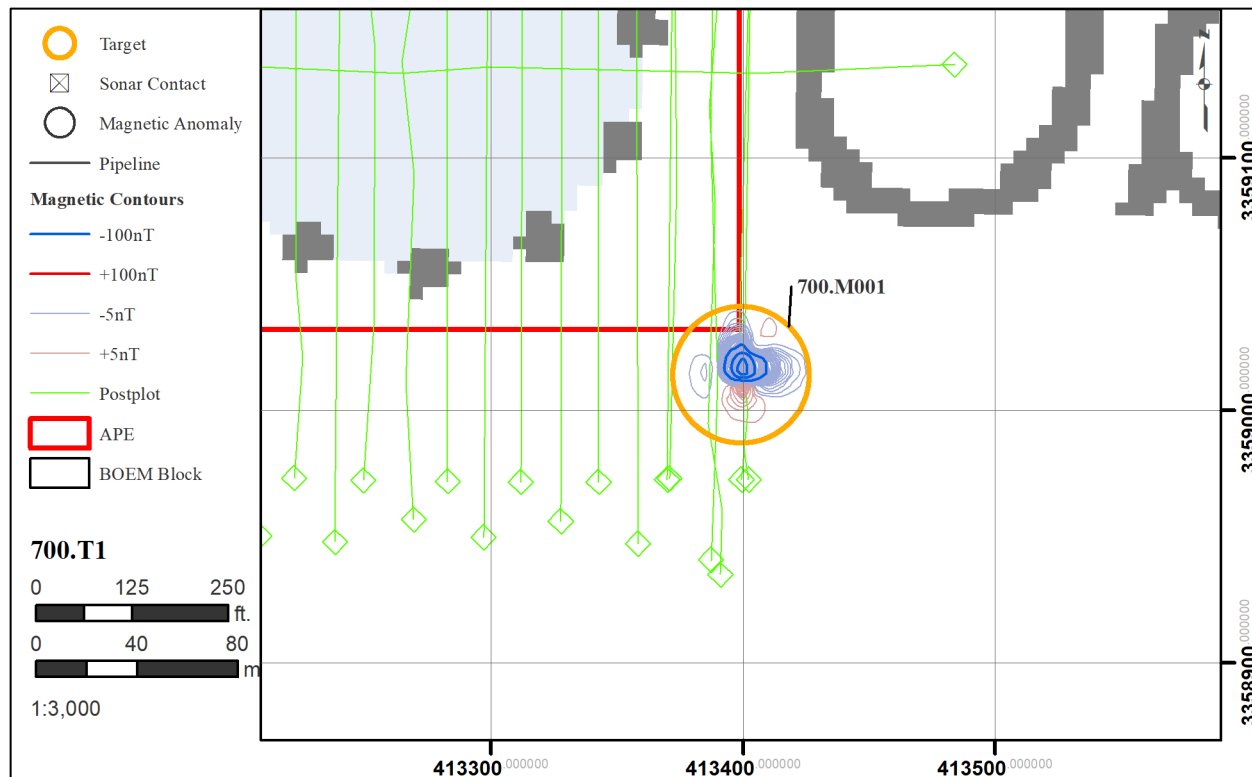


Figure 4-04. Magnetic contour map showing location of potentially significant Anomaly 700.M001 just outside the southwest corner of the Mobile Bay Cell 700 (also see *Appendix B*, Figure B-3).

**BAL2 (SAM-2014-00487-DEM)**

A total of 34 magnetic anomalies and 27 acoustic contacts were recorded in the BAL2 cell of SAM-2014-00487-DEM. Remote sensing data for BAL2 including anomaly and sonar contact tables as well as sonar records is presented in *Appendix D* and *E*. *Appendix C* presents tables of anomaly and sonar contact data, sonar images, and the sonar mosaic. *Appendix D* presents the magnetic contour maps showing anomalies and sonar contact locations, all overlaid onto navigation charts. An extensive review and analysis of the remote sensing data indicates that the majority of the anomalies are represented by single point source objects (SPS) and small isolated debris or objects, all of which are considered non-significant. There are, however, four targets near the southern boundary of the cell that have the potential to each represent a significant cultural resource. Their locations within the cell are presented in Figure 4-05 and associated data are presented in Table 4-04.

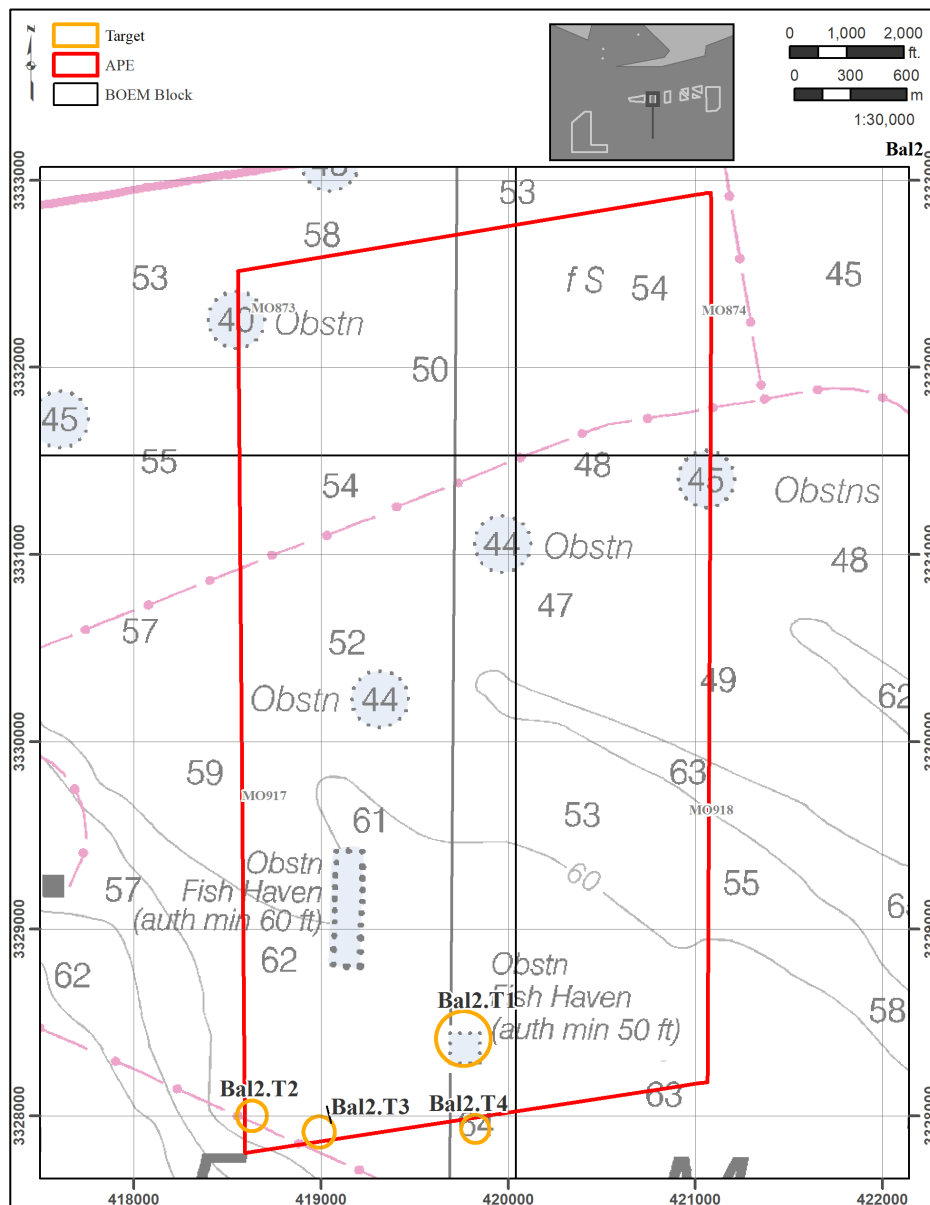


Figure 4-05. Location of potentially significant targets in the BAL2 cell (also see *Appendix F*).

**Table 4-04. Potentially Significant Targets in the BAL2 Cell.**

Target	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Target 1	419761	3328412	D	291	457	Y	Buffalo Barge 1	Bal2.M029 Bal2.M032 Bal2.S024 Bal2.S025	B2-05	MO917
Target 2	419825	3327930	D	110	64	Y	Unknown; wreck-like signature	Bal2.M036	B2-05	MO917
Target 3	418630	3327999	D	162	1018	Y	Buffalo Barge 3	Bal2.M038 Bal2.S026	B2-05	MO917
Target 4	418989	3327914	D	168	178	Y	Buffalo Barge 2	Bal2.M039 Bal2.S027	B2-05	MO917

***TARGET 1 – BUFFALO BARGE 1***

Its location shown in Figures 4-05 above, Target 1 is situated in the south central area of the BAL2 cell and within BOEM Block MO17 (see also *Appendix F*, Figure F-06). Comprised of anomalies Bal2.M029 and Bal2.M032, and sonar contacts Bal2.S024 and Bal2.S025, the target represents the remains of “Buffalo Barge 1.” Illustrated in Figure 4-06, the complex anomaly has a maximum gamma deviation of 457 nT and covers an area approximately 200 feet by 200 feet. As listed in the Alabama Public Reefs Data Base, this site is identified as Buffalo Barge 1, a wooden hopper barge that was sunk at this location in 1973 as an artificial reef in 61 feet of water. Figures 4-07 and 4-08 show the current remains of the wooden barge that is now broken into two sections. While little is known of the vessel’s history, as a wooden hopper barge it most likely dates to the first half of the twentieth century. As such, the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.

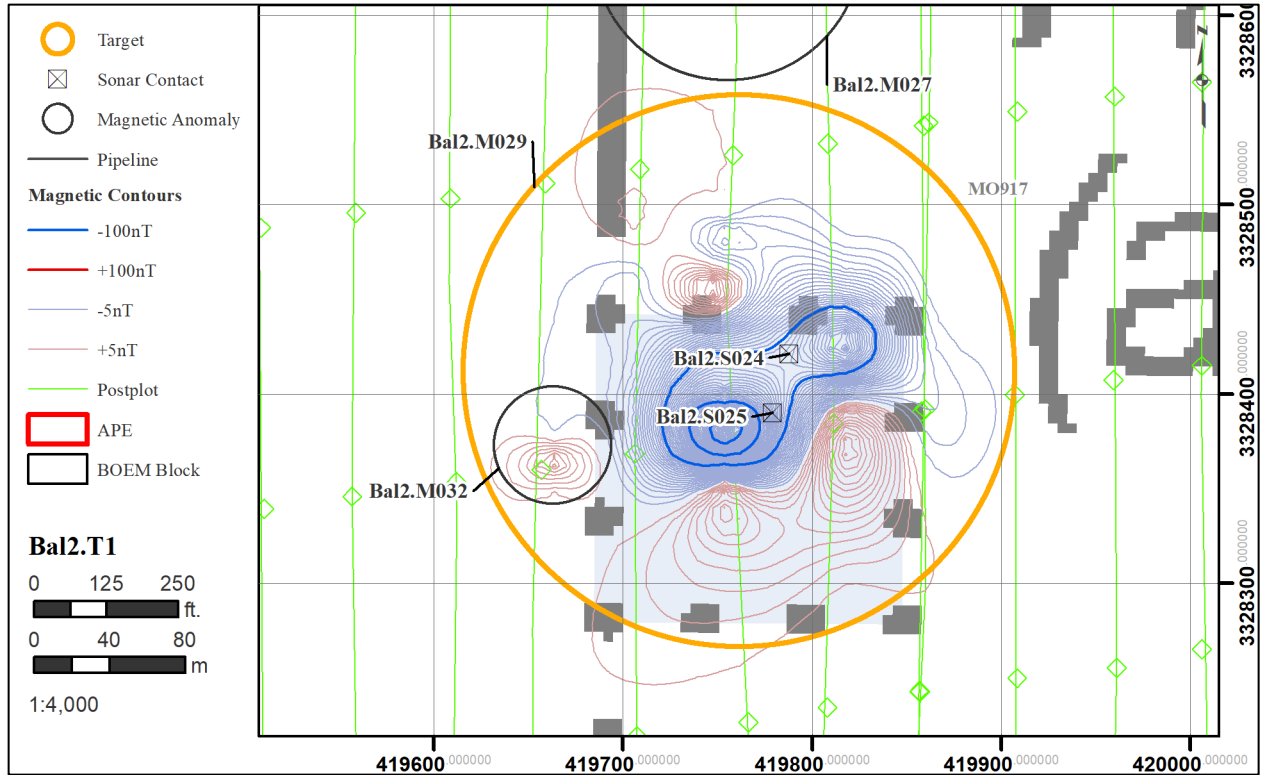


Figure 4-06. Magnetic contour map of potentially significant Target 1, Buffalo Barge 1, in the BAL2 Cell (also see *Appendix F*).

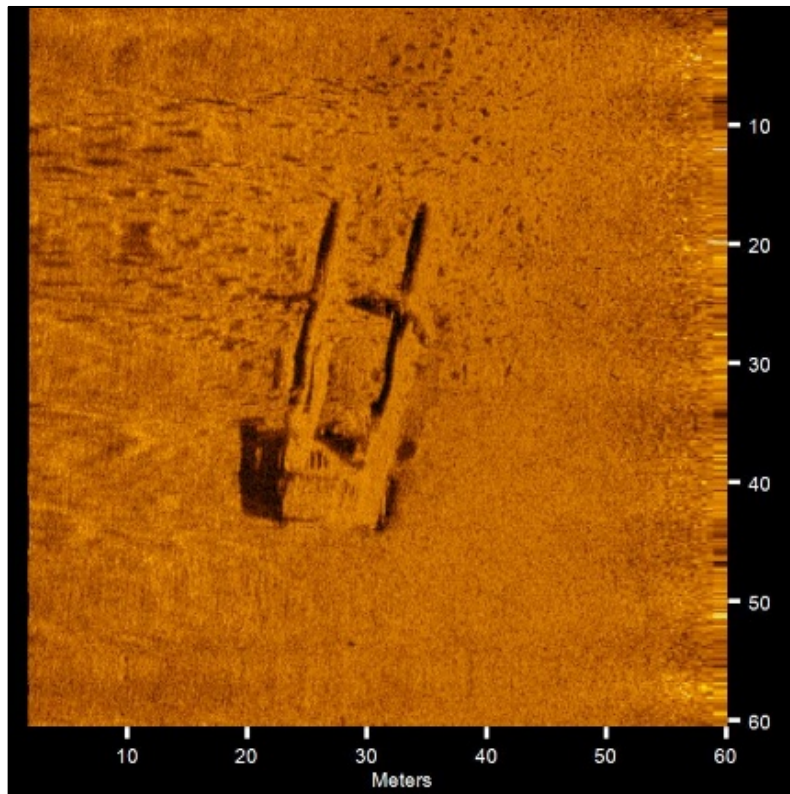
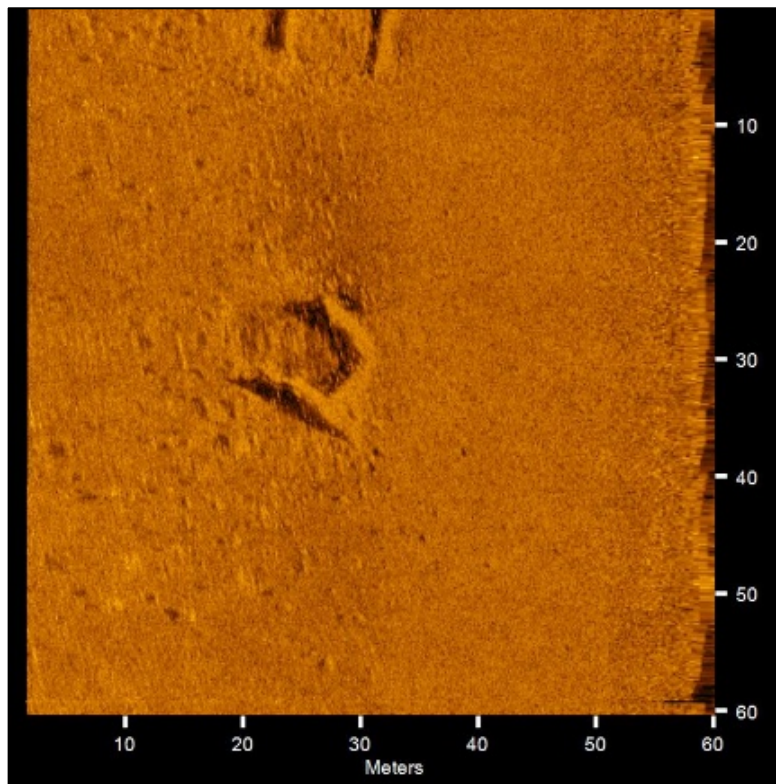


Figure 4-07. Acoustic image Bal2.S024, Buffalo Barge 1, northern section.



**Figure 4-08. Acoustic image Bal2.S025, Buffalo Barge 1, southern section.**

### TARGET 2 – ANOMALY BAL2.M036

Illustrated in Figures 4-09, Target 2 is located at and along the south-central boundary of the BAL2 cell and within BOEM Block MO17 (see also *Appendix F*, Figure F-06). Buried without a corresponding sonar contact, the target has a maximum gamma deviation of 64 nT, and covers an area approximately 100 feet by 100 feet. Considered potentially significant due to its signature, it is located at but mainly outside the south-central boundary of the BAL2 cell and is easily avoidable.

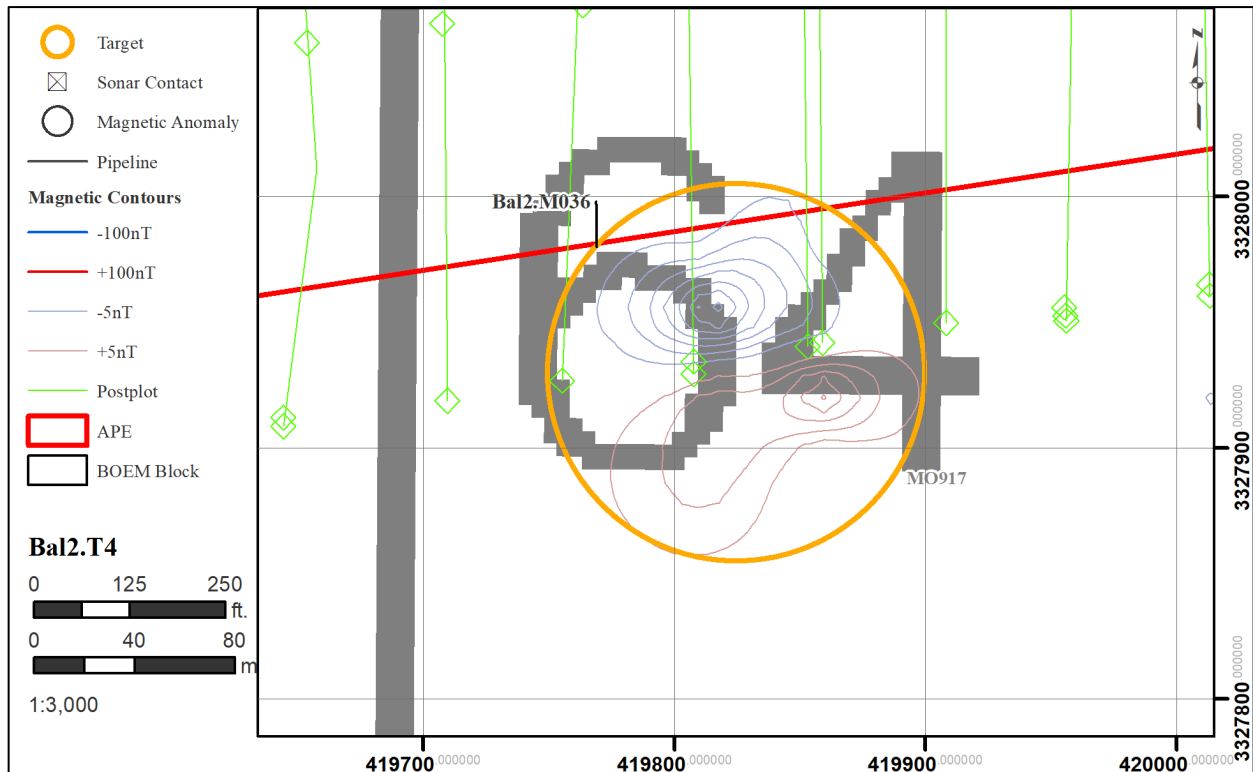


Figure 4-09. Magnetic contour map of potentially significant Target BAL2.M036 in the BAL2 Cell (also see *Appendix F*). The magnetics have a wreck-like signature.

### TARGET 3 – BUFFALO BARGE 3

Target 3 (see Figure 4-05) is situated in the far southwestern corner of the BAL2 cell and within BOEM Block MO17 (see also *Appendix F*, Figure F-06). Comprised of anomaly Bal2.M038, and sonar contact Bal2.S026, the target represents the remains of “Buffalo Barge 3.” Illustrated in Figure 4-10, the complex anomaly has a maximum gamma deviation of 1018 nT and covers an area approximately 150 feet by 150 feet adjacent to and along a pipeline. As listed in the Alabama Public Reefs Data Base, this site is identified as Buffalo Barge 3, a 58-foot long by 38-foot wide wooden hopper barge that was sunk at this location in 1973 as an artificial reef in 64 feet of water. Figure 4-11 shows the current remains of the wooden barge. While little is known of the vessel’s history, as a wooden hopper barge it most likely dates to the first half of the twentieth century. As such, the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.

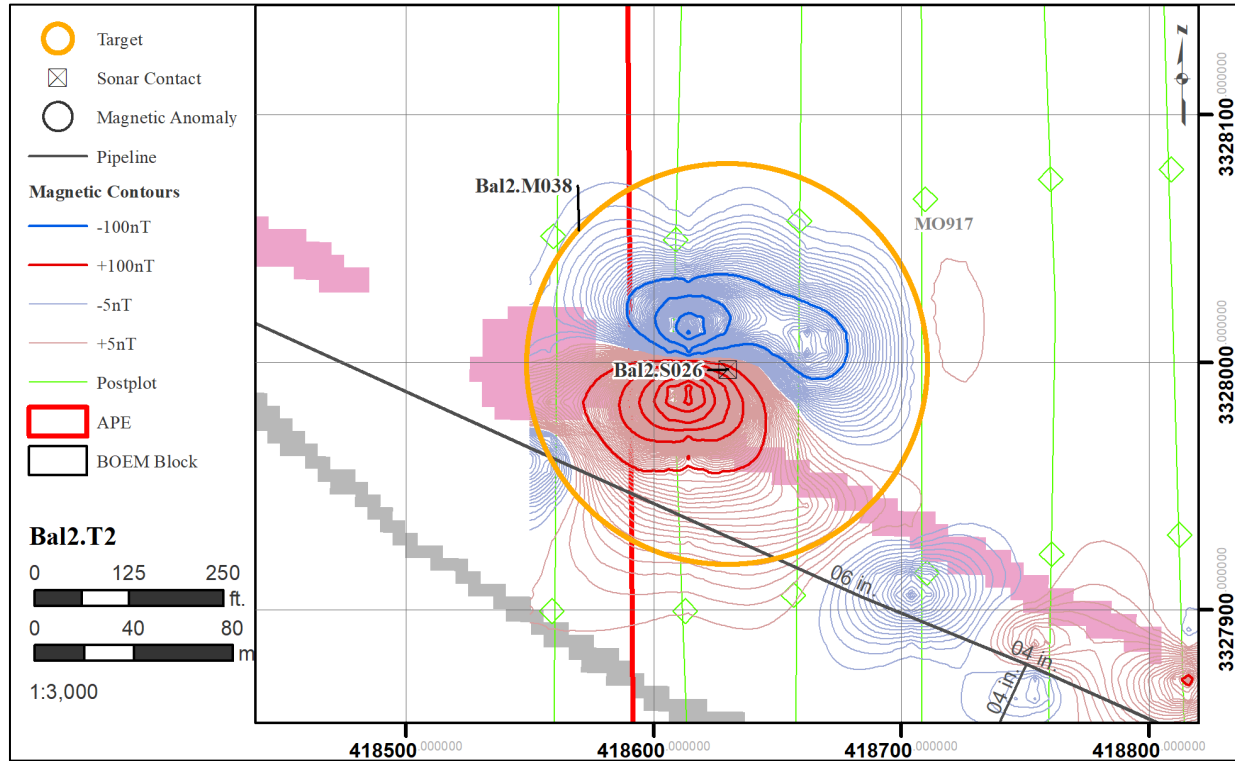


Figure 4-10. Magnetic contour map of potentially significant Target 3, Buffalo Barge 3, in the BAL2 Cell (also see *Appendix F*). It sits adjacent to a pink linear pipeline symbol.

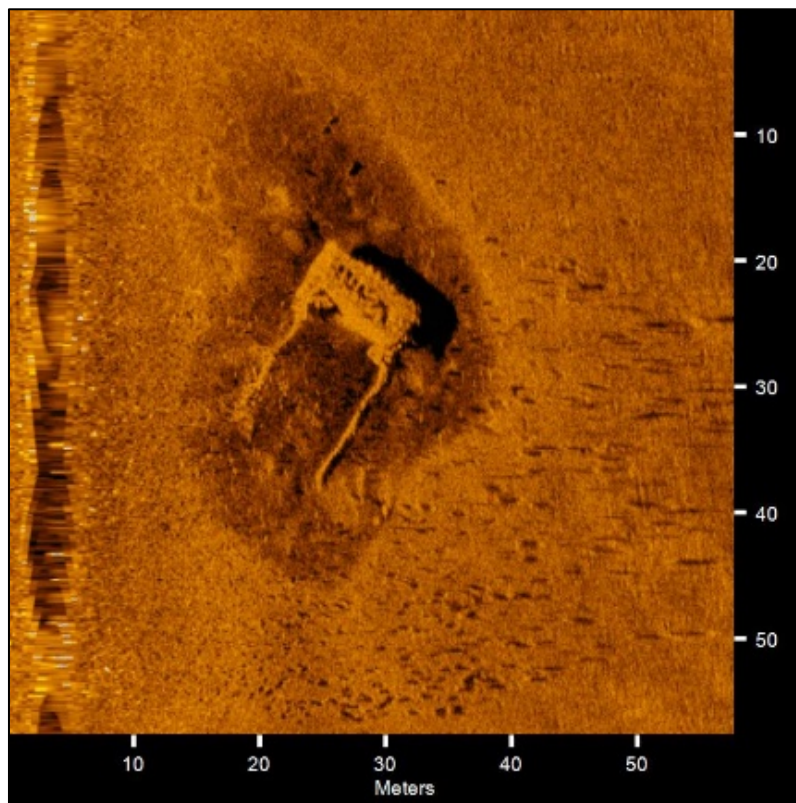


Figure 4-11. Acoustic image of Target 3 (Bal2.S026), Buffalo Barge 3.

**TARGET 4— BUFFALO BARGE 2**

Target 4 (see Figures 4-05) is located in the southwestern corner of the BAL2 cell and within BOEM Block MO17 (see also *Appendix F*, Figure F-06). Comprised of anomaly Bal2.M039 and sonar contact Bal2.S027, the target represents the remains of the “Buffalo Barge 2.” Illustrated in Figure 4-12, the complex anomaly has a maximum gamma deviation of 178 nT and covers an area approximately 150 feet by 150 feet. As listed in the Alabama Public Reefs Data Base, this site is identified as Buffalo Barge 2, a wooden hopper barge that was sunk at this location in 1973 as an artificial reef in 64 feet of water. Figure 4-13 shows the current remains of the wooden barge. While little is known of the vessel’s history, as a wooden hopper barge it most likely dates to the first half of the twentieth century. As such, the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.

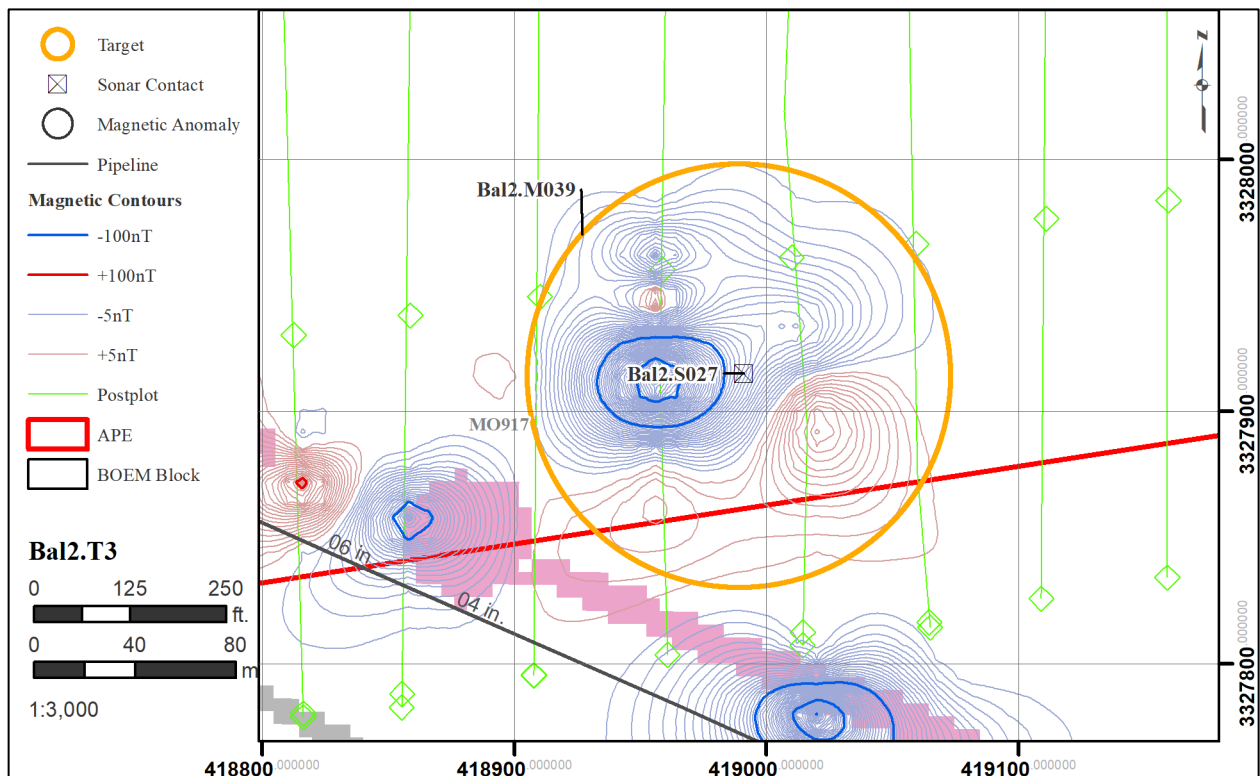


Figure 4-12. Magnetic contour map of potentially significant Target 4 in the BAL2 Cell (also see *Appendix F*).

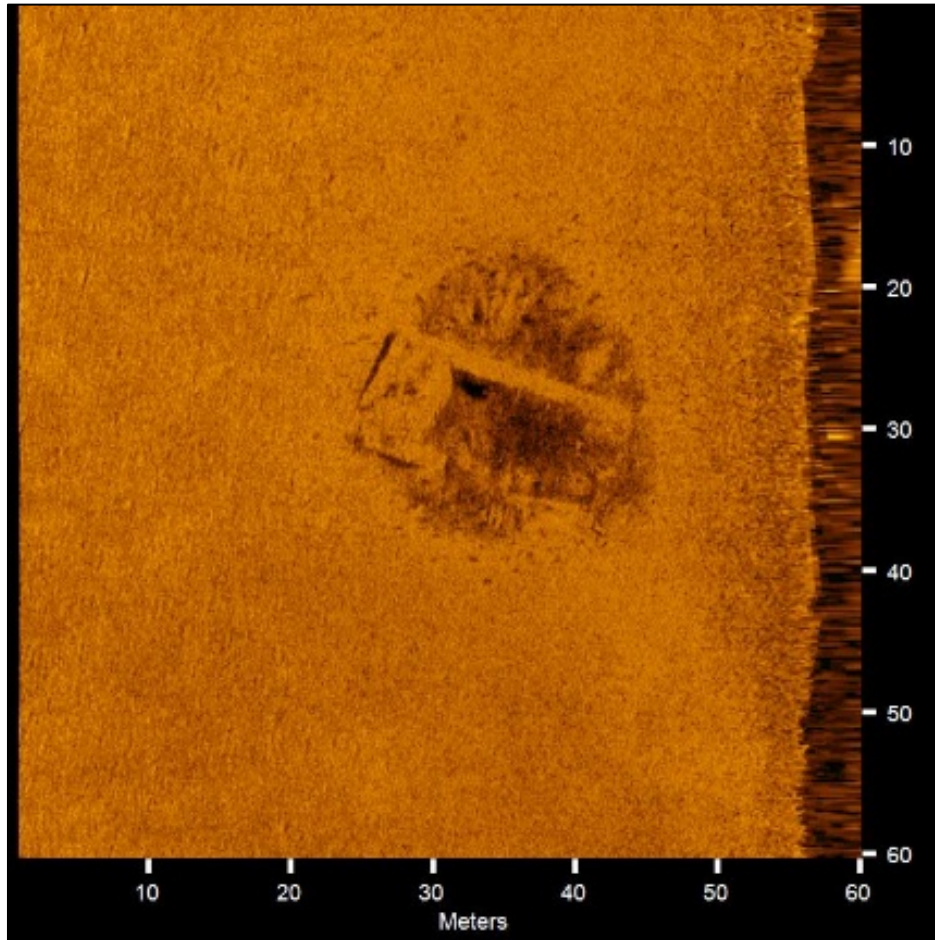


Figure 4-13. Acoustic image of Target 4 (Bal2.S027) identified as Buffalo Barge 2, which was sunk in 1973 as a fish haven.

### ***BAL8 (SAM-2014-00487-DEM)***

A total of 120 magnetic anomalies and 166 acoustic contacts were recorded in the BAL8 cell of SAM-2014-00487-DEM. Remote sensing data for BAL8 including anomaly and sonar contact tables as well as sonar records is presented in *Appendix M* and *N*. *Appendix M* presents tables of anomaly and sonar contact data, sonar images, and the sonar mosaic. *Appendix N* presents the magnetic contour maps showing anomalies and sonar contact locations, all overlaid onto navigation charts. An extensive review and analysis of the remote sensing data indicates that the majority of the anomalies are represented by SPS and small isolated debris or objects, all of which are considered non-significant. There are, however, six targets that have the potential to each represent a significant cultural resource. Their locations within the cell are presented in Figure 4-14 and associated data are presented in Table 4-06

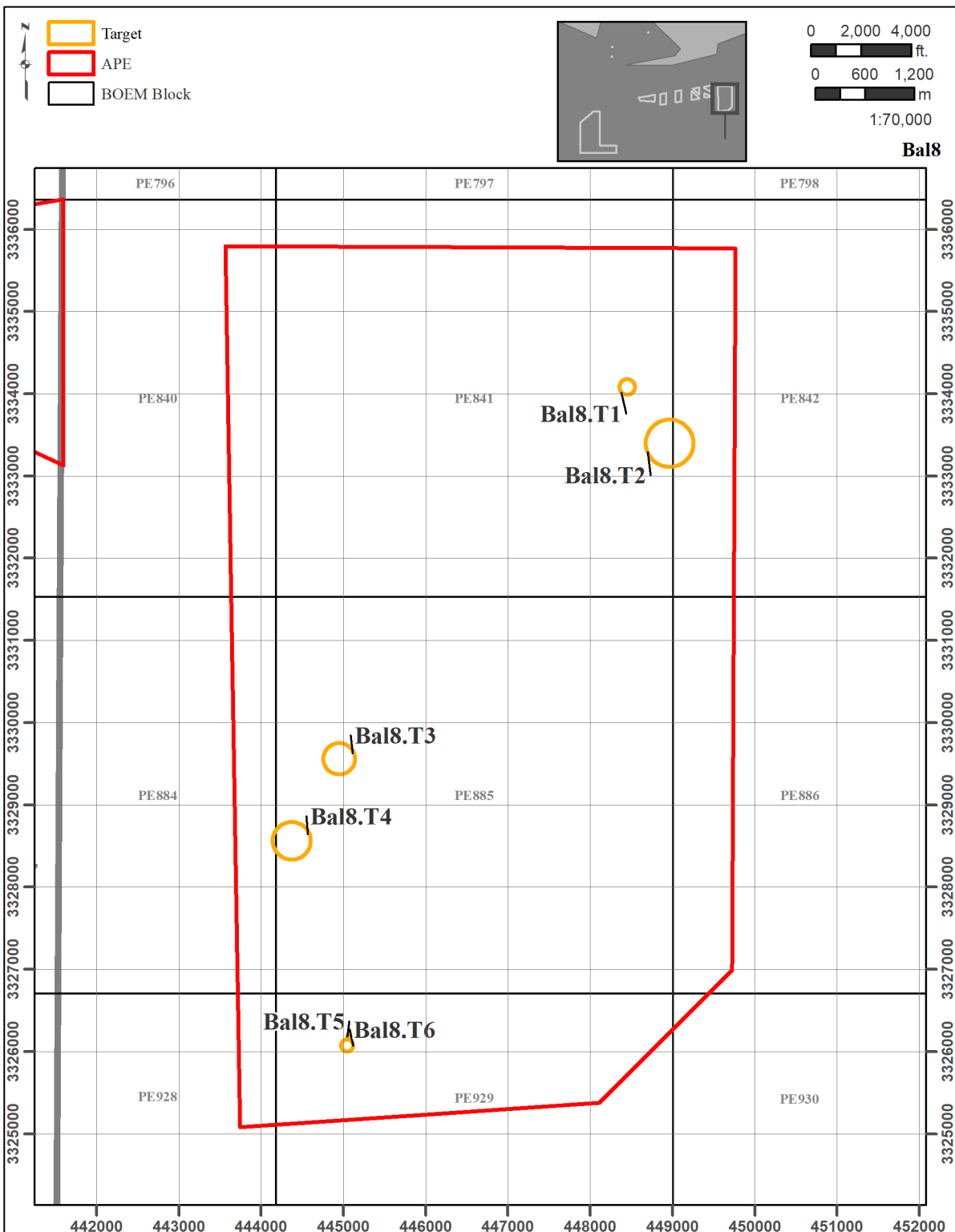


Figure 4-14. Location of potentially significant targets in the BAL8 cell (also see Appendix N).

Table 4-06. Potentially Significant Targets in the BAL8 Cell.

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Target 1	448448	3334080	D	190	181.0	Y	Rookie Barge; flat deck steel barge	Bal8.M060 Bal8.S091	B8-08	PE841
Target 2	448968	3333397	C	189	6918.6	Y	"Allen" Reef Liberty Ship	Bal8.M072 Bal8.S069, Bal8.S076	B8-08	PE841
Target 3	444951	3329560	D	381	721.2	Y	Wrecked barge; in BOEM wreck as "Unknown Vessel"	Bal8.M110 Bal8.S034	B8-13	PE885
Target 4	444370	3328559	D	460	670.2	Y	"Wallace" Reef Liberty Ship	Bal8.M123 Bal8.S017	B8-13	PE885
Target 5	445044	3326070	D	145	57.0	Y	M60 Tank "Tank 90 A"	Bal8.M136 Bal8.S003	B8-22	PE929
Target 6	445067	3326182	D	37	13.9	Y	M60 Tank "Tank 90 B"	Bal8.M137 Bal8.S004	B8-22	PE929

D = Dipole, C = Complex/Multi Component.

#### ***TARGET 1 – "ROOKIE BARGE"***

Target 1 (see Figure 4-14 above) is located in the northeastern quadrant of the BAL8 cell and within BOEM Block PE841 (see also *Appendix N*, Figure N-15). Comprised of anomaly Bal8.M060 and sonar contact Bal8.S091, the target represents the remains of the "Rookie Barge." Illustrated in Figure 4-15, the complex anomaly has a maximum gamma deviation of 181 nT and covers an area approximately 150 feet by 100 feet. As listed in the Alabama Public Reefs Data Base, this site is identified as the Rookie Barge, a 75-foot long by 25-foot wide decked steel barge that was sunk at this location in 2013 as an artificial reef in 82 feet of water. Figure 4-16 shows the current remains of the wooden barge. While little is known of the vessel's age or history, it is unknown if the barge may represent an early metal barge type, possibly riveted. And as such, the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.

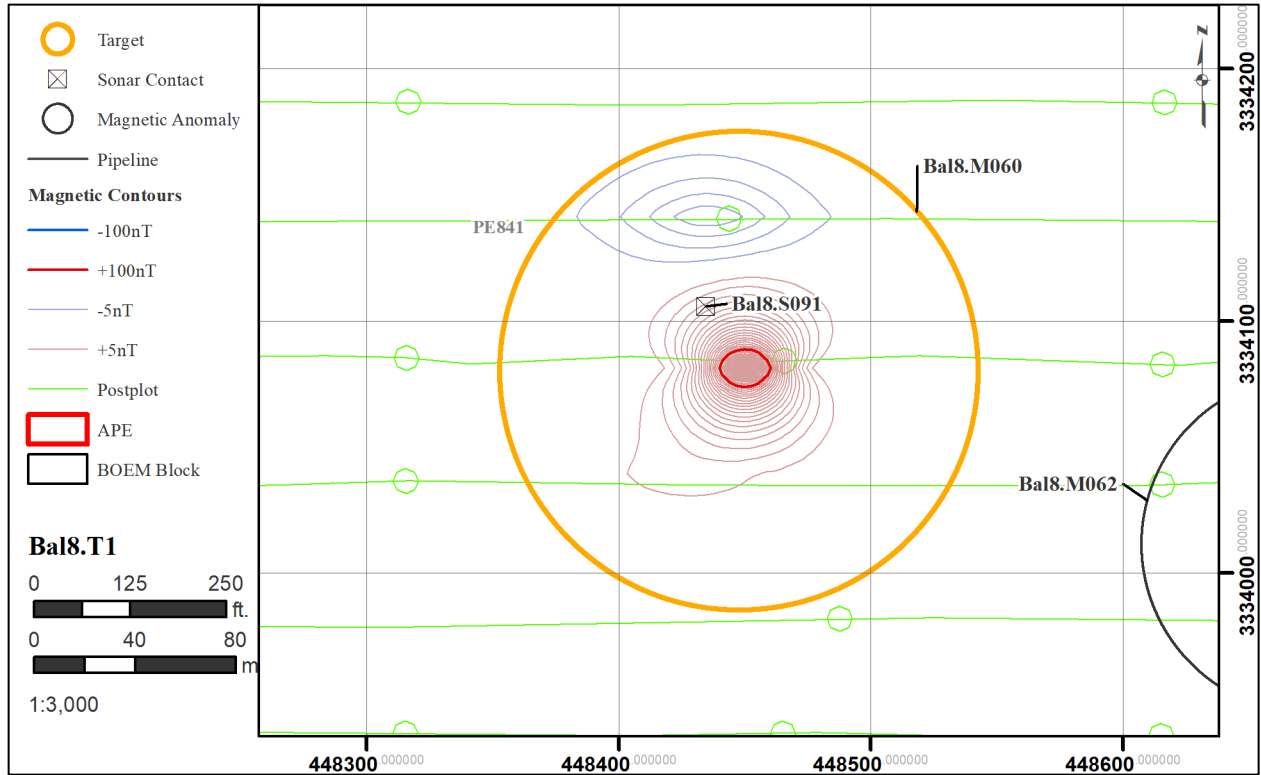


Figure 4-15. Magnetic contour map of potentially significant Target 1 (Bal8.M060) in the BAL8 Cell (also see *Appendix N*).

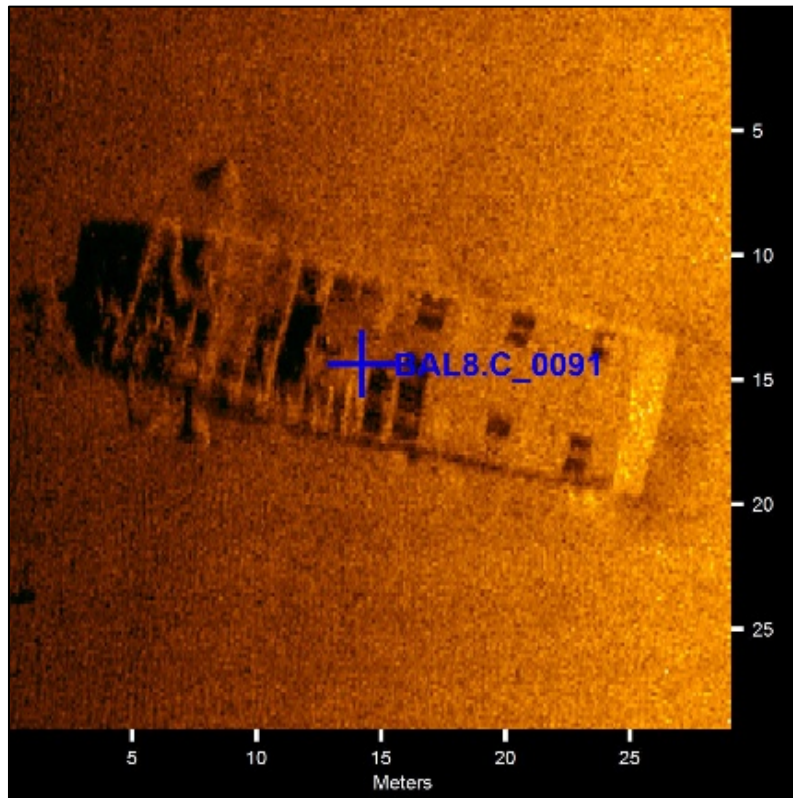


Figure 4-16. Acoustic image of Bal8.S091, Target 1, the “Rookie Barge,” a decked, steel barge in BAL8 Cell.

### TARGET 2 – “ALLEN” REEF LIBERTY SHIP

Its location shown in Figures 4-14 above, Target 2 is located in the northeastern quadrant of the BAL8 cell and within BOEM Block PE841 (see also *Appendix N*, Figure N-09). Comprised of anomaly Bal8.M072 and sonar contacts Bal8.S069 and Bal8.S076, the target represents the remains of the “Allen” Reef Liberty Ship. Illustrated in Figure 4-17, the complex anomaly has a maximum gamma deviation of 6918 nT and covers an area approximately 400 feet by 300 feet. As shown in the acoustic images of the wreck (Figures 4-18 and 4-19), the remains appear to be complete but it is not known which end is the stern or bow.

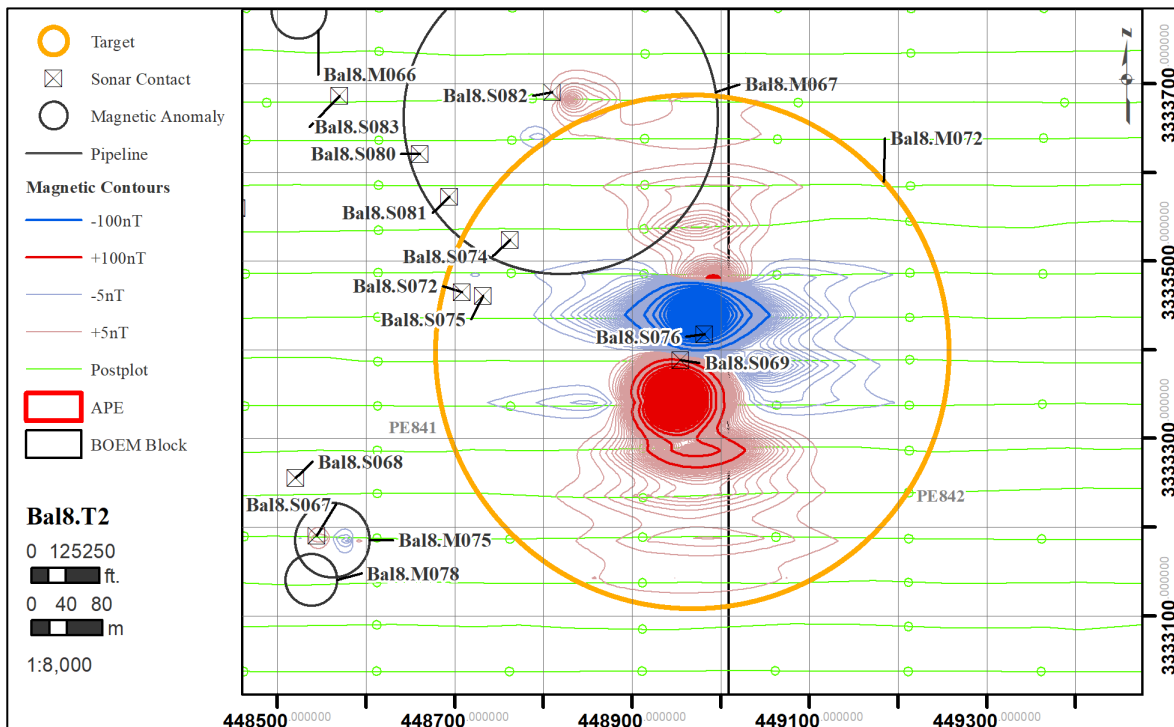


Figure 4-17. Magnetic contour map of potentially significant Target 2 (Bal8.M072) in the BAL8 Cell (also see *Appendix N*).

Renamed “Allen” prior to scuttling in 1974 as part of the State of Alabama’s artificial reef program, the wreck actually represents the remains of the Liberty Ship *William T. Barry*. Several other Liberty Ships, all of which had sat mothballed opposite the City of Mobile until scuttled, were also sunk along with the “Allen,” our survey recording one other, the “Wallace” (see Target 4 below). The “Allen” or *William T. Barry*, named after the Governor of Kentucky in 1821 who also served as the U.S. Postmaster General from 1829 through 1835, was built by the North Carolina Shipbuilding Company in Wilmington, North Carolina. Launched 6 December 1941 and converted in 1943 to a troop transport with the ability to carry up to 550 people, the vessel (Hull #1980) was one of 2,710 Liberty Ships constructed for the war effort in WWII at sixteen shipyards throughout the county. All were built alike with a length of 441 feet 6 inches, a maximum beam of 57 feet and a depth of hold of 37 feet four inches (Figure 4-20). Constructed with five cargo holds which could carry c 2,840 jeeps, 440 tanks, or 230 million rounds of rifle ammunition, there were several variants built including the General Cargo Vessel, Type EC2-S-C1, the Tanker, Type Z-ET1-S-C3, and the Collier, Type EC2-S-AW1 (Davies 2004).

Prior to entering the war, Liberty Ships were constructed to help supply Britain, and after the attack on Pearl Harbor and entry into the war the vessels would be employed to transport American troops, and military supplies and equipment. While extensive research has not been

conducted on the vessel's history, we do know that the *William T. Barry* received two Battle Stars, one of which may have been a result of her crew downing three enemy planes of a group of 20 to 50 that attacked her convoy MKS21 while south of Almeria, Spain in August 1943 (as presented at <https://www.armed-guard.com/liberty.html>).

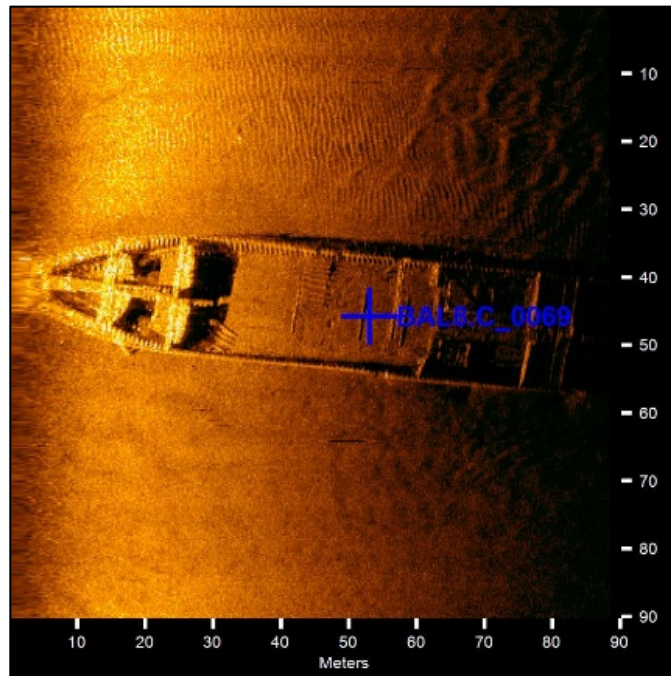


Figure 4-18. Acoustic image of Bal8.S069, Target 2, the remains of the *Allen Reef Liberty Ship (William T. Barry)* in BAL8 Cell (one end of the remains - stern or bow).

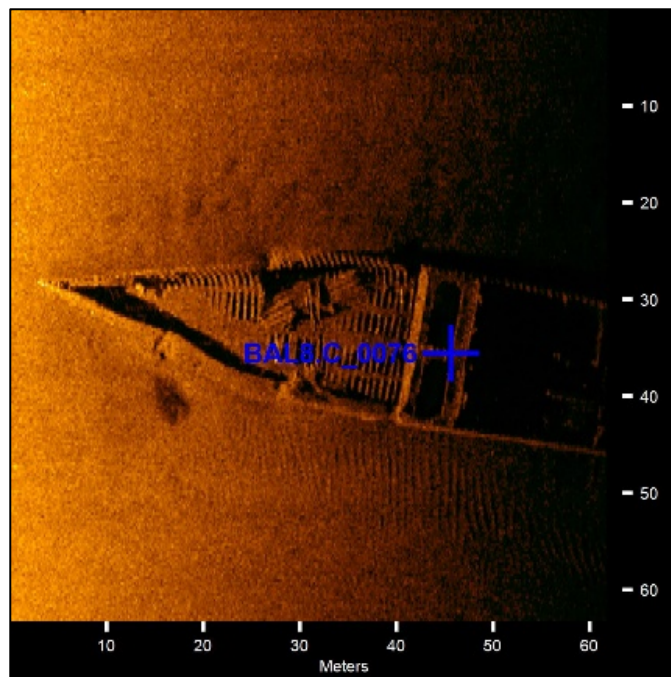


Figure 4-19. Acoustic image of Bal8.076, Target 2, the remains of the *Allen Reef Liberty Ship (William T. Barry)* in BAL8 Cell (stern or bow).



**Figure 4-20. Typical profile view of a Liberty Ship, all which were all similar in construction. This image is of the troop transport *Carlos Carillo* at San Francisco in 1945 (Courtesy of the Naval History and Heritage Command, Photography Collection, Photo NH 98700). Note that no photo of the *William T. Barry* has been located.**

### ***TARGET 3 – BARGE WRECK***

Target 3 (see Figure 4-14) is located in the west-central area of the BAL8 cell and within BOEM Block PE885 (see also *Appendix N*, Figure N-15). Comprised of anomaly Bal8.M10 and sonar contact Bal8.S034, the target represents the remains of an unknown barge. Illustrated in Figure 4-21, the complex anomaly has a maximum gamma deviation of 721 nT and covers an area approximately 150 feet by 150 feet. As listed in the BOEM Wrecks Data Base, this site is identified as an “Unknown Vessel.” While its high gamma deviation indicates a metal hull, its acoustic image in Figure 4-22 shows the remains of what appears to be the remains of an overturned barge. While little is known of the vessel’s age, type, construction materials, and history, the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.

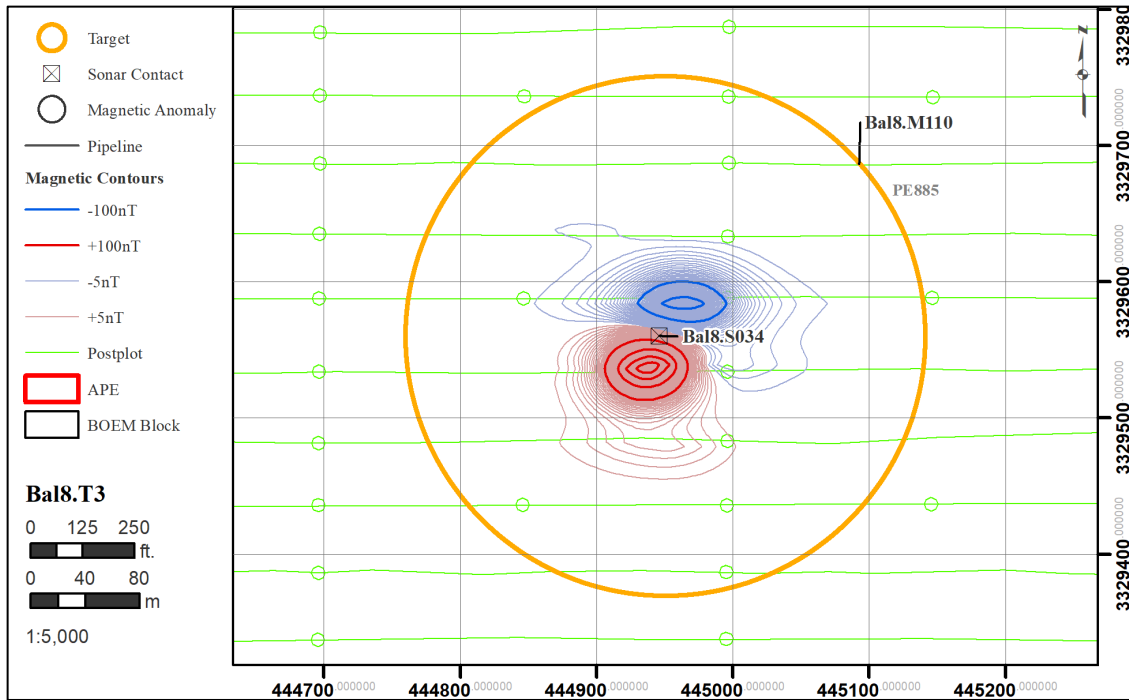


Figure 4-21. Magnetic contour map of potentially significant Target 3 (Bal8.M110) in the BAL8 Cell (also see Appendix N).

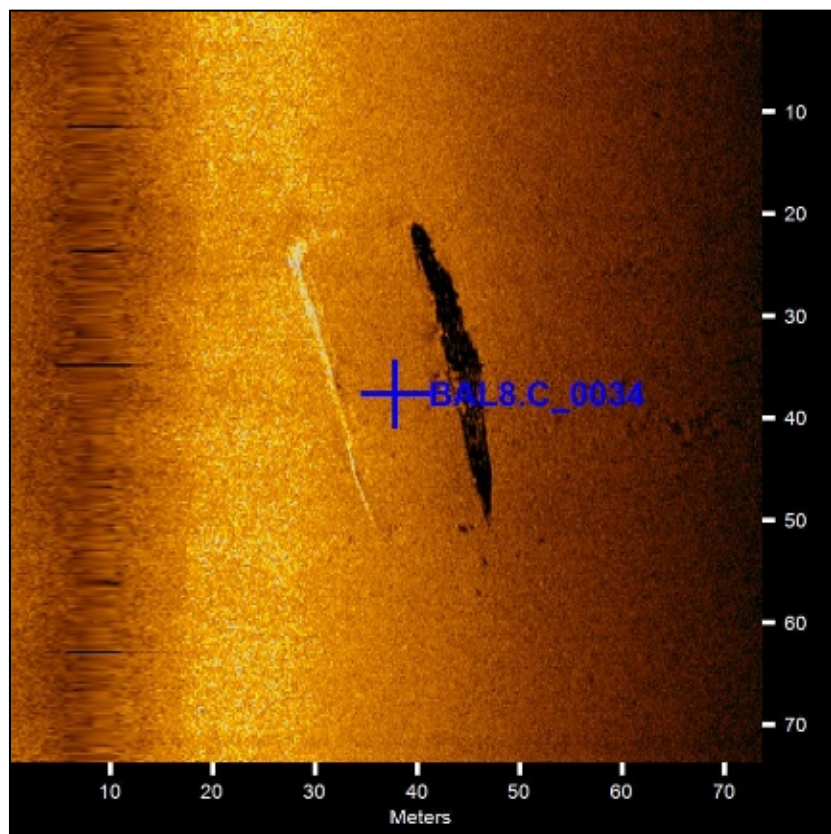


Figure 4-22. Acoustic image Bal8.S034, Target 3, a barge wreck in BAL8 Cell identified as an “unknown vessel” in the BOEM database.

**TARGET 4 – “WALLACE” REEF LIBERTY SHIP**

Its location shown in Figures 4-14 above, Target 4 is located in the west-central area of the BAL8 cell and within BOEM Block PE841 (see also *Appendix N*, Figure N-15). Comprised of anomaly Bal8.M0123 and sonar contacts Bal8.S017 and Bal8.S017a, the target represents the remains of the “Wallace” Reef Liberty Ship. Illustrated in Figure 4-23, the complex anomaly has a maximum gamma deviation of 670 nT and covers an area approximately 400 feet by 300 feet. As shown in the acoustic images of the wreck (Figures 4-24 and 4-25), the remains appear to be broken into at least two sections.

As listed in the BOEM Wrecks Data Base, this site is identified as the “Liberty Ship Fish Haven.” Renamed “Wallace” prior to scuttling on 2 May 1974 as part of the State of Alabama’s artificial reef program, the wreck actually represents the remains of the Liberty Ship *Oran M. Roberts* which was built as part of the “Emergency Fleet” for service in WWII. Launched 5 August 1943 at the Todd-Houston Shipbuilding Corporation, Houston, Texas as Hull #1980. Named after Oran M. Roberts who was the Governor of Texas from 1878 to 1880, as stated above, several other Liberty Ships, all of which had sat mothballed opposite the City of Mobile until scuttled, were also sunk along with the “Wallace,” our survey recording one other, the “Allen” to the north (see *Target 2* section above).

While extensive research has not been conducted on the vessel’s history, we do know that the *Oran M. Roberts* was a EC2-S-C1 type Liberty Ship and served as a cargo transport ship (as presented at <https://www.wrecksite.eu/wreck.aspx?231876>).

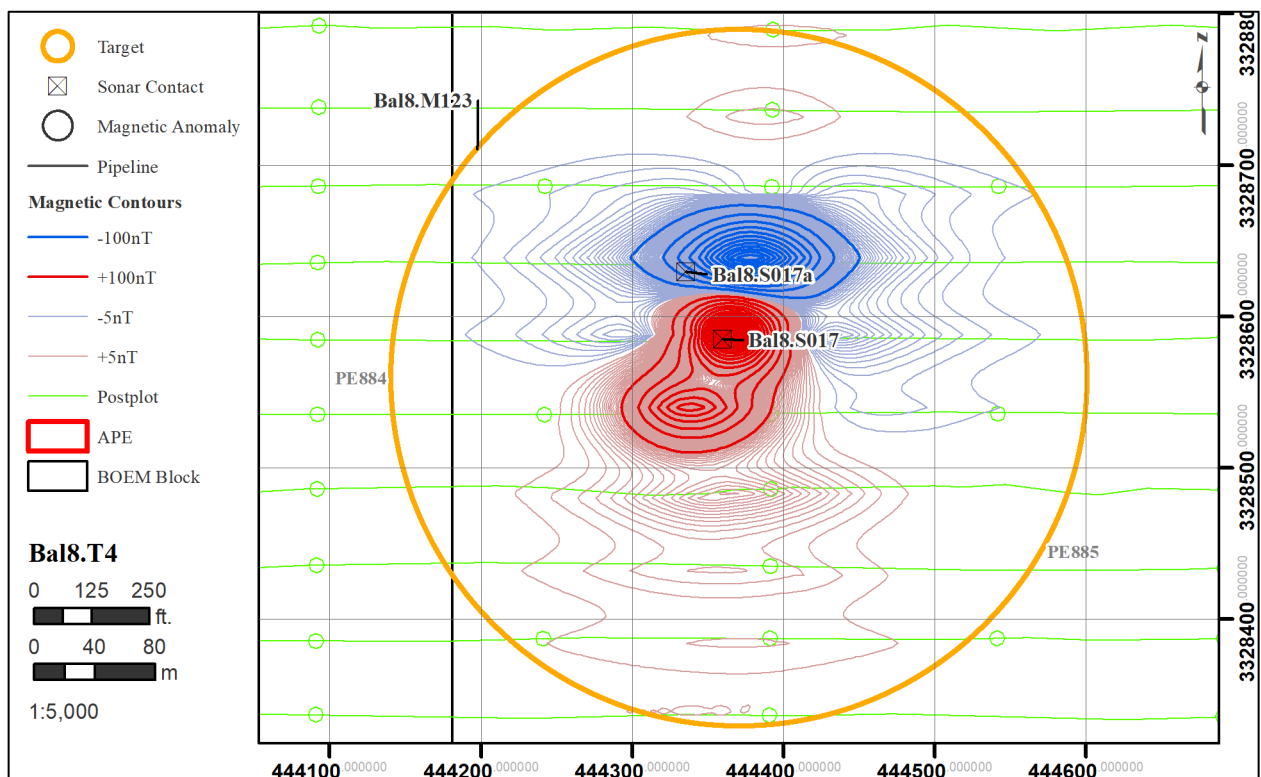


Figure 4-23. Magnetic contour map of potentially significant Target 4 (Bal8.M123) in the BAL8 Cell (also see *Appendix N*).

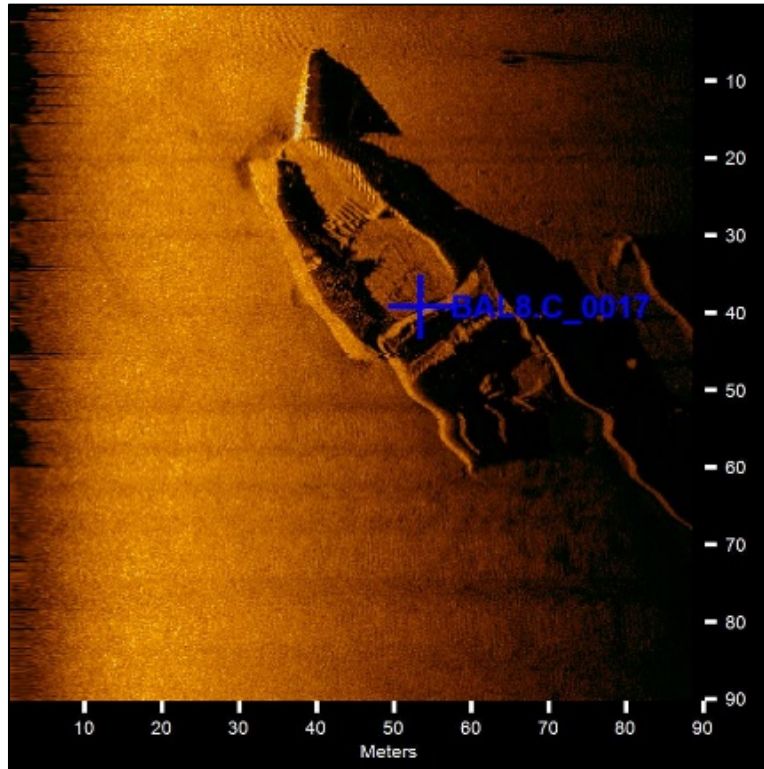


Figure 4-24. Acoustic image of Bal8.S017, Target 4, the remains of the Liberty Ship "Wallace" in BAL8 Cell (bow or stern).

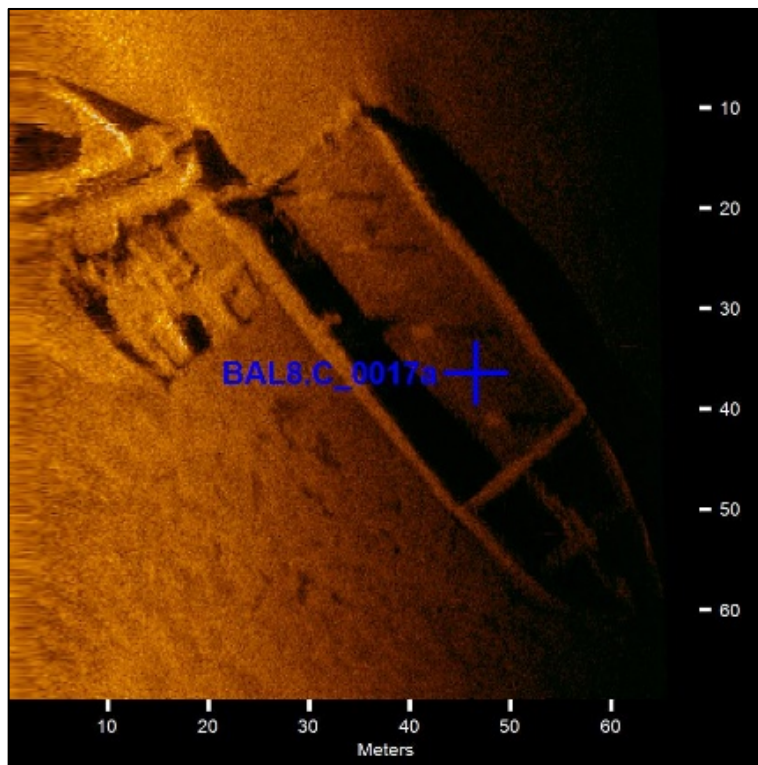
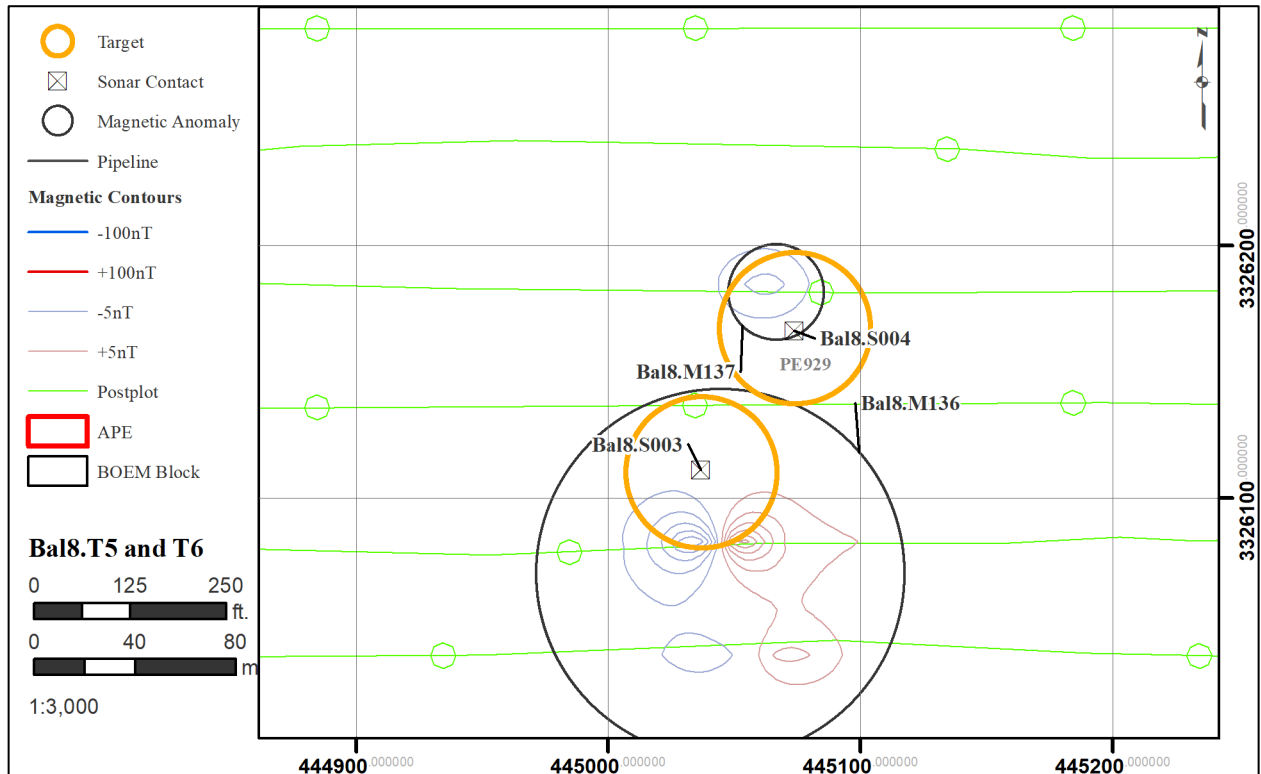


Figure 4-25. Acoustic image of Bal8.S017a, Target 4, the remains of the Liberty Ship "Wallace" in BAL8 Cell (bow or stern).

**TARGET 5 – M60 TANK**

Its location shown in Figures 4-14 above, Target 5 is located in the southwestern quadrant of the BAL8 cell and within BOEM Block PE929 (see also *Appendix N*, Figure N-23). Comprised of anomaly Bal8.M136 and sonar contact Bal8.S003, the target represents the remains of an M60 Tank. Illustrated in Figure 4-26, the complex anomaly has a maximum gamma deviation of 57 nT and covers an area approximately 100 feet by 100 feet. As listed in the Alabama Public Reefs Data Base, this site is identified as “Tank 90 A” that was sunk at this location in 1994 as an artificial reef. Figure 4-27 shows the tank that is located just south of Target 6, “Tank 90 B.” While little is known of the tank’s history, the site must be considered potentially significant unless investigated and determined otherwise. The M60 Tank is the second-generation main battle tank employed from 1959 to 1997. It is assumed that it will be avoided by future artificial reef placement.



**Figure 4-26. Magnetic contour map of potentially significant Target 5 (Bal8.S003) an M60 Tank designated “Tank 90 A” in the BAL8 Cell (also see Appendix N). It lies just south of Target 6 (Bal8.S004) an M60 Tank designated “Tank 90 B.”**

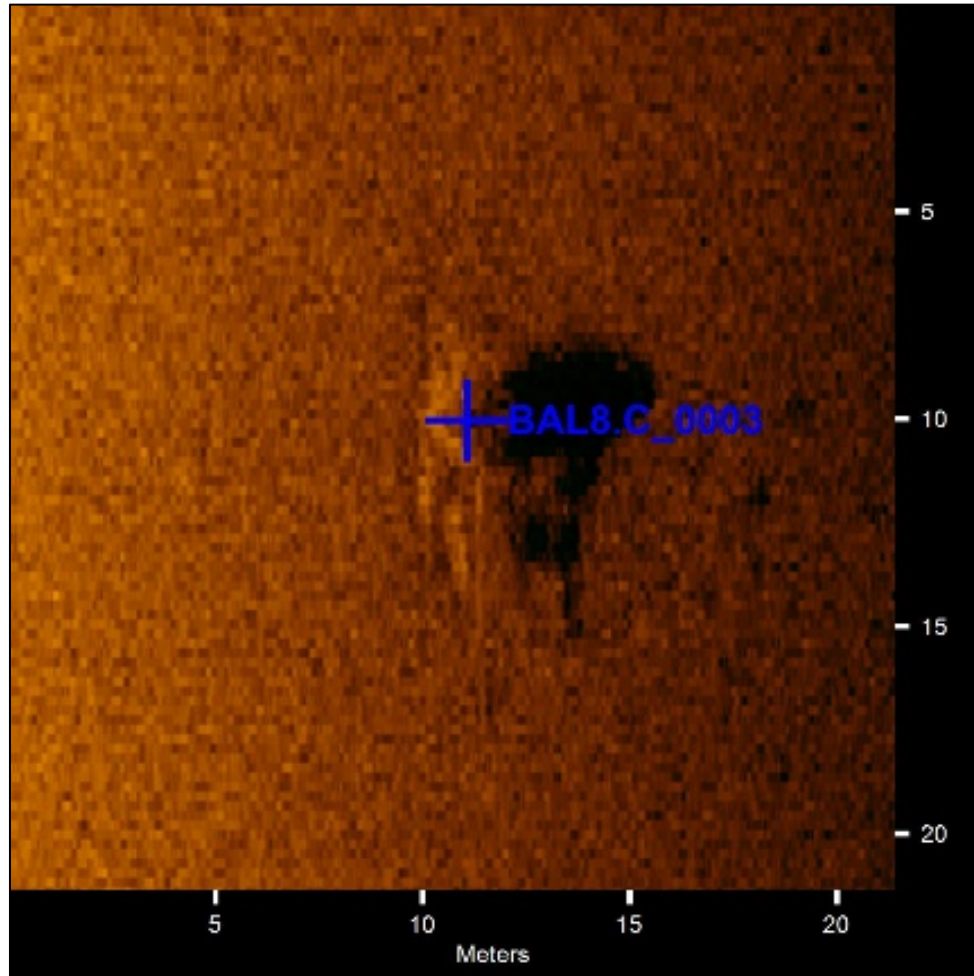


Figure 4-27. Acoustic image Bal8.S003, an M60 Tank designated (Bal8.S003) an M60 Tank designated "Tank 90 A".

#### ***TARGET 6 – M60 TANK***

Its location shown in Figures 4-14 above, Target 6 is located in the southwestern quadrant of the BAL8 cell and within BOEM Block PE929 (see also *Appendix N*, Figure N-23). Comprised of anomaly Bal8.M137 and sonar contact Bal8.S004, the target represents the remains of an M60 Tank. Illustrated in Figure 4-26 above, the complex anomaly has a maximum gamma deviation of 37 nT and covers an area approximately 100 feet by 100 feet. As listed in the Alabama Public Reefs Data Base, this site is identified as "Tank 90 B" that was sunk at this location in 1994 as an artificial reef. Figure 4-28 shows the tank that is located just north of Target 5, "Tank 90 A." While little is known of the tank's history, the site must be considered potentially significant unless investigated and determined otherwise. The M60 Tank is the second-generation main battle tank employed from 1959 to 1997. It is assumed that it will be avoided by future artificial reef placement.

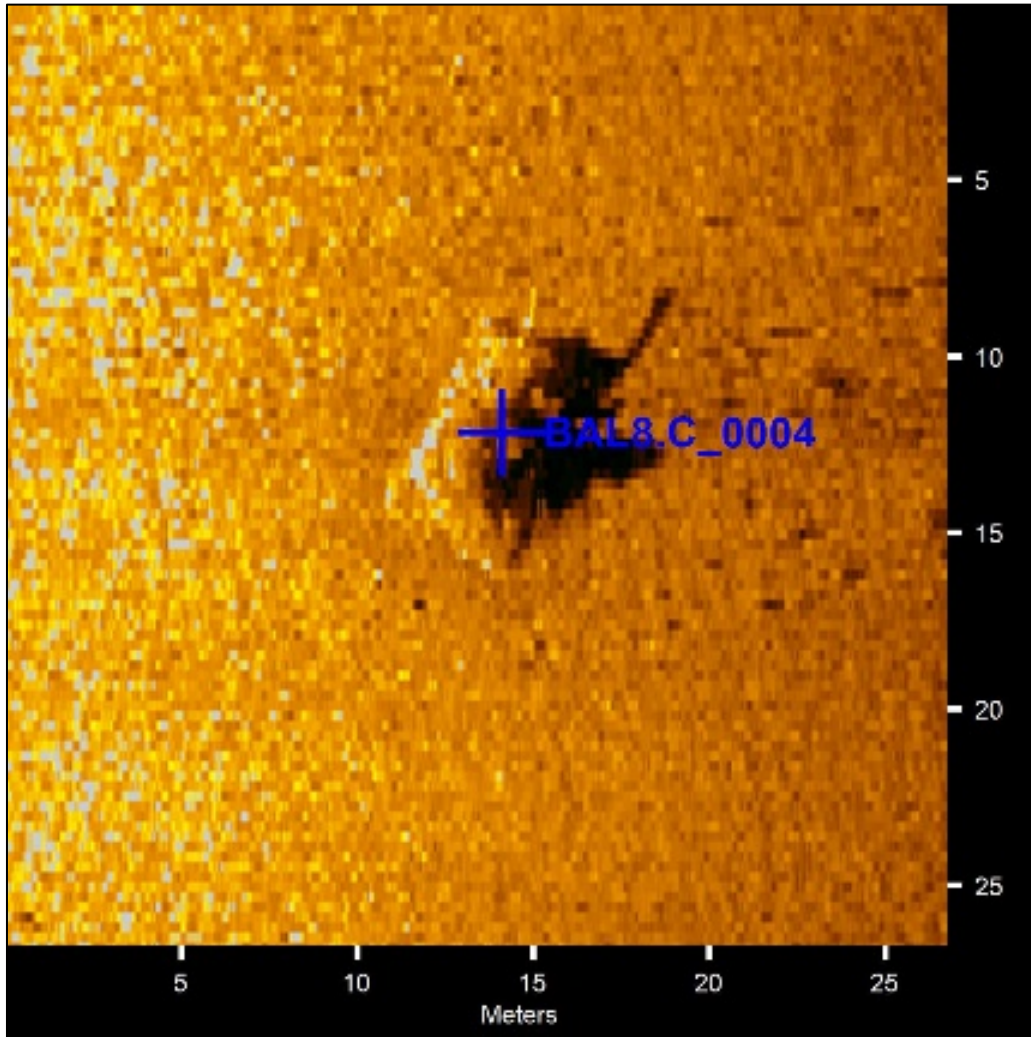


Figure 4-28. Acoustic image Bal8.S004, an M60 Tank designated “Tank 90 B”. The shadow of the tank’s gun tube is clearly visible.

### ***MOB (SAM-2014-00487-DEM)***

A total of 120 magnetic anomalies and 166 acoustic contacts were recorded in the MOB cell (SAM-2018-01036-GAC). Remote sensing data for the MOB cell including anomaly and sonar contact tables as well as sonar records is presented in *Appendix O* and *P*. *Appendix O* presents tables of anomaly and sonar contact data, sonar images, and the sonar mosaic. *Appendix P* presents the magnetic contour maps showing anomalies and sonar contact locations, all overlaid onto navigation charts. An extensive review and analysis of the remote sensing data indicates that the majority of the anomalies are represented by SPS and small isolated debris or objects, all of which are considered non-significant. There are, however, six targets that have the potential to each represent a significant cultural resource. These findings are discussed below. Their locations within the cell are presented in Figure 4-29 and associated data are presented in Table 4-07.

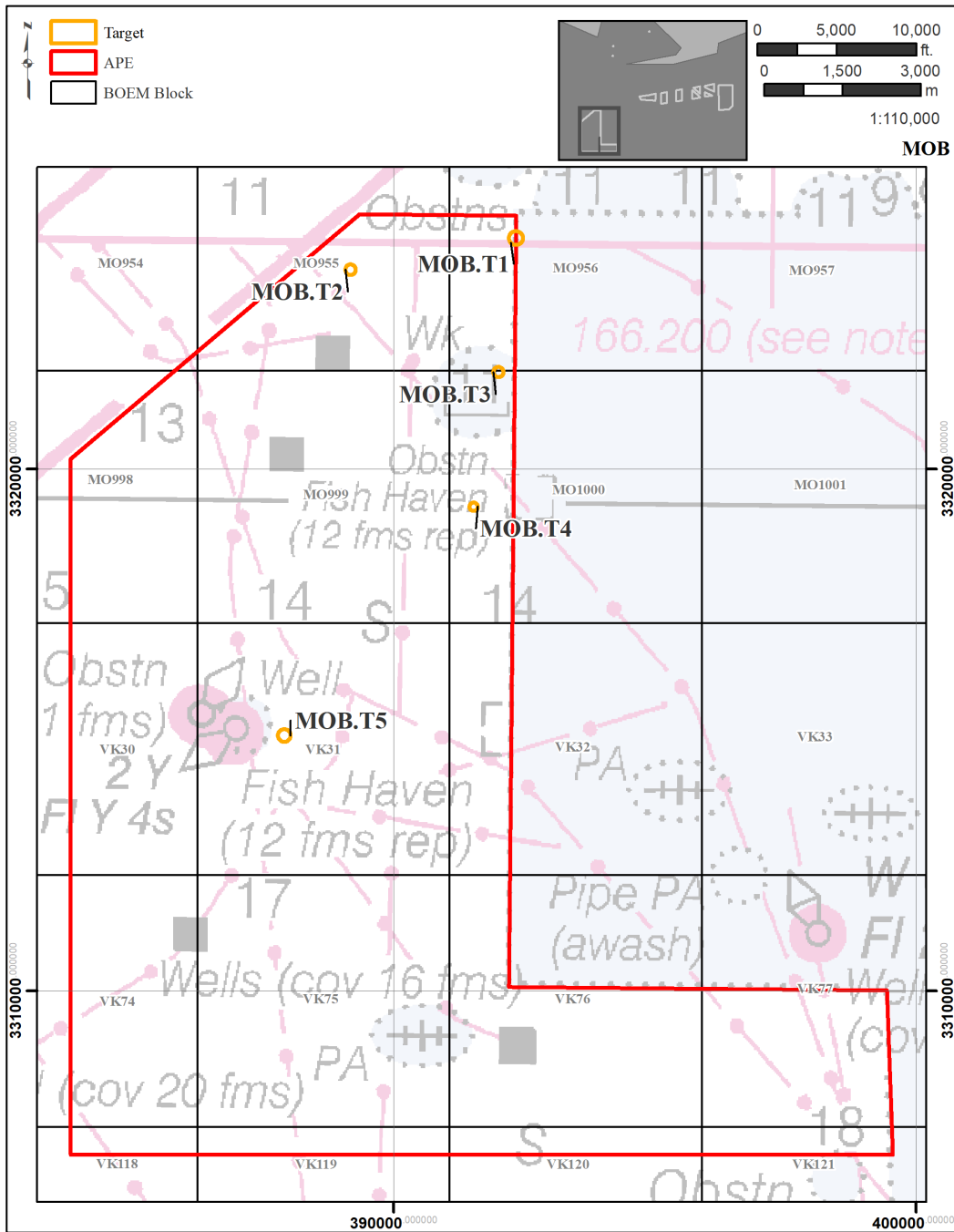


Figure 4-29. Location of potentially significant targets in the MOB cell (also see Appendix P).

**Table 4-07. Potentially Significant Targets in the MOB Cell.**

Target	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Target 1	392339	3324420	C	890	608.2	Y	unknown; large buried debris field	MOB.M019	M-03	MO956
Target 2	389177	3323816	C	198	1857.6	Y	Listed as possible wreck in BOEM database	MOB.M584	M-02	MO955
Target 3	392008	3321854	C	197	145.4	Y	location of BOEM database entry "barge/unknown vessel"	MOB.M105 MOB.S038	M-07	MO1000
Target 4	391534	3319274	C	162	3227.4	Y	"Papa Joe" wreck	MOB.M624 MOB.S053	M-17	MO1000
Target 5	387903	3314888	C	164	2693.6	Y	"Nail Wreck"	MOB.M233 MOB.M234 MOB.M235 MOB.S083 MOB.S106	M-25	VK31

C = Complex/Multi Component.

#### ***TARGET 1 – ANOMALY MOB.M019***

Illustrated in Figure 4-30, Target 1 is located in the north-central portion of the MOB cell and in BOEM Block MO956 (see also *Appendix P*, Figure P-04). Buried without a corresponding sonar contact, the target has a maximum gamma deviation of 608 nT, and covers an area approximately 250 feet by 150 feet. Located along the western boundary of a marked fish haven, the anomaly is somewhat linear but does not correspond to any marked pipeline, and remains unknown. Considered potentially significant due to its signature, it is assumed that it will be avoided by future artificial reef placement.

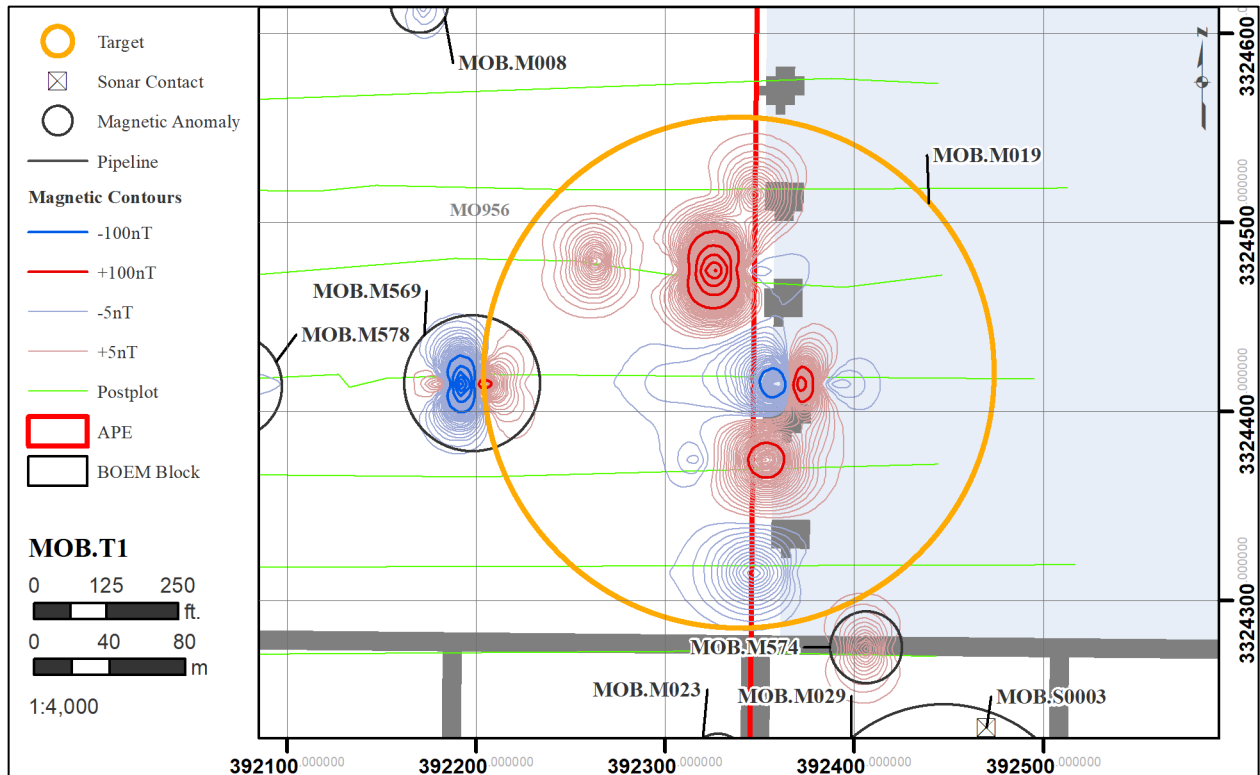


Figure 4-30. Magnetic contour map of potentially significant Target 1 (MOB.M019) in the MOB Cell (also see *Appendix P*).

### TARGET 2 – POSSIBLE WRECK

Illustrated in Figures 4-31, Target 2 is located in the northeastern corner of the MOB cell and in BOEM Block MO955 (see also *Appendix P*, Figure P-04). Buried without a corresponding sonar contact, the target has a maximum gamma deviation of 1,857 nT, and covers an area approximately 150 feet by 100 feet. Listed as a “possible wreck,” the anomaly remains unknown. Considered potentially significant due to its signature and statements by BOEM, it is assumed that it will be avoided by future artificial reef placement.

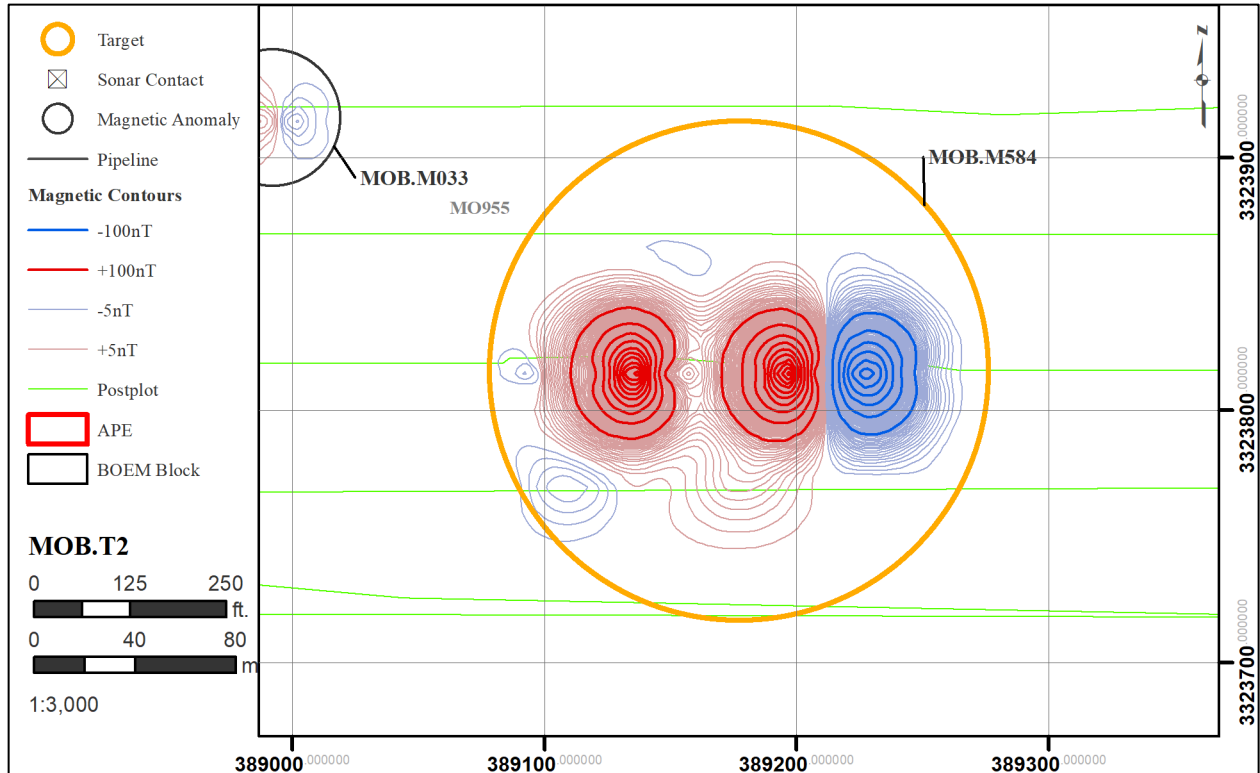


Figure 4-31. Magnetic contour map of potentially significant Target 2 (MOB.M584) in the MOB Cell listed as a possible wreck in the BOEM Data Base (also see *Appendix P*).

### ***TARGET 3 – BARGE/UNKNOWN VESSEL***

Its location shown in Figures 4-29 above, Target 3 is located near the northeastern corner of the MOB cell and in BOEM Block M1000 (see also *Appendix P*, Figure P-08). Comprised of anomaly MOB.M105 and sonar contact MOB.S038, the target appears to represent the remains of an unknown barge. Illustrated in Figure 4-32, the complex anomaly has a maximum gamma deviation of 145 nT and covers an area approximately 100 feet by 100 feet. As listed in the BOEM Wrecks database, this site is identified as a/an "barge/unknown vessel." Its acoustic image in Figure 4-33 shows the remains of what appears to be the possible remains of a barge. While little is known of the wreck's actual type, date of construction, construction materials, and history; the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.

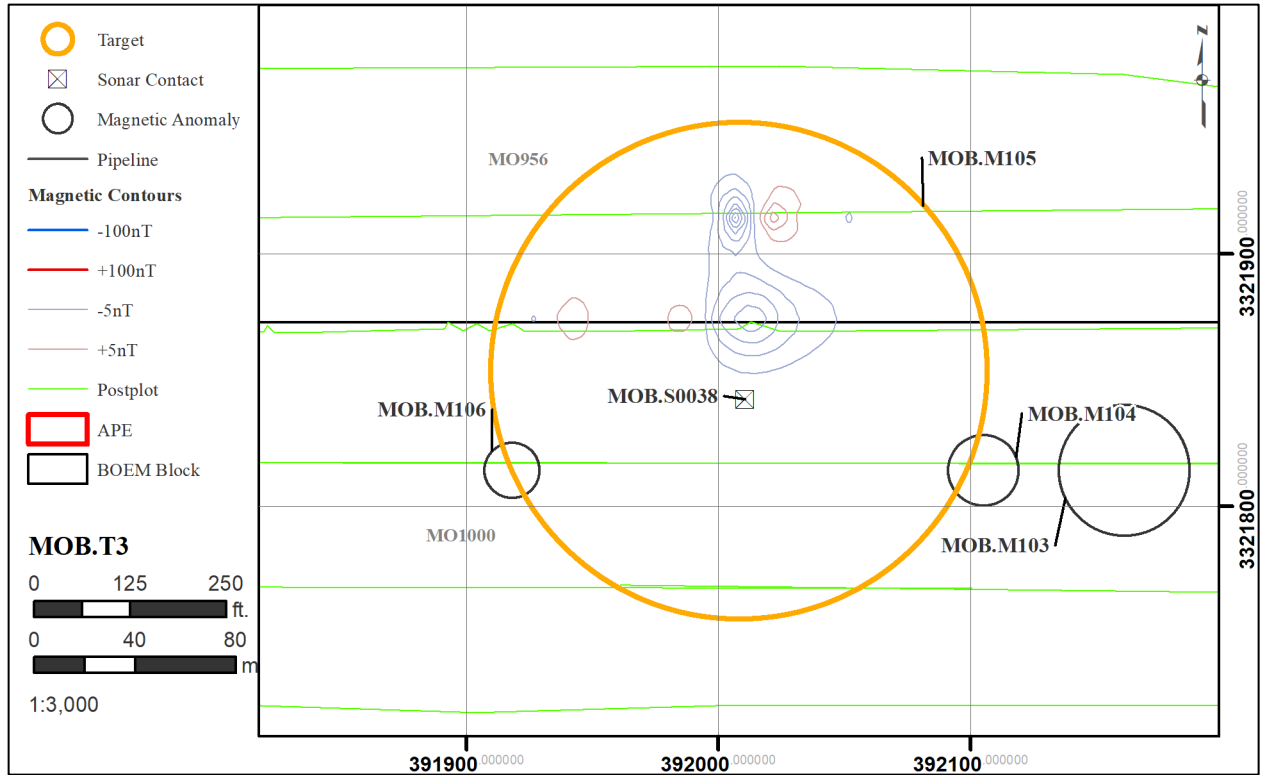


Figure 4-32. Magnetic contour map of potentially significant Target 3 (MOB.M105) in the MOB Cell (also see Appendix P).

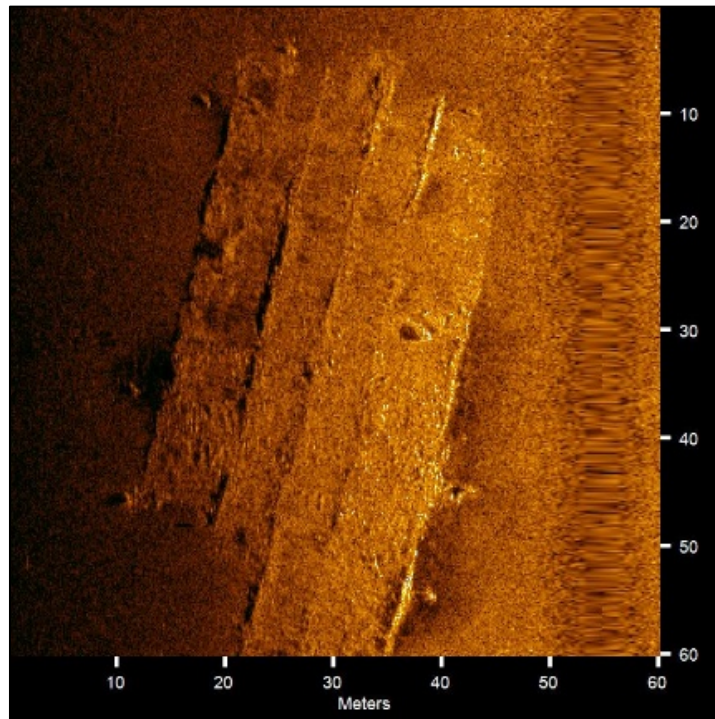
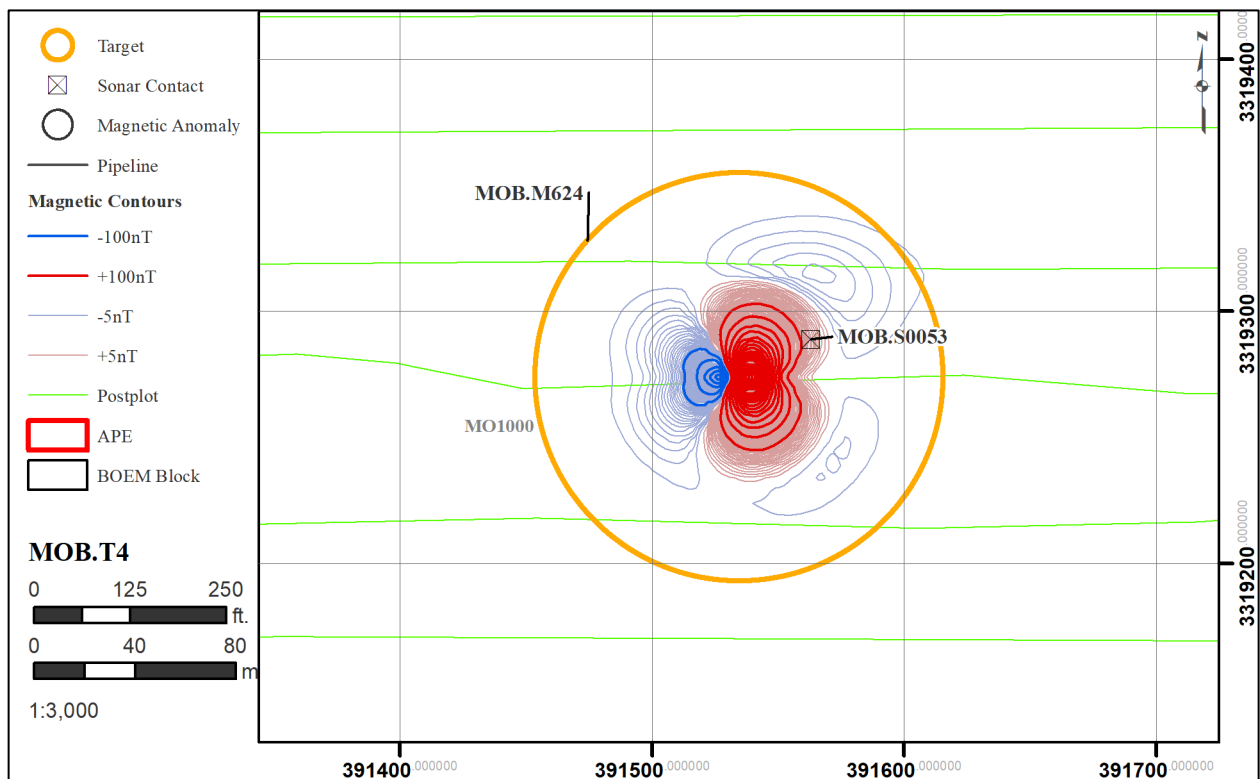


Figure 4-33. Acoustic image of MOB.S038, Target 3 in the MOB Cell identified as an “unknown vessel” in the BOEM database.

**TARGET 4 – “PAPA JOE” WRECK**

Target 4 (see Figure 4-29) is located in the north-central area of the MOB cell and within BOEM Block MO1000 (see also *Appendix P*, Figure P-18). Comprised of anomaly MOB.624 and sonar contact MOB.S053, the target represents the remains of an iron-hulled tug, the *Papa Joe*. Illustrated in Figure 4-34, the complex anomaly has a maximum gamma deviation of 3,2271 nT and covers an area approximately 150 feet by 150 feet. As listed in the Alabama Public Reefs Data Base, this site is identified as “*Papa Joe*” (aka *John Wood*), a 50-foot long, three-decked metal tug that was sunk at this location in 2001 as an artificial reef in 83 feet of water. Figure 4-35 shows the current remains of the tug, sitting upright with the acoustic shadow indicating an intact deck and wheelhouse. While little is known of the vessel’s age or history, the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.



**Figure 4-34. Magnetic contour map of potentially significant Target 4 (MOB.M624) in the MOB Cell identified as the “*Papa Joe*” wreck (also see *Appendix P*).**

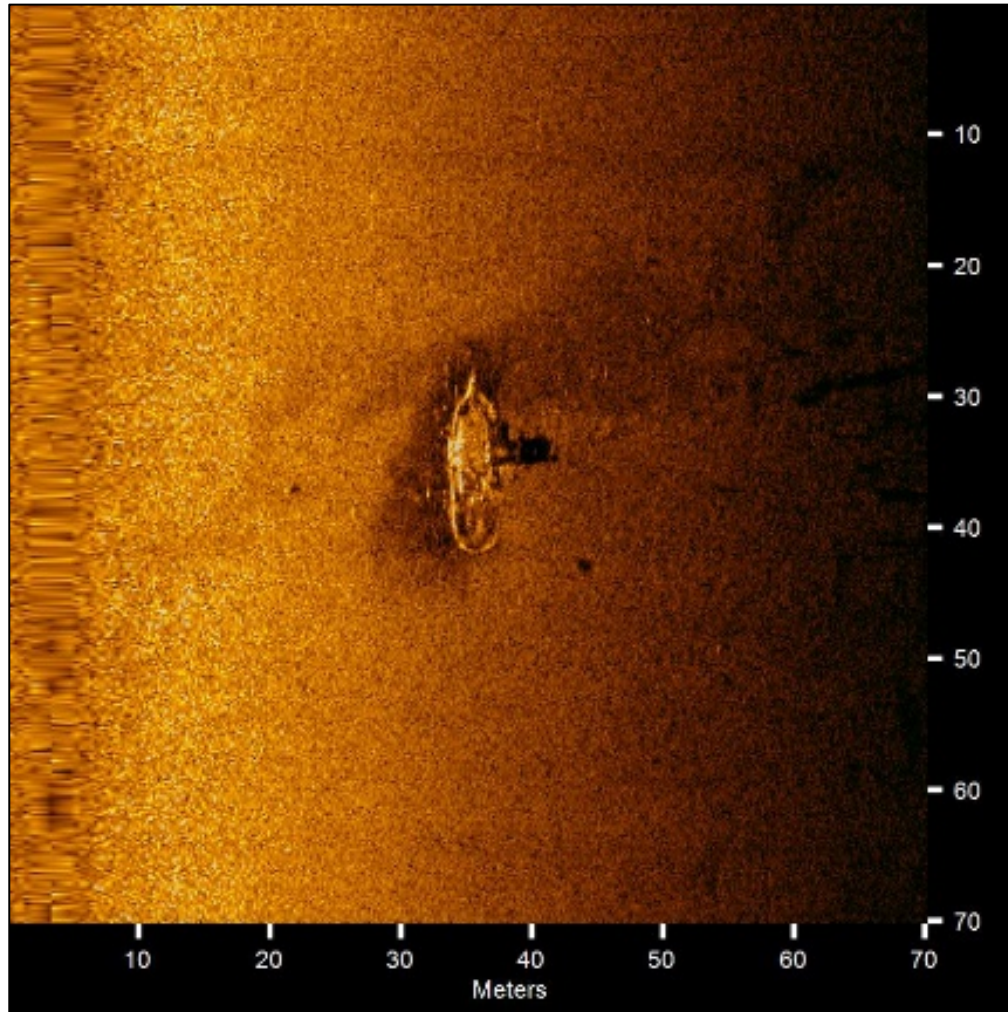


Figure 4-35. Acoustic image of MOB.S053, Target 4 in the MOB Cell identified as the “*Papa Joe*” wreck.

#### ***TARGET 5 – “NAIL WRECK”***

Target 5 (see Figure 4-29) is located in the center of the MOB cell and within BOEM Block MOVK31 (see also *Appendix P*, Figure P-18). Comprised of anomalies MOB.233, 234, and 235, as well as sonar contacts MOB.S083 and 106, the target represents the remains of the “*Nail Wreck*.” Illustrated in Figure 4-36, the complex anomaly has a maximum gamma deviation of 2,693 nT and covers an area approximately 200 feet by 200 feet. As listed in the Alabama Public Reefs Data Base, this site is identified as *Nail Ship* a cargo barge loaded with cotton bales and kegs of nails that sank at in the 1930s during a storm. Rediscovered when snagged by a shrimp boat, it was listed as an artificial reef in 102 feet of water. While its high gamma deviation indicates a metal hull, its acoustic image in Figure 4-37 shows the remains of what appears to be the somewhat impacted and disarticulate remains of the hull. Because little is known of the vessel’s age, type, construction materials, and history, the site must be considered potentially significant unless investigated and determined otherwise. It is assumed that it will be avoided by future artificial reef placement.

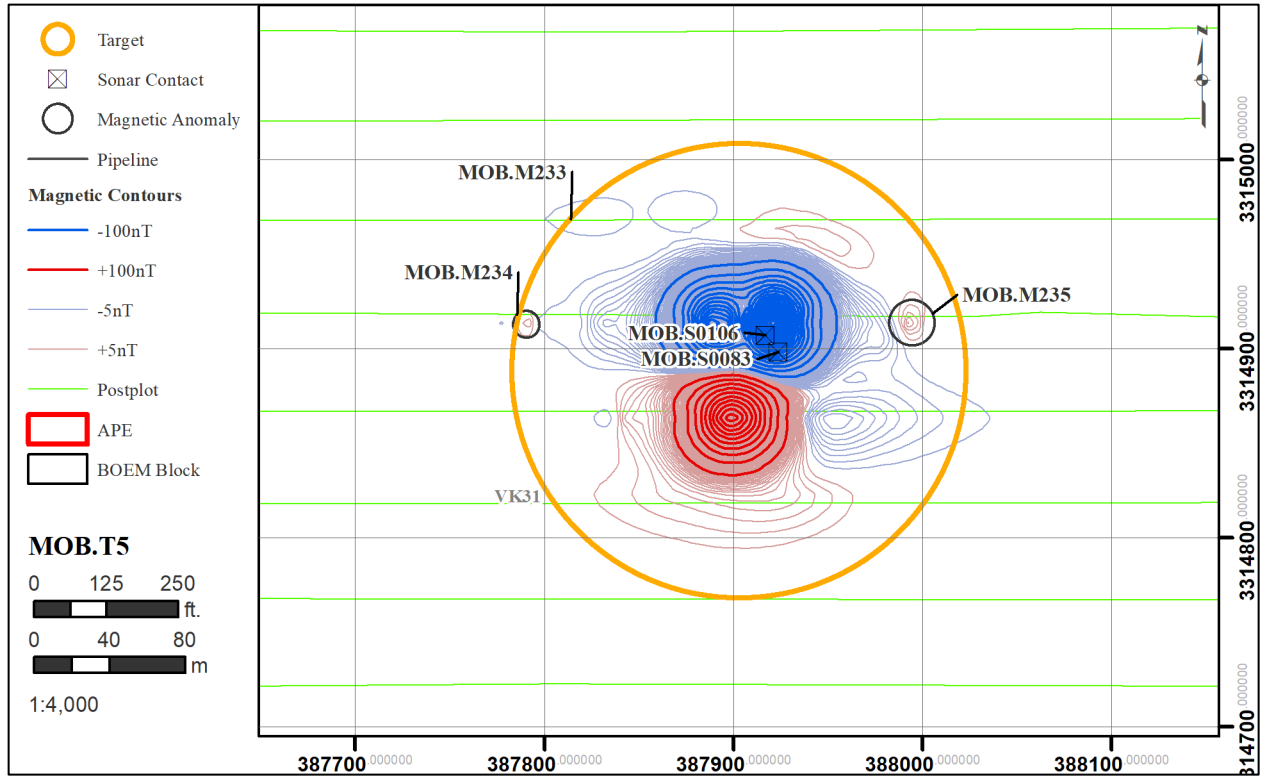


Figure 4-36. Magnetic contour map of potentially significant Target 5 (MOB.M233) in the MOB Cell (also see Appendix P).

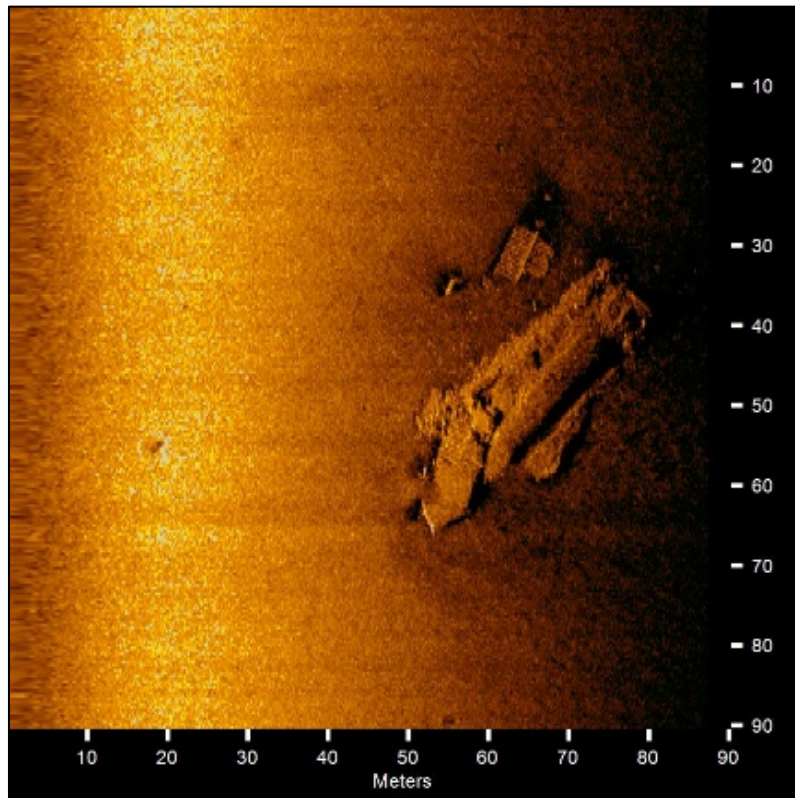


Figure 4-37. Acoustic image of MOB.S106, Target 5 in the MOB Cell identified as the “Nail Wreck”.

### ***SUBBOTTOM RESULTS***

Subbottom profiler data collected over the seven survey areas totaled over 104 gigabytes of shallow seismic data. These profiles were processed in SonarWiz 7 to aid in the analysis and mapping of features relevant to reconstructing paleolandscape features, including those with the potential to preserve submerged prehistoric archaeological sites. Penetration was generally very good throughout the project area, ranging from 6 to 15 meters (20 to 50 feet) below seafloor. The stratigraphy is primarily comprised of incised channel features that terminate at the seafloor or a ravinement surface, and an occasional shallow horizontal reflector representing a peat bed or surface expression. The extents of all incised channel features were mapped and exported to ArcGIS for spatial analysis (Figures 4-38 and 4-39). Additionally, features recorded during the 2017 9-Mile Cells survey (Wilson et. al 2017) were included in the GIS to show continuity of features between survey areas. These channel features may range in age from late Pleistocene to early Holocene. However, as discussed below, these features likely all predate human occupation. Profiles across each of the 13 survey areas with depth (33-foot [10-meter] intervals) and distance (500-foot [150-meter] intervals) annotations are presented below.

#### ***EXPOSED BALD CYPRESS FOREST***

Investigations conducted by LSU of an exposed bald cypress forest (located just east of Bal2; see discussion in *Chapter II: Historical Background*) point to older dates, which radiocarbon demonstrated to be dated to 41,000 to 45,000 YBP (Rodriguez 2018), well before the last lowstand and at the upper reaches of reliable detection. Optical stimulated luminescence (OSL) was additionally employed, both to date sediments and to overcome the dating limits (>43,500 YBP) of radiocarbon. Surrounding sediment layers taken from cores dated 56,000 to 72,000 ( $\pm$  5,000) YBP, placing them well before the possibility of human occupation. While these features predate the presence of people in the region, side-scan sonar records were examined to ensure no evidence of this forest was present in the Survey Area.

#### ***INCISED CHANNELS***

Channel features were created when the study area was exposed at various periods. Although there are near-surface channel features in the Project Area, some may actually pre-date the last lowstand (during the Late Glacial Maximum, approximately 29,000 YBP) as seen with the exposed bald cypress forest. Channels were found with both fluvial as well as transgressive sediment deposits. Evidence of the truncation of positive relief features such as natural levees, back-bay margins, and relict shorelines indicate that they are unlikely to be associated with human presence.

#### ***RAVINEMENT SURFACE AND TRANSGRESSIVE DEPOSITS***

This ravinement surface, shown throughout many of the offshore survey areas as a shallow horizontal reflector, was probably formed during the late Pleistocene erosion. The overlying deposits are Mississippi-Alabama-Florida (MAFLA) shelf sand sheet sediments. Erosion from marine transgression has removed sediments from the inner shelf area and deposited them seaward in deeper water, removing lowstand delta features from the Project Area (Anderson et al. 2004:16). Ravinement surfaces are erosional and not associated with potential prehistoric occupation. An example of this feature is shown in Figures 4-87.

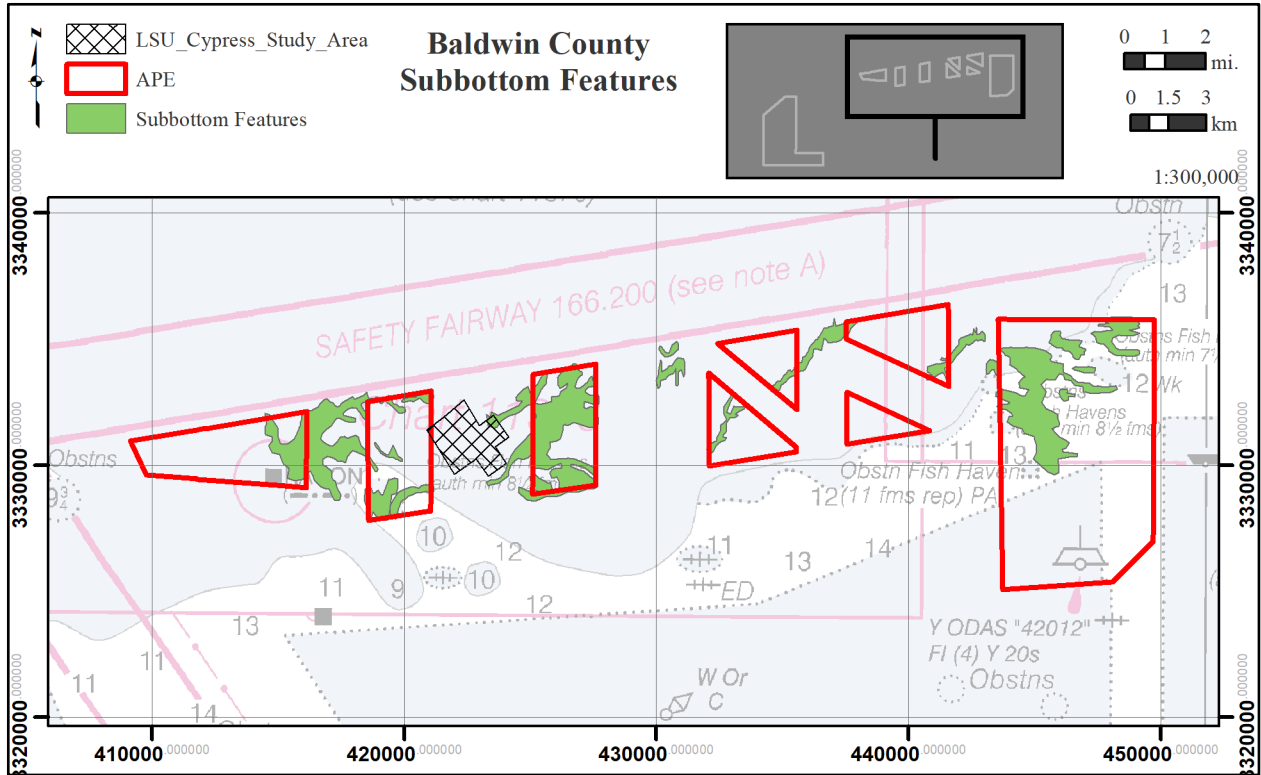


Figure 4-38. SAM-2014-00487-DEM (BAL Cells) subbottom features map. Note the LSU Bald Cypress Study Area to the east of Bal2.

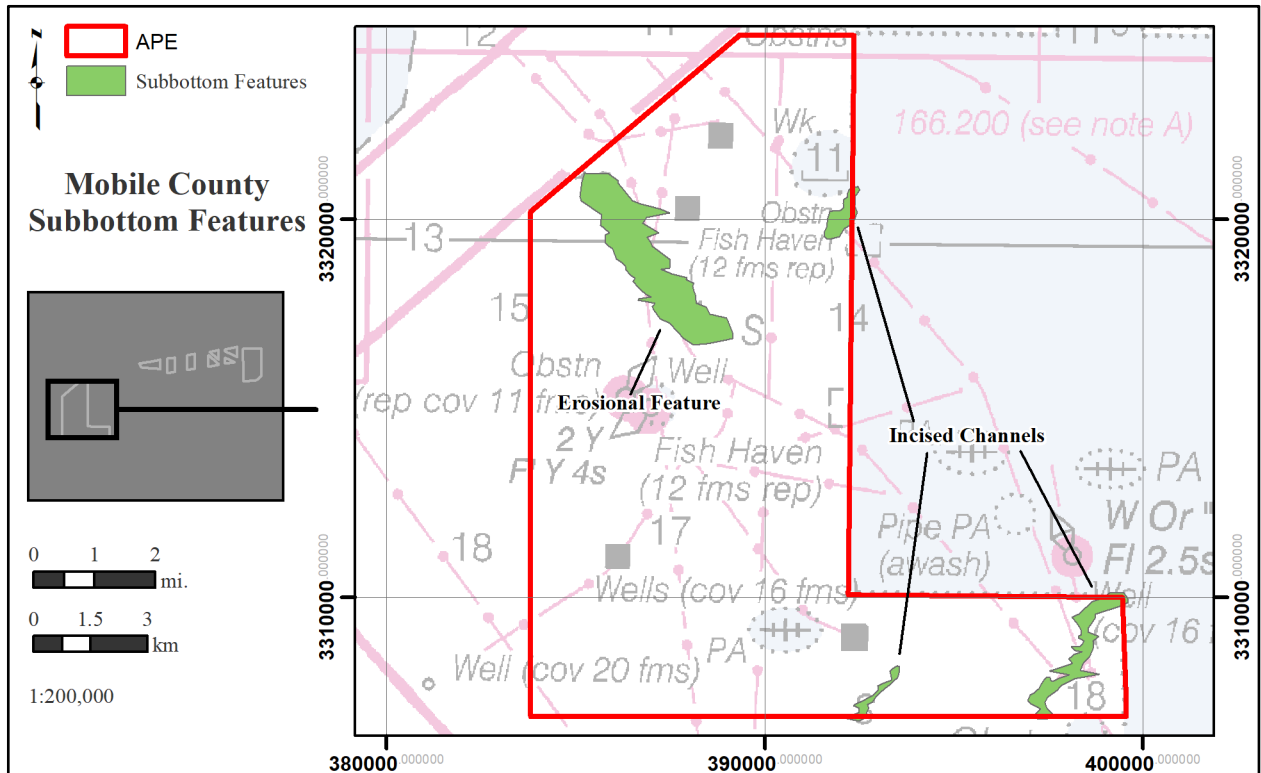


Figure 4-39. SAM-2018-01036-GAC (MOB Cell) subbottom features map.

**BAL1**

A shallow erosional feature was recorded in Bal1, which ran roughly north-south through the eastern portion of the cell. This feature tied into one previously recorded in the 2017 9-Mile Survey Cell E1, and is visible extending east of Bal1 in Figure 4-38. The feature (Figure 4-40) extends from 0 to 5 meters (0 to 16 feet) below the mudline (BML). The feature is interpreted as delta plain facies due to its overall extent. The margins of this feature appear to have been truncated by erosional forces. Lack of preserved positive relief features make potential for archaeological sites unlikely. This feature is not recommended for further investigation or avoidance.

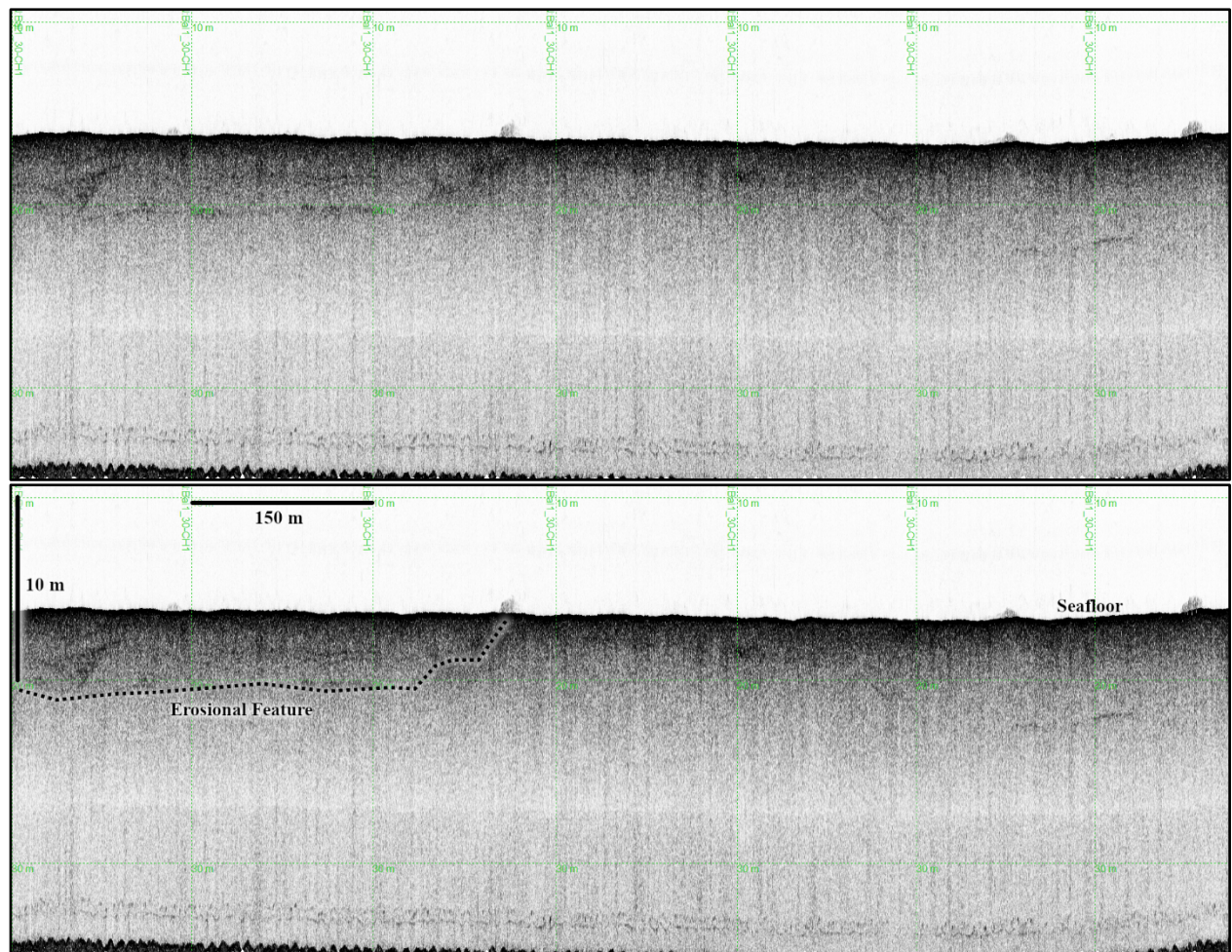
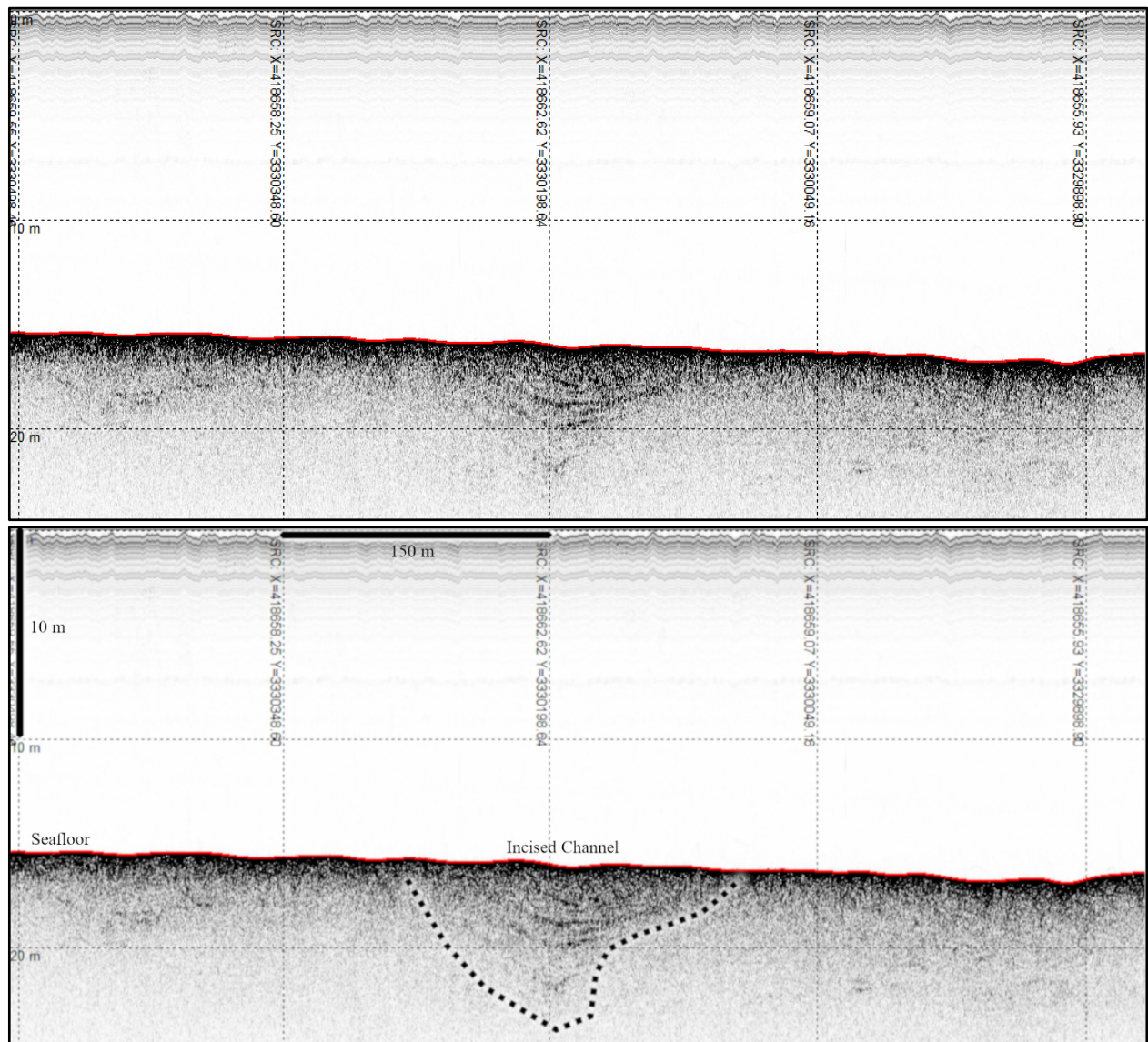


Figure 4-40. Raw (above) and annotated (below) seismic profile from Bal1 (line Bal2\_30) illustrating the erosional feature running through the eastern portion of the survey cell. Profile runs from east to west.

**BAL2**

Multiple shallow erosional features (i.e. channels) were recorded on seismic profiles throughout Bal2. These features trended mostly east-west. The paleochannels ranged from 0 to 15 meters (0 to 50 feet) BML. The channels have fluvial infill as demonstrated by foreset beds on the profiles (Figure 4-41). Channel margins appear to have been truncated by erosional forces, so preservation of prehistoric features is unlikely. At roughly 10 feet and below the seafloor, the horizontal reflector representing a ravinement surface extends throughout the Project Area (Figure 4-42). Note that the channels appear to cut through this transgressive facies in some areas—further confounding attempts to understand the chronology. Lack of preserved positive relief features make potential for archaeological sites unlikely; therefore, features in the Bal2 survey cell are not recommended for further investigation or avoidance.



**Figure 4-41.** Raw (above) and annotated (below) seismic profile from Bal2 (line Bal2\_03) illustrating one of the paleochannels running through the survey cell. Note the foreset bedding in the channel. Profile runs from east to west.

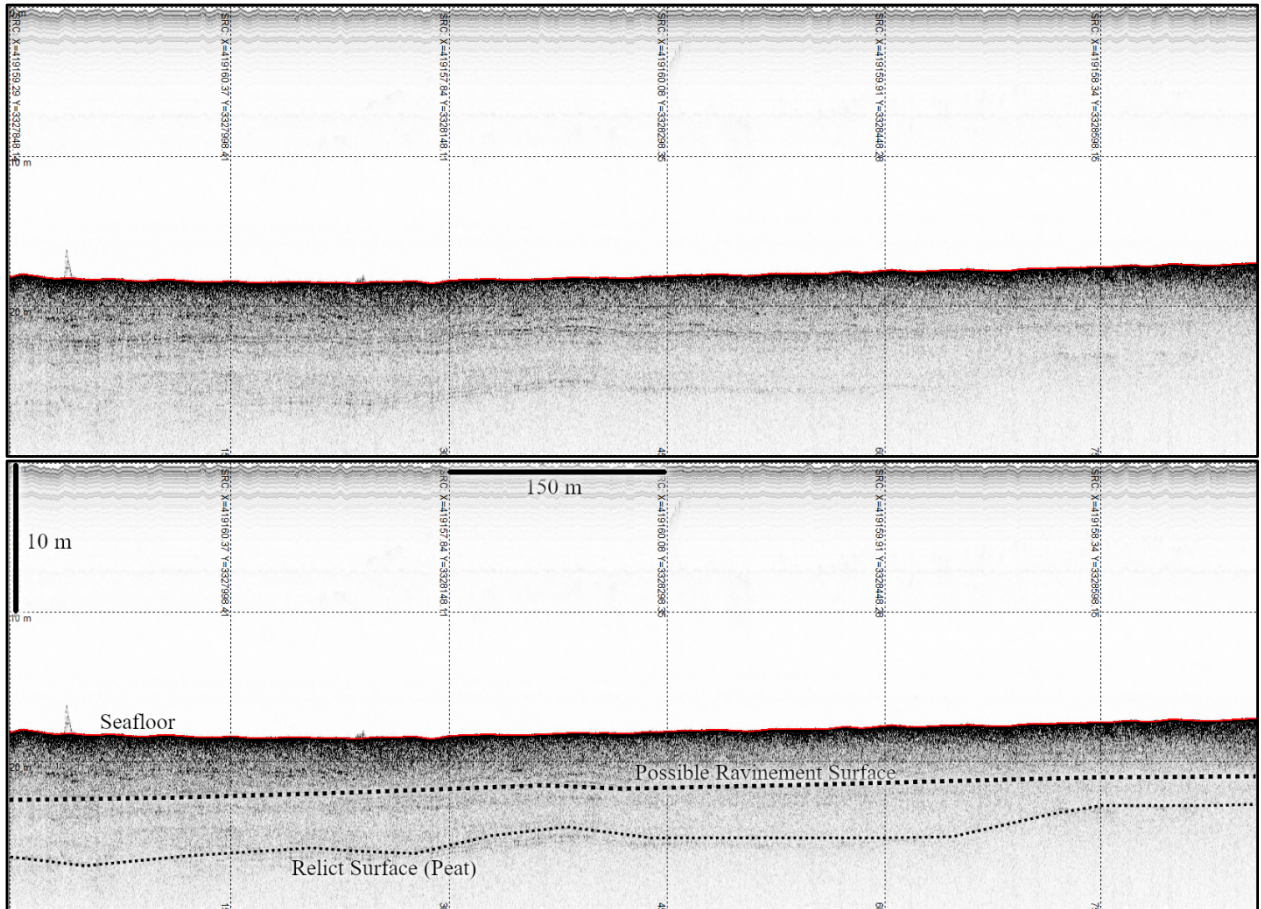
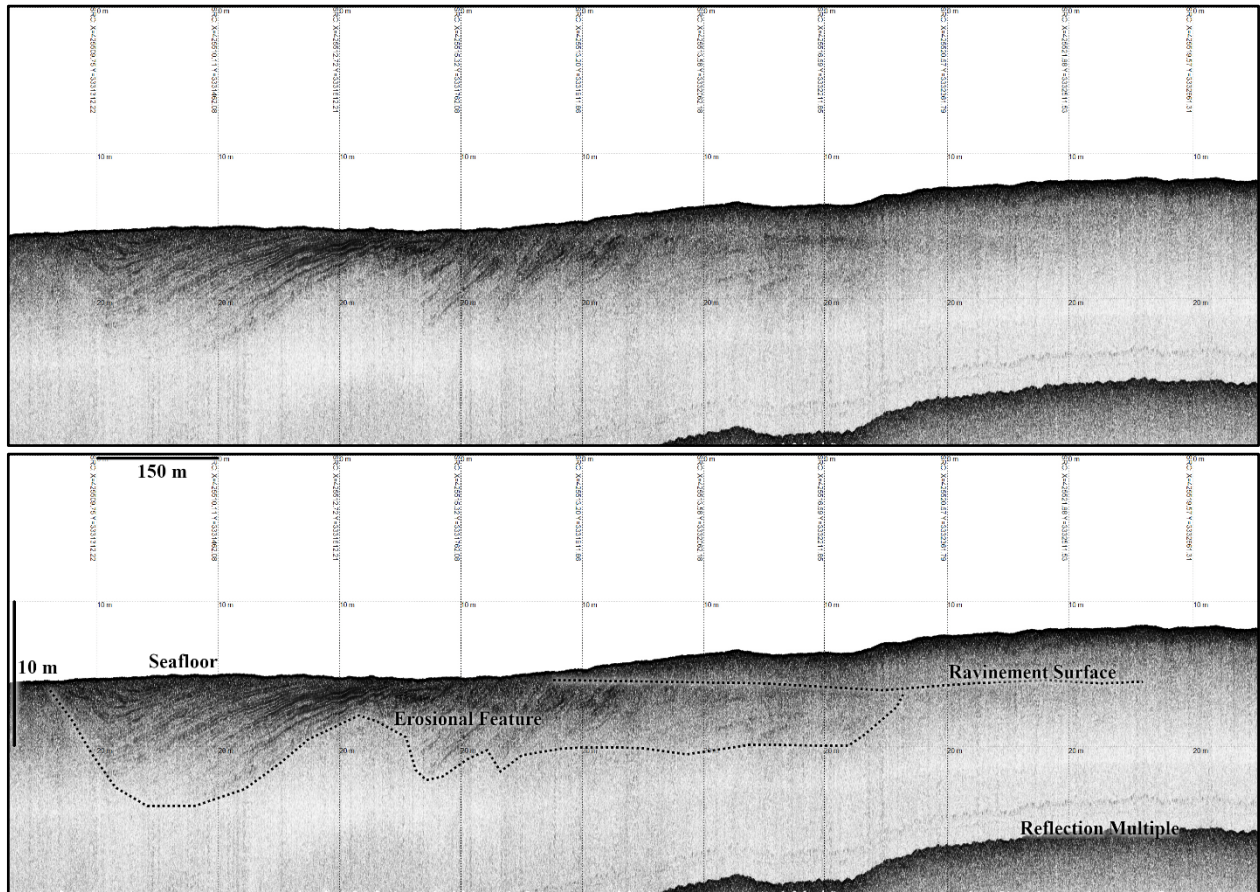


Figure 4-42. Raw (above) and annotated (below) seismic profile from Bal2 (line Bal2\_13) illustrating horizontal reflectors representing peat beds and possible ravinement surface. Profile runs from south to north.

**BAL3**

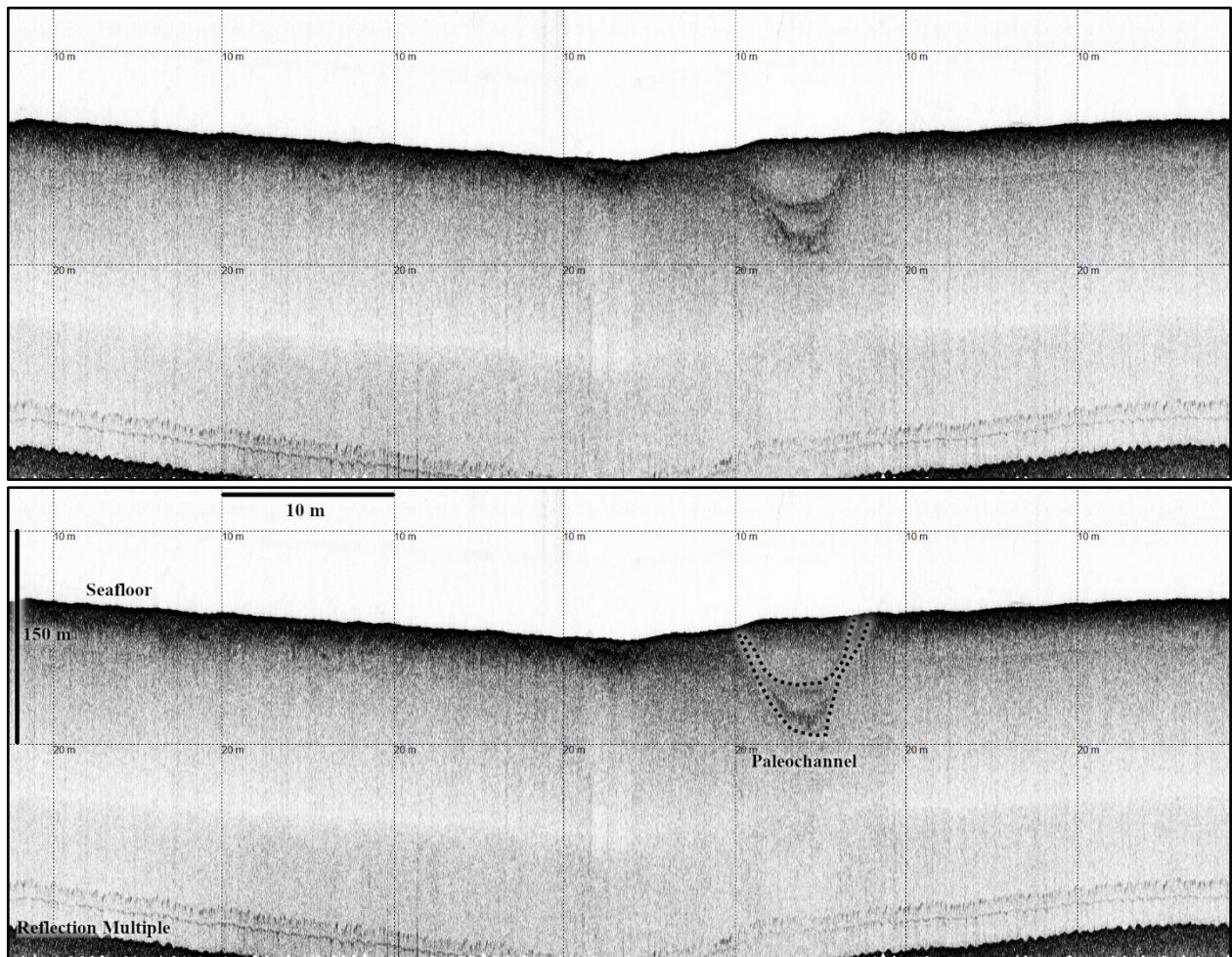
Bal3 included large erosional features running throughout the survey cell. These features ranged in depth from roughly 0 to 15 meters (0 to 50 feet) BML. The features contain fluvial deposits as evidenced by foreset bedding in seismic profiles. As seen in Figure 4-43, these features often terminated at the ravinement surface. In some areas these features may be exposed at the seafloor. As the cell is approximately two kilometers (three miles) east of the LSU Cypress Study Area, sonar records were evaluated for possible exposed forest features. However, no evidence of cypress stumps or logs was detected on side-scan sonar records. With the truncation of positive relief features and channel margins, the possibility of preserved prehistoric remains is unlikely. No subbottom features in Bal3 are recommended for avoidance or further investigation.



**Figure 4-43. Raw (above) and annotated (below) seismic profile from Bal3 (line Bal3\_09) illustrating large erosional feature and ravinement surface. Note foreset bedding in erosional feature indicative of fluvial deposits. Profile runs from south to north.**

**BAL4**

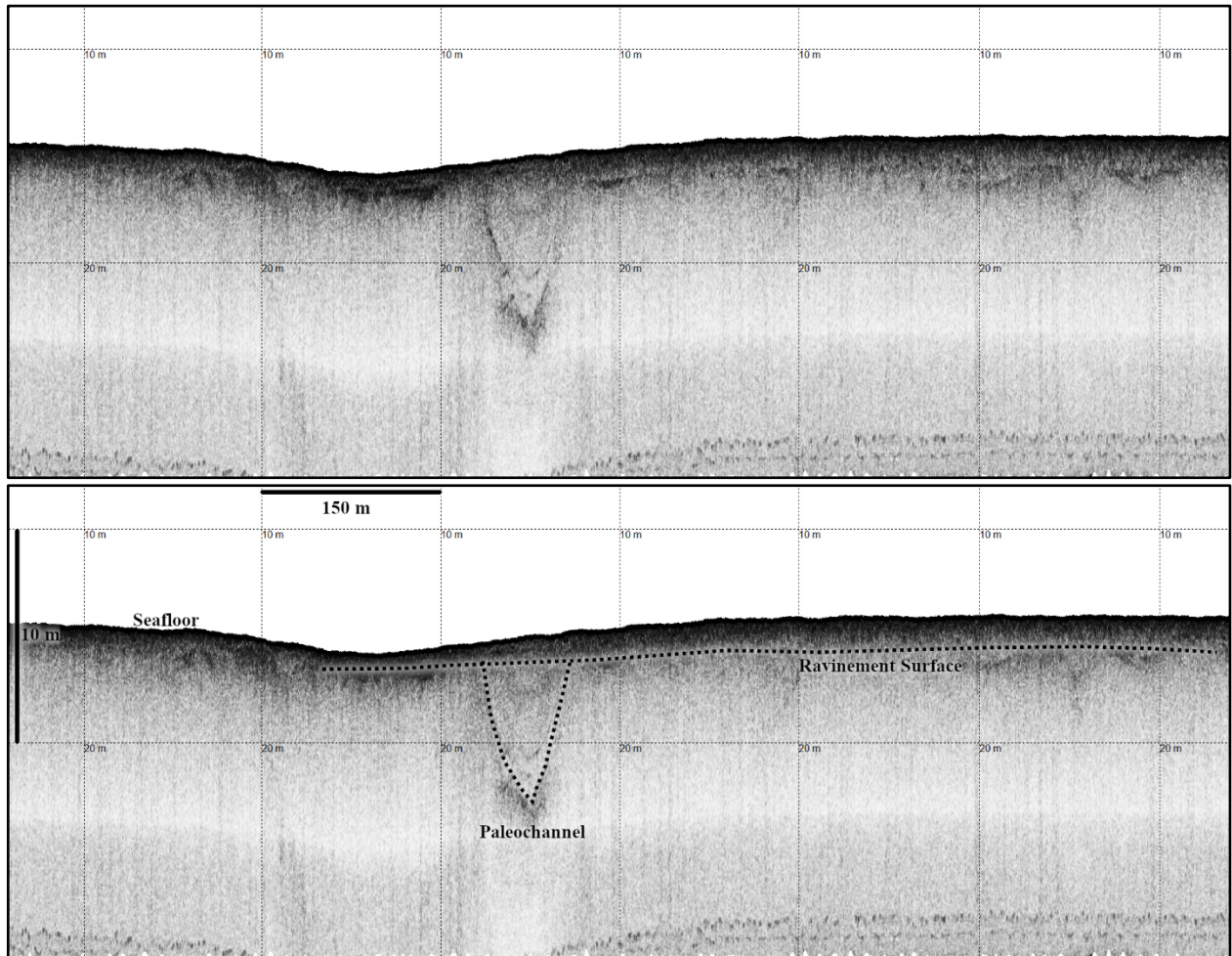
Bal4 had a single paleochannel running through the eastern end of the survey cell. The channel ran northeast-southwest, and ranged from 0 to 6 meters (0 to 20 feet) BML. This paleochannel terminated at the seafloor instead of a ravinement surface (Figure 4-44). It also appears to have transgressive (acoustically transparent) infill, although second reflector in the channel may indicate two periods of infill. With the truncation of positive relief features and channel margins, the possibility of preserved prehistoric remains is unlikely. No subbottom features in Bal4 are recommended for avoidance or further investigation.



**Figure 4-44. Raw (above) and annotated (below) seismic profile from Bal4 (line Bal4\_60) illustrating the paleochannel in the eastern portion of the survey cell. Profile runs from north to south.**

**BAL5**

A paleochannel, likely an extension of the same channel found in Bal4, runs through the western half of Bal5. This channel extends from 0 to 5 meters (0 to 16 feet) BML, and terminates at a ravinement surface (Figure 4-45). It contains transgressive infill, as evidenced by the acoustically transparent sediment within the feature. With the truncation of positive relief features and channel margins, the possibility of preserved prehistoric remains is unlikely. No subbottom features in Bal5 are recommended for avoidance or further investigation.



**Figure 4-45. Raw (above) and annotated (below) seismic profile from Bal5 (line Bal5\_12) illustrating the paleochannel in the western portion of the survey cell. Profile runs from south to north.**

**BAL6**

Shallow paleochannels extend through the southern end of Bal6, running roughly northeast-southwest. The channel extends from 0 to 5 meters (0 to 16 feet) BML, and terminates at the seafloor (Figure 4-46). The feature is almost acoustically transparent, so identifying the infill as transgressive or fluvial is difficult. With the truncation of positive relief features and channel margins, the possibility of preserved prehistoric remains is unlikely. No subbottom features in Bal6 are recommended for avoidance or further investigation.

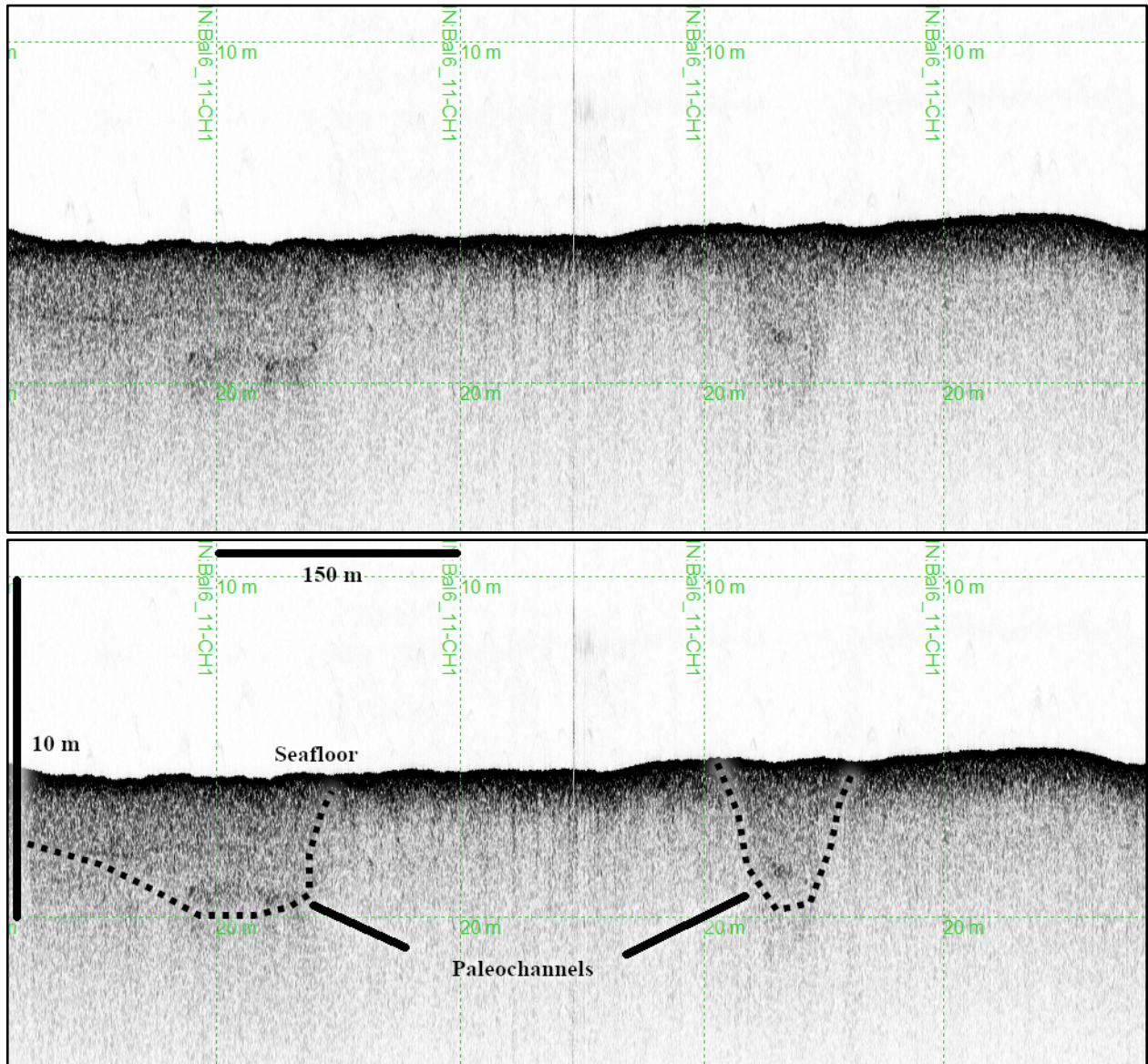


Figure 4-46. Raw (above) and annotated (below) seismic profile from Bal6 (line Bal6\_11) illustrating the paleochannels in the southern end of the survey cell. Profile runs west to east.

### **BAL7**

No subbottom features were recorded during the survey Bal7. No avoidance or further investigation is recommended for paleofeatures in the Bal7 survey cell.

### **BAL8**

Bal8 contained surface expressions, which were primarily visible in the northern half of the survey cell (Figure 4-47). The surface expressions likely represent layers of peat, although the reflector nearest the seafloor may represent a ravinement surface. The extents recorded in the GIS (Figure 4-38) represent the visible reflectors, which tended to be present in areas with less shoaling. The overlying sand facies likely impede the acoustic source from penetrating to the lower peat strata. Although the digitized features are limited spatially across the extents of Bal8, it is quite possible that these peat lenses extend across most of the cell. However, no positive relief features with the potential for containing prehistoric remains were recorded within Bal8. We recommend no further work or avoidance related to subbottom features within this cell.

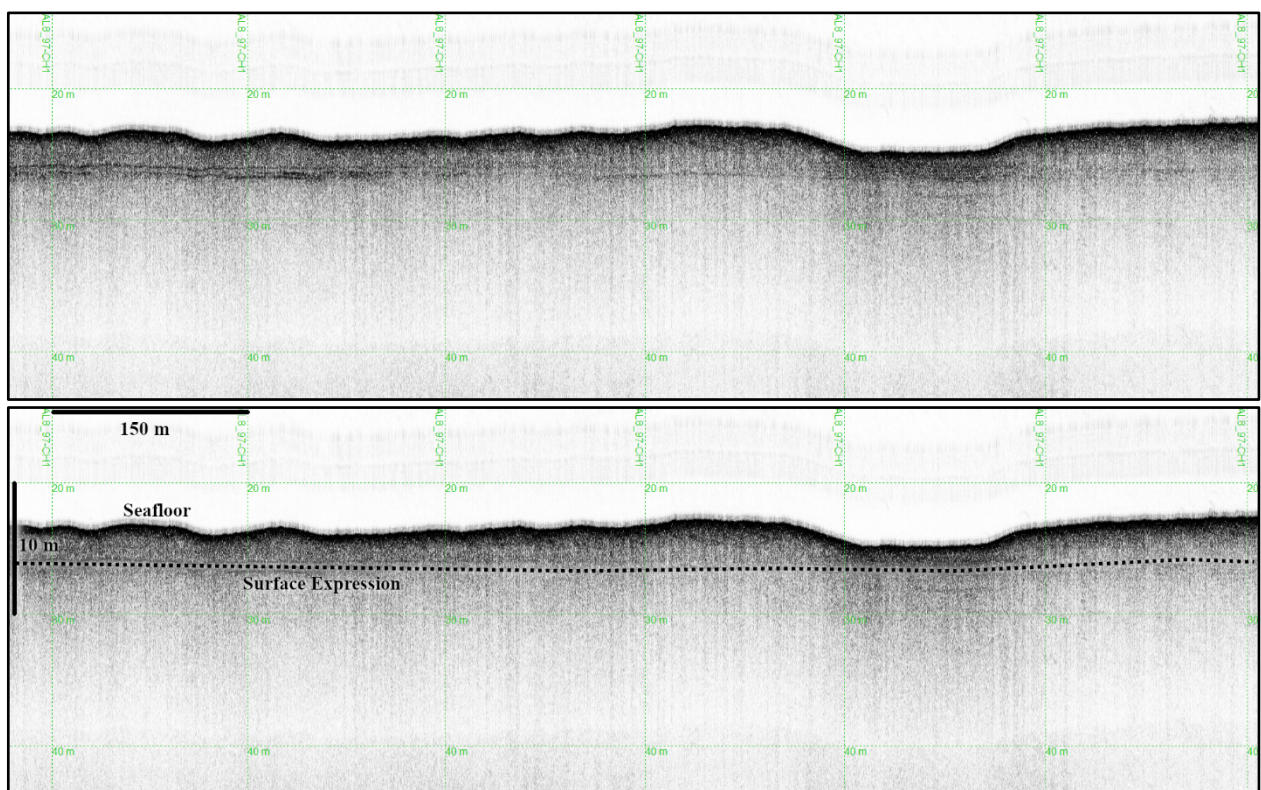


Figure 4-47. Raw (above) and annotated (below) seismic profile from Bal8 (line Bal8\_97) illustrating an example of the surface expressions found in the northern half of the survey cell. Profile runs west to east.

### MOB

Clearly defined incised channels run through the southern portion of the MOB survey cell. These range from 3 to 15 meters (10 to 50 feet) BML. Foreset bedding is indicative of fluvial deposits (Figure 4-48). The upper portions, likely including channel margins, were truncated through transgressive marine forces (as indicated by the ravinement surface). The upper 3 meters (10 feet) are composed of Holocene transgressive sediments.

A large erosional feature runs northwest-southeast through the northern half of the MOB Cell (Figure 4-49). Depths range from 3 to 8 meters (10 to 26 feet) BML. The feature appears to contain both fluvial deposits (foreset bedding) and transgressive (acoustically transparent) infill. The breadth of this feature may indicate that it was once a bayou or small embayment. The margins of this feature have been eroded, eliminating the possibility of prehistoric remains.

Lack of preserved positive relief features make potential for archaeological sites unlikely. Features in the MOB Cell are not recommended for further investigation or avoidance.

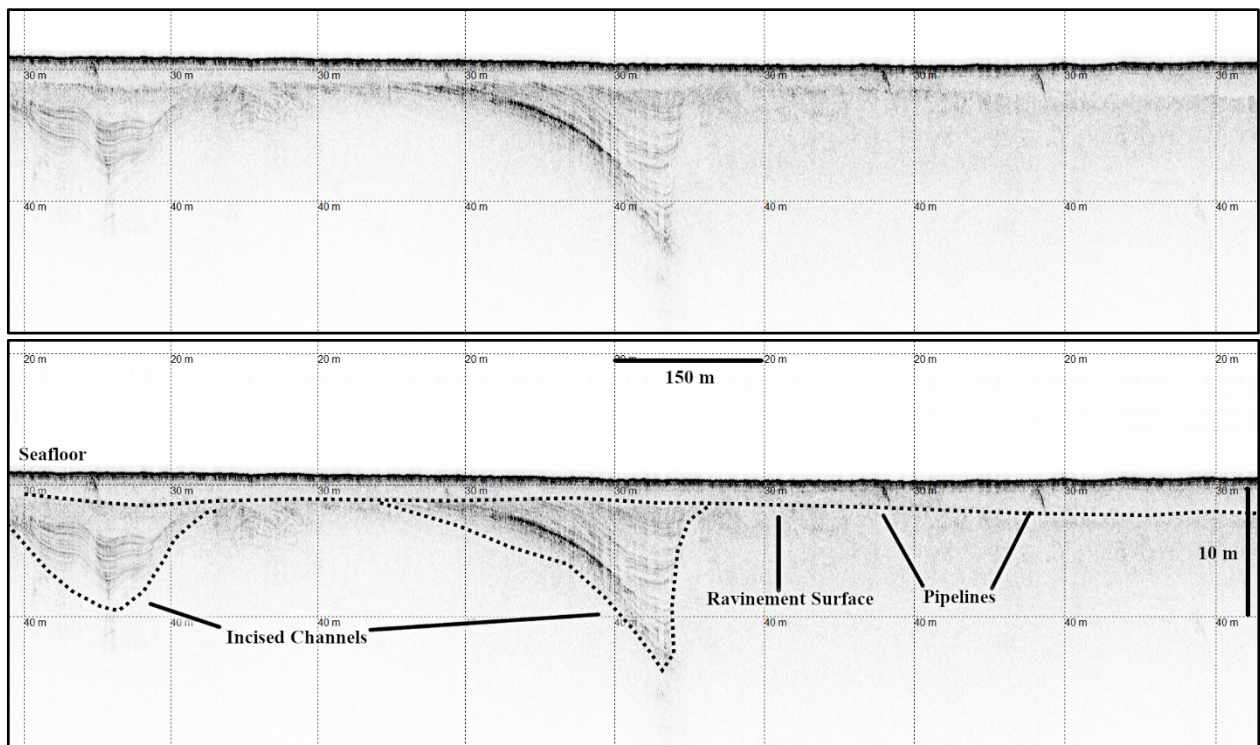


Figure 4-48. Raw (above) and annotated (below) seismic profile from MOB (line MOB\_26) showing incised channel features, a ravinement surface, and two pipelines. Profile runs from west to east.

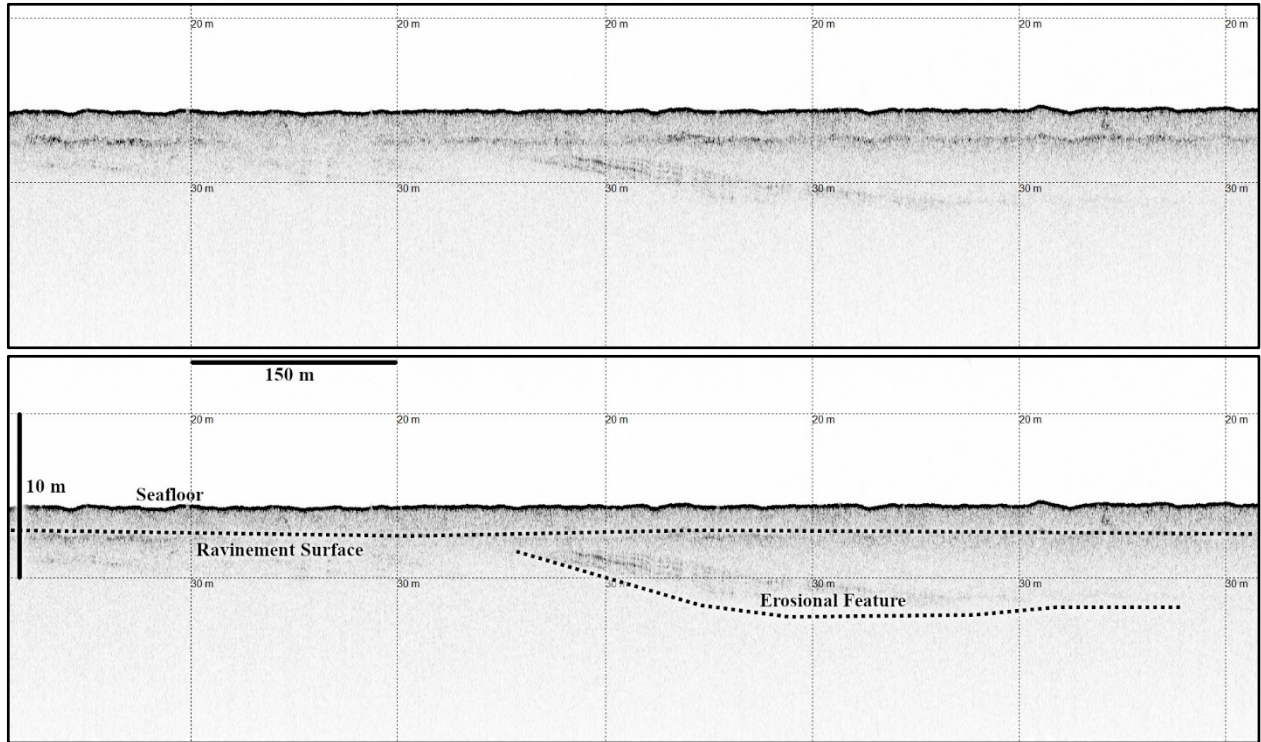


Figure 4-49. Raw (above) and annotated (below) seismic profile from the northern portion of Mob (line MOB\_224) showing a large erosional feature and ravinement surface. Profile runs from west to east.

677 - "GHOST RIG REEF"

Survey cell 677, located near the mouth of Mobile Bay, included one Paleochannel running east-west (Figure 4-50). The feature was observed between 0 and 4 meters (0 and 13 feet) BML. No channel margins were visible on seismic records, as the feature terminated at the bay floor. No avoidance or further work is recommended for subbottom features in 677.

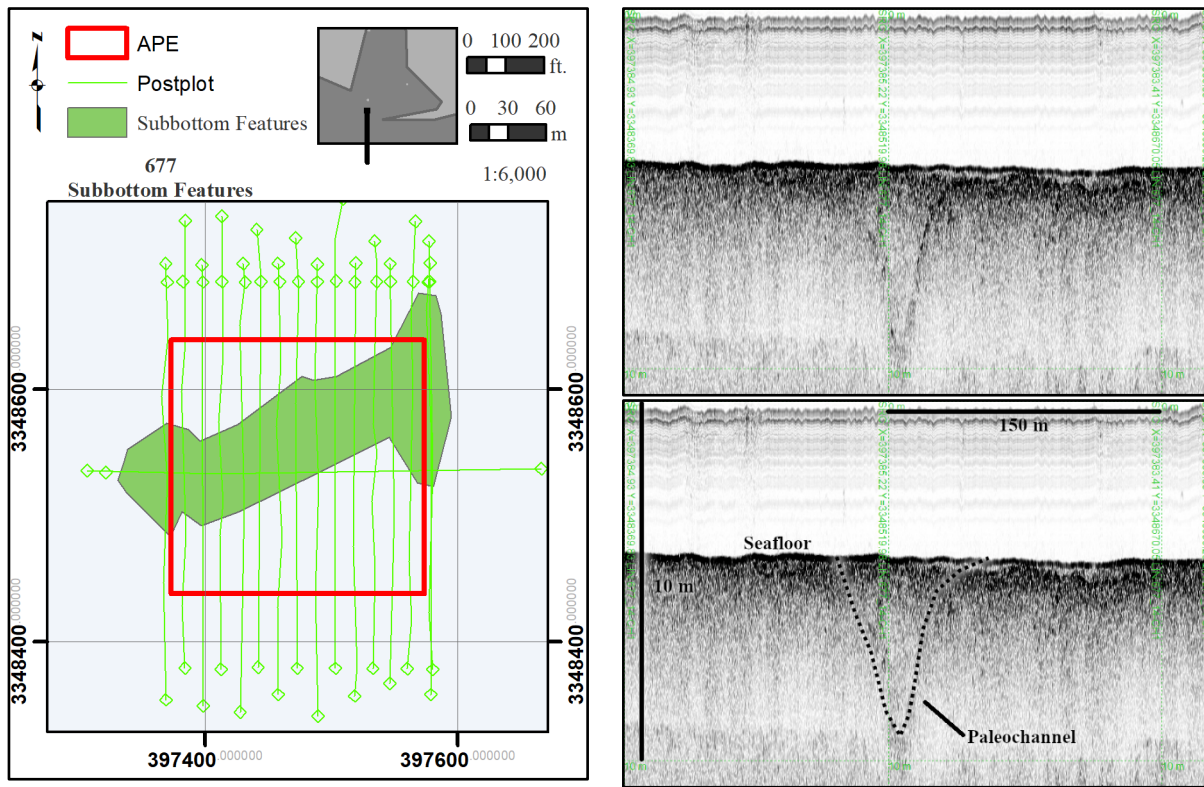


Figure 4-50. Raw (above) and annotated (below) seismic profile from 677 (line 677\_14) showing a small paleochannel. GIS plan-view map on left. Profile runs from south to north.

**699 - "WELLHEAD REEF"**

Located just north of Cell 677, Cell 699 contained surface expressions with some evidence of fluvial deposition (Figure 4-51). The expression is visible at 6 meters (20 feet) BML. The fluvial deposits, apparently a shallow channel extend from 6 to 8 meters (20 to 26 feet) BML. An additional surface expression lies below at roughly 10 meters (33 feet) BML). An associated paleochannel is present as well, just below the other paleochannel. This channel extends from 10 to 13 meters (33 to 43 feet) BML. The margins of these paleo channels are likely preserved and have the potential to contain prehistoric remains. In any case, the activities associated with this area would not be sufficient to impact any sites that would be associated with these features, given the depth of burial (at least 6 meters [20 feet]). No further work is recommended.

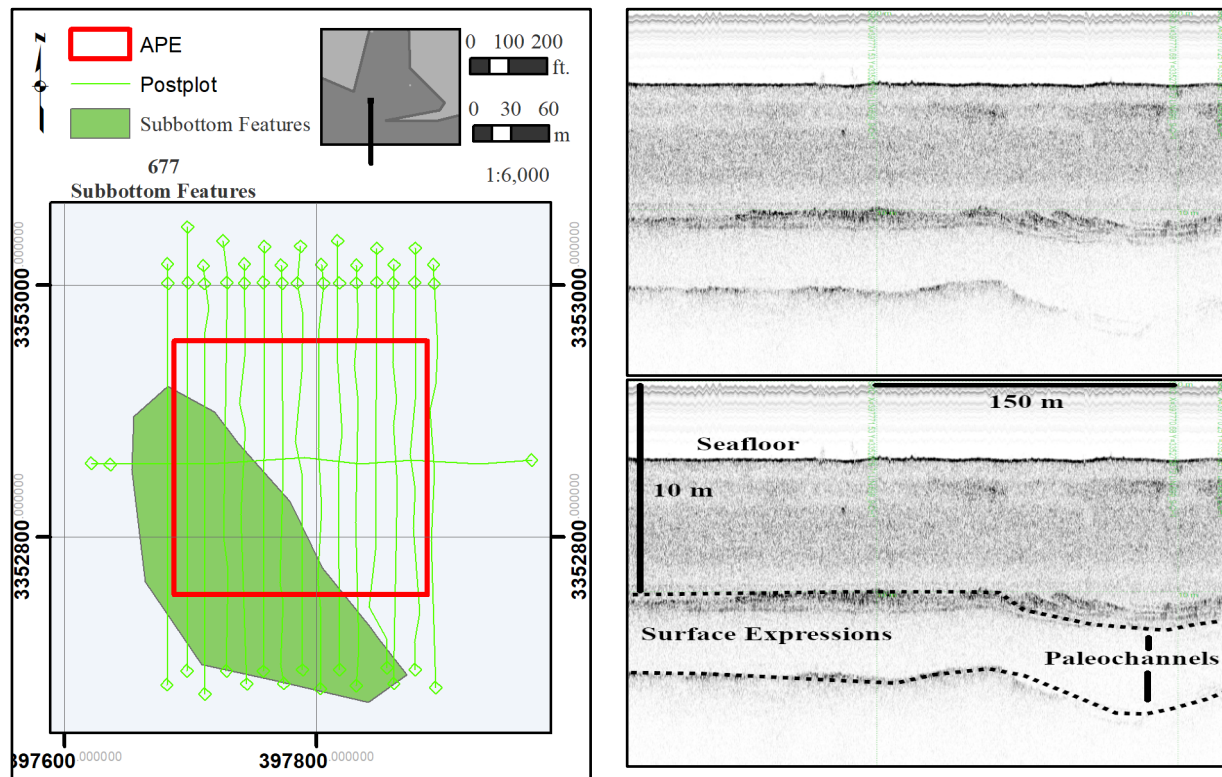


Figure 4-51. Raw (above) and annotated (below) seismic profile from 699 (line 699\_9) showing two small paleochannels and surface expressions. GIS plan-view map on left. Profile runs from north to south.

**700 - “BON SECOUR REEF”**

Survey Cell 700 included a surface expression that ran throughout the entirety of the cell, as well as biogenic gas visible near the center of the cell (Figure 4-52). Biogenic gas is the product of anaerobic bacteria consuming organic material, and is of no interest archaeologically. Additionally, no paleochannels or positive relief features with the potential for containing prehistoric remains were recorded. No further work is recommended.

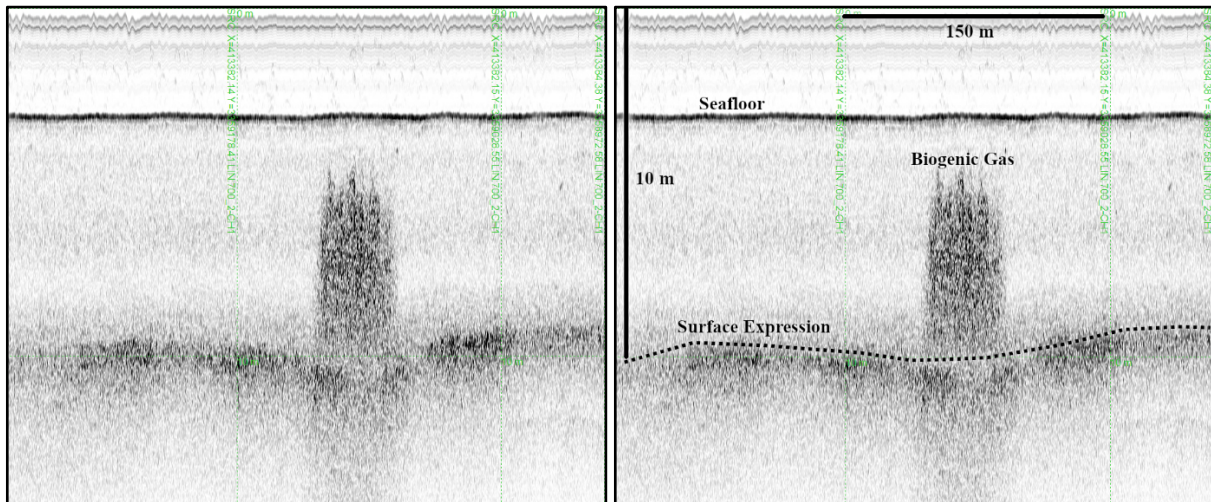


Figure 4-52. Raw (left) and annotated (right) seismic profile from 700 (line 700\_2) showing a surface expression and biogenic gas.

**701 - “DOG RIVER REEF”**

No features of archaeological significance were recorded in Cell 701. A chaotic reflector was recorded 7 meters (23 feet) BML (Figure 4-53). This likely represents a buried facies rich in organic material, probably a buried marsh bottom. No further work is recommended.

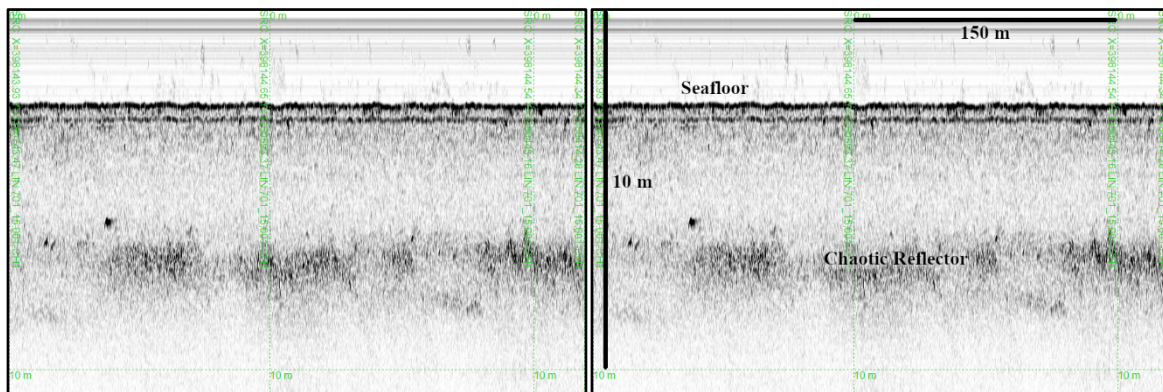


Figure 4-53. Raw (left) and annotated (right) seismic profile from 701 (line 701\_15) showing a chaotic reflector.

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## V. CONCLUSIONS & RECOMMENDATIONS

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### **CONCLUSIONS**

From 1 April 2020 to 22 October 2020, Panamerican conducted a comprehensive submerged cultural resources assessment survey for the ADCNR of six Artificial Reef Zones slated for possible reef placement. Comprising thirteen cells, the proposed Artificial Reef Zones cover approximately 115 square miles of water bottoms with four small cells located in Mobile Bay, and nine much larger cells located offshore of Mobile Bay. Comprised of a magnetometer, sidescan sonar, and a subbottom profiler survey, the nearly 7 month-long investigation of approximately 3,700 survey line miles recorded a total of 829 anomalies and 417 acoustic contacts.

An extensive review and analysis of all anomalies and sonar contacts indicates that the majority of the anomalies are represented by SPS, nonsignificant debris, reef material, pipelines, small unknowns, and a large portion represented by reef infrastructure/ modules, all of which are considered non-significant. While the majority of the cells did not contain potentially significant resources, there are however, 16 targets that represent potentially significant cultural resources and are discussed below by the cell in which they are located.

#### ***SAM-2019-00700-DCH “BON SECOUR REEF” / 700 CELL***

The “Bon Secour Reef” / 700 Cell contains 1 target that that has the potential to represent a significant cultural resources in the form of a shipwreck. Target 700.M001 is a small complex anomaly that is completely buried without a corresponding sonar contact. With a maximum gamma deviation of 818 nT it covers an area approximately 50 feet by 50 feet. Considered potentially significant, it is located at but mainly outside the southwest corner of Cell 700 and is easily avoidable.

#### ***SAM-2014-00487-DEM / BAL2 CELL***

The BAL2 Cell contains 4 targets near the southern boundary of the cell that have the potential to each represent a significant cultural resource. Targets 1, 3, and 4 represent the remains of Buffalo Barges 1, 2, and 3, wooden hopper barges sunk as reefs in 1973. While little is known of the vessel histories, as wooden hopper barges, they most likely date to the first half of the twentieth century. As such, the sites must be considered potentially significant unless investigated and determined otherwise. The fourth target considered potentially significant is Target 2, Anomaly Bal2.M036, is a small complex anomaly that is completely buried without a corresponding sonar contact. With a maximum gamma deviation of 64 nT it covers an area approximately 100 feet by 100 feet. It is assumed that all targets will be avoided by future artificial reef placement.

#### ***SAM-2014-00487-DEM / BAL8***

The BAL8 Cell contains 6 targets near the southern boundary of the cell including 2 WWII Liberty Ships, 2 barges, and 2 M60 Tanks that have the potential to each represent a significant cultural resource,. Targets 1 represents the remains of the “*Rookie Barge*,” a 75-foot long by 25-foot wide decked steel barge that was sunk at this location in 2013 as an artificial reef. Target 3 also represents the remains of an unknown iron-hulled barge. Target 2 and 4 represent the remains of WWII Liberty Ships scuttled as artificial reefs in 1974. Renamed “*Allen*” prior to scuttling, Target 2 actually represents the remains of the Liberty Ship *William T. Barry*. Renamed “*Wallace*” prior to scuttling, Target 4 actually represents the remains of the Liberty

Ship *Oran M. Roberts*. As vessels built as part of the “Emergency Fleet” and which saw service and combat service in WWII, these vessels are considered significant under NRHP eligibility criteria. Targets 5 and 6 both represent the remains of M60 Tanks sunk in 1994. All of these targets are considered potentially significant until otherwise determined.

#### ***SAM-2018-01036-GAC / MOB CELL***

The MOB Cell contains 5 targets including four shipwrecks and a debris field that have the potential to each represent a significant cultural resource. Target 1 represents a large unknown anomaly with a shipwreck signature. Target 2 represents a large anomaly that BOEM lists as a possible wreck. Target 3 represents the remains of a vessel, most likely sections of a barge. Target 4 is the remains of the “*Papa Joe*,” the wreck of a 50-foot long, three-decked metal tug that was sunk at this location in 2001 as an artificial reef. And Target 5 represents the remains of the “Nail Wreck,” a cargo barge loaded with cotton bales and kegs of nails that sank at in the 1930s during a storm. All of these targets are considered potentially significant until otherwise determined.

With respect to the subbottom profiler record for all zones and cells—while paleofeatures are present in the data—they likely all predate human occupation and no further work regarding potential submerged prehistoric archaeological sites is recommended.

#### ***RECOMMENDATIONS***

Table 5-01 below presents the potentially significant magnetic anomalies and sonar contacts discussed above, with the presented coordinates the target center. Although the actual parameters for activities within the zones and cells are unknown (i.e., location and type and number of proposed reefs), these potentially significant cultural resources should and can be avoided by any adverse effect. Therefore, prior to the implementation of any bottom disturbing activities within the zones, with the data that has been presented, the ADCNR can ensure that the locations of the 16 significant and potentially significant targets are avoided. GIS shape files have been developed as a part of the investigation and can be employed to ensure avoidance. Although unlikely, if the potentially significant sites will be impacted and cannot be avoided, it is recommended that the sites be further investigated to determine if they indeed do represent cultural resources sites. If they do represent cultural resources sites, it is recommended that an assessment of the integrity of the sites and their historical significance, based on NRHP nomination eligibility criteria. Based on site type, subsequent investigations, if required, should include, but not be limited to, archaeological diver assessment and/or coring. Discussions should be conducted on which method(s) should be employed on the respective Target(s).

#### ***PROCEDURES TO DEAL WITH UNEXPECTED DISCOVERIES***

Reasonable effort has been made during this investigation to identify and evaluate possible locations of historic archaeological sites and potential prehistoric site locations within the Project Area; however, the possibility exists that evidence of prehistoric and historic resources may yet to be encountered within the project limits not previously identified in the above conclusions and recommendations. Should any evidence of historic resources be discovered within the Project Areas that were not previously documented, it is recommended that all work in that portion of the area cease immediately. Evidence of historic resources includes: aboriginal or historic pottery; and prehistoric stone, bone, and/or shell tools; as well as historic shipwreck remains. Should questionable materials be uncovered during project activities, procedures contained in *ACHP 36 CFR Part 800* will take effect.

Table 5-01. Potentially Significant Targets by Area.

Target	Centroid Easting	Centroid Northing	Description	Associations	*Avoidance Centroid Radius
<b>SAM-2019-00700-DCH "Bon Secour Reef" / 700 Cell</b>					
1	413399	3359014	Unknown; wreck-like signature	700.M001	30
<b>SAM-2014-00487-DEM / BAL2 Cell</b>					
1	419761	3328412	Buffalo Barge 1	Bal2.M029, Bal2.M032, Bal2.S024, Bal2.S025	150
2	418630	3327999	Buffalo Barge 3	Bal2.M038, Bal2.S026	80
3	418989	3327914	Buffalo Barge 2	Bal2.M039, Bal2.S027	85
4	419825	3327930	Unknown; wreck-like signature	Bal2.M036	60
<b>SAM-2014-00487-DEM / BAL8 Cell</b>					
1	448448	3334080	"Rookie Barge" flat deck steel barge	Bal8.M060, Bal8.S091	100
2	448968	3333397	Liberty Ship <i>Allen</i>	Bal8.M072, Bal8.S069, Bal8.S076	100
3	444951	3329560	Wrecked barge; in BOEM wreck db as "Unknown Vessel"	Bal8.M110, Bal8.S034	190
4	444370	3328559	Liberty Ship <i>Wallace</i>	Bal8.M123, Bal8.S017	230
5	445067	3326182	M60 Tank	Bal8.M137, Bal8.S004	30
6	445044	3326070	M60 Tank	Bal8.M136, Bal8.S003	30
<b>SAM-2018-01036-GAC / MOB Cell</b>					
1	392339	3324420	Unknown; large buried debris field	MOB.M019	450
2	389177	3323816	Listed as possible wreck in BOEM database	MOB.M584	100
3	392008	3321854	Wreck; BOEM entry "barge/unknown vessel"	MOB.M105, MOB.S038	100
4	391534	3319274	<i>Papa Joe</i> Wreck	MOB.M624, MOB.S053	80
5	387903	3314888	"Nail Wreck"	MOB.M233, MOB.M234, MOB.M235, MOB.S083, MOB.S106	80

†Coordinates in NAD83 Alabama State Plane West, U.S. Survey Feet; \*=In Meters.

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 1941 The McQuorquodale Mound: A Manifestation of the Hopewellian Phase in South Alabama. *Geological Survey of Alabama, Museum Paper 19.* University of Alabama, Tuscaloosa.

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**APPENDIX A: MOBILE BAY CELLS REMOTE SENSING DATA**

**Table A-1. Magnetic Anomalies Recorded for the Mobile Bay Cells.**

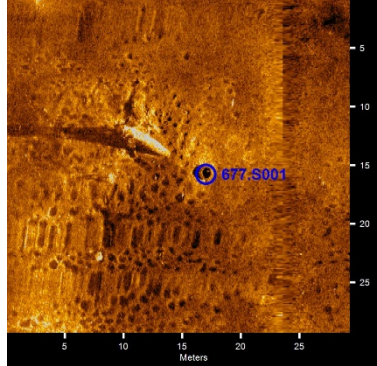
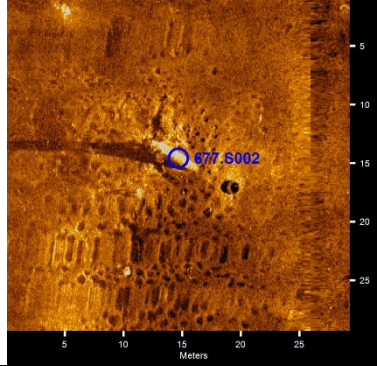
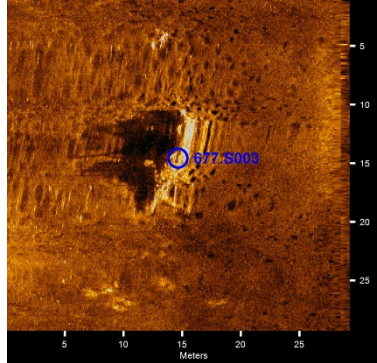
Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
677.M001	397367	3348452	D	22	108.7		SPS		677	N/A
699.M001	397727	3352833	M	16	23.1		SPS		699	N/A
699.M002	397728	3352988	D	13	5.1		SPS		699	N/A
700.M001	413399	3359014	C	55	818.3	Y	Unknown; wreck-like signature		700	N/A
701.M001	398353	3380482	D	19	57.1		SPS		701	N/A
701.M002	398233	3380651	D	19	6.8		SPS		701	N/A
701.M003	398204	3380472	D	11	6.5		SPS		701	N/A
701.M004	398204	3380401	D	9	34.8		SPS		701	N/A
701.M005	398189	3380461	D	11	10.4		SPS		701	N/A

\* M = Monopole, D = Dipole, MC = Multi Component.

**Table A-2. Sonar Contacts for the Mobile Bay Cells.**

Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
677.S001	397435	3348545	tire	0.9	0.6	0.3		B1-01	N/A
677.S002	397440	3348542	Linear object	4.7	1.0	1.9		B1-01	N/A
677.S003	397413	3348566	Structural debris; associated with plugged well?	9.8	3.0	1.0		B1-01	N/A

Table A-3. Acoustic Target Images recorded for the Mobile Bay Cells.

Target Image	Target Info	User Entered Info
	<p><b>677.S001</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 6/24/2020 5:13:20 PM</li> <li>● Click Position 30.2642207192 -88.0662296281 (WGS84) (X) 397435.20 (Y) 3348544.74 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\2mr205\Raw\INSHORE\SS Raw\677\677_11.jsf</li> <li>● Heading: 178.800 Degrees</li> <li>● Line Name: 677_11</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.99 Meters</li> <li>● Target Height: 0.25 Meters</li> <li>● Target Length: 0.69 Meters</li> <li>● Target Shadow: 0.49 Meters</li> <li>● Mag Anomaly:</li> <li>● Avoidance Area:</li> <li>● Classification1: tire</li> <li>● Description:</li> </ul>
	<p><b>677.S002</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 6/24/2020 5:13:21 PM</li> <li>● Click Position 30.2642001723 -88.0661793004 (WGS84) (X) 397440.02 (Y) 3348542.42 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\2mr205\Raw\INSHORE\SS Raw\677\677_11.jsf</li> <li>● Heading: 179.000 Degrees</li> <li>● Line Name: 677_11</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.01 Meters</li> <li>● Target Height: 1.85 Meters</li> <li>● Target Length: 4.70 Meters</li> <li>● Target Shadow: 11.34 Meters</li> <li>● Mag Anomaly:</li> <li>● Avoidance Area:</li> <li>● Classification1: linear</li> <li>● Description: Linear debris</li> </ul>
	<p><b>677.S003</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 6/24/2020 5:21:42 PM</li> <li>● Click Position 30.2644142262 -88.0664659492 (WGS84) (X) 397412.66 (Y) 3348566.40 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\2mr205\Raw\INSHORE\SS Raw\677\677_13.jsf</li> <li>● Heading: 177.100 Degrees</li> <li>● Line Name: 677_13</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.04 Meters</li> <li>● Target Height: 1.04 Meters</li> <li>● Target Length: 9.84 Meters</li> <li>● Target Shadow: 5.84 Meters</li> <li>● Mag Anomaly:</li> <li>● Avoidance Area:</li> <li>● Classification1: structural</li> <li>● Description: Structural debris; possibly associated with plugged well</li> </ul>

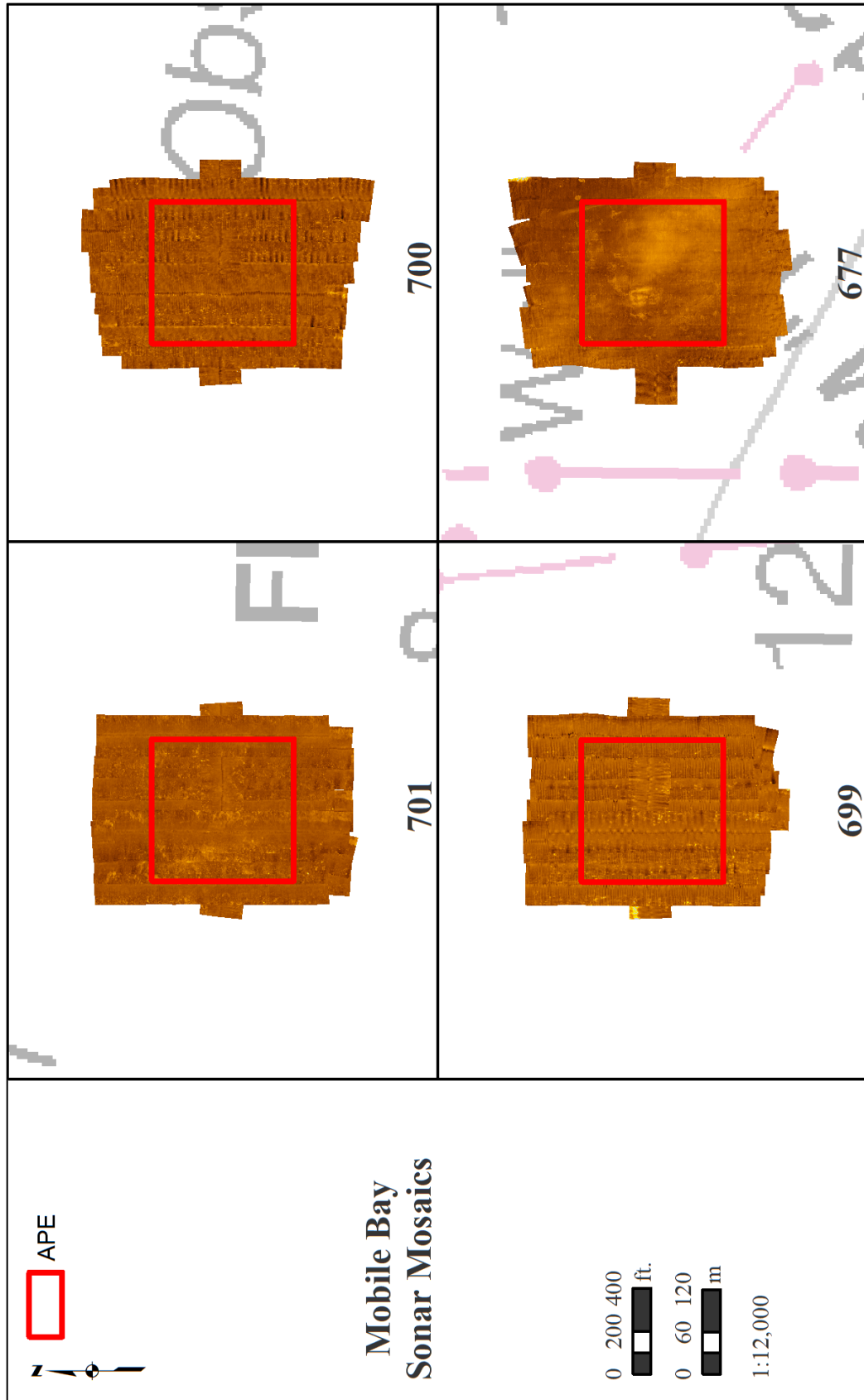
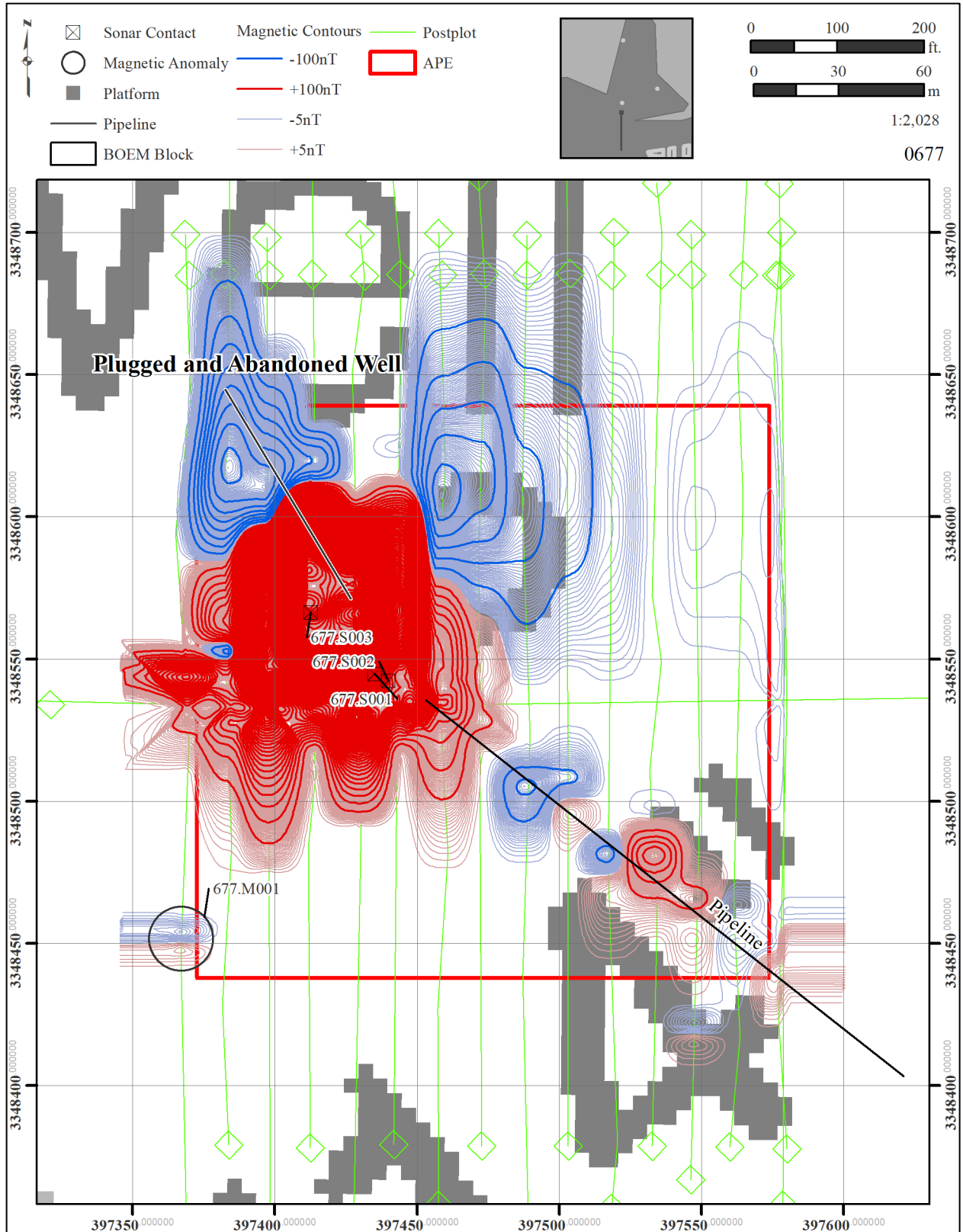


Figure A-1. Sonar Mosaics showing coverage for the Mobile Bay Cells.

**APPENDIX B: MOBILE BAY CELLS MAGNETIC CONTOUR MAPS**



**Figure B-1. Magnetic Contour Map Key for Mobile Bay Cell 677 (SAM-2019-00677-DCH). This anomaly, that was not given a number, is a plugged and abandoned petroleum well with a pipeline signature to the southeast.**

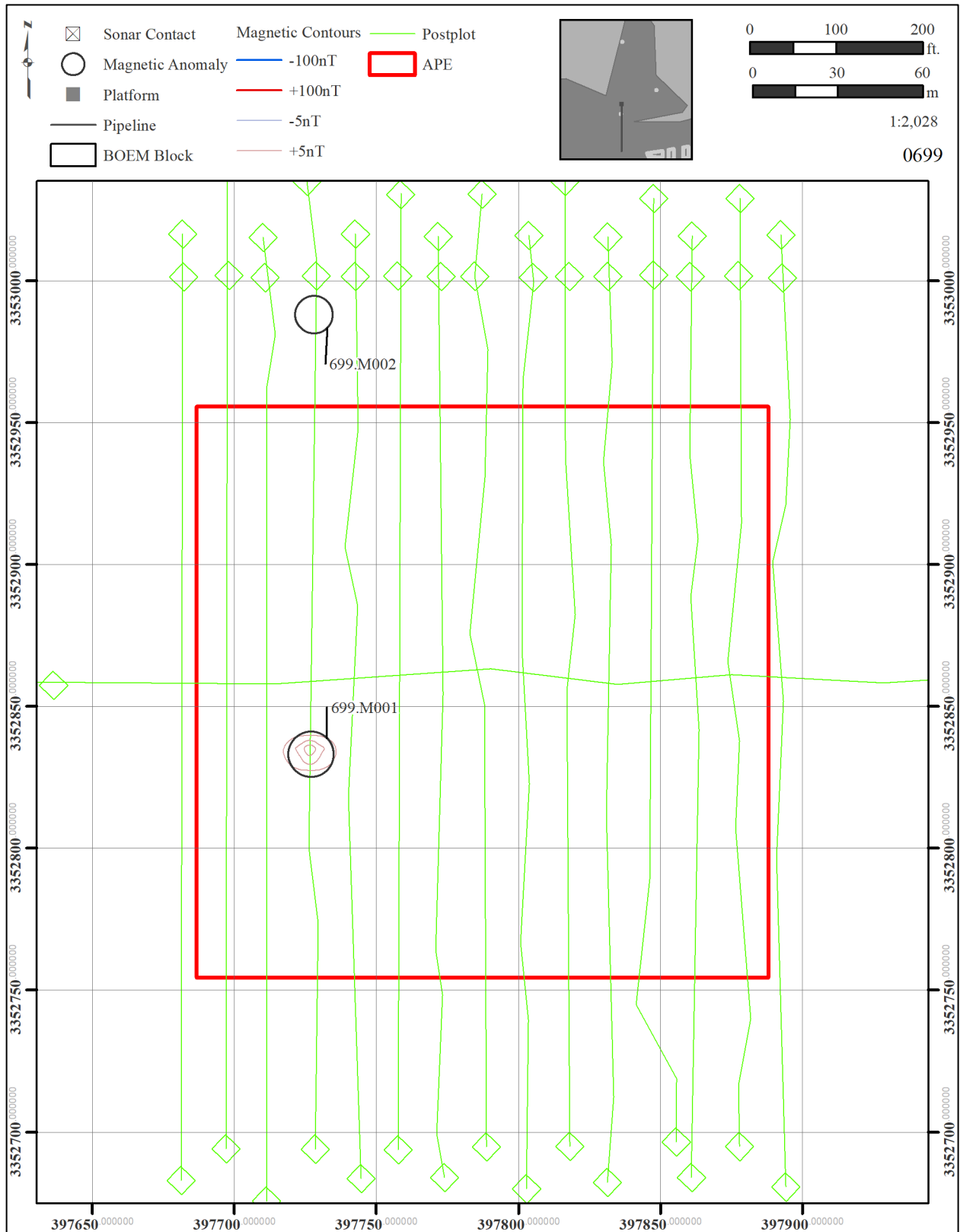


Figure B-2. Magnetic Contour Map Key for Mobile Bay Cell 699 (SAM-2019-00699-DCH).

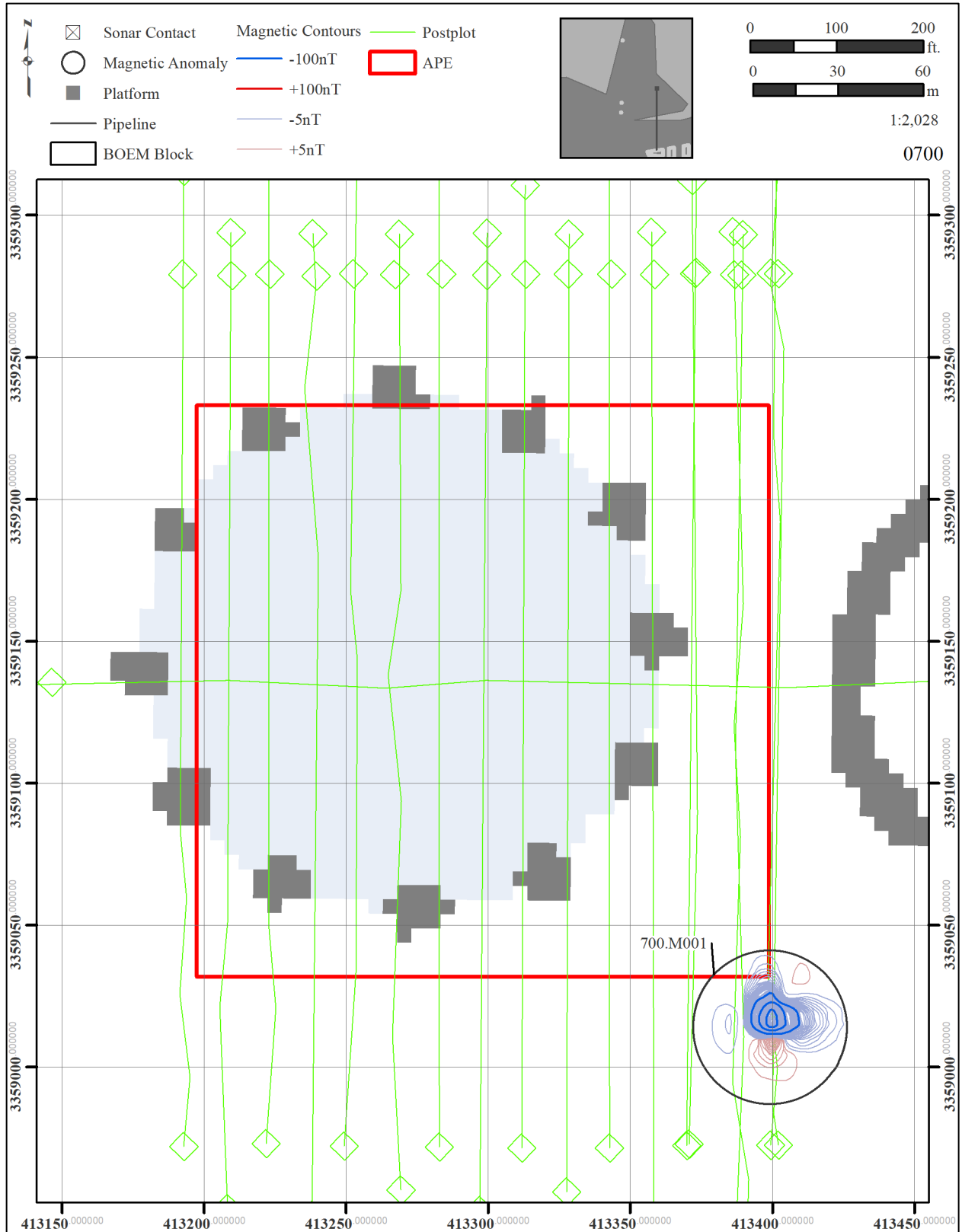


Figure B-3. Magnetic Contour Map Key for Mobile Bay Cell 700 (SAM-2019-00700-DCH).

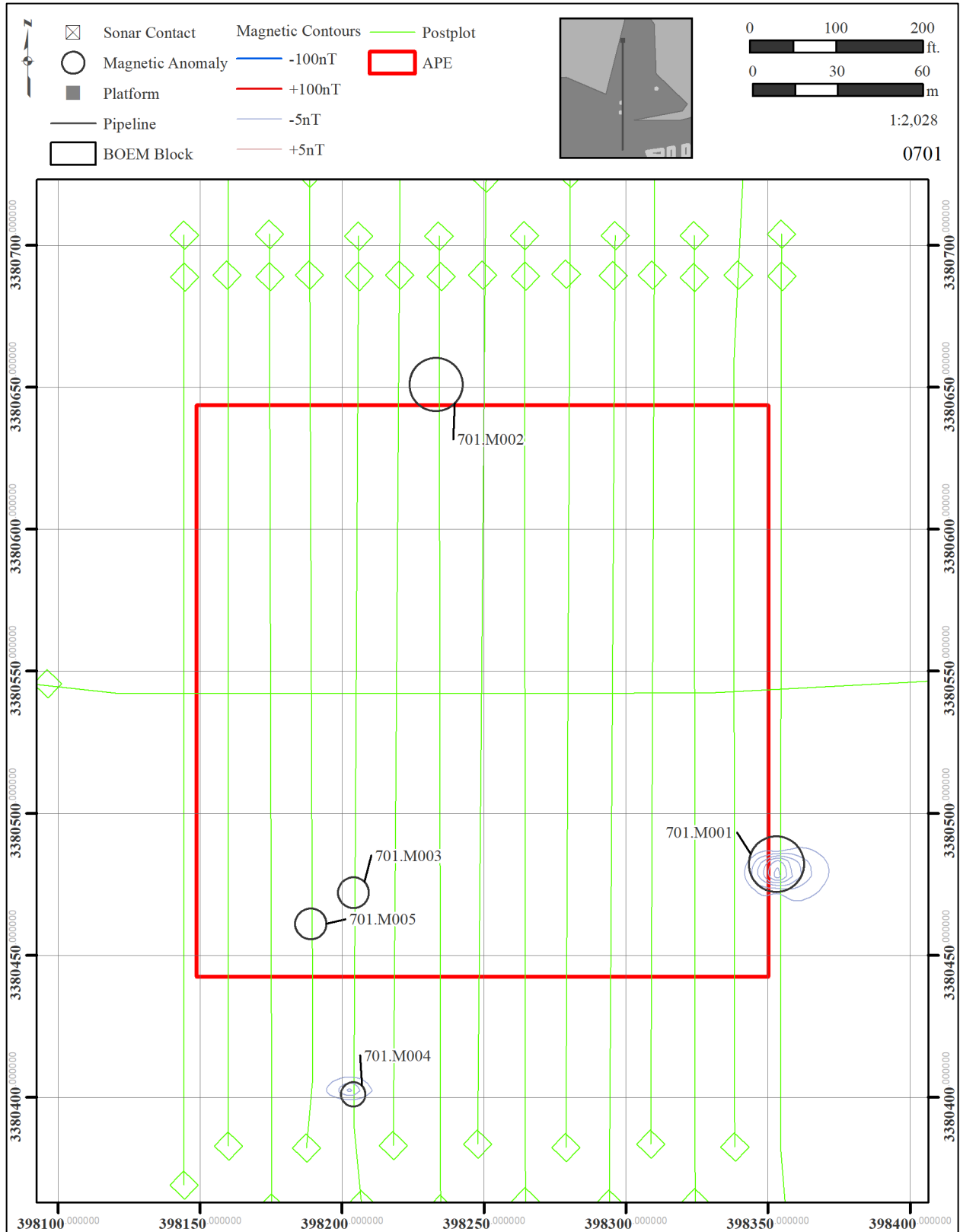


Figure B-4. Magnetic Contour Map Key for Mobile Bay Cell 701 (SAM-2019-00701-DCH).

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## **APPENDIX C: BAL1 REMOTE SENSING DATA**

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Table C-1. Magnetic Anomalies Recorded for the BAL1 Cell.

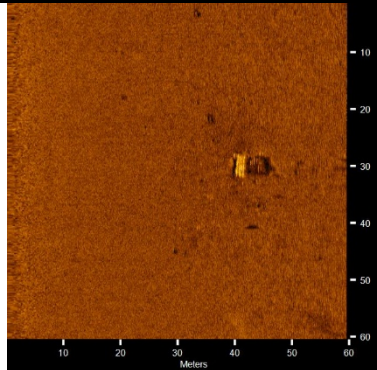
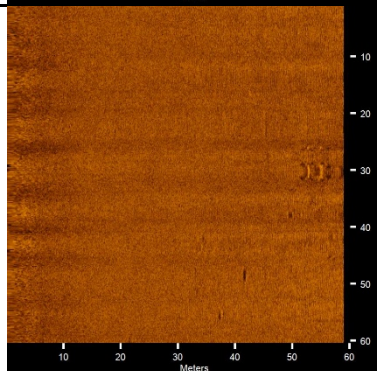
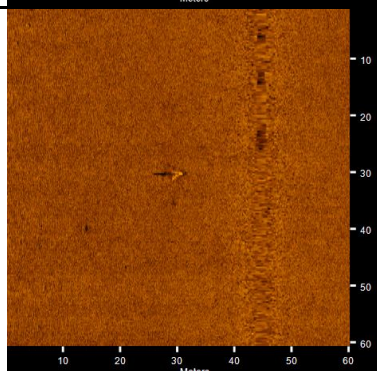
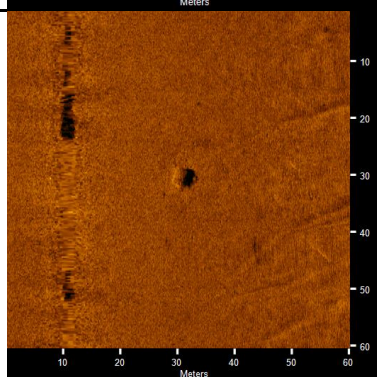
Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal1.M001	409388	3330537	M	118	14.4		SPS		B1-06	MO915
Bal1.M002	409678	3330568	M	263	5.1		SPS		B1-01	MO915
Bal1.M003	409755	3330862	D	130	259.6		Unknown		B1-01	MO915
Bal1.M004	409803	3330288	M	34	6.7		SPS		B1-06	MO915
Bal1.M005	409806	3329729	D	157	39.4		SPS		B1-06	MO915
Bal1.M006	410129	3329686	C	133	173.2		SPS		B1-06	MO915
Bal1.M007	410571	3330716	M	68	23.3		SPS		B1-02	MO916
Bal1.M008	410891	3330424	D	52	9.2		SPS		B1-07	MO916
Bal1.M009	411184	3330469	M	46	4.5		SPS		B1-07	MO916
Bal1.M010	411237	3330687	M	40	8.7		SPS		B1-02	MO916
Bal1.M011	411302	3329928	D	38	6.5		SPS		B1-07	MO916
Bal1.M012	411324	3329632	M	54	23.7		SPS		B1-07	MO916
Bal1.M013	411424	3330255	M	39	7.7		SPS		B1-07	MO916
Bal1.M014	411608	3330645	M	75	62.5		SPS		B1-02	MO916
Bal1.M015	411632	3331253	M	53	31.8		SPS		B1-02	MO916
Bal1.M016	411933	3330194	D	49	8.2		SPS		B1-07	MO916
Bal1.M017	412262	3330651	M	56	5.2		SPS		B1-03	MO916
Bal1.M018	412882	3329940	M	34	6.5		SPS		B1-08	MO916
Bal1.M019	413032	3330884	D	37	86.1		SPS		B1-03	MO916
Bal1.M020	413330	3330128	M	21	20.3		SPS		B1-08	MO916
Bal1.M022	413992	3330080	D	24	8.0		SPS		B1-09	MO916
Bal1.M023	414152	3331681	M	35	11.0		SPS		B1-04	MO872
Bal1.M024	414288	3330077	D	140	7.8		SPS		B1-09	MO916
Bal1.M025	414686	3330194	D	22	35.1		SPS		B1-09	MO916
Bal1.M026	415092	3331172	M	30	33.3		SPS		B1-04	MO916
Bal1.M027	415677	3330360	M	22	13.3		SPS		B1-10	MO917

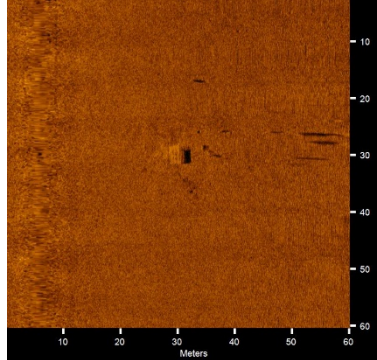
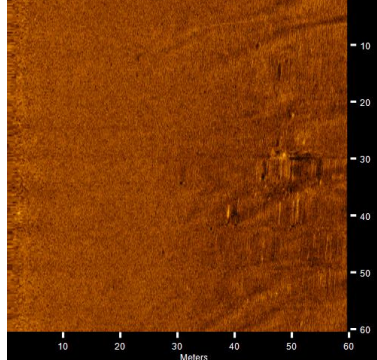
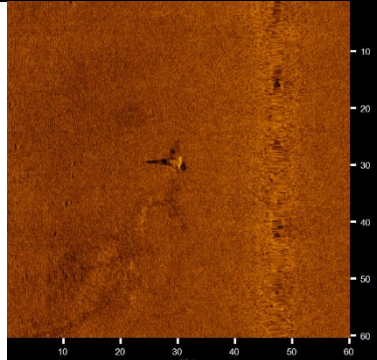
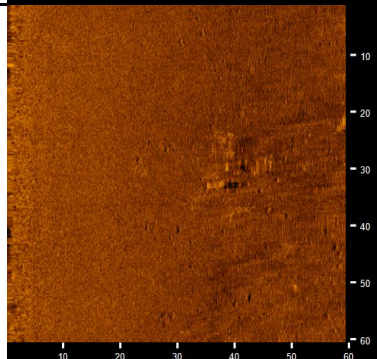
\* M = Monopole, D = Dipole, MC = Multi Component.

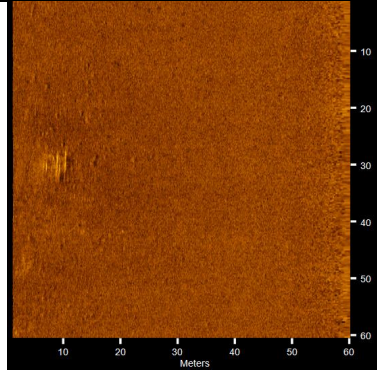
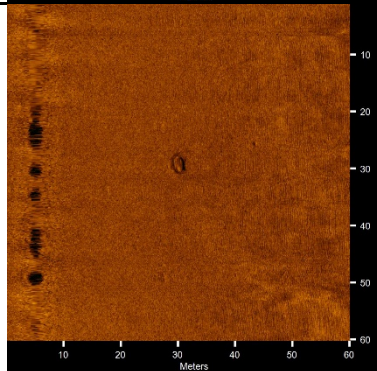
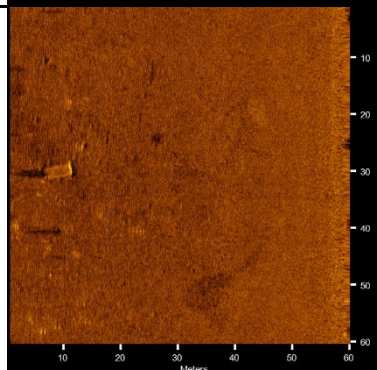
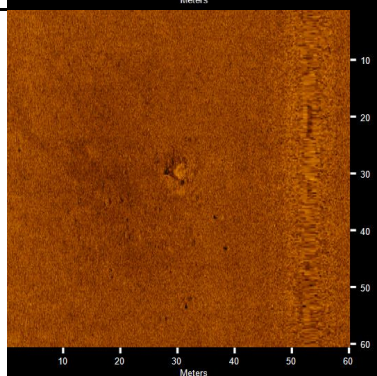
Table C-2. Sonar Contacts for the BAL1 Cell.

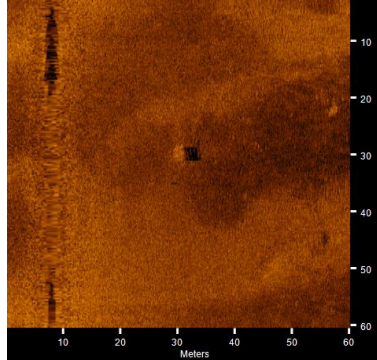
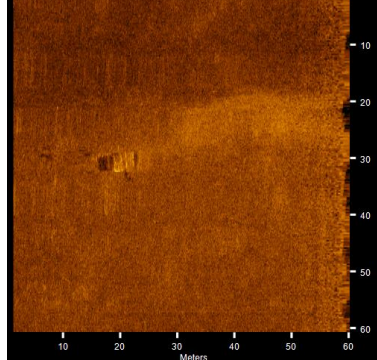
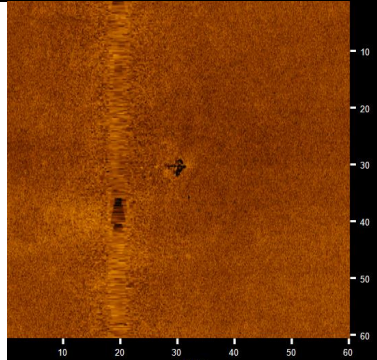
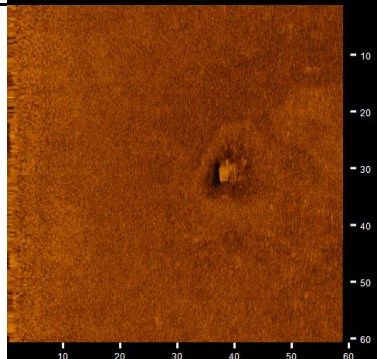
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Ball.S001	410641	3329786	debris	3.4	1.8	0.9		B1-07	MO916
Ball.S002	410813	3330969	debris	4.3	3.2	0.1		B1-02	MO916
Ball.S003	411005	3329552	debris	2.2	2.7	1.7		B1-07	MO916
Ball.S004	411092	3330115	debris	2.6	1.8	1.0		B1-07	MO916
Ball.S005	411105	3330077	debris	2.1	0.0	0.4		B1-07	MO916
Ball.S006	411418	3330266	debris	2.3	1.6	0.8		B1-07	MO916
Ball.S007	411484	3329683	debris	2.7	2.1	1.6		B1-07	MO916
Ball.S008	411585	3331135	debris	3.3	0.9	0.7		B1-02	MO916
Ball.S009	411620	3331260	debris	5.2	4.0	0.3		B1-02	MO916
Ball.S010	412351	3331502	debris	3.0	1.3	0.2		B1-03	MO916
Ball.S011	413016	3330886	debris	4.3	2.4	0.8		B1-03	MO916
Ball.S012	413410	3329451	debris	4.2	2.0	0.4		B1-08	MO916
Ball.S013	413888	3331506	debris	2.2	2.1	0.8		B1-04	MO916
Ball.S014	414147	3331692	debris	3.0	2.8	0.8		B1-04	MO872
Ball.S015	414440	3331672	debris	2.2	1.6	1.6		B1-04	MO872
Ball.S016	414653	3331649	debris	2.3	2.9	0.4		B1-04	MO872
Ball.S017	414795	3331504	debris	2.1	1.3	2.3		B1-04	MO916
Ball.S018	415094	3331170	debris	4.6	3.3	0.6		B1-04	MO916
Ball.S019	415558	3331446	debris	3.2	3.4	0.1		B1-05	MO917
Ball.S020	415669	3330357	debris	2.6	1.0	1.2		B1-10	MO917
Ball.S021	415724	3329648	debris	5.6	2.1	2.0		B1-10	MO917
Ball.S022	415820	3331166	debris	4.0	2.2	0.9		B1-05	MO917
Ball.S023	415874	3330899	debris	5.5	1.5	0.8		B1-05	MO917
Ball.S024	416277	3330620	debris	2.8	2.8	0.8		B1-05	MO917
Ball.S025	416368	3329753	debris	2.9	2.3	2.4		B1-10	MO917

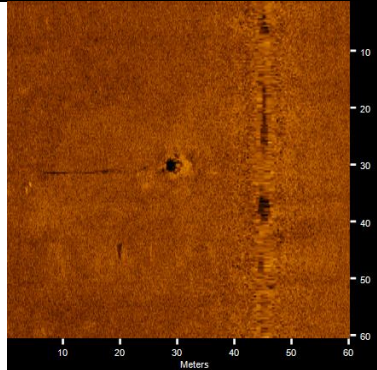
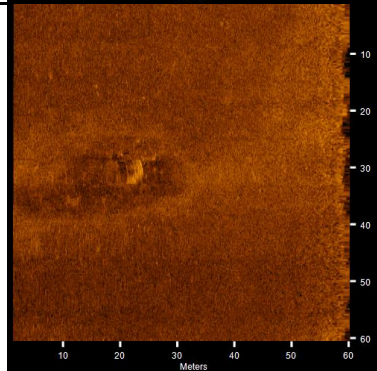
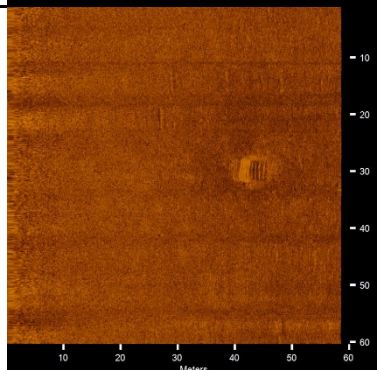
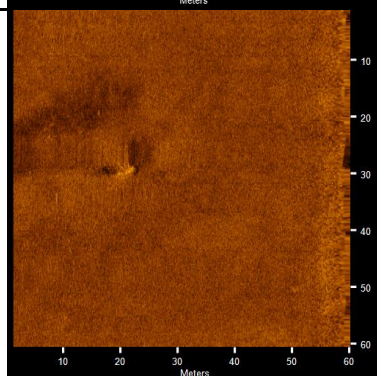
Table C-3. Acoustic Target Images recorded for the BAL1 Cell.

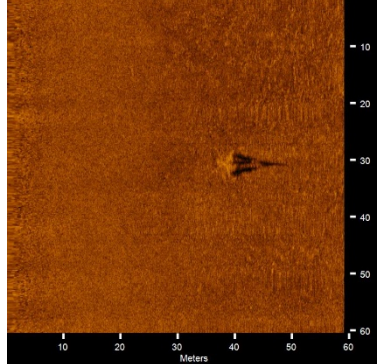
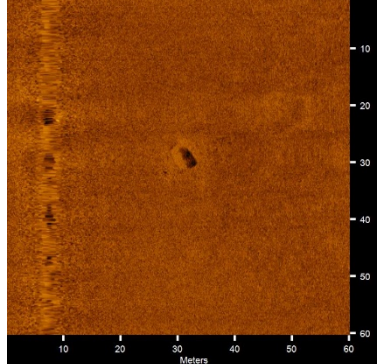
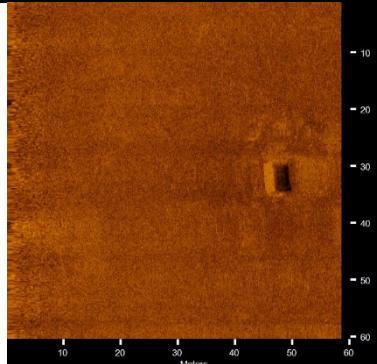
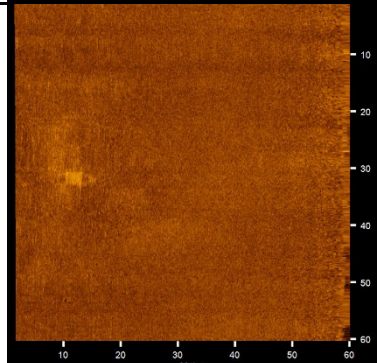
Target Image	Target Image	Target Image
	<p><b>Ball.S0001</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/9/2020 2:35:38 PM</li> <li>● Click Position 30.0960035044 -87.9273755977 (WGS84) (X) 410641.03 (Y) 3329786.05 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_33.jsf</li> <li>● Heading: 77.590 Degrees</li> <li>● Line Name: Ball_33</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.8 Meters</li> <li>● Target Height: 0.9 Meters</li> <li>● Target Length: 3.4 Meters</li> <li>● Target Shadow: 5.2 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball.S0002</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/9/2020 8:12:51 AM</li> <li>● Click Position 30.1066873786 -87.9256918738 (WGS84) (X) 410812.87 (Y) 3330968.69 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_54.001.jsf</li> <li>● Heading: 262.890 Degrees</li> <li>● Line Name: Ball_54.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.2 Meters</li> <li>● Target Height: 0.1 Meters</li> <li>● Target Length: 4.3 Meters</li> <li>● Target Shadow: 0.6 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball.S0003</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/11/2020 12:07:21 AM</li> <li>● Click Position 30.0939202302 -87.9235844926 (WGS84) (X) 411004.48 (Y) 3329552.23 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_26.jsf</li> <li>● Heading: 33.000 Degrees</li> <li>● Line Name: Ball_26</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.7 Meters</li> <li>● Target Height: 1.7 Meters</li> <li>● Target Length: 2.2 Meters</li> <li>● Target Shadow: 4.2 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball.S0004</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 5:58:13 AM</li> <li>● Click Position 30.0990038978 -87.9227248886 (WGS84) (X) 411091.87 (Y) 3330114.92 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_37.jsf</li> <li>● Heading: 247.500 Degrees</li> <li>● Line Name: Ball_37</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.8 Meters</li> <li>● Target Height: 1.0 Meters</li> <li>● Target Length: 2.6 Meters</li> <li>● Target Shadow: 2.5 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>

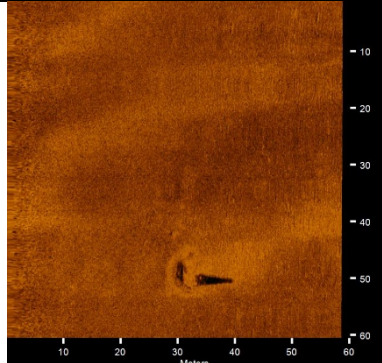
Target Image	Target Image	Target Image
	<p><b>Ball.S0005</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/9/2020 2:09:25 PM</li> <li>● Click Position 30.0986636189 -87.9225908075 (WGS84) (X) 411104.48 (Y) 3330077.10 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_36.jsf</li> <li>● Heading: 266.700 Degrees</li> <li>● Line Name: Ball_36</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.0 Meters</li> <li>● Target Height: 0.4 Meters</li> <li>● Target Length: 2.1 Meters</li> <li>● Target Shadow: 1.1 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball.S0006</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 6:30:56 AM</li> <li>● Click Position 30.1003875521 -87.9193488120 (WGS84) (X) 411418.41 (Y) 3330265.63 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_34.001.jsf</li> <li>● Heading: 31.000 Degrees</li> <li>● Line Name: Ball_34.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.6 Meters</li> <li>● Target Height: 0.8 Meters</li> <li>● Target Length: 2.3 Meters</li> <li>● Target Shadow: 5.7 Meters</li> <li>● Mag Anomaly: Ball.M013</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball.S0007</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/9/2020 4:23:52 PM</li> <li>● Click Position 30.0951326452 -87.9186187135 (WGS84) (X) 411484.08 (Y) 3329682.73 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_27.jsf</li> <li>● Heading: 81.500 Degrees</li> <li>● Line Name: Ball_27</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.1 Meters</li> <li>● Target Height: 1.6 Meters</li> <li>● Target Length: 2.7 Meters</li> <li>● Target Shadow: 4.6 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball.S0008</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 11:55:41 AM</li> <li>● Click Position 30.1082453027 -87.9176937826 (WGS84) (X) 411584.88 (Y) 3331135.12 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_55.jsf</li> <li>● Heading: 259.000 Degrees</li> <li>● Line Name: Ball_55</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.9 Meters</li> <li>● Target Height: 0.7 Meters</li> <li>● Target Length: 3.3 Meters</li> <li>● Target Shadow: 3.0 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>

Target Image	Target Image	Target Image
	<p><b>Ball.S0009</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/9/2020 6:48:02 AM</li> <li>• Click Position 30.1093717541 -87.9173361891 (WGS84) (X) 411620.34 (Y) 3331259.67 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_57.jsf</li> <li>• Heading: 84.590 Degrees</li> <li>• Line Name: Ball_57</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 4.0 Meters</li> <li>• Target Height: 0.3 Meters</li> <li>• Target Length: 5.2 Meters</li> <li>• Target Shadow: 1.3 Meters</li> <li>• Mag Anomaly: Ball.M015</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Ball.S0010</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/9/2020 5:52:17 AM</li> <li>• Click Position 30.1116134593 -87.9097711987 (WGS84) (X) 412351.19 (Y) 3331502.26 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_60.001.jsf</li> <li>• Heading: 257.890 Degrees</li> <li>• Line Name: Ball_60.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 1.3 Meters</li> <li>• Target Height: 0.2 Meters</li> <li>• Target Length: 3.0 Meters</li> <li>• Target Shadow: 0.6 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Ball.S0011</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/9/2020 11:07:01 AM</li> <li>• Click Position 30.1060980276 -87.9028247684 (WGS84) (X) 413015.61 (Y) 3330885.74 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_45.jsf</li> <li>• Heading: 86.000 Degrees</li> <li>• Line Name: Ball_45</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.4 Meters</li> <li>• Target Height: 0.8 Meters</li> <li>• Target Length: 4.3 Meters</li> <li>• Target Shadow: 5.6 Meters</li> <li>• Mag Anomaly: Ball.M019</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Ball.S0012</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/11/2020 2:44:22 AM</li> <li>• Click Position 30.0931756696 -87.8986101276 (WGS84) (X) 413410.43 (Y) 3329450.53 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_17.jsf</li> <li>• Heading: 250.390 Degrees</li> <li>• Line Name: Ball_17</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.0 Meters</li> <li>• Target Height: 0.4 Meters</li> <li>• Target Length: 4.2 Meters</li> <li>• Target Shadow: 1.1 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>

Target Image	Target Image	Target Image
	<p><b>Ball1.S0013</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 11:37:37 AM</li> <li>● Click Position 30.1117564377 -87.8938189698 (WGS84) (X) 413888.24 (Y) 3331505.97 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_55.jsf</li> <li>● Heading: 270.100 Degrees</li> <li>● Line Name: Ball_55</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.1 Meters</li> <li>● Target Height: 0.8 Meters</li> <li>● Target Length: 2.2 Meters</li> <li>● Target Shadow: 1.9 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball1.S0014</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 1:45:36 PM</li> <li>● Click Position 30.1134568402 -87.8911499630 (WGS84) (X) 414146.85 (Y) 3331692.39 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_59.jsf</li> <li>● Heading: 267.890 Degrees</li> <li>● Line Name: Ball_59</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.8 Meters</li> <li>● Target Height: 0.8 Meters</li> <li>● Target Length: 3.0 Meters</li> <li>● Target Shadow: 3.0 Meters</li> <li>● Mag Anomaly: Ball_M023</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball1.S0015</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/9/2020 7:04:39 AM</li> <li>● Click Position 30.1132965519 -87.8881026943 (WGS84) (X) 414440.30 (Y) 3331672.34 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_57.jsf</li> <li>● Heading: 84.300 Degrees</li> <li>● Line Name: Ball_57</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.6 Meters</li> <li>● Target Height: 1.6 Meters</li> <li>● Target Length: 2.2 Meters</li> <li>● Target Shadow: 2.4 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball1.S0016</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 11:31:26 AM</li> <li>● Click Position 30.1130998141 -87.8858953039 (WGS84) (X) 414652.80 (Y) 3331648.89 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_55.jsf</li> <li>● Heading: 262.700 Degrees</li> <li>● Line Name: Ball_55</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.9 Meters</li> <li>● Target Height: 0.4 Meters</li> <li>● Target Length: 2.3 Meters</li> <li>● Target Shadow: 1.2 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>

Target Image	Target Image	Target Image
	<p><b>Ball1.S0017</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 11:01:10 AM</li> <li>● Click Position 30.1118026651 -87.8844054295 (WGS84) (X) 414795.23 (Y) 3331504.03 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_52.jsf</li> <li>● Heading: 23.390 Degrees</li> <li>● Line Name: Ball_52</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.3 Meters</li> <li>● Target Height: 2.3 Meters</li> <li>● Target Length: 2.1 Meters</li> <li>● Target Shadow: 4.3 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball1.S0018</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/10/2020 7:18:49 PM</li> <li>● Click Position 30.1088071584 -87.8812740892 (WGS84) (X) 415094.35 (Y) 3331169.74 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_44.jsf</li> <li>● Heading: 23.200 Degrees</li> <li>● Line Name: Ball_44</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.3 Meters</li> <li>● Target Height: 0.6 Meters</li> <li>● Target Length: 4.6 Meters</li> <li>● Target Shadow: 2.1 Meters</li> <li>● Mag Anomaly: Ball.M026</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball1.S0019</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/9/2020 9:40:41 AM</li> <li>● Click Position 30.1113298591 -87.8764818379 (WGS84) (X) 415558.22 (Y) 3331445.75 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_48.jsf</li> <li>● Heading: 264.290 Degrees</li> <li>● Line Name: Ball_48</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.4 Meters</li> <li>● Target Height: 0.1 Meters</li> <li>● Target Length: 3.2 Meters</li> <li>● Target Shadow: 0.3 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Ball1.S0020</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/11/2020 12:44:27 AM</li> <li>● Click Position 30.1015162376 -87.8752452477 (WGS84) (X) 415669.03 (Y) 3330357.32 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_26.jsf</li> <li>● Heading: 30.100 Degrees</li> <li>● Line Name: Ball_26</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.0 Meters</li> <li>● Target Height: 1.2 Meters</li> <li>● Target Length: 2.6 Meters</li> <li>● Target Shadow: 4.6 Meters</li> <li>● Mag Anomaly: Ball.M027</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>

Target Image	Target Image	Target Image
	<p><b>Ball1.S0021</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/9/2020 7:34:42 PM</li> <li>• Click Position 30.0951165931 -87.8746218537 (WGS84) (X) 415723.67 (Y) 3329647.68 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_12.jsf</li> <li>• Heading: 262.890 Degrees</li> <li>• Line Name: Ball_12</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.1 Meters</li> <li>• Target Height: 2.0 Meters</li> <li>• Target Length: 5.6 Meters</li> <li>• Target Shadow: 8.8 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Ball1.S0022</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/9/2020 11:40:23 AM</li> <li>• Click Position 30.1088256905 -87.8737405167 (WGS84) (X) 415820.21 (Y) 3331166.22 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_42.jsf</li> <li>• Heading: 263.290 Degrees</li> <li>• Line Name: Ball_42</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.2 Meters</li> <li>• Target Height: 0.9 Meters</li> <li>• Target Length: 4.0 Meters</li> <li>• Target Shadow: 1.9 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Ball1.S0023</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/9/2020 1:32:59 PM</li> <li>• Click Position 30.1064154689 -87.8731661721 (WGS84) (X) 415873.51 (Y) 3330898.70 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_36.jsf</li> <li>• Heading: 265.600 Degrees</li> <li>• Line Name: Ball_36</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 1.5 Meters</li> <li>• Target Height: 0.8 Meters</li> <li>• Target Length: 5.5 Meters</li> <li>• Target Shadow: 3.1 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Ball1.S0024</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/10/2020 3:18:22 AM</li> <li>• Click Position 30.1039295467 -87.8689608723 (WGS84) (X) 416276.59 (Y) 3330620.13 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_31.jsf</li> <li>• Heading: 236.000 Degrees</li> <li>• Line Name: Ball_31</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.8 Meters</li> <li>• Target Height: 0.8 Meters</li> <li>• Target Length: 2.8 Meters</li> <li>• Target Shadow: 3.1 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>

Target Image	Target Image	Target Image
	<p><b>Ball.S0025</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/9/2020 7:29:27 PM</li> <li>● Click Position 30.0961125079 -87.8679436865 (WGS84) (X) 416368.02 (Y) 3329753.13 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Ball\Ball_12.jsf</li> <li>● Heading: 258.290 Degrees</li> <li>● Line Name: Ball_12</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.3 Meters</li> <li>● Target Height: 2.4 Meters</li> <li>● Target Length: 2.9 Meters</li> <li>● Target Shadow: 7.7 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>

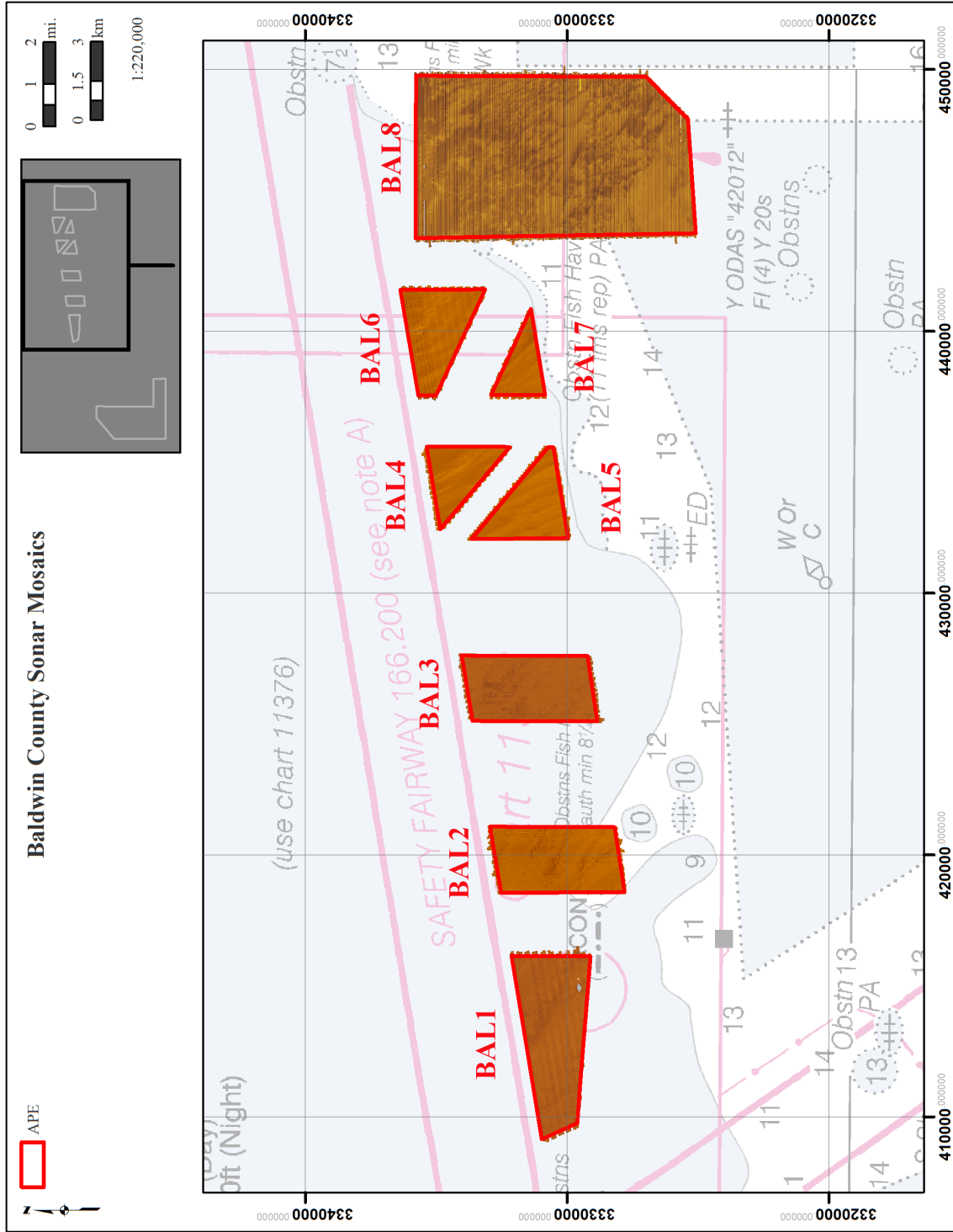


Figure C-1. Sonar Mosaics showing coverage for all Baldwin Cells (SAM-2014-00487-DEM) including BAL1.

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## **APPENDIX D: BAL1 MAGNETIC CONTOUR MAPS**

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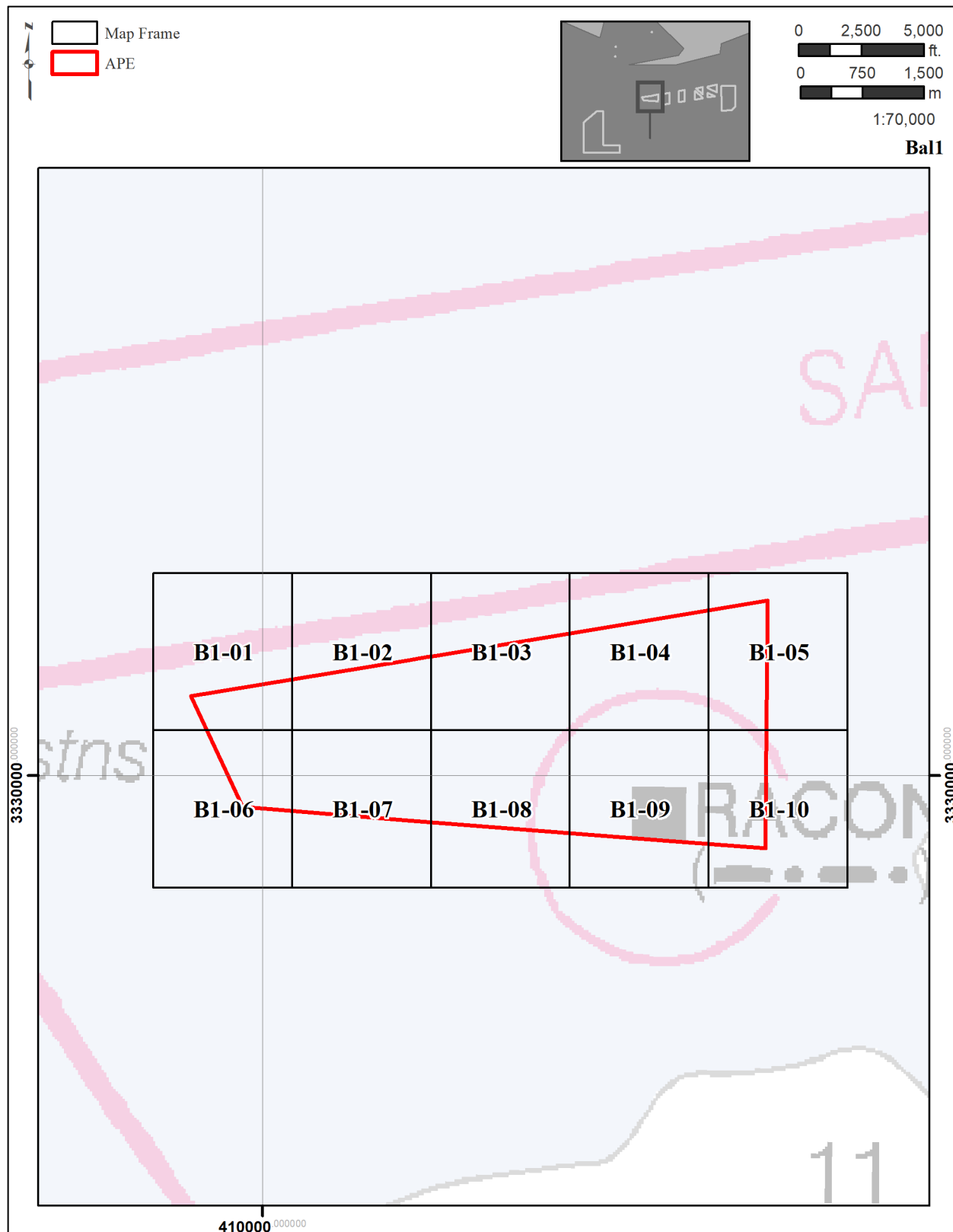


Figure D-01. Magnetic Contour Map Key for BAL1 (SAM-2014-00487-DEM).

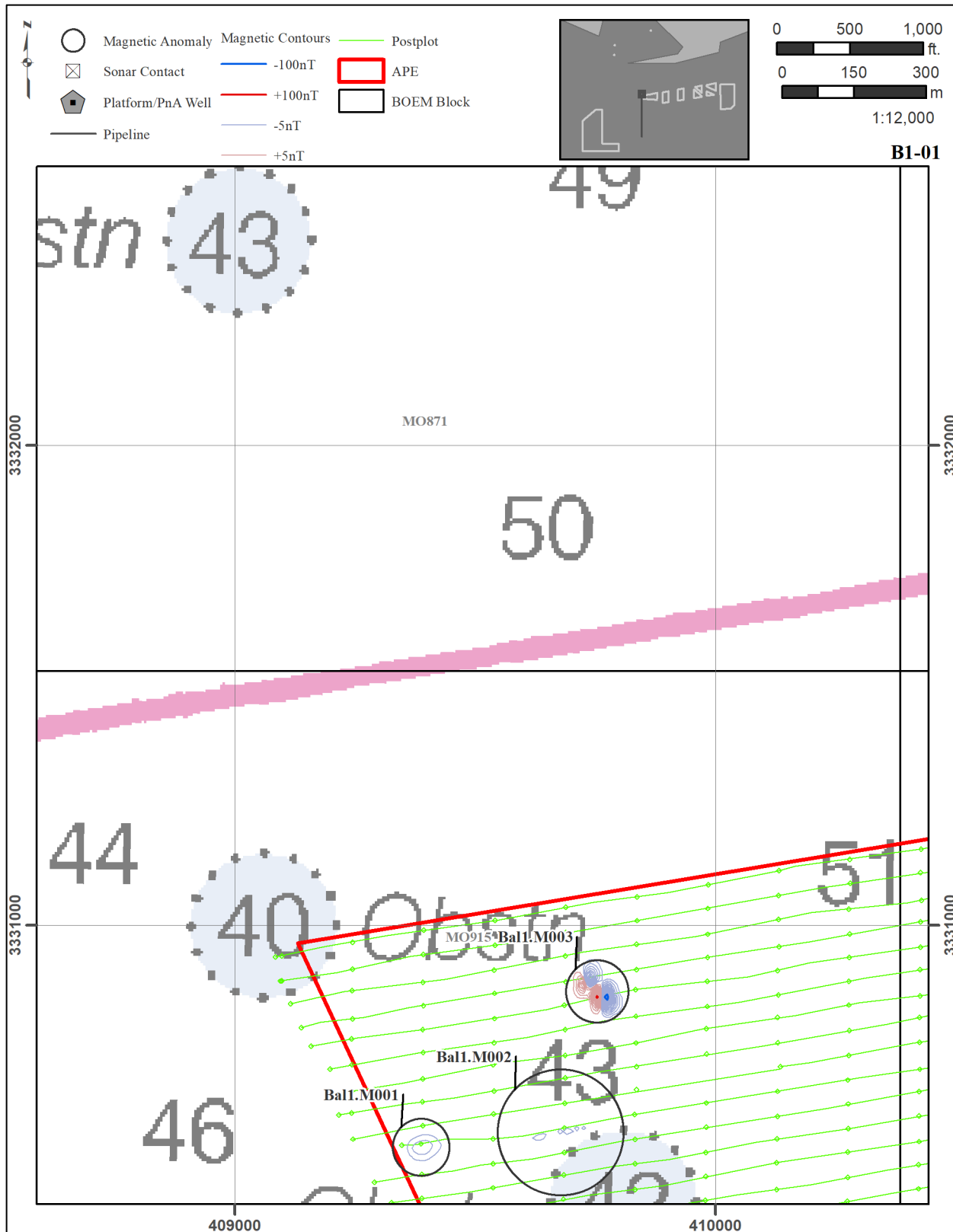


Figure D-02. BAL1 Map 1.

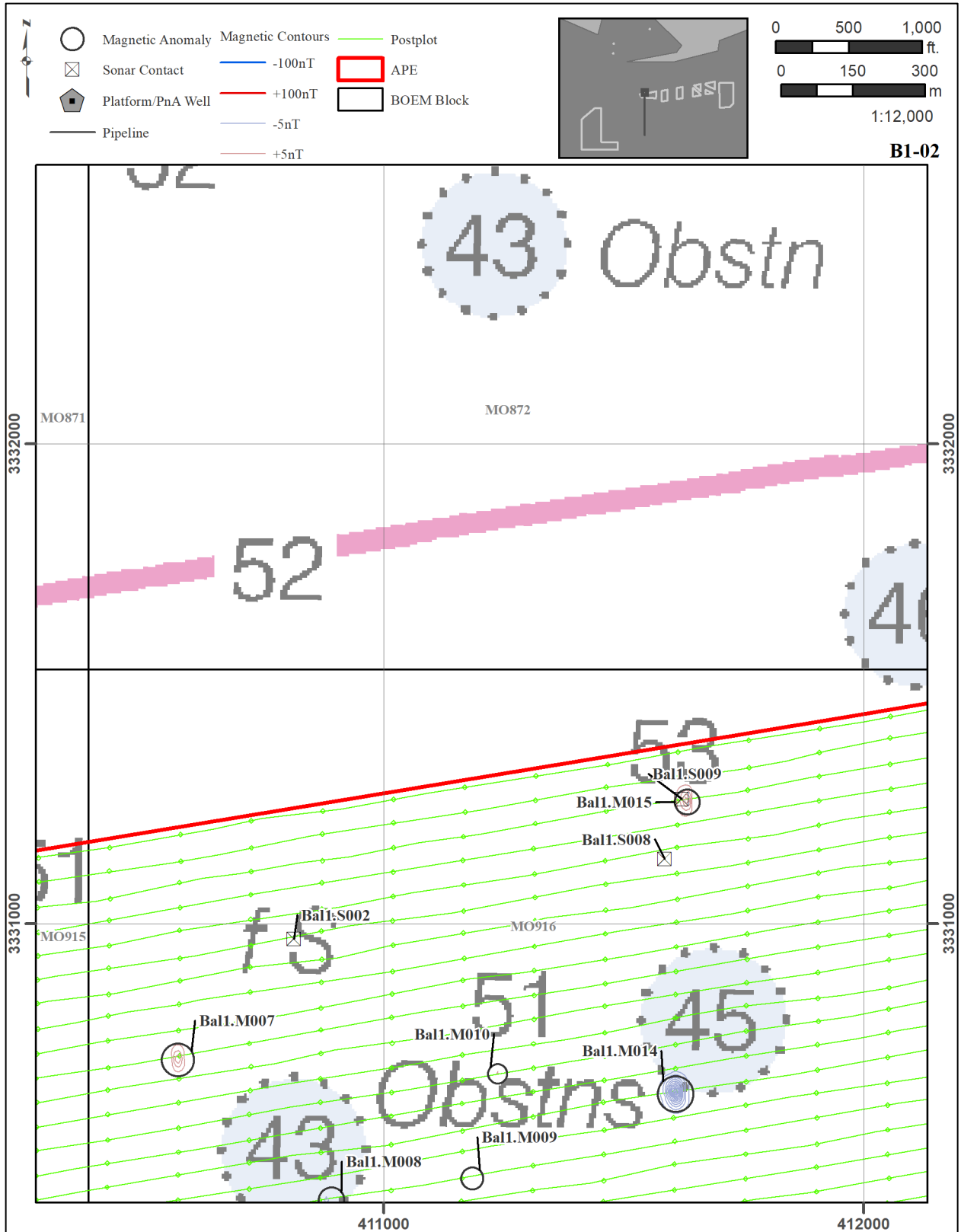


Figure D-03. BAL1 Map 2.

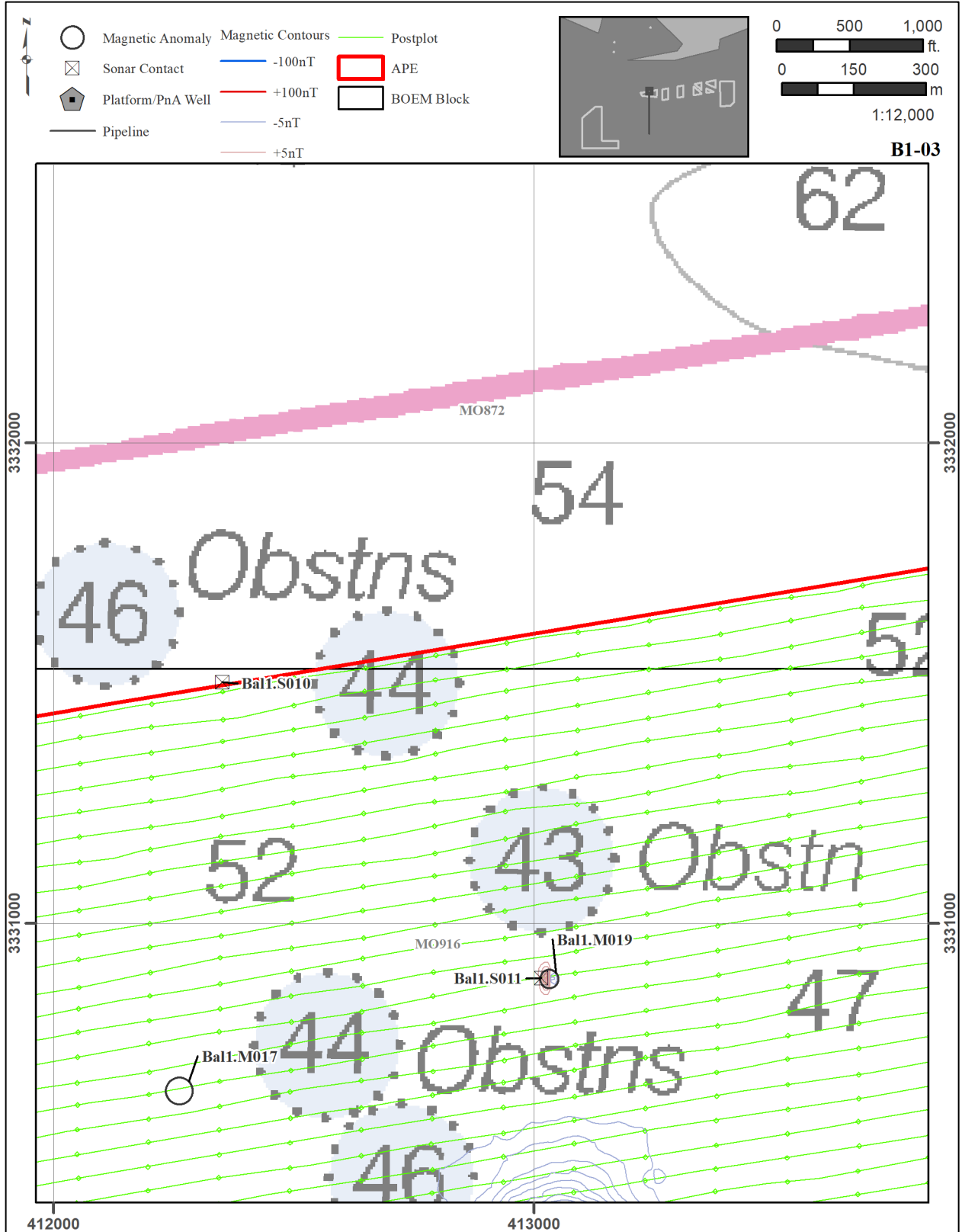


Figure D-04. BAL1 Map 3.

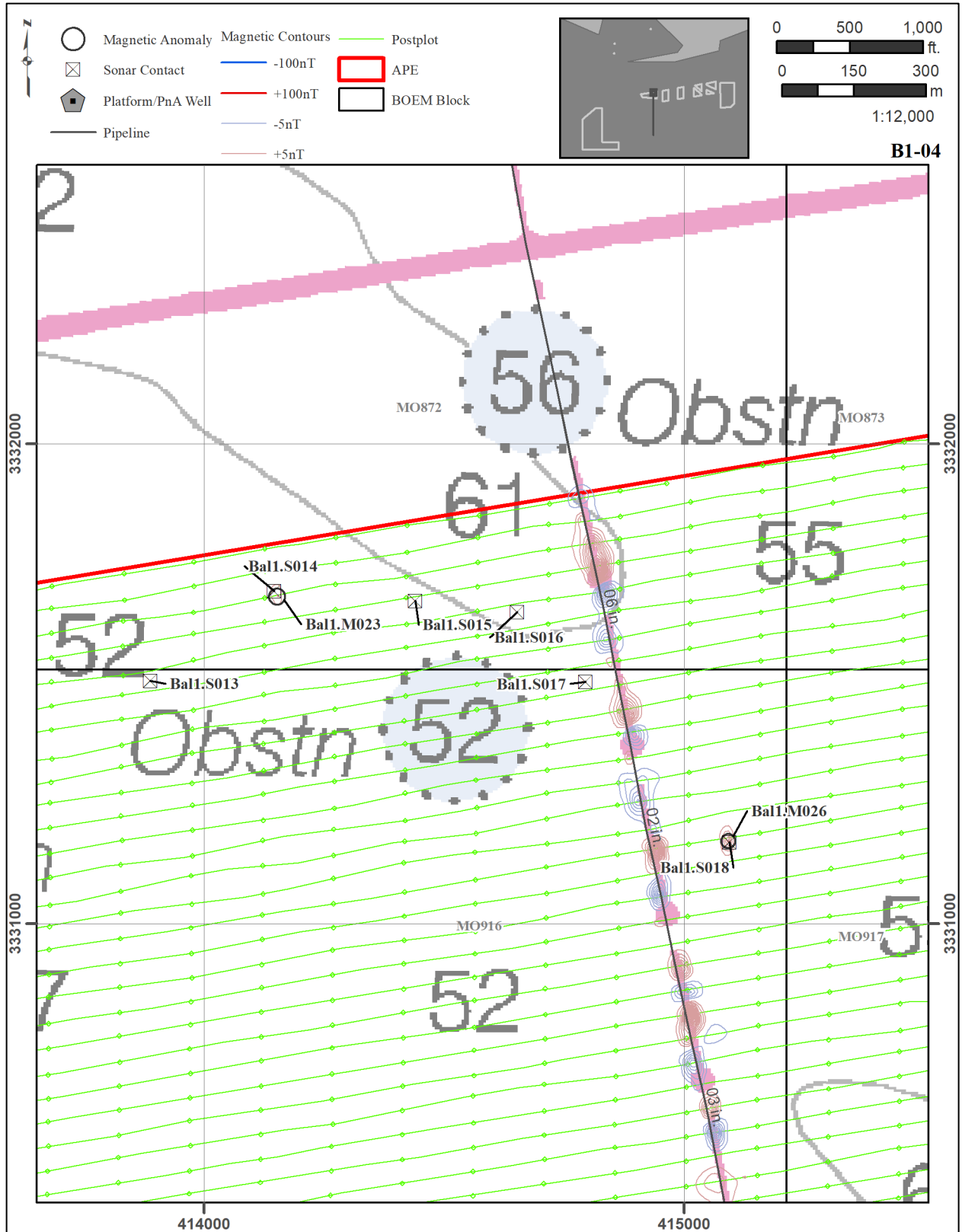


Figure D-05. BAL1 Map 4.

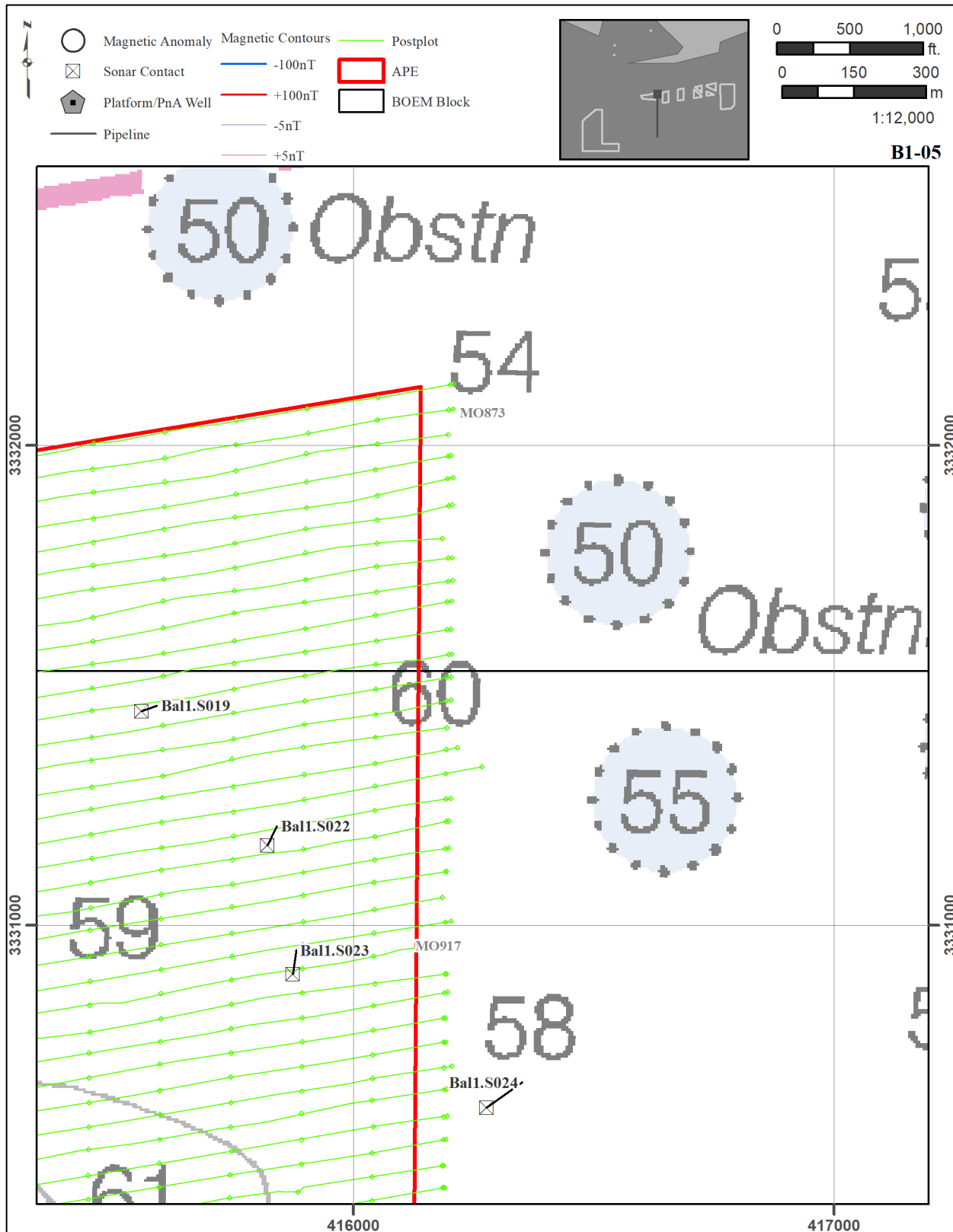


Figure D-06. BAL1 Map 5.

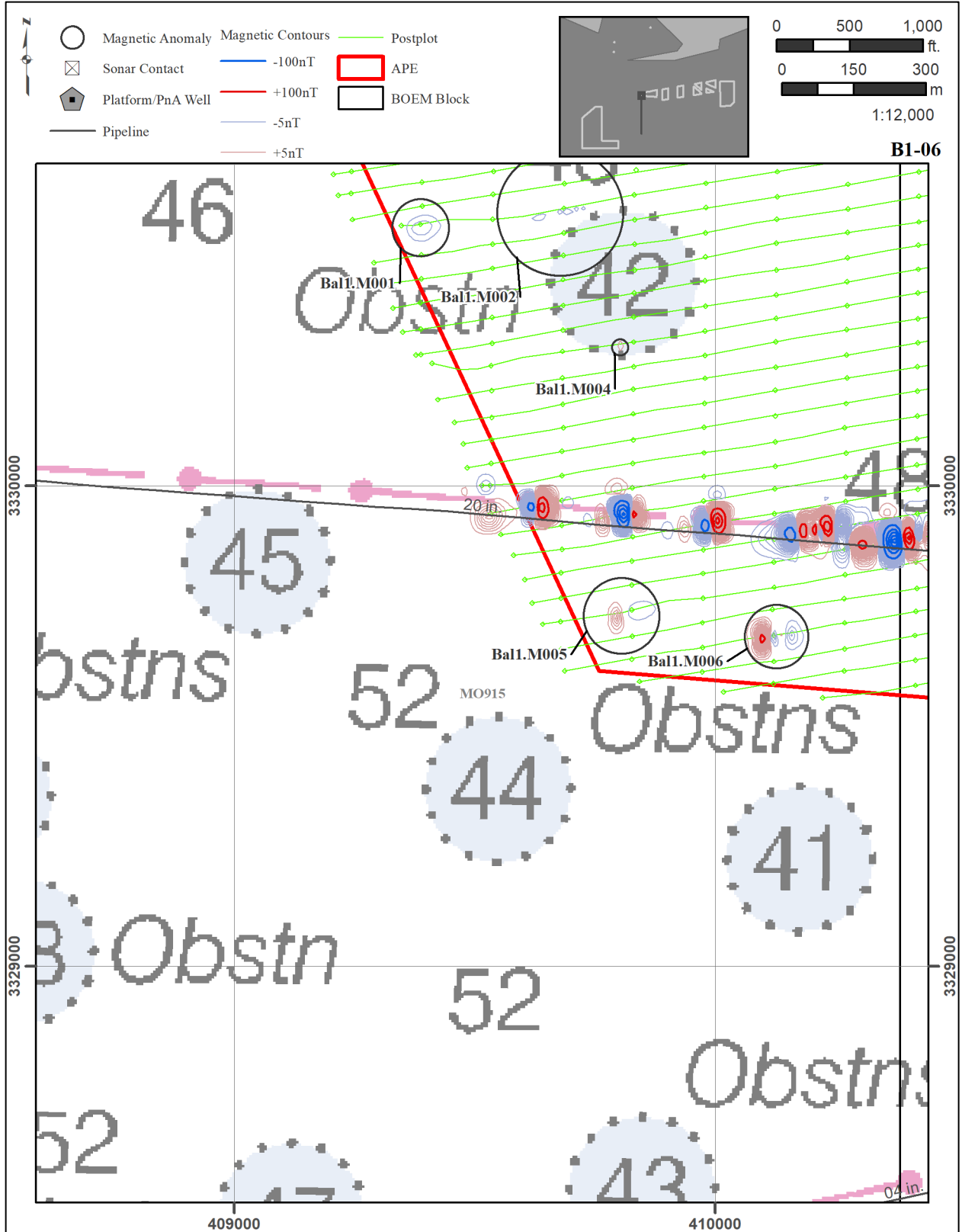


Figure D-07. BAL1 Map 6.

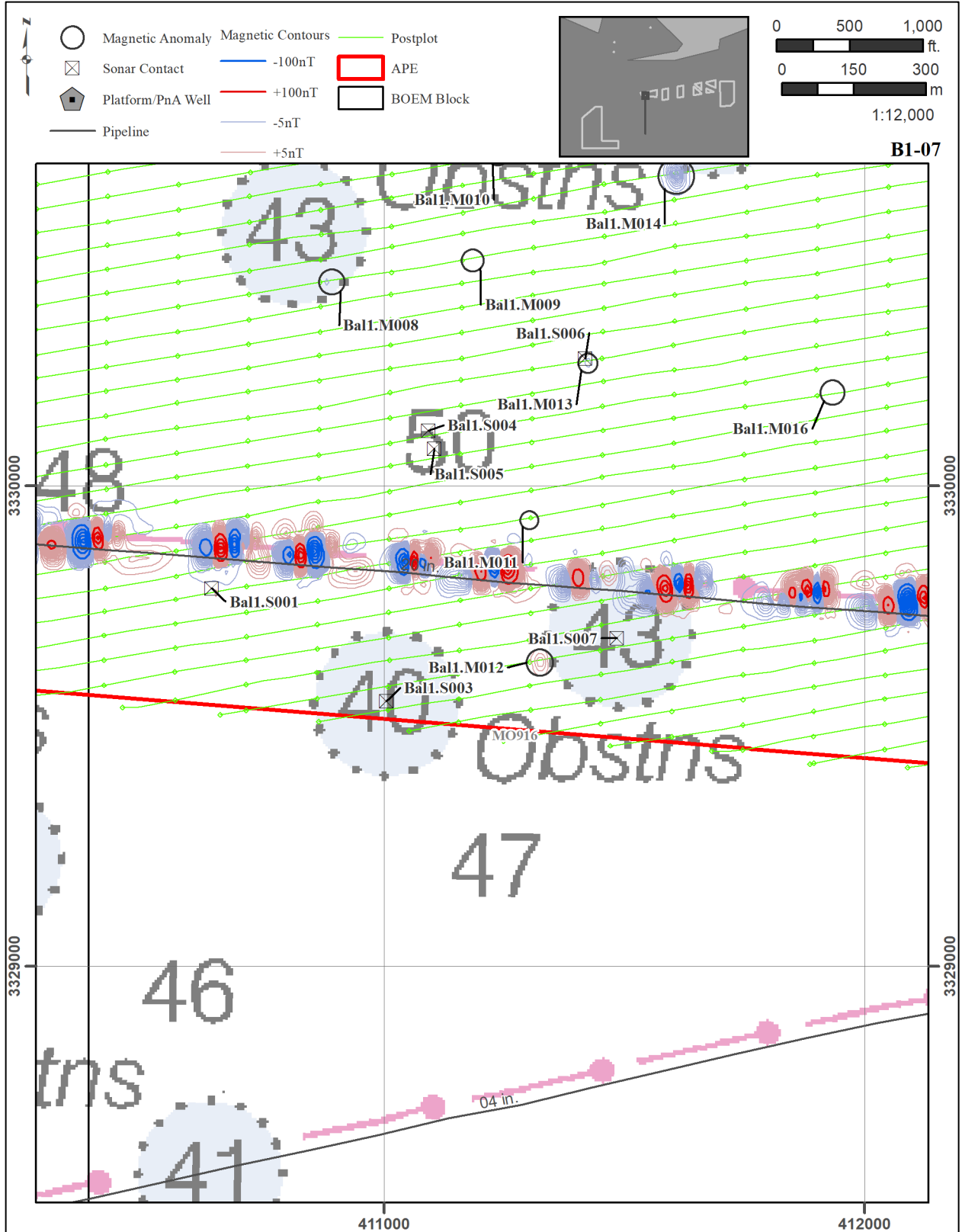


Figure D-08. BAL1 Map 7.

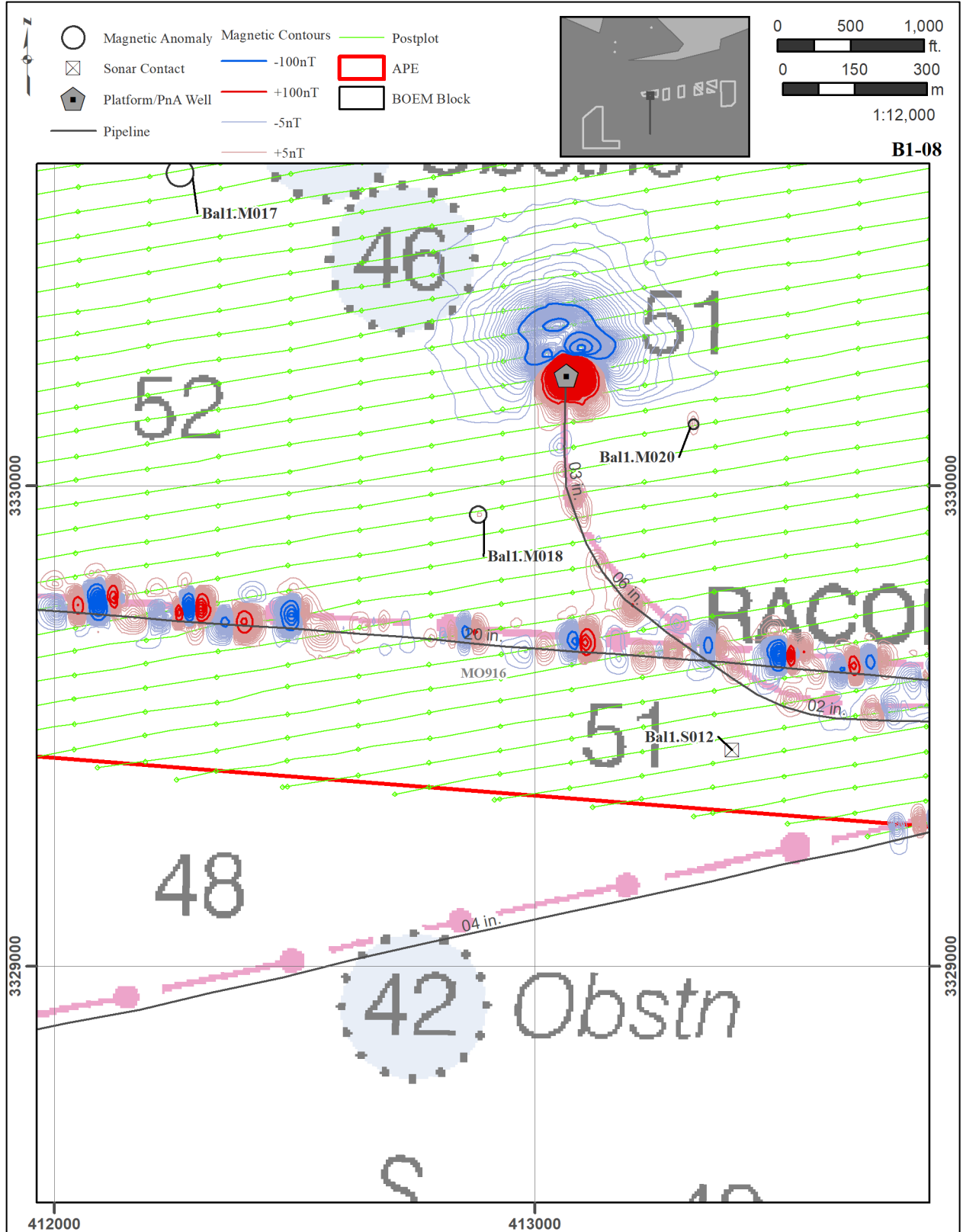


Figure D-09. BAL1 Map 8.

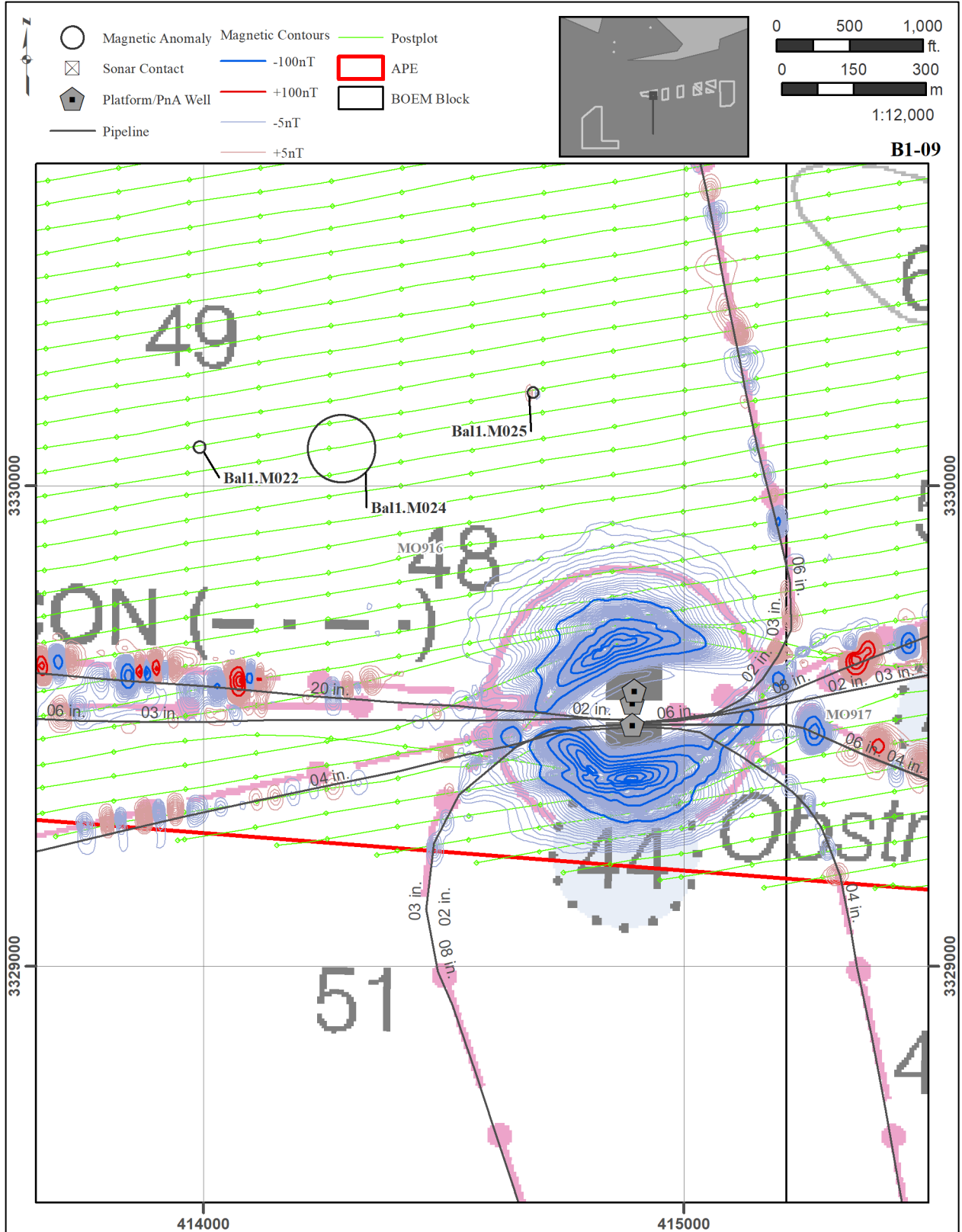


Figure D-10. BAL1 Map 9.

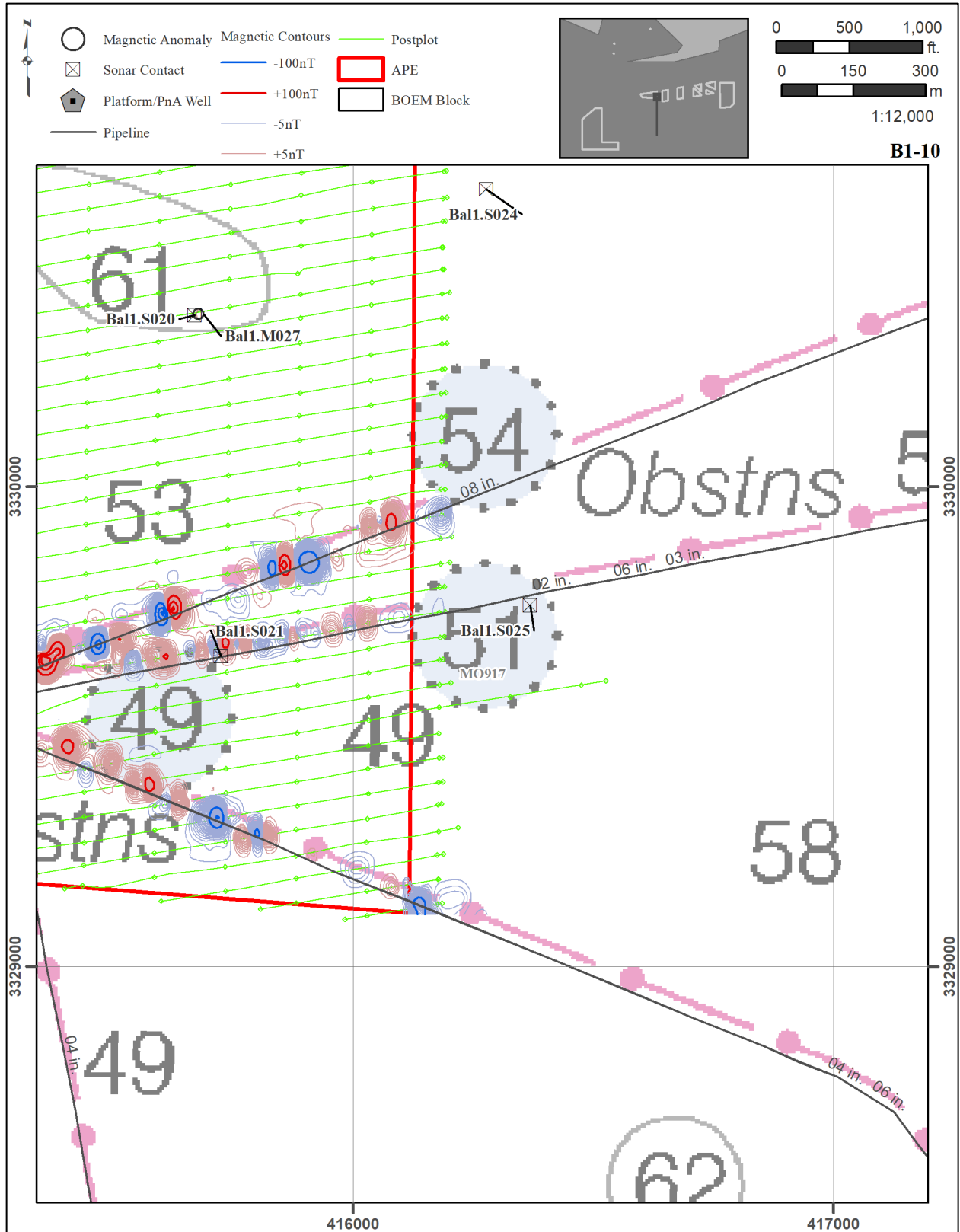


Figure D-11. BAL1 Map 10.

## **APPENDIX E: BAL2 REMOTE SENSING DATA**

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Table E-1. Magnetic Anomalies Recorded for the BAL2 Cell.

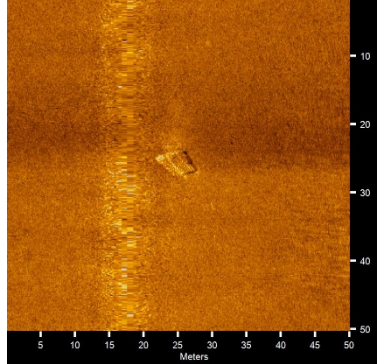
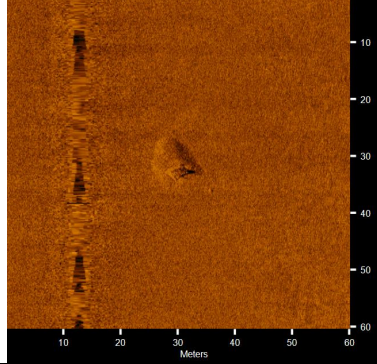
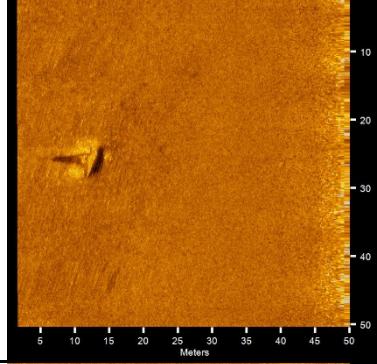
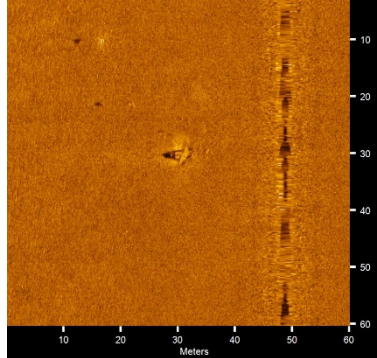
Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal2.M002	420910	3332880	D	168	13.3		SPS		B2-02	MO874
Bal2.M003	420369	3332841	M	213	111.0		Unknown		B2-02	MO874
Bal2.M004	419701	3332753	D	118	9.7		SPS		B2-01	MO873
Bal2.M005	420815	3332735	D	54	98.1		rectangular object	Bal2.S001	B2-02	MO874
Bal2.M006	419065	3332598	D	52	15.4		SPS		B2-01	MO873
Bal2.M007	418662	3332221	D	58	11.5		SPS		B2-01	MO873
Bal2.M008	420566	3332108	M	27	6.2		debris	Bal2.S003	B2-02	MO874
Bal2.M009	420615	3330775	D	47	7.4		SPS		B2-04	MO918
Bal2.M010	421016	3330537	D	46	28.0		SPS		B2-04	MO918
Bal2.M011	420310	3329984	D	54	19.3		Gravel	Bal2.S008	B2-04	MO918
Bal2.M012	420461	3329969	D	45	11.7		SPS		B2-04	MO918
Bal2.M013	418557	3329817	M	34	18.1		SPS		B2-03	MO917
Bal2.M014	419615	3329753	D	71	6.2		SPS		B2-03	MO917
Bal2.M015	419662	3329677	D	47	11.1		SPS		B2-03	MO917
Bal2.M016	419264	3329613	D	55	10.3		SPS		B2-03	MO917
Bal2.M017	420163	3329538	D	69	14.3		SPS		B2-04	MO918
Bal2.M018	419816	3329507	D	71	6.6		SPS		B2-03	MO917
Bal2.M019	418751	3329392	D	110	31.4		SPS		B2-03	MO917
Bal2.M020	421017	3329302	D	60	13.7		SPS		B2-06	MO918
Bal2.M021	419755	3329294	M	87	12.8		SPS		B2-05	MO917
Bal2.M022	420054	3329277	D	99	42.1		debris	Bal2.S012	B2-06	MO917
Bal2.M023	419860	3329019	D	98	30.2		debris	Bal2.S015, Bal2.S016	B2-06	MO917
Bal2.M024	419215	3329014	M	42	9.9		SPS		B2-05	MO917
Bal2.M025	419156	3328982	M	63	7.8		SPS		B2-05	MO917
Bal2.M026	419666	3328938	D	60	7.3		debris	Bal2.S017	B2-05	MO917
Bal2.M027	419755	3328637	M	142	15.7		SPS		B2-05	MO917
Bal2.M029	419761	3328412	D	291	457.7	Y	Buffalo Barge 1	Bal2.M032, Bal2.S024, Bal2.S025	B2-05	MO917
Bal2.M032	419663	3328373	D	63	53.3	Y	Buffalo Barge 1 debris	Bal2.M029	B2-05	MO917
Bal2.M033	420758	3328325	M	58	12.7		SPS		B2-06	MO918
Bal2.M034	420425	3328051	M	100	7.6		SPS		B2-06	MO918
Bal2.M036	419825	3327930	D	110	64.8	Y	Unknown; wreck- like signature		B2-05	MO917
Bal2.M037	419272	3327872	M	113	6.7		SPS		B2-05	MO917
Bal2.M038	418630	3327999	D	162	1018.0	Y	Buffalo Barge 3	Bal2.S026	B2-05	MO917
Bal2.M039	418989	3327914	D	168	178.9	Y	Buffalo Barge 2	Bal2.S027	B2-05	MO917

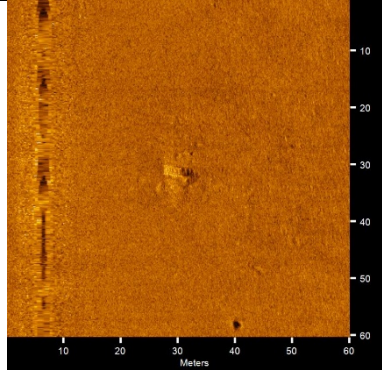
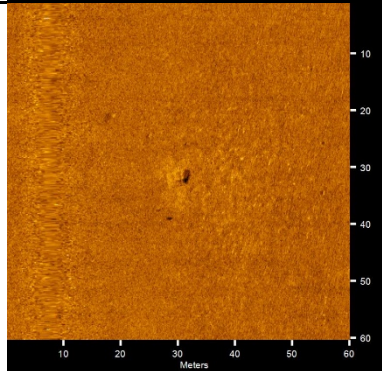
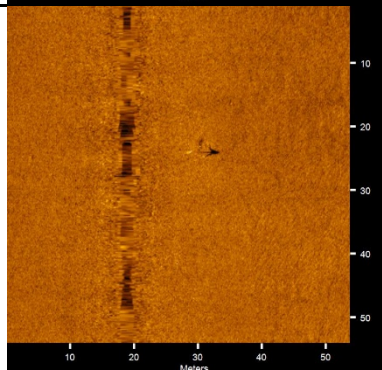
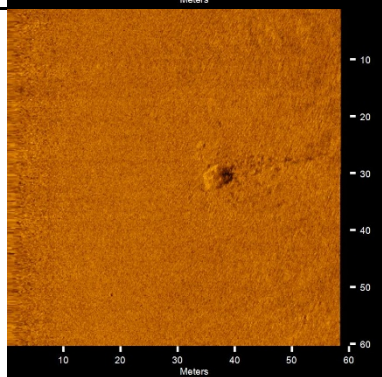
\* M = Monopole, D = Dipole, MC = Multi Component.

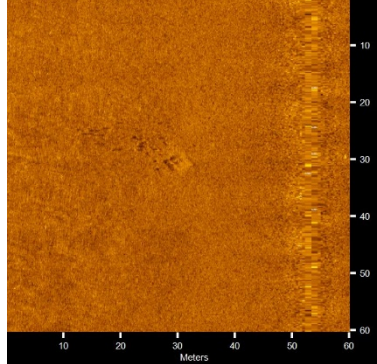
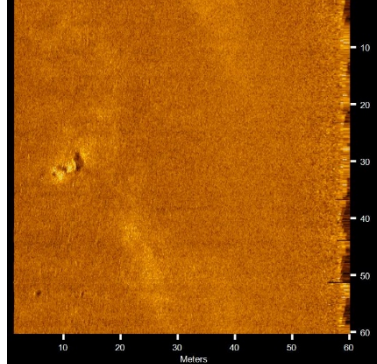
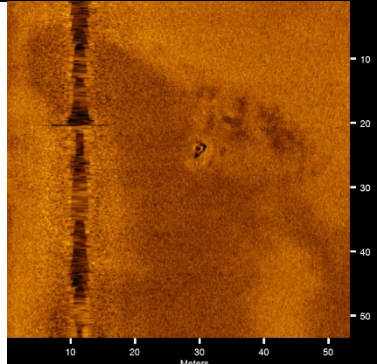
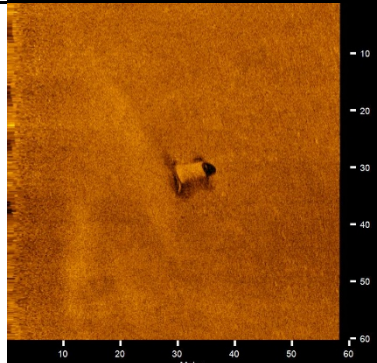
Table E-2. Sonar Contacts for the BAL2 Cell.

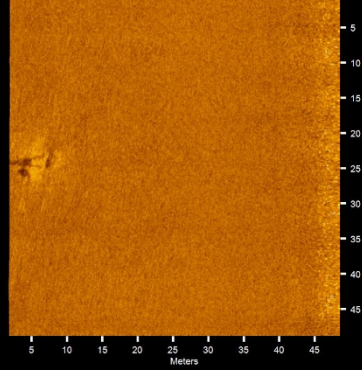
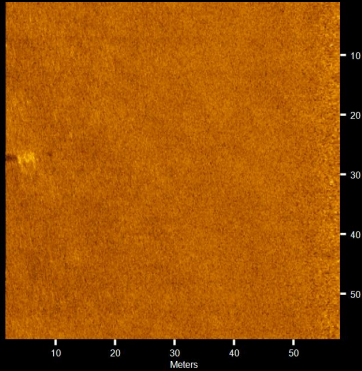
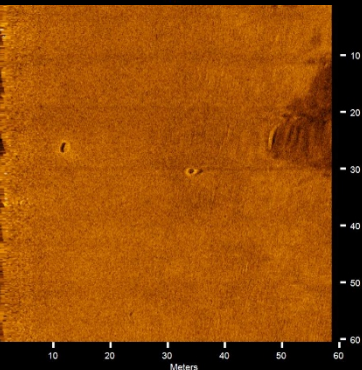
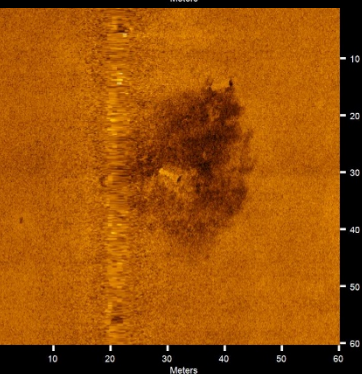
Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal2.S001	420820	3332724	rectangular	5.5	2.3	0.7		B2-02	MO874
Bal2.S002	418542	3332240	debris	1.8	2.4	0.4		B2-01	MO873
Bal2.S003	420555	3332114	debris	5.1	3.1	1.4		B2-02	MO874
Bal2.S004	418979	3332096	debris	1.5	1.7	0.9		B2-01	MO873
Bal2.S005	418830	3331888	debris	3.0	1.8	1.1		B2-01	MO873
Bal2.S006	419841	3330868	debris	2.3	2.2	1.0		B2-03	MO917
Bal2.S007	419303	3330219	debris	2.6	2.1	2.1		B2-03	MO917
Bal2.S008	420330	3329977	gravel	3.7	2.8	0.8	Bal2.M011	B2-04	MO918
Bal2.S009	419795	3329831	debris	3.4	2.9	0.4		B2-03	MO917
Bal2.S010	419564	3329624	debris	3.6	3.2	0.3		B2-03	MO917
Bal2.S011	419496	3329370	tire	1.9	1.9	0.3		B2-05	MO917
Bal2.S012	420044	3329273	cylinder	5.3	2.8	1.0	Bal2.M022	B2-06	MO918
Bal2.S013	420562	3329139	debris	2.9	1.9	1.4		B2-06	MO918
Bal2.S014	419205	3329019	Debris possibly associated with "Fort Morgan Pipes" AWOIS Obstruction record 3622	1.8	1.4	0.7		B2-05	MO917
Bal2.S015	419881	3329011	tire	1.8	2.7	0.3	Bal2.M023	B2-06	MO917
Bal2.S016	419857	3329005	cylinder	3.4	1.5	0.6	Bal2.M023	B2-06	MO917
Bal2.S017	419658	3328951	linear	6.4	1.7	0.2	Bal2.M026	B2-05	MO917
Bal2.S018	420095	3328895	tire	2.4	2.7	0.3		B2-06	MO918
Bal2.S019	419982	3328733	tire	2.6	3.2	0.3		B2-06	MO917
Bal2.S020	419885	3328671	tire	2.3	1.9	0.5		B2-06	MO917
Bal2.S021	419870	3328661	tire	1.7	1.2	0.5		B2-06	MO917
Bal2.S022	419232	3328619	tire	1.5	1.8	0.5		B2-05	MO917
Bal2.S023	419881	3328610	debris	2.7	1.6	0.3		B2-06	MO917
Bal2.S024	419788	3328421	Wreck-Buffalo Barge 1	27.1	8.8	1.4		B2-05	MO917
Bal2.S025	419779	3328390	Wreck-Buffalo Barge 1 bow	6.9	6.4	1.1		B2-05	MO917
Bal2.S026	418630	3327997	Wreck-Buffalo Barge 3	18.0	8.7	1.3	Mag partially obscured by pipeline; >1,000nT	B2-05	MO917
Bal2.S027	418991	3327915	Wreck-Buffalo Barge 2	17.9	8.6	1.5	Mag obscured by pipeline; >250nT	B2-05	MO917

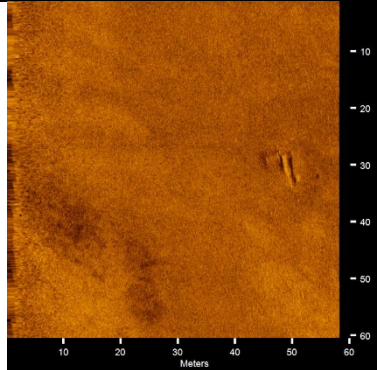
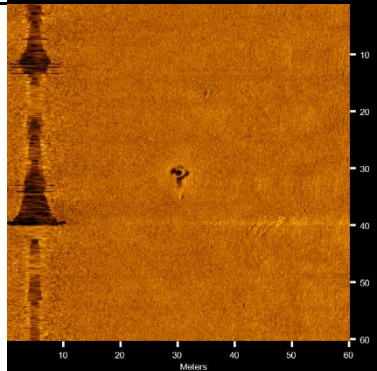
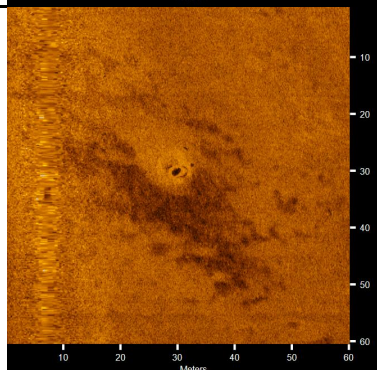
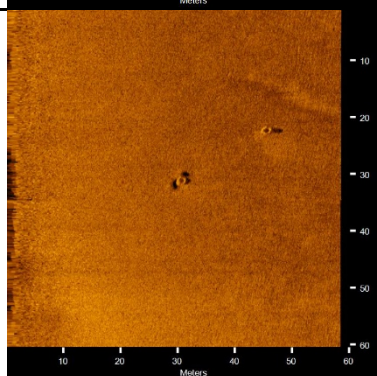
Table E-3. Acoustic Target Images recorded for the BAL2 Cell.

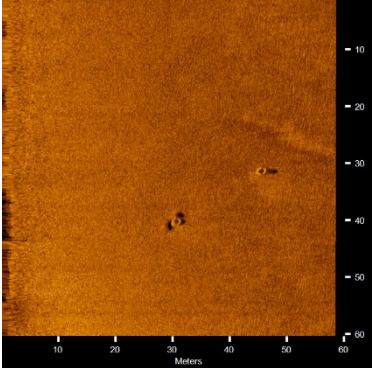
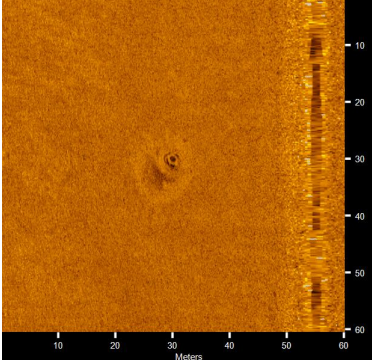
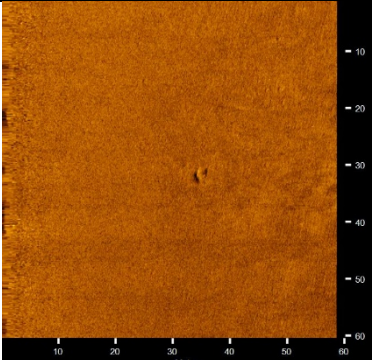
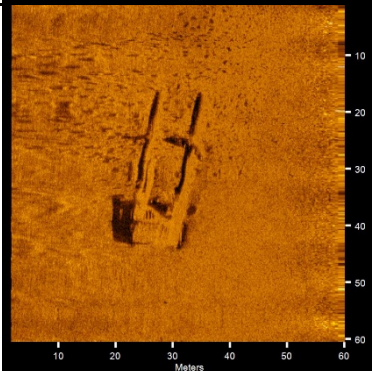
Target Image	Target Info	User Entered Info
	<p><b>Bal2.S0001</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/2/2020 2:42:58 PM</li> <li>● Click Position 30.1232156827 -87.8219706241 (WGS84) (X) 420819.60 (Y) 3332723.83 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_47.jsf</li> <li>● Heading: 190.300 Degrees</li> <li>● Line Name: Bal2_47</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.3 Meters</li> <li>● Target Height: 0.7 Meters</li> <li>● Target Length: 5.5 Meters</li> <li>● Target Shadow: 3.2 Meters</li> <li>● Mag Anomaly: Bal2.M002</li> <li>● Classification1: rectangular</li> <li>● Description: Rationalized contact created from contacts: Contact0036, Contact0037</li> </ul>
	<p><b>Bal2.S0002</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 10:48:44 AM</li> <li>● Click Position 30.1186954206 -87.8455790850 (WGS84) (X) 418541.60 (Y) 3332239.52 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_01.jsf</li> <li>● Heading: 201.000 Degrees</li> <li>● Line Name: Bal2_01</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.4 Meters</li> <li>● Target Height: 0.4 Meters</li> <li>● Target Length: 1.8 Meters</li> <li>● Target Shadow: 0.8 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Bal2.S0003</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/2/2020 8:40:42 PM</li> <li>● Click Position 30.1176950012 -87.8246731883 (WGS84) (X) 420554.83 (Y) 3332113.93 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_40.jsf</li> <li>● Heading: 205.190 Degrees</li> <li>● Line Name: Bal2_40</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.1 Meters</li> <li>● Target Height: 1.4 Meters</li> <li>● Target Length: 5.1 Meters</li> <li>● Target Shadow: 5.2 Meters</li> <li>● Mag Anomaly: Bal2.M007</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Bal2.S0004</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 1:27:06 PM</li> <li>● Click Position 30.1174266049 -87.8410321808 (WGS84) (X) 418978.61 (Y) 3332095.68 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_09.jsf</li> <li>● Heading: 195.890 Degrees</li> <li>● Line Name: Bal2_09</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.7 Meters</li> <li>● Target Height: 0.9 Meters</li> <li>● Target Length: 1.5 Meters</li> <li>● Target Shadow: 2.1 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>

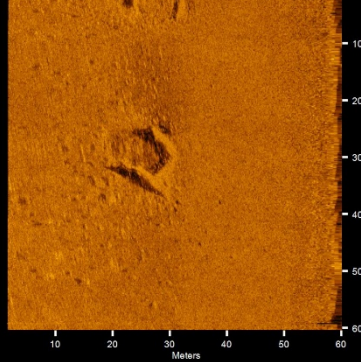
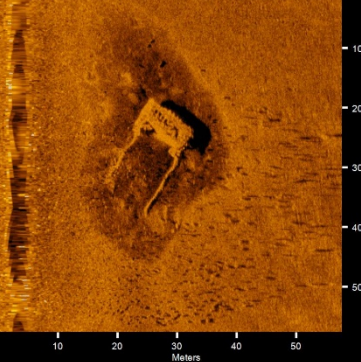
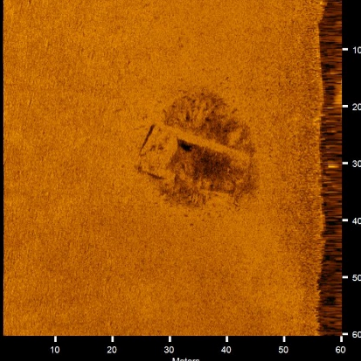
Target Image	Target Info	User Entered Info
	<p><b>Bal2.S0005</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 9:12:20 AM</li> <li>• Click Position 30.1155458191 -87.8425549108 (WGS84) (X) 418830.37 (Y) 3331888.34 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_06.jsf</li> <li>• Heading: 344.700 Degrees</li> <li>• Line Name: Bal2_06</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 1.8 Meters</li> <li>• Target Height: 1.1 Meters</li> <li>• Target Length: 3.0 Meters</li> <li>• Target Shadow: 2.9 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Bal2.S0006</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 7:17:48 PM</li> <li>• Click Position 30.1064091387 -87.8319864655 (WGS84) (X) 419841.17 (Y) 3330868.39 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_27.jsf</li> <li>• Heading: 199.190 Degrees</li> <li>• Line Name: Bal2_27</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.2 Meters</li> <li>• Target Height: 1.0 Meters</li> <li>• Target Length: 2.3 Meters</li> <li>• Target Shadow: 2.2 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Bal2.S0007</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 3:44:35 PM</li> <li>• Click Position 30.1005160622 -87.8375244874 (WGS84) (X) 419302.79 (Y) 3330219.24 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_15.jsf</li> <li>• Heading: 347.000 Degrees</li> <li>• Line Name: Bal2_15</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.1 Meters</li> <li>• Target Height: 2.1 Meters</li> <li>• Target Length: 2.6 Meters</li> <li>• Target Shadow: 8.8 Meters</li> <li>• Mag Anomaly: Bal2.M012</li> <li>• Classification1: debris</li> <li>• Description: Rationalized contact created from contacts: Contact0015, Contact0008</li> </ul>
	<p><b>Bal2.S0008</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 8:52:31 PM</li> <li>• Click Position 30.0983946107 -87.8268494329 (WGS84) (X) 420329.69 (Y) 3329976.66 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_37.jsf</li> <li>• Heading: 201.100 Degrees</li> <li>• Line Name: Bal2_37</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.8 Meters</li> <li>• Target Height: 0.8 Meters</li> <li>• Target Length: 3.7 Meters</li> <li>• Target Shadow: 2.4 Meters</li> <li>• Mag Anomaly: Bal2.M014</li> <li>• Classification1: gravel</li> <li>• Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal2.S0009</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 7:55:39 AM</li> <li>• Click Position 30.0970462904 -87.8323848009 (WGS84) (X) 419795.23 (Y) 3329831.12 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_25.001.jsf</li> <li>• Heading: 196.390 Degrees</li> <li>• Line Name: Bal2_25.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.9 Meters</li> <li>• Target Height: 0.4 Meters</li> <li>• Target Length: 3.4 Meters</li> <li>• Target Shadow: 0.9 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Bal2.S0010</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 4:09:22 AM</li> <li>• Click Position 30.0951643114 -87.8347707870 (WGS84) (X) 419563.79 (Y) 3329624.24 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_20.jsf</li> <li>• Heading: 196.300 Degrees</li> <li>• Line Name: Bal2_20</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 3.2 Meters</li> <li>• Target Height: 0.3 Meters</li> <li>• Target Length: 3.6 Meters</li> <li>• Target Shadow: 1.5 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description:</li> </ul>
	<p><b>Bal2.S0011</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 5:01:13 PM</li> <li>• Click Position 30.0928623958 -87.8354505557 (WGS84) (X) 419496.42 (Y) 3329369.63 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_19.jsf</li> <li>• Heading: 347.890 Degrees</li> <li>• Line Name: Bal2_19</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 1.9 Meters</li> <li>• Target Height: 0.3 Meters</li> <li>• Target Length: 1.9 Meters</li> <li>• Target Shadow: 0.8 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: tire</li> <li>• Description: Rationalized contact created from contacts: Contact0017, Contact0016</li> </ul>
	<p><b>Bal2.S0012</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 12:24:02 AM</li> <li>• Click Position 30.0920260638 -87.8297583538 (WGS84) (X) 420044.27 (Y) 3329272.96 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_30.jsf</li> <li>• Heading: 345.200 Degrees</li> <li>• Line Name: Bal2_30</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.8 Meters</li> <li>• Target Height: 1.0 Meters</li> <li>• Target Length: 5.3 Meters</li> <li>• Target Shadow: 2.6 Meters</li> <li>• Mag Anomaly: Bal2.M027</li> <li>• Classification1: cylinder</li> <li>• Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal2.S0013</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/2/2020 12:41:11 PM</li> <li>• Click Position 30.0908516490 -87.8243772657 (WGS84) (X) 420561.87 (Y) 3329139.06 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_41.jsf</li> <li>• Heading: 358.500 Degrees</li> <li>• Line Name: Bal2_41</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 1.9 Meters</li> <li>• Target Height: 1.4 Meters</li> <li>• Target Length: 2.9 Meters</li> <li>• Target Shadow: 4.6 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Description: Rationalized contact created from contacts: Contact0033, Contact0035</li> </ul>
	<p><b>Bal2.S0014</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 3:36:15 PM</li> <li>• Click Position 30.0896818905 -87.8384444527 (WGS84) (X) 419205.34 (Y) 3329019.29 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_15.jsf</li> <li>• Heading: 348.290 Degrees</li> <li>• Line Name: Bal2_15</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 1.4 Meters</li> <li>• Target Height: 0.7 Meters</li> <li>• Target Length: 1.8 Meters</li> <li>• Target Shadow: 3.1 Meters</li> <li>• Mag Anomaly: Bal2.M031</li> <li>• Classification1: debris</li> <li>• Description: Possibly associated with "Fort Morgan Pipes", AWOIS Obstruction record 3622</li> </ul>
	<p><b>Bal2.S0015</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 1:26:43 AM</li> <li>• Click Position 30.0896484434 -87.8314296591 (WGS84) (X) 419881.30 (Y) 3329010.65 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_28.jsf</li> <li>• Heading: 197.690 Degrees</li> <li>• Line Name: Bal2_28</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.7 Meters</li> <li>• Target Height: 0.3 Meters</li> <li>• Target Length: 1.8 Meters</li> <li>• Target Shadow: 0.8 Meters</li> <li>• Mag Anomaly: Bal2.M030</li> <li>• Classification1: tire</li> <li>• Description:</li> </ul>
	<p><b>Bal2.S0016</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 7:32:41 PM</li> <li>• Click Position 30.0895992301 -87.8316806485 (WGS84) (X) 419857.07 (Y) 3329005.37 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_27.jsf</li> <li>• Heading: 198.800 Degrees</li> <li>• Line Name: Bal2_27</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 1.5 Meters</li> <li>• Target Height: 0.6 Meters</li> <li>• Target Length: 3.4 Meters</li> <li>• Target Shadow: 0.7 Meters</li> <li>• Mag Anomaly: Bal2.M030</li> <li>• Classification1: cylinder</li> <li>• Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal2.S0017</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 3:11:29 AM</li> <li>● Click Position 30.0890981774 -87.8337396790 (WGS84) (X) 419658.25 (Y) 3328951.29 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_22.jsf</li> <li>● Heading: 348.100 Degrees</li> <li>● Line Name: Bal2_22</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.7 Meters</li> <li>● Target Height: 0.2 Meters</li> <li>● Target Length: 6.4 Meters</li> <li>● Target Shadow: 0.7 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: linear</li> <li>● Description:</li> </ul>
	<p><b>Bal2.S0018</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 12:01:43 AM</li> <li>● Click Position 30.0886146811 -87.8292072358 (WGS84) (X) 420094.63 (Y) 3328894.54 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_32.jsf</li> <li>● Heading: 200.100 Degrees</li> <li>● Line Name: Bal2_32</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.7 Meters</li> <li>● Target Height: 0.3 Meters</li> <li>● Target Length: 2.4 Meters</li> <li>● Target Shadow: 0.7 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: tire</li> <li>● Description:</li> </ul>
	<p><b>Bal2.S0019</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 7:52:17 PM</li> <li>● Click Position 30.0871470324 -87.8303618726 (WGS84) (X) 419982.18 (Y) 3328732.71 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_29.jsf</li> <li>● Heading: 344.000 Degrees</li> <li>● Line Name: Bal2_29</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.2 Meters</li> <li>● Target Height: 0.3 Meters</li> <li>● Target Length: 2.6 Meters</li> <li>● Target Shadow: 0.5 Meters</li> <li>● Mag Anomaly: Bal2.M035</li> <li>● Classification1: tire</li> <li>● Description:</li> </ul>
	<p><b>Bal2.S0020</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 1:29:18 AM</li> <li>● Click Position 30.0865815518 -87.8313689771 (WGS84) (X) 419884.67 (Y) 3328670.75 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_28.jsf</li> <li>● Heading: 197.190 Degrees</li> <li>● Line Name: Bal2_28</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.9 Meters</li> <li>● Target Height: 0.5 Meters</li> <li>● Target Length: 2.3 Meters</li> <li>● Target Shadow: 1.2 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: tire</li> <li>● Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal2.S0021</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 1:29:22 AM</li> <li>● Click Position 30.0864969876 -87.8315254364 (WGS84) (X) 419869.53 (Y) 3328661.49 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_28.jsf</li> <li>● Heading: 198.390 Degrees</li> <li>● Line Name: Bal2_28</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.2 Meters</li> <li>● Target Height: 0.5 Meters</li> <li>● Target Length: 1.7 Meters</li> <li>● Target Shadow: 1.8 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: tire</li> <li>● Description:</li> </ul>
	<p><b>Bal2.S0022</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 5:59:25 AM</li> <li>● Click Position 30.0860697115 -87.8381388959 (WGS84) (X) 419231.85 (Y) 3328618.79 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_14.jsf</li> <li>● Heading: 344.200 Degrees</li> <li>● Line Name: Bal2_14</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.8 Meters</li> <li>● Target Height: 0.5 Meters</li> <li>● Target Length: 1.5 Meters</li> <li>● Target Shadow: 1.0 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: tire</li> <li>● Description: Rationalized contact created from contacts: Contact0014, Contact0007</li> </ul>
	<p><b>Bal2.S0023</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 1:29:45 AM</li> <li>● Click Position 30.0860318332 -87.8314066014 (WGS84) (X) 419880.60 (Y) 3328609.86 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_28.jsf</li> <li>● Heading: 196.390 Degrees</li> <li>● Line Name: Bal2_28</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.6 Meters</li> <li>● Target Height: 0.3 Meters</li> <li>● Target Length: 2.7 Meters</li> <li>● Target Shadow: 0.7 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Description:</li> </ul>
	<p><b>Bal2.S0024</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 4/3/2020 8:06:10 AM</li> <li>● Click Position 30.0843216088 -87.8323540761 (WGS84) (X) 419787.92 (Y) 3328421.00 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_25.001.jsf</li> <li>● Heading: 193.190 Degrees</li> <li>● Line Name: Bal2_25.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 8.8 Meters</li> <li>● Target Height: 1.4 Meters</li> <li>● Target Length: 27.1 Meters</li> <li>● Target Shadow: 3.9 Meters</li> <li>● Mag Anomaly: Bal2.M036</li> <li>● Classification1: wreck</li> <li>● Description: Buffalo Barge 2</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal2.S0025</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 1:43:10 AM</li> <li>• Click Position 30.0840429096 -87.8324474359 (WGS84) (X) 419778.69 (Y) 3328390.18 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_26.jsf</li> <li>• Heading: 348.200 Degrees</li> <li>• Line Name: Bal2_26</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 6.4 Meters</li> <li>• Target Height: 1.1 Meters</li> <li>• Target Length: 6.9 Meters</li> <li>• Target Shadow: 3.2 Meters</li> <li>• Mag Anomaly: Bal2.M036</li> <li>• Classification1: wreck</li> <li>• Description: Buffalo Barge 2 bow</li> </ul>
	<p><b>Bal2.S0026</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 10:03:55 AM</li> <li>• Click Position 30.0804153950 -87.8443370658 (WGS84) (X) 418629.90 (Y) 3327996.60 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_02.jsf</li> <li>• Heading: 348.390 Degrees</li> <li>• Line Name: Bal2_02</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 8.7 Meters</li> <li>• Target Height: 1.3 Meters</li> <li>• Target Length: 18.0 Meters</li> <li>• Target Shadow: 3.0 Meters</li> <li>• Mag Anomaly: Bal2.M039</li> <li>• Classification1: wreck</li> <li>• Description: Hopper barge</li> </ul>
	<p><b>Bal2.S0027</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 4/3/2020 2:01:09 PM</li> <li>• Click Position 30.0797042220 -87.8405889246 (WGS84) (X) 418990.55 (Y) 3327915.13 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: H:\Offshore Alabama 2020\RAW\SSS\Bal2\Bal2_09.jsf</li> <li>• Heading: 199.000 Degrees</li> <li>• Line Name: Bal2_09</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 8.6 Meters</li> <li>• Target Height: 1.5 Meters</li> <li>• Target Length: 17.9 Meters</li> <li>• Target Shadow: 3.7 Meters</li> <li>• Mag Anomaly: Bal2.M041</li> <li>• Classification1: wreck</li> <li>• Description: Hopper barge</li> </ul>

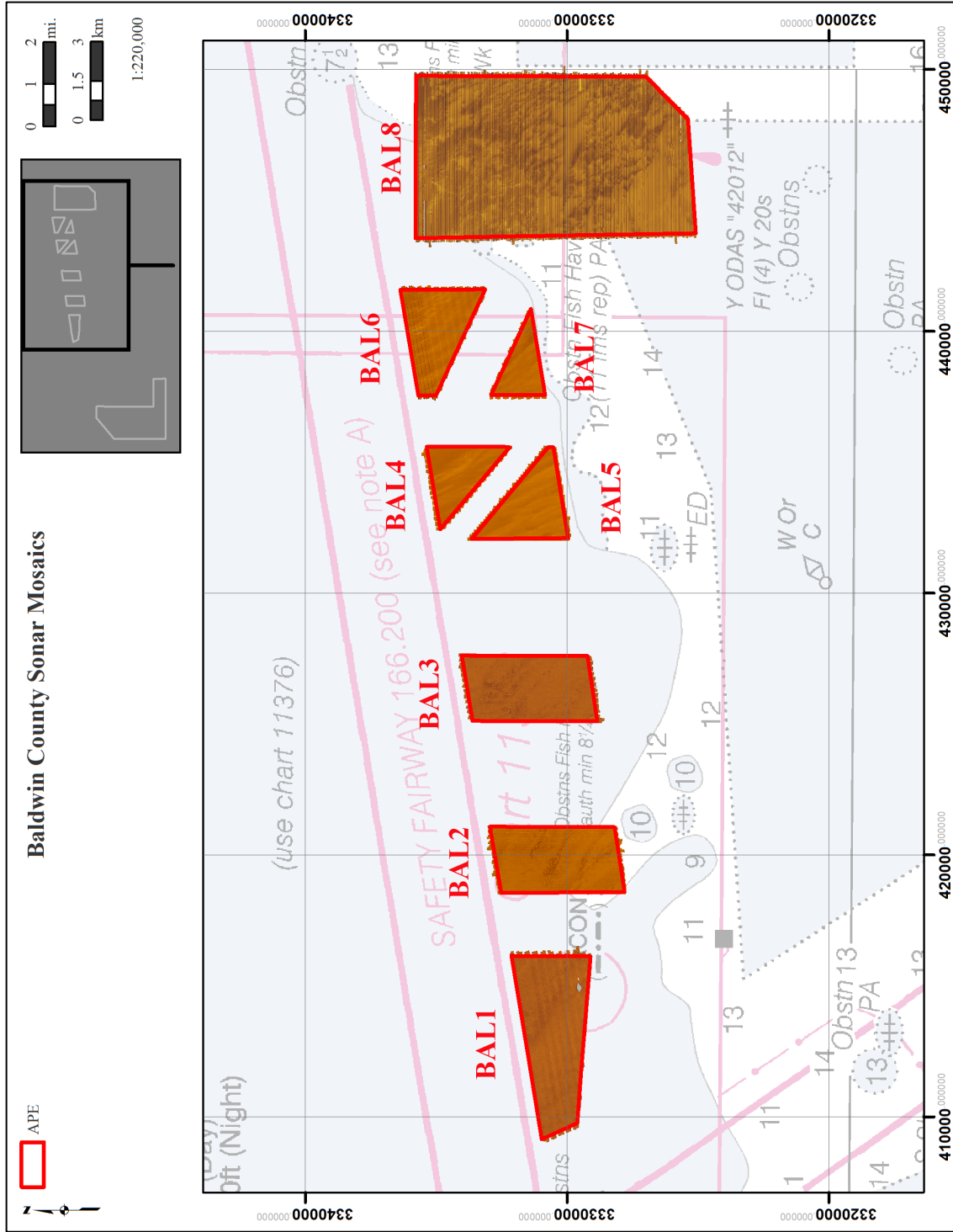


Figure E-1. Sonar Mosaics showing coverage for all Baldwin Cells (SAM-2014-00487-DEM) including BAL2.

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## **APPENDIX F: BAL2 MAGNETIC CONTOUR MAPS**

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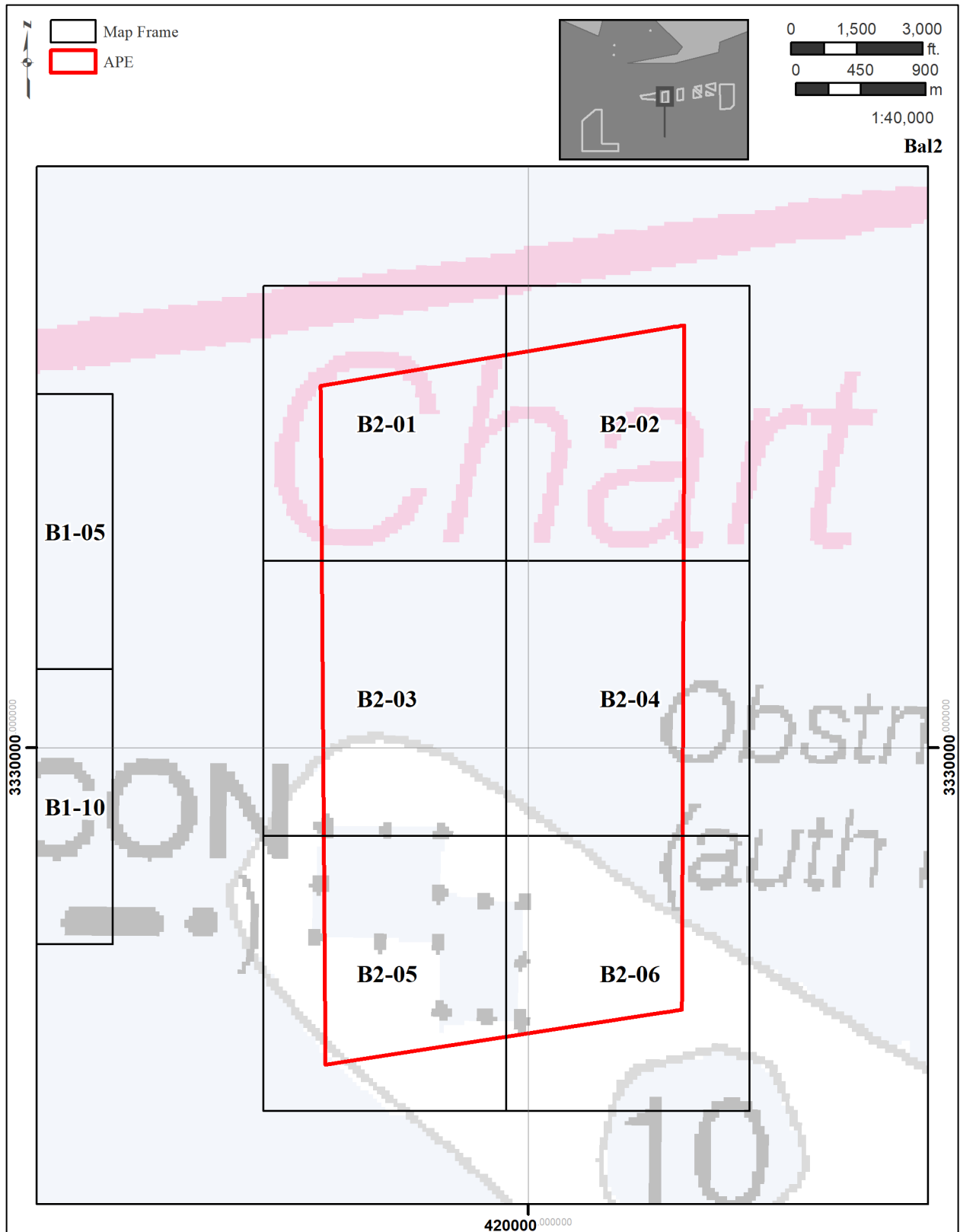


Figure F-01. Magnetic Contour Map Key for BAL2 (SAM-2014-00487-DEM).

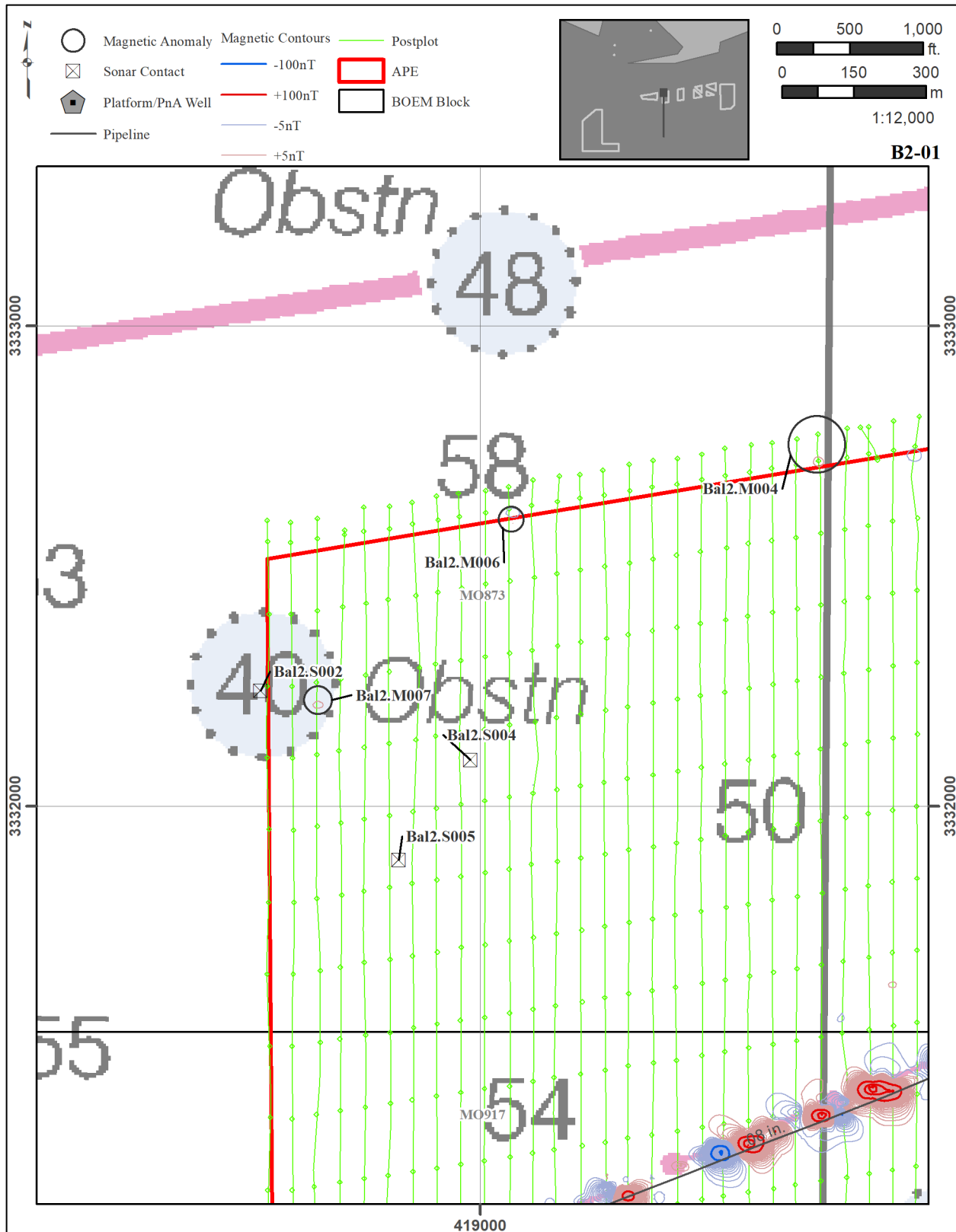


Figure F-02. BAL2 Map 1.

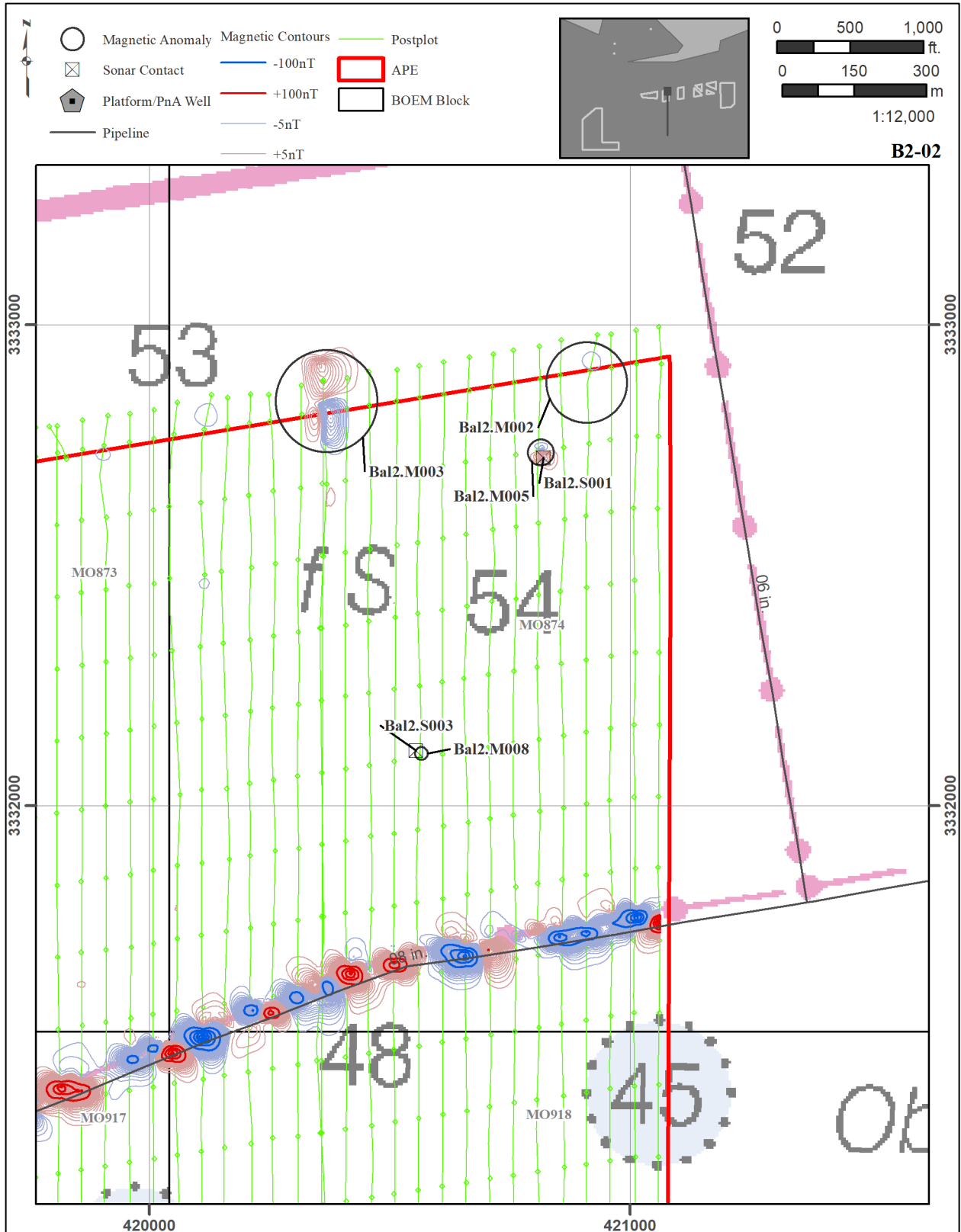


Figure F-03. BAL2 Map 2.

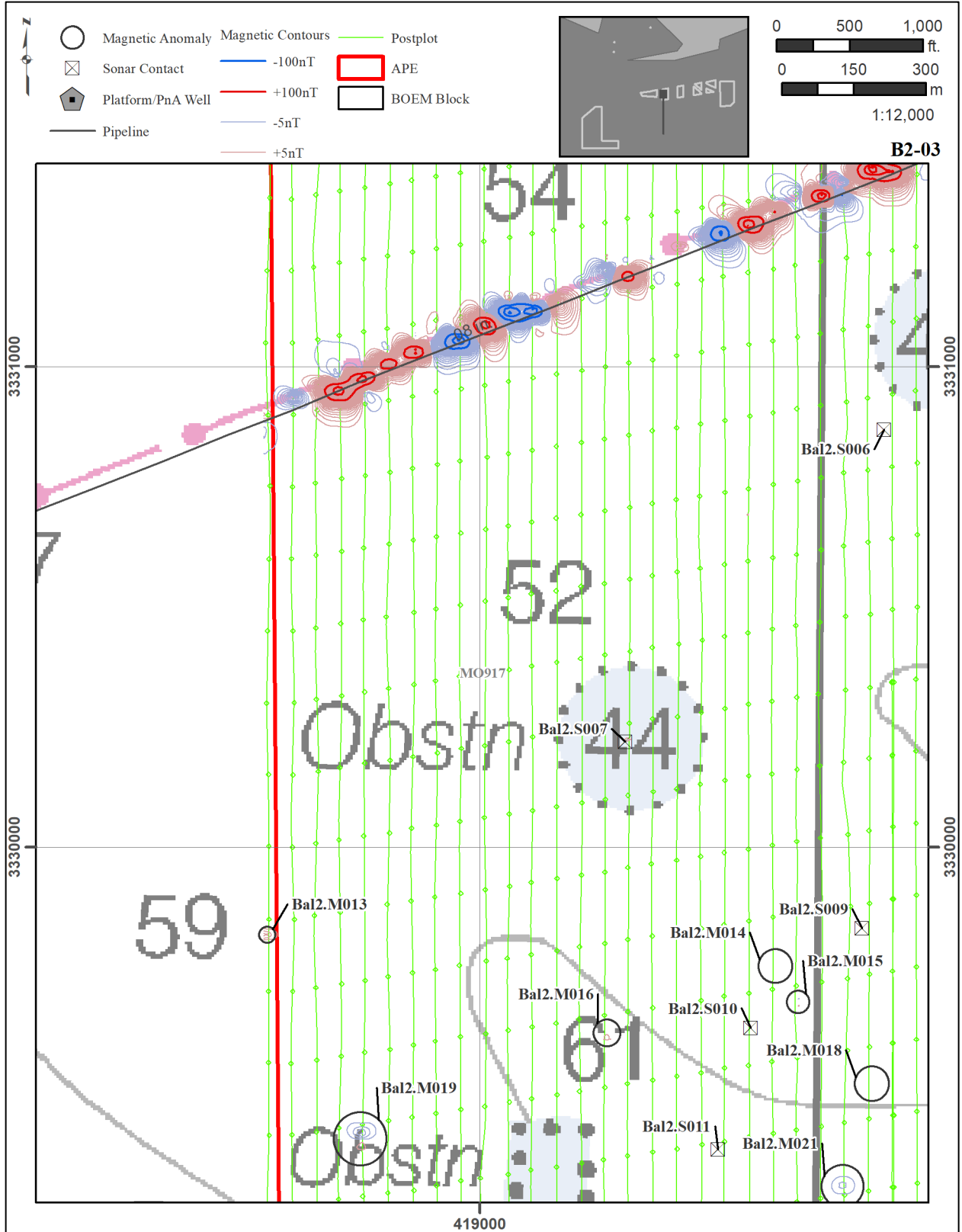


Figure F-04. BAL2 Map 3.

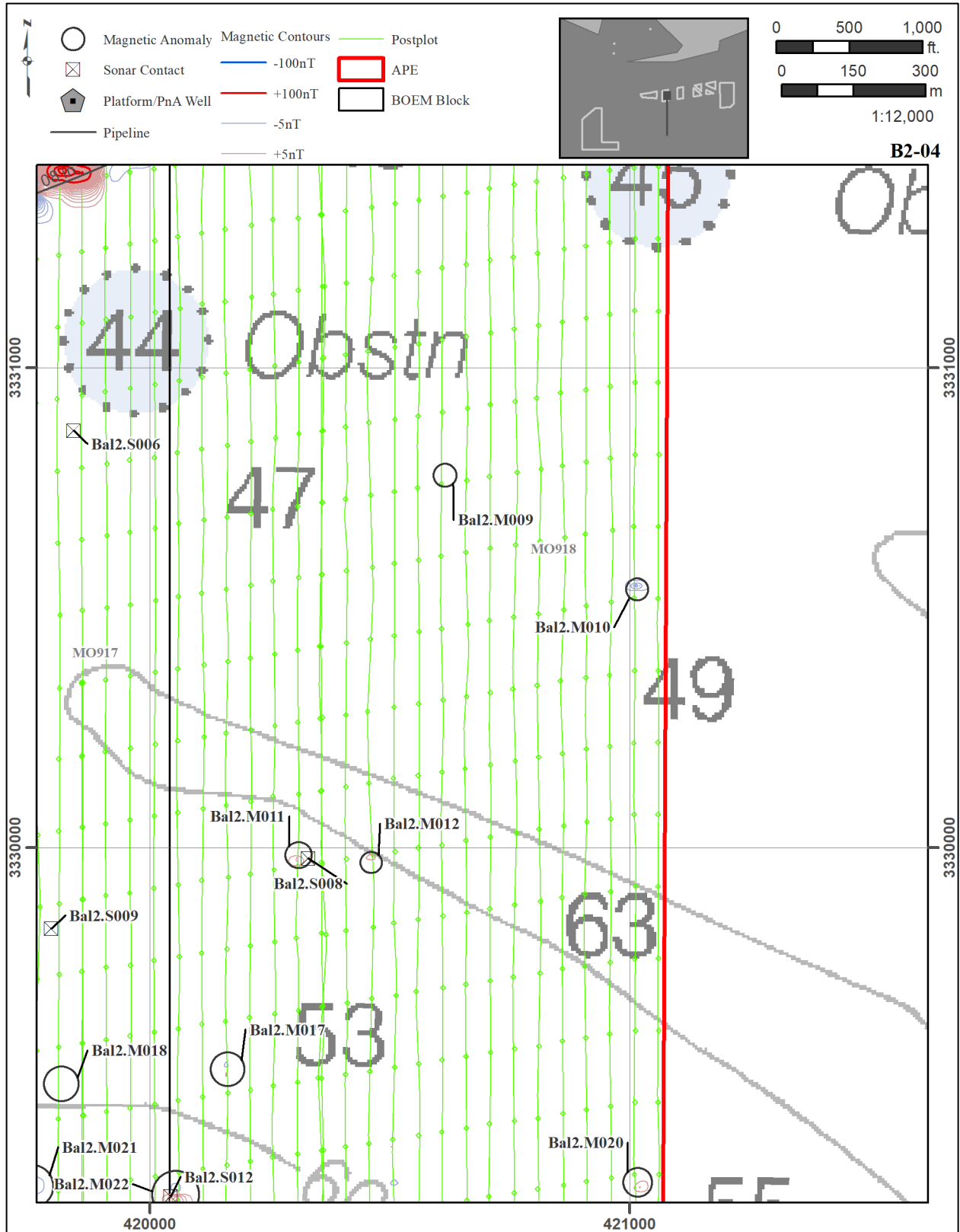


Figure F-05. BAL2 Map 4.

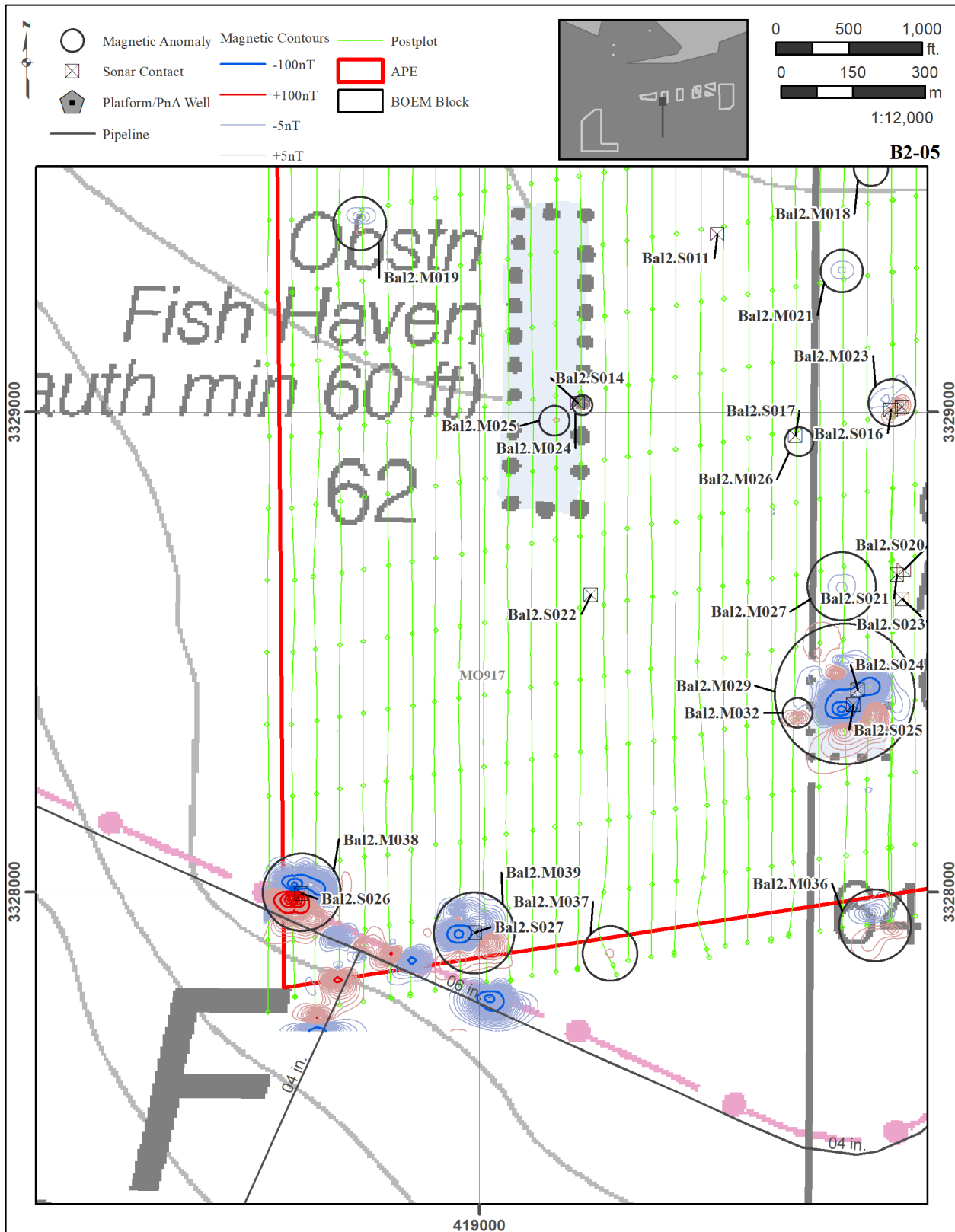


Figure F-06. BAL2 Map 5.

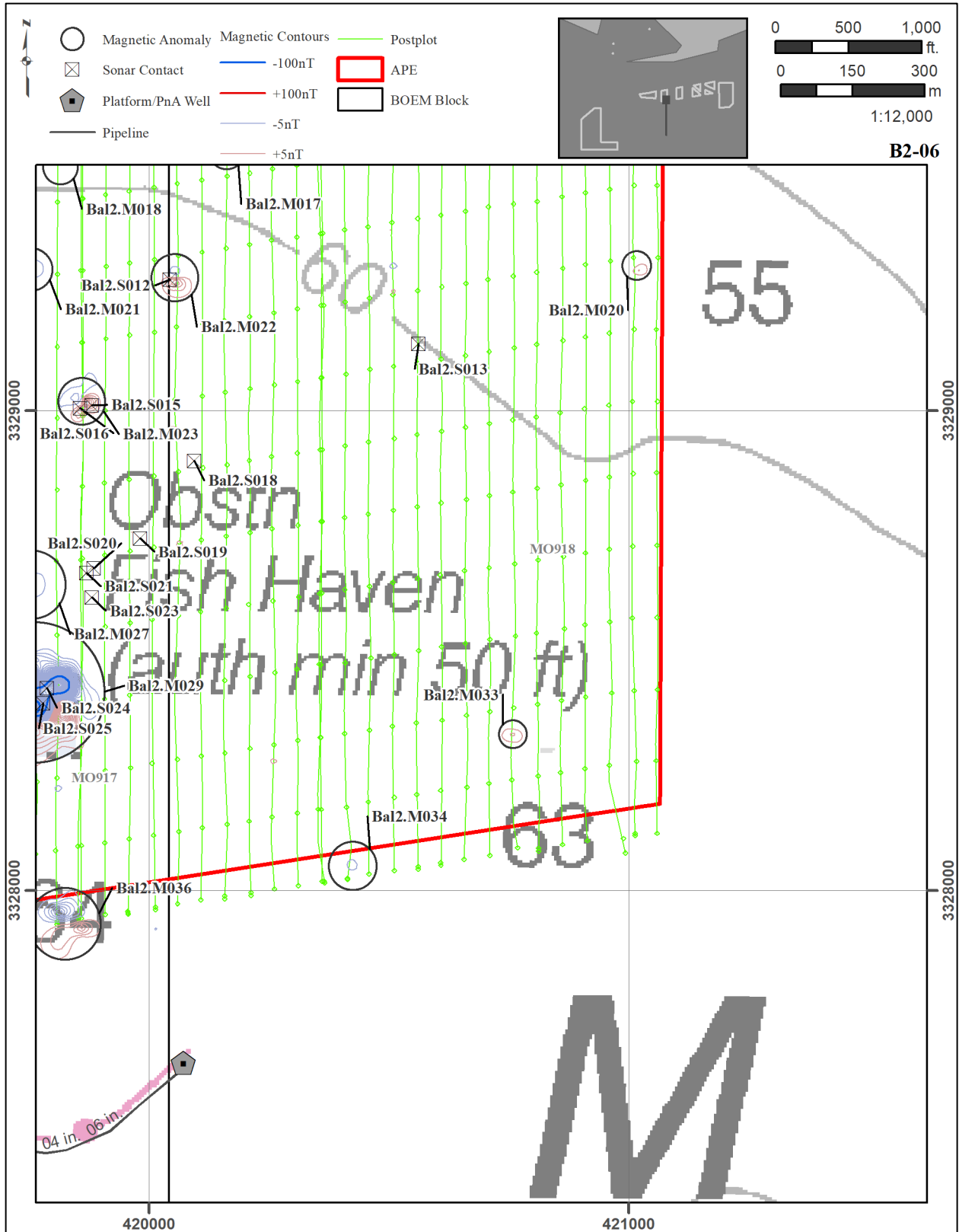


Figure F-07. BAL2 Map 6.

## **APPENDIX G: BAL3 REMOTE SENSING DATA**

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Table G-1. Magnetic Anomalies Recorded for the BAL3 Cell.

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal3.M001	425133	3333636	D	17	6.2		SPS		B3-01	PE837
Bal3.M002	427529	3333610	D	61	5.0		SPS		B3-02	PE837
Bal3.M003	425275	3333592	D	29	37.1		SPS		B3-01	PE837
Bal3.M004	426981	3333403	D	27	15.7		SPS		B3-02	PE837
Bal3.M005	426127	3333291	D	41	5.5		SPS		B3-01	PE837
Bal3.M006	427020	3333286	D	37	26.5		SPS		B3-02	PE837
Bal3.M007	426224	3333235	D	21	63.9		SPS		B3-01	PE837
Bal3.M008	425577	3333232	D	40	13.1		SPS		B3-01	PE837
Bal3.M009	426325	3333262	D	24	27.5		SPS		B3-01	PE837
Bal3.M010	426627	3333205	C	145	13.4		SPS		B3-02	PE837
Bal3.M011	426464	3333199	D	59	14.4		SPS		B3-02	PE837
Bal3.M012	426379	3333190	D	16	8.7		SPS		B3-02	PE837
Bal3.M013	425376	3333008	D	24	5.6		SPS		B3-01	PE837
Bal3.M014	425128	3332964	D	27	22.9		SPS		B3-01	PE837
Bal3.M015	427125	3332798	D	26	35.7		SPS		B3-02	PE837
Bal3.M016	425372	3332749	D	28	7.4		SPS		B3-01	PE837
Bal3.M017	426120	3332632	D	153	5.6		SPS		B3-01	PE837
Bal3.M018	426575	3332484	D	46	16.3		debris	Bal3 .S00 1	B3-02	PE837
Bal3.M019	426415	3332369	D	22	8.7		SPS		B3-02	PE837
Bal3.M020	425120	3332346	D	26	18.7		SPS		B3-03	PE837
Bal3.M021	426772	3332313	D	29	59.2		debris	Bal3 .S00 2	B3-04	PE837
Bal3.M022	425972	3332303	D	125	9.3		SPS		B3-03	PE837
Bal3.M023	427118	3332180	D	165	7.3		buried geological feature		B3-04	PE837
Bal3.M024	427368	3332174	D	123	5.2		buried geological feature		B3-04	PE837
Bal3.M025	427518	3332108	D	172	10.3		buried geological feature		B3-04	PE837
Bal3.M026	427167	3332092	D	210	8.4		buried geological feature		B3-04	PE837
Bal3.M027	427567	3332084	D	180	10.1		buried geological feature		B3-04	PE837
Bal3.M028	427258	3332064	D	170	9.8		buried geological feature		B3-04	PE837
Bal3.M029	426516	3331996	D	152	6.5		SPS		B3-04	PE837
Bal3.M030	425918	3331989	D	33	6.0		SPS		B3-03	PE837
Bal3.M031	427609	3331978	D	188	12.3		buried geological feature		B3-04	PE837
Bal3.M032	426367	3331925	D	73	7.9		SPS		B3-03	PE837
Bal3.M033	426111	3331881	D	189	9.8		SPS		B3-03	PE837
Bal3.M034	426167	3331839	D	141	8.6		SPS		B3-03	PE837
Bal3.M035	425319	3331806	D	27	13.2		SPS		B3-03	PE837
Bal3.M036	425810	3331734	D	23	6.7		SPS		B3-03	PE837
Bal3.M037	425963	3331711	D	180	8.8		SPS		B3-03	PE837
Bal3.M038	427559	3331238	D	60	9.6		SPS		B3-04	PE881
Bal3.M039	425644	3330432	D	25	8.1		SPS		B3-05	PE881
Bal3.M041	425702	3330316	D	34	17.0		SPS		B3-05	PE881

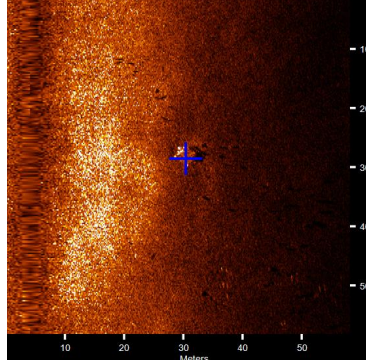
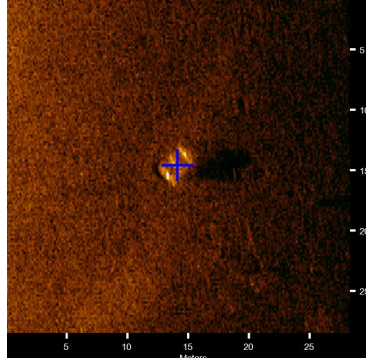
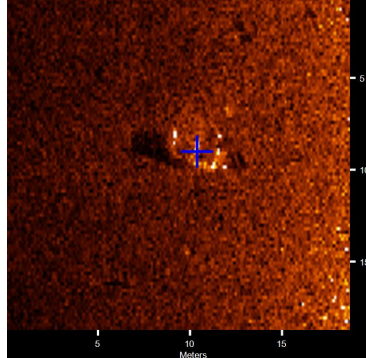
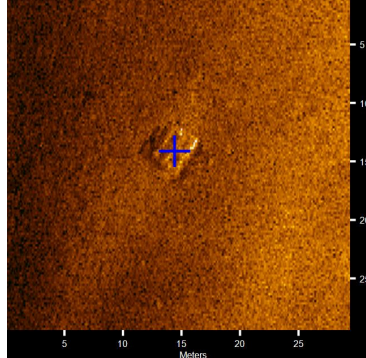
Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal3.M042	425146	3330289	D	115	5.8		SPS		B3-05	PE881
Bal3.M043	426553	3330209	D	91	8.1		SPS		B3-06	PE881
Bal3.M044	426752	3330144	D	121	7.2		SPS		B3-06	PE881
Bal3.M045	427097	3330069	D	152	6.0		buried geological feature		B3-06	PE881
Bal3.M046	427151	3330008	D	147	8.3		buried geological feature		B3-06	PE881
Bal3.M047	427301	3329985	D	153	8.4		buried geological feature		B3-06	PE881
Bal3.M048	427350	3329959	D	104	7.9		buried geological feature		B3-06	PE881
Bal3.M049	427188	3329919	D	148	10.9		buried geological feature		B3-06	PE881
Bal3.M050	427243	3329907	D	141	9.4		buried geological feature		B3-06	PE881
Bal3.M051	427493	3329879	D	118	5.9		SPS		B3-06	PE881
Bal3.M052	426496	3329868	D	163	11.3		buried geological feature		B3-06	PE881
Bal3.M053	426297	3329857	D	105	6.9		buried geological feature		B3-05	PE881
Bal3.M054	426350	3329838	D	181	12.0		buried geological feature		B3-05	PE881
Bal3.M055	426549	3329825	D	153	11.8		buried geological feature		B3-06	PE881
Bal3.M056	426189	3329814	D	53	5.8		buried geological feature		B3-05	PE881
Bal3.M057	426240	3329808	D	153	10.9		buried geological feature		B3-05	PE881
Bal3.M058	426751	3329793	D	187	8.6		SPS		B3-06	PE881
Bal3.M059	426388	3329786	D	218	13.5		buried geological feature		B3-06	PE881
Bal3.M060	427146	3329654	D	245	11.4		buried geological feature		B3-06	PE881
Bal3.M061	427184	3329583	D	174	11.5		buried geological feature		B3-06	PE881
Bal3.M062	427294	3329566	D	174	11.1		buried geological feature		B3-06	PE881
Bal3.M063	427345	3329555	D	198	8.0		buried geological feature		B3-06	PE881
Bal3.M064	427239	3329530	D	184	12.6		buried geological feature		B3-06	PE881
Bal3.M065	426146	3329433	D	59	8.3		SPS		B3-05	PE881
Bal3.M066	426236	3329313	D	174	10.8		SPS		B3-05	PE881
Bal3.M067	425739	3329247	D	130	7.9		SPS		B3-05	PE881
Bal3.M068	427235	3329170	D	40	16.3		debris	Bal3.S004	B3-06	PE881
Bal3.M069	425294	3328969	D	31	8.3		SPS		B3-05	PE881
Bal3.M070	425431	3328948	D	41	10.2		SPS		B3-05	PE881

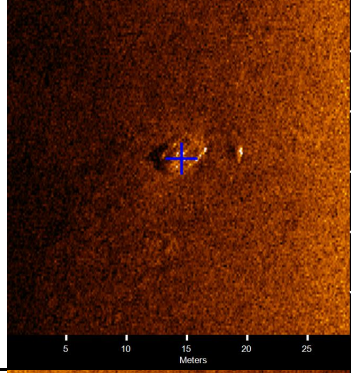
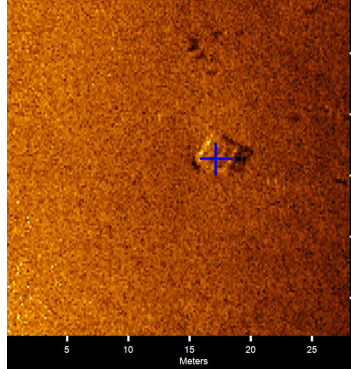
\* M = Monopole, D = Dipole, MC = Multi Component.

Table G-2. Sonar Contacts for the BAL3 Cell.

Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal3.S001	426596	3332470	debris	0.0	0.0	0.0	Bal3.M018	B3-02	PE837
Bal3.S002	426776	3332291	debris	2.8	2.0	0.9	Bal3.M021	B3-04	PE837
Bal3.S003	426844	3332297	debris	3.2	1.6	1.0		B3-04	PE837
Bal3.S004	427250	3329194	debris	3.7	2.7	0.0	Bal3.M068	B3-06	PE881
Bal3.S005	427489	3332648	debris	3.9	2.6	0.5		B3-02	PE837
Bal3.S006	427576	3331205	debris	2.8	2.6	0.4		B3-04	PE881

Table G-3. Acoustic Target Images recorded for the BAL3 Cell.

Target Image	Target Info	User Entered Info
	<p><b>Bal3.S001</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1212890218 -87.7619981416 (WGS84) (X) 426595.50 (Y) 3332470.24 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: C:\Users\Tardis\Desktop\Bal3\Bal3_31.jsf</li> <li>Heading: 195.000 Degrees</li> <li>Line Name: Bal3_31</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.00 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 0.00 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>Bal3.S002</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1196806940 -87.7601148450 (WGS84) (X) 426775.74 (Y) 3332290.81 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: C:\Users\Tardis\Desktop\Bal3\Bal3_35.jsf</li> <li>Heading: 194.300 Degrees</li> <li>Line Name: Bal3_35</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.98 Meters</li> <li>Target Height: 0.92 Meters</li> <li>Target Length: 2.84 Meters</li> <li>Target Shadow: 4.57 Meters</li> <li>Mag Anomaly:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>Bal3.S003</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1197423859 -87.7594082598 (WGS84) (X) 426843.85 (Y) 3332297.19 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: C:\Users\Tardis\Desktop\Bal3\Bal3_35.jsf</li> <li>Heading: 195.190 Degrees</li> <li>Line Name: Bal3_35</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.59 Meters</li> <li>Target Height: 0.98 Meters</li> <li>Target Length: 3.15 Meters</li> <li>Target Shadow: 2.24 Meters</li> <li>Mag Anomaly:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>Bal3.S004</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0917625455 -87.7549775671 (WGS84) (X) 427250.19 (Y) 3329193.78 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: C:\Users\Tardis\Desktop\Bal3\Bal3_45.jsf</li> <li>Heading: 349.500 Degrees</li> <li>Line Name: Bal3_45</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.74 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 3.67 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal3.S005</b></p> <ul style="list-style-type: none"> <li>Click Position: 30.1229491480 -87.7527312181 (WGS84) (X) 427489.43 (Y) 3332648.29 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: C:\Users\Tardis\Desktop\Bal3\Bal3_49.jsf</li> <li>Heading: 346.600 Degrees</li> <li>Line Name: Bal3_49</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.58 Meters</li> <li>Target Height: 0.50 Meters</li> <li>Target Length: 3.90 Meters</li> <li>Target Shadow: 1.50 Meters</li> <li>Mag Anomaly:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>Bal3.S006</b></p> <ul style="list-style-type: none"> <li>Click Position: 30.1099262599 -87.7517314771 (WGS84) (X) 427576.24 (Y) 3331204.53 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: C:\Users\Tardis\Desktop\Bal3\Bal3_51.jsf</li> <li>Heading: 201.500 Degrees</li> <li>Line Name: Bal3_51</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.61 Meters</li> <li>Target Height: 0.45 Meters</li> <li>Target Length: 2.80 Meters</li> <li>Target Shadow: 1.27 Meters</li> <li>Mag Anomaly:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>



## **APPENDIX H: BAL3 MAGNETIC CONTOUR MAPS**

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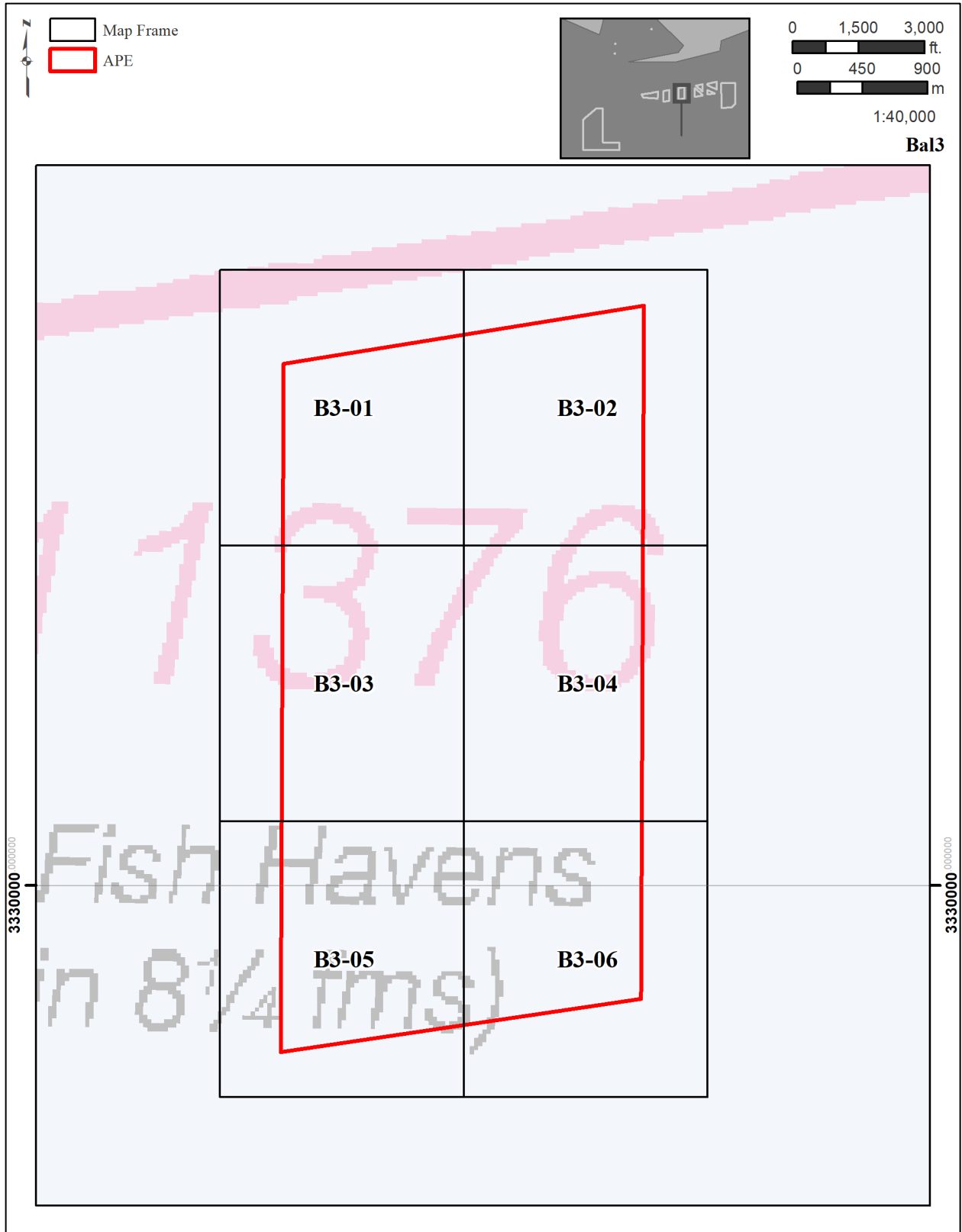


Figure H-01. Magnetic Contour Map Key for BAL3 (SAM-2014-00487-DEM).

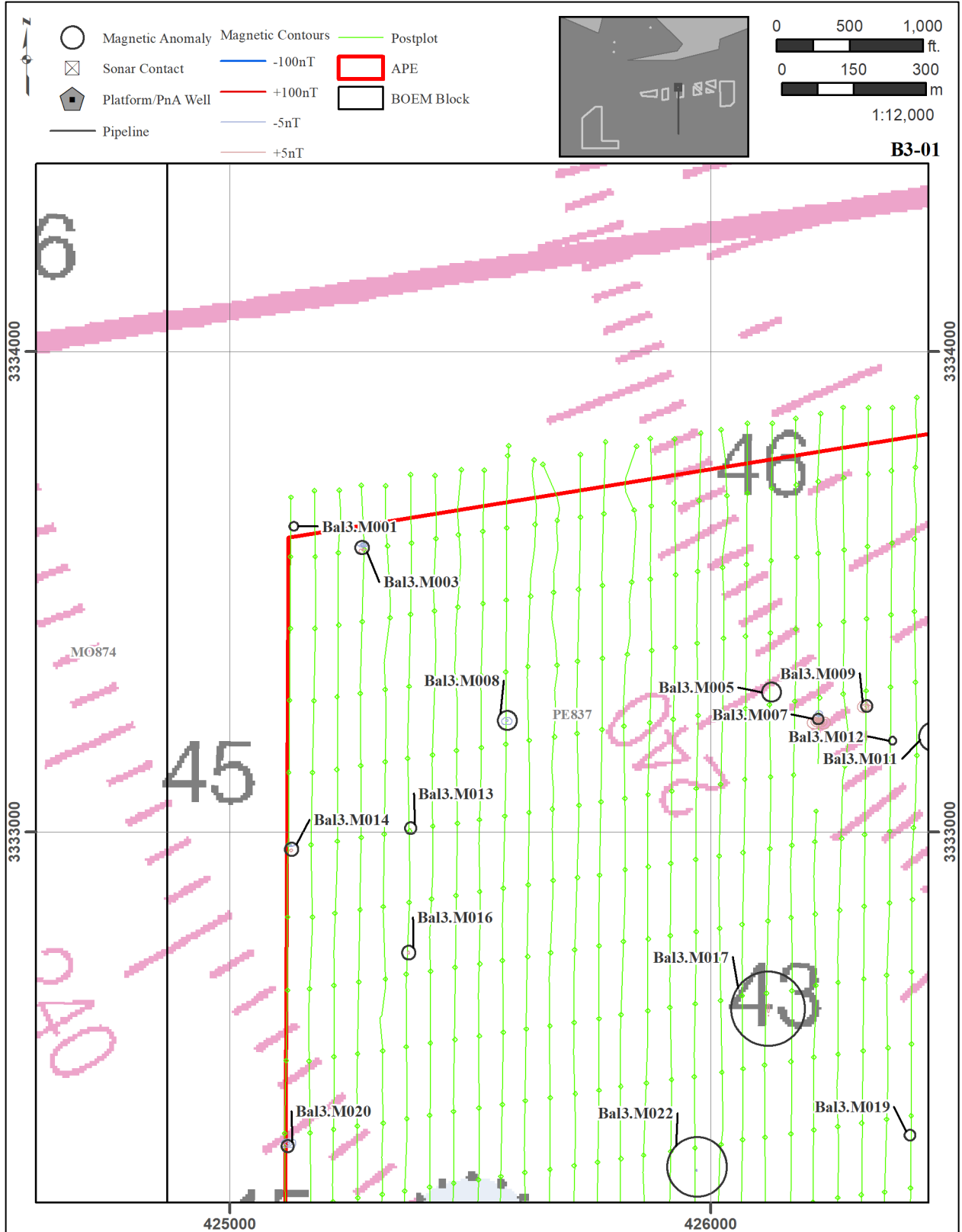


Figure H-02. BAL3 Map 1.

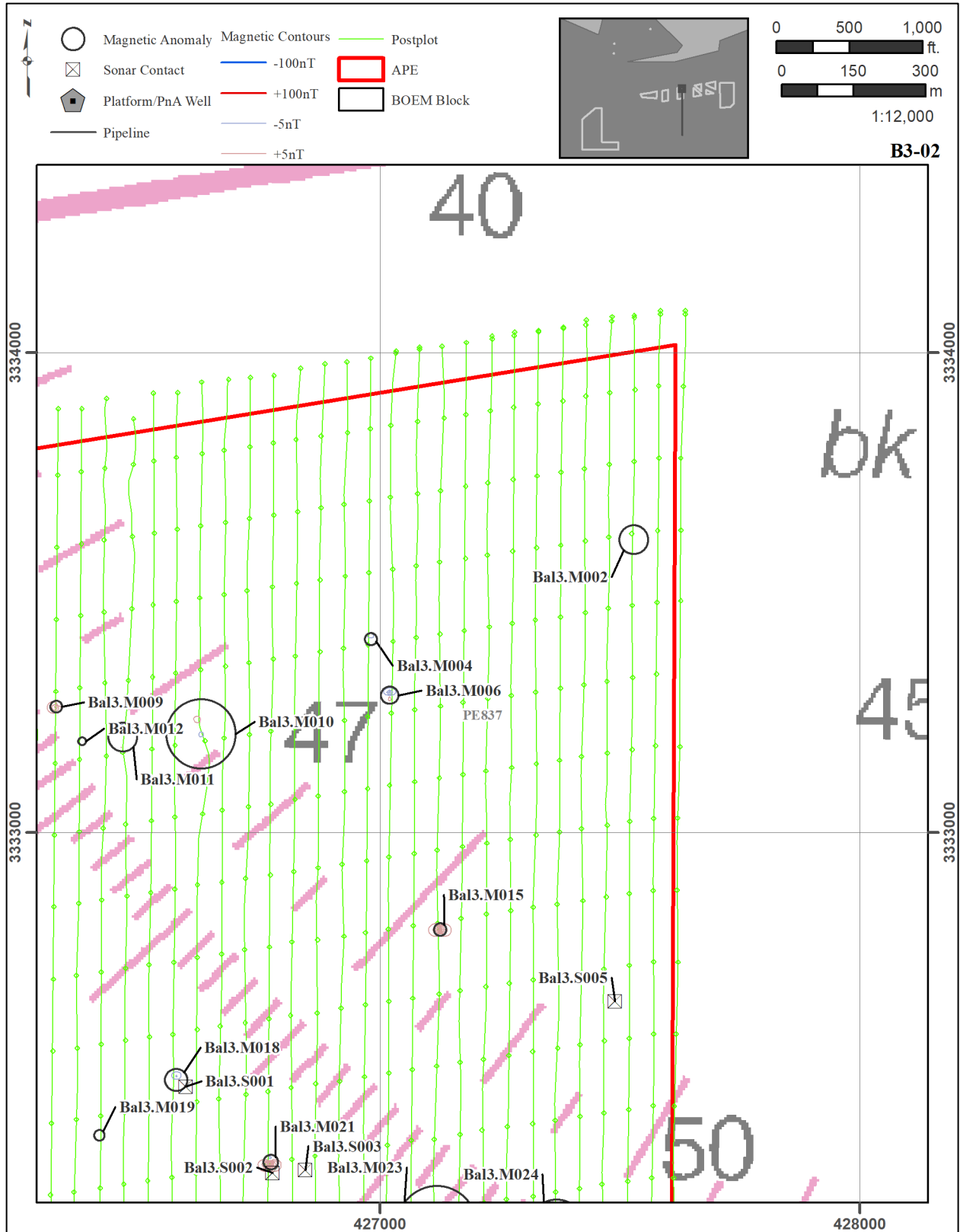


Figure H-03. BAL3 Map 2.

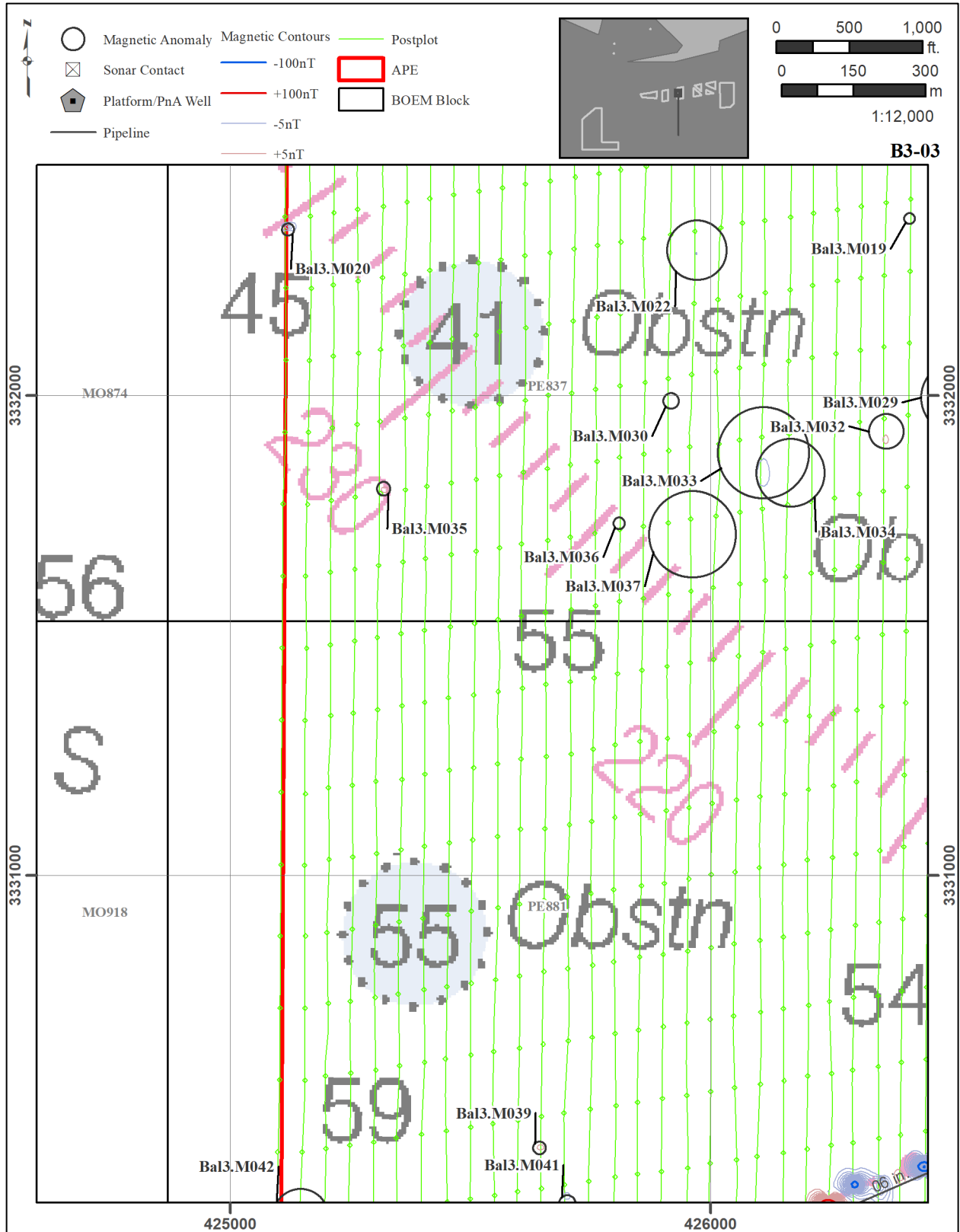


Figure H-04. BAL3 Map 3.

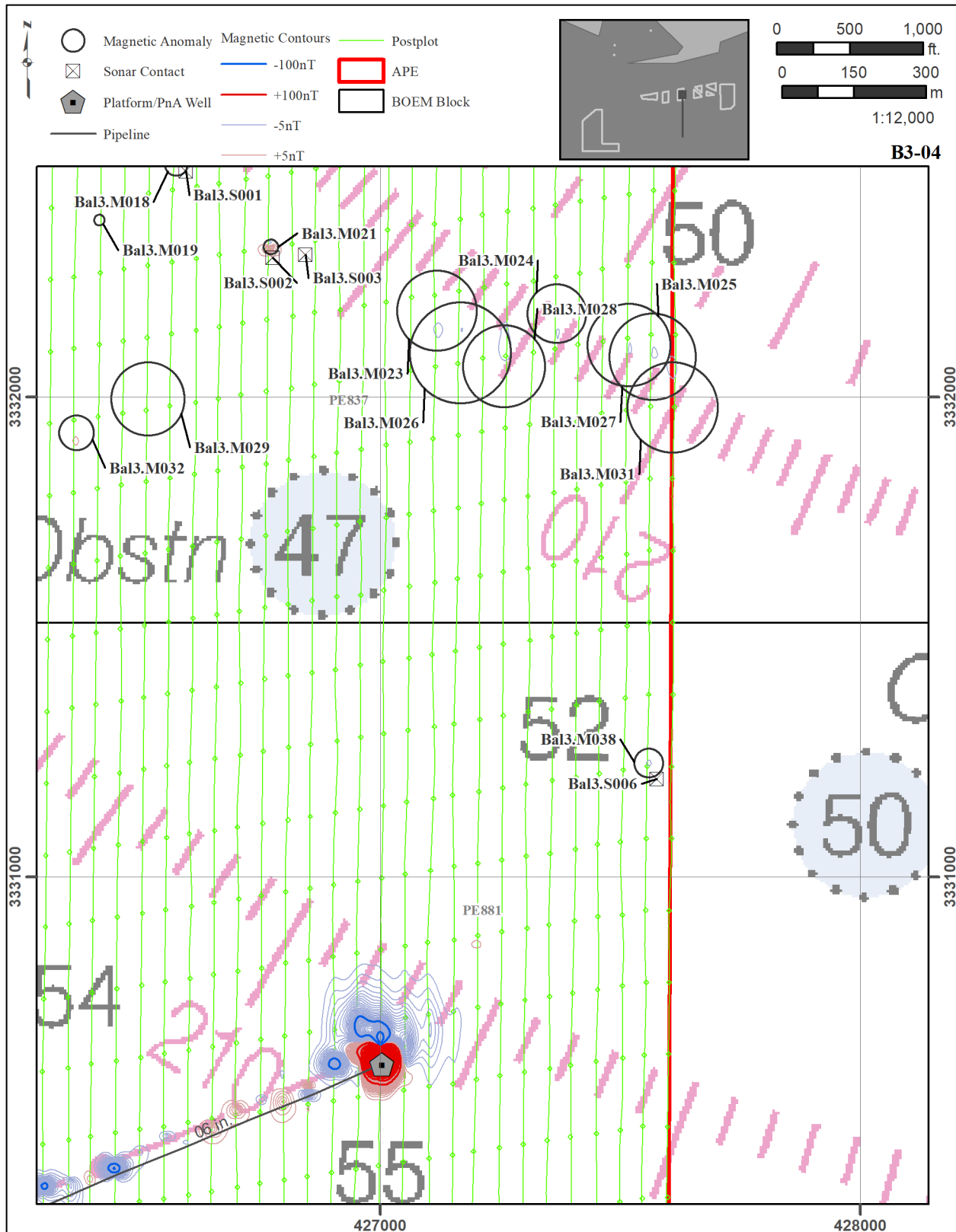


Figure H-05. BAL3 Map 4.

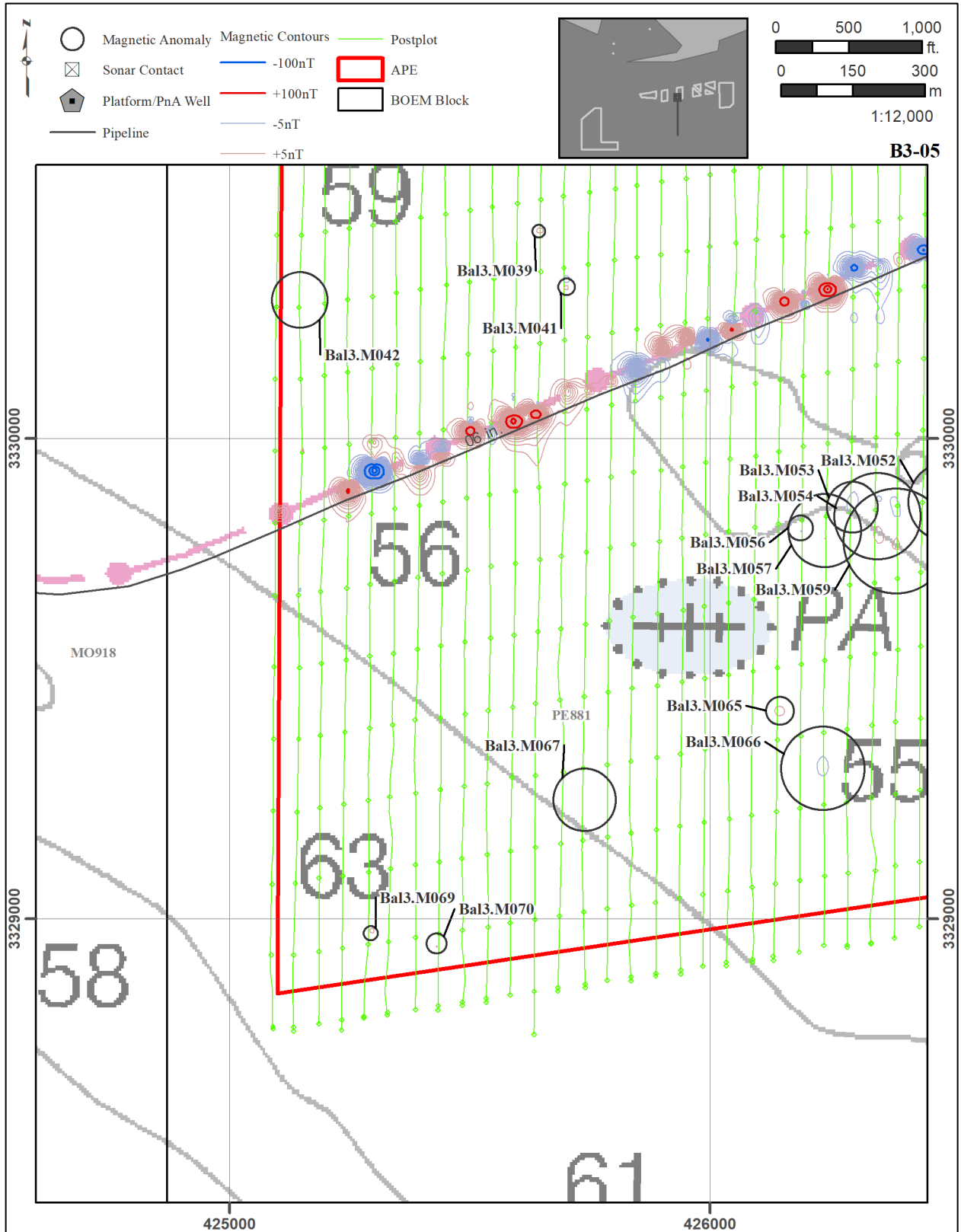


Figure H-06. BAL3 Map 5.

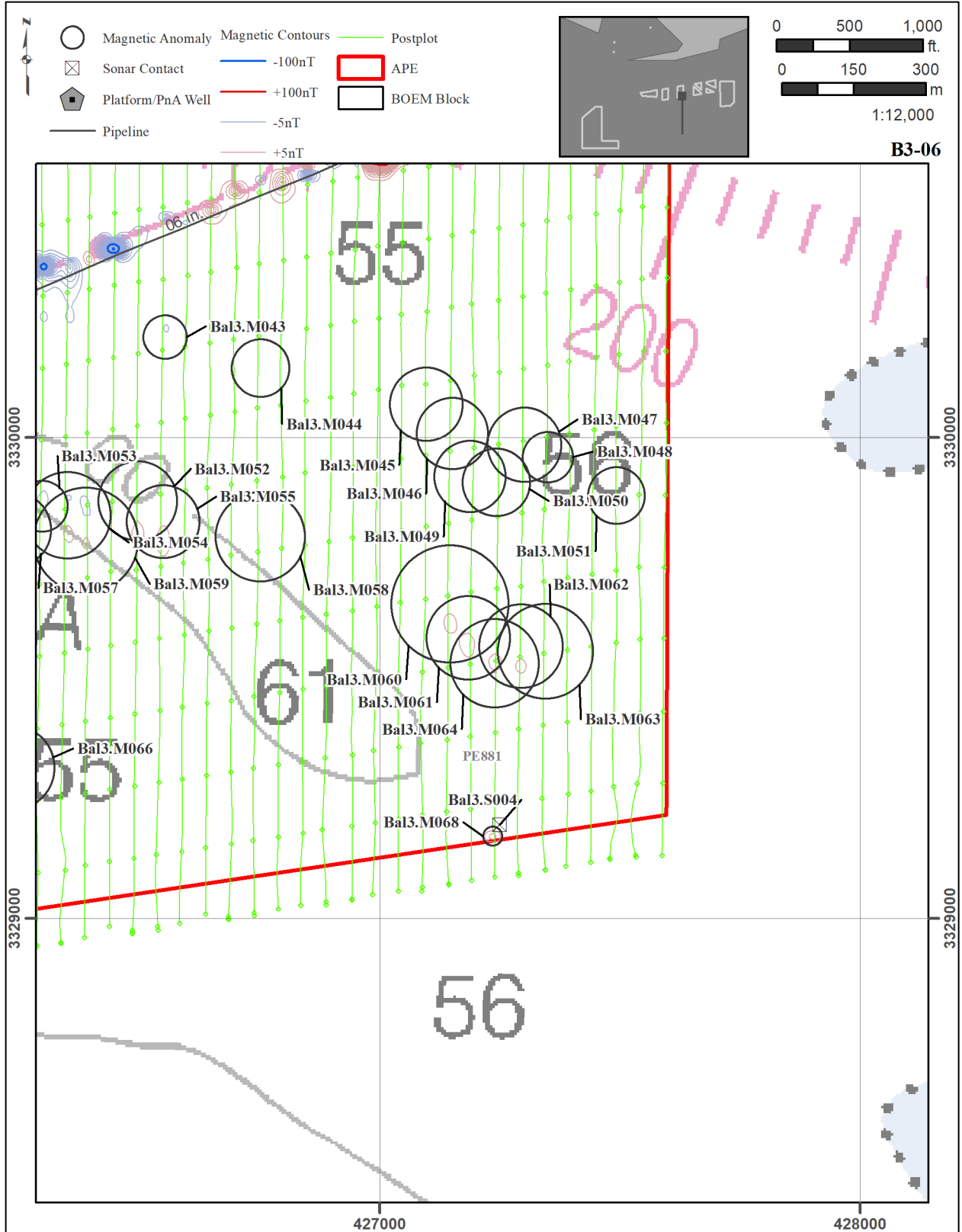


Figure H-07. BAL3 Map 6.

## **APPENDIX I: BAL4 & BAL5 REMOTE SENSING DATA**

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Table I-1. Magnetic Anomalies Recorded for the BAL4 &amp; BAL5 Cells.

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
<b>BAL4</b>										
Bal4.M001	433466	3334248	D	88	10.4		debris	Bal4.S007	B4n5-02	PE838
Bal4.M002	433322	3334279	D	43	16.2		SPS		B4n5-02	PE838
Bal4.M003	433922	3333913	D	45	15.2		SPS		B4n5-02	PE838
Bal4.M004	435012	3334770	D	47	21.5		SPS		B4n5-03	PE839
Bal4.M005	435014	3335265	D	45	24.5		SPS		B4n5-03	PE839
Bal4.M006	435063	3334375	D	57	25.3		debris	Bal4.S005	B4n5-03	PE839
Bal4.M007	433664	3334636	M	23	26.4		SPS		B4n5-02	PE838
Bal4.M008	434519	3333777	D	50	36.6		SPS		B4n5-03	PE839
Bal4.M009	434920	3333403	D	45	55.6		SPS		B4n5-06	PE839
Bal4.M010	434569	3333692	M	29	7.7		SPS		B4n5-03	PE839
Bal4.M011	435058	3335305	M	91	9.6		SPS		B4n5-03	PE839
Bal4.M012	435118	3333362	D	108	10.0		SPS		B4n5-06	PE839
<b>BAL5</b>										
Bal5.M001	433026	3332801	D	35	4.7		SPS		B4n5-05	PE838
Bal5.M002	433131	3332794	M	19	22.1		debris	Bal5.S008	B4n5-05	PE838
Bal5.M003	432831	3332672	D	28	13.3		SPS		B4n5-05	PE838
Bal5.M004	432127	3332668	D	26	11.9		SPS		B4n5-04	PE838
Bal5.M005	433325	3332497	D	54	91.5		SPS		B4n5-05	PE838
Bal5.M006	432129	3332377	D	27	11.2		SPS		B4n5-04	PE838
Bal5.M007	432827	3332222	M	21	12.6		SPS		B4n5-05	PE838
Bal5.M008	433929	3332087	M	31	4.0		SPS		B4n5-05	PE838
Bal5.M009	433327	3332013	D	35	11.4		SPS		B4n5-05	PE838
Bal5.M010	432873	3332013	D	34	21.9		SPS		B4n5-05	PE838
Bal5.M011	432627	3331999	D	38	9.3		SPS		B4n5-04	PE838
Bal5.M012	433028	3331965	D	44	11.0		debris	Bal5.S009	B4n5-05	PE838
Bal5.M013	434031	3331911	M	37	8.7		SPS		B4n5-05	PE838
Bal5.M014	433371	3331833	M	19	53.6		SPS		B4n5-05	PE838
Bal5.M015	432330	3331558	M	46	6.3		SPS		B4n5-07	PE838
Bal5.M016	432429	3331544	D	42	8.4		SPS		B4n5-07	PE838
Bal5.M017	432129	3331527	M	35	6.2		SPS		B4n5-07	PE838
Bal5.M018	433572	3331489	D	35	73.9		debris	Bal5.S006	B4n5-08	PE882
Bal5.M019	432770	3331432	D	35	92.2		debris	Bal5.M019	B4n5-07	PE882
Bal5.M020	433829	3331303	D	50	10.1		SPS		B4n5-08	PE882
Bal5.M021	433929	3331246	D	31	5.5		SPS		B4n5-08	PE882
Bal5.M022	433531	3331020	M	36	5.2		SPS		B4n5-08	PE882
Bal5.M023	434672	3330952	M	32	19.7		SPS		B4n5-09	PE883
Bal5.M024	433529	3330907	M	43	4.8		SPS		B4n5-08	PE882
Bal5.M025	433426	3330877	D	26	41.6		debris	Bal5.S019	B4n5-08	PE882
Bal5.M026	433129	3330861	M	41	6.3		SPS		B4n5-08	PE882
Bal5.M027	434774	3330813	D	49	68.4		debris	Bal5.S002	B4n5-09	PE883
Bal5.M028	432270	3330764	M	25	36.6		SPS		B4n5-07	PE882
Bal5.M029	434530	3330681	D	31	6.3		SPS		B4n5-09	PE883
Bal5.M030	433073	3330656	M	27	28.8		SPS		B4n5-08	PE882

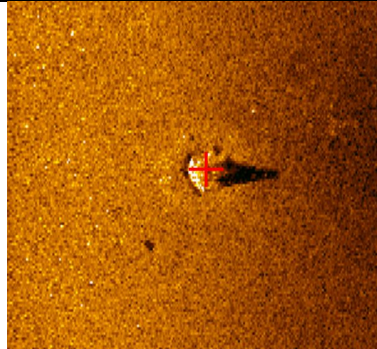
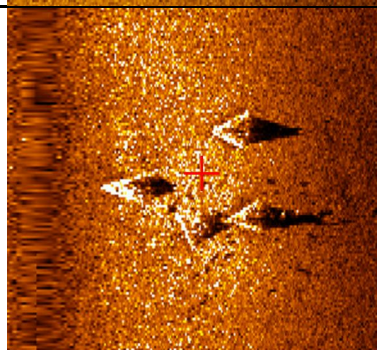

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal5.M031	434629	3330655	D	33	25.2		SPS		B4n5-09	PE883
Bal5.M032	432126	3330575	M	30	6.9		debris	Bal5.S018	B4n5-07	PE882
Bal5.M033	432728	3330491	M	33	8.2		SPS		B4n5-07	PE882
Bal5.M034	434429	3330432	M	34	23.9		SPS		B4n5-08	PE882
Bal5.M035	433431	3330368	D	39	7.3		SPS		B4n5-08	PE882
Bal5.M036	433469	3330353	D	52	13.3		SPS		B4n5-08	PE882
Bal5.M037	433627	3330271	D	37	41.3		SPS		B4n5-08	PE882

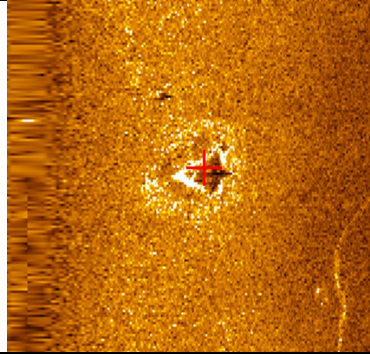
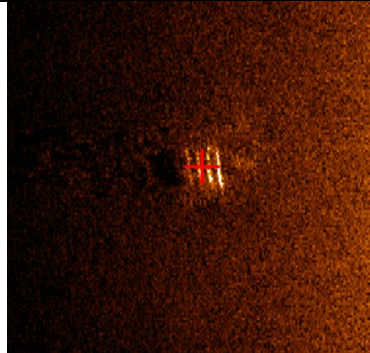
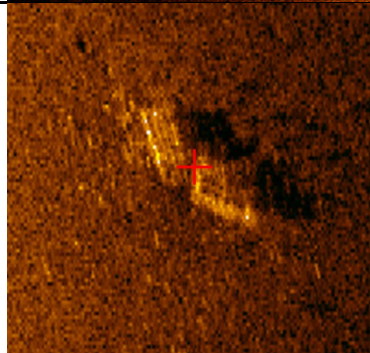
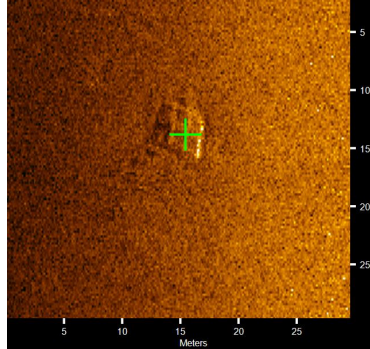
\* M = Monopole, D = Dipole, MC = Multi Component.

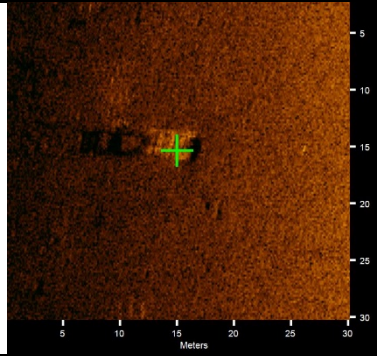
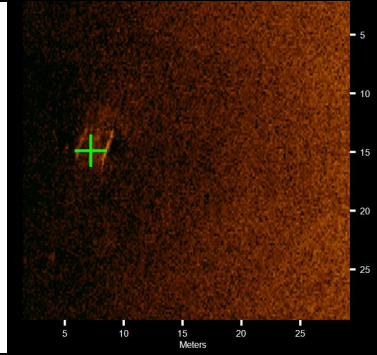
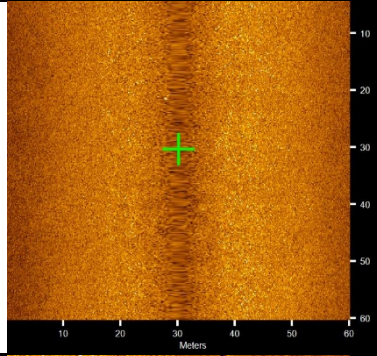
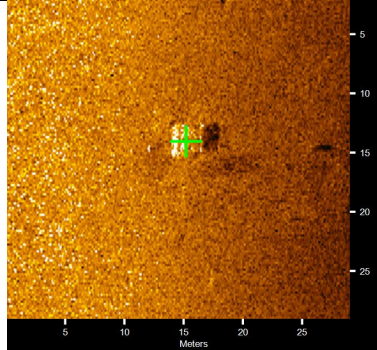
Table I-2. Sonar Contacts for the BAL4 & BAL5 Cells.

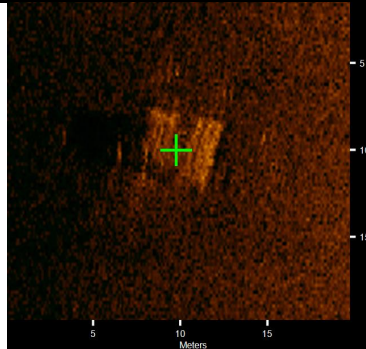
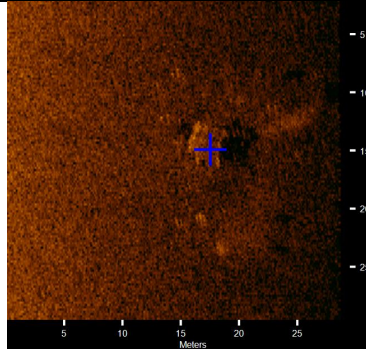
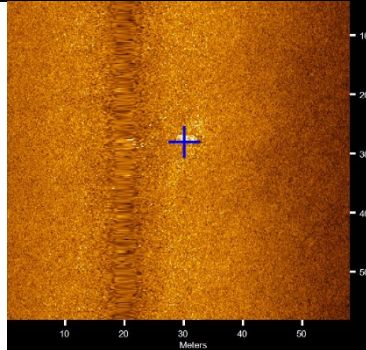
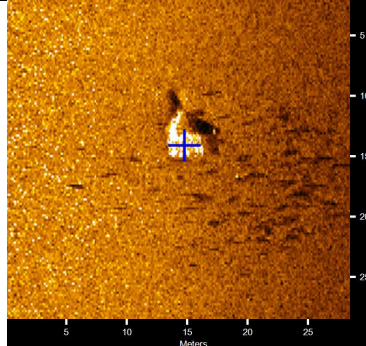
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
<b>BAL4</b>									
Bal4.S002	435593	3333200	Reefing Device?	5.6	3.0	1.6		B4n5-06	PE839
Bal4.S003	435599	3334173	Reefing Device?	3.1	2.9	1.5		B4n5-03	PE839
Bal4.S004	435608	3335098	Reefing Device?	11.0	15.6	1.9		B4n5-03	PE839
Bal4.S005	435062	3334395	debris	3.1	3.3	0.3	Bal4.M006	B4n5-03	PE839
Bal4.S006	434208	3334275	Reefing Device?	3.1	3.7	0.0		B4n5-02	PE838
Bal4.S007	433485	3334254	debris	3.3	3.4	0.6	Bal4.M001	B4n5-02	PE838
Bal4.S008	434201	3333826	debris	7.9	2.0	0.5		B4n5-02	PE838
<b>BAL5</b>									
Bal5.S001	435000	3331306	debris	3.9	4.1	0.0		B4n5-09	PE883
Bal5.S002	434778	3330828	debris	2.6	4.0	1.5	Bal5.M027	B4n5-09	PE883
Bal5.S003	434467	3330855	debris	3.0	2.8	0.0		B4n5-09	PE882
Bal5.S004	434519	3330829	debris	0.0	0.0	0.0		B4n5-09	PE882
Bal5.S005	433645	3331774	debris	2.6	2.7	0.5		B4n5-05	PE838
Bal5.S006	433574	3331503	debris	3.5	4.1	0.9	Bal5.M018	B4n5-08	PE882
Bal5.S008	433129	3332783	debris	3.6	2.8	0.5	Bal5.M002	B4n5-05	PE838
Bal5.S009	433032	3331957	debris	1.6	3.8	0.0	Bal5.M012	B4n5-05	PE838
Bal5.S010	432854	3331194	debris	4.2	2.9	1.0		B4n5-08	PE882
Bal5.S011	432904	3331948	debris	2.7	1.7	0.5		B4n5-05	PE838
Bal5.S012	432854	3332865	debris	2.9	0.0	0.4		B4n5-05	PE838
Bal5.S013	432771	3331446	debris	4.0	2.4	0.0	Bal5.M019	B4n5-07	PE882
Bal5.S014	433904	3330606	debris	1.9	2.4	0.0		B4n5-08	PE882
Bal5.S015	435505	3330424	debris	2.3	3.0	0.7		B4n5-09	PE883
Bal5.S016	434693	3331223	Reefing Device?	3.4	2.6	1.9		B4n5-09	PE883
Bal5.S017	434096	3331929	debris	3.1	2.6	1.0		B4n5-05	PE838
Bal5.S018	432140	3330563	debris	2.6	2.8	0.7	Bal5.M032	B4n5-07	PE882
Bal5.S019	433428	3330881	debris	6.4	3.7	0.6	Bal5.M025	B4n5-08	PE882

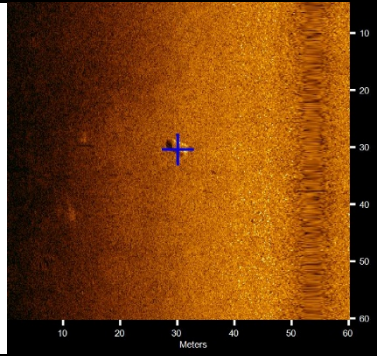
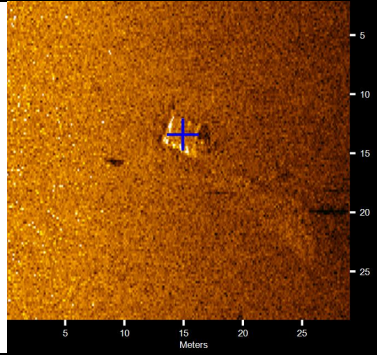
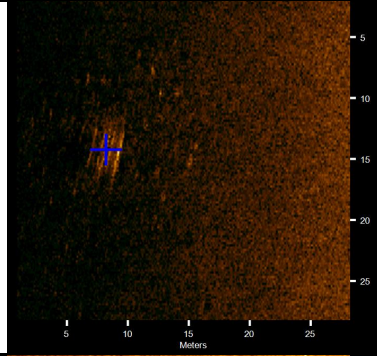
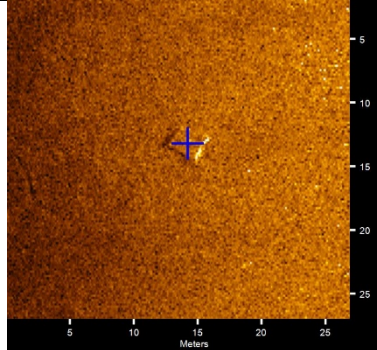
**Table I-3. Acoustic Target Images recorded for the BAL4 & BAL5 Cells.**

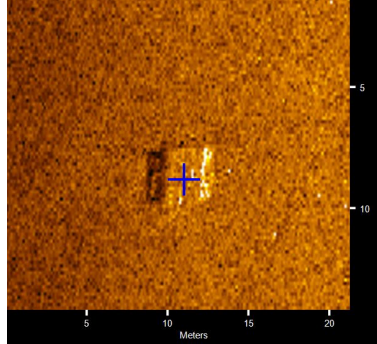
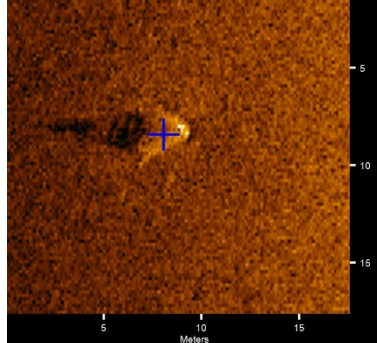
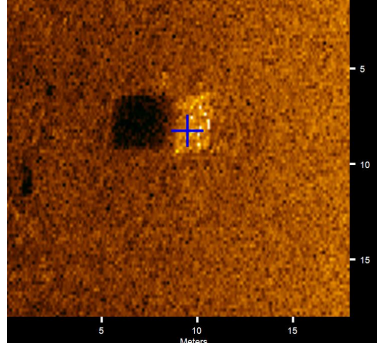
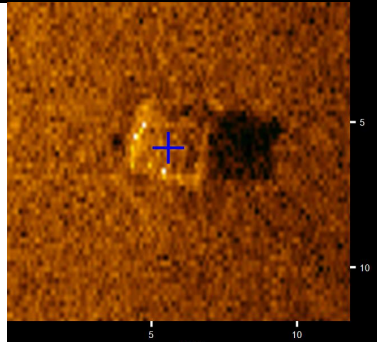
Target Image	Target Info	User Entered Info
<b>BAL4</b>		
	<p><b>BAL4.C0002</b></p> <ul style="list-style-type: none"> <li>● Click Position 30.1283822400 -87.6686498183 (WGS84) (X) 435592.71 (Y) 3333199.93 (Projected Coordinates)</li> <li>● Map Projection: UTM83-16</li> <li>● Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal4\Bal4_64.jsf</li> <li>● Heading: 202.190 Degrees</li> <li>● Line Name: Bal4_64</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.98 Meters</li> <li>● Target Height: 1.58 Meters</li> <li>● Target Length: 5.56 Meters</li> <li>● Target Shadow: 5.29 Meters</li> <li>● Mag Anomaly:</li> <li>● Avoidance Area:</li> <li>● Classification1:</li> <li>● Classification2:</li> <li>● Description: Reefing Device?</li> </ul>
	<p><b>BAL4.C0003</b></p> <ul style="list-style-type: none"> <li>● Click Position 30.1371670054 -87.6686475316 (WGS84) (X) 435598.64 (Y) 3334173.40 (Projected Coordinates)</li> <li>● Map Projection: UTM83-16</li> <li>● Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal4\Bal4_64.jsf</li> <li>● Heading: 201.190 Degrees</li> <li>● Line Name: Bal4_64</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.87 Meters</li> <li>● Target Height: 1.53 Meters</li> <li>● Target Length: 3.10 Meters</li> <li>● Target Shadow: 4.19 Meters</li> <li>● Mag Anomaly:</li> <li>● Avoidance Area:</li> <li>● Classification1:</li> <li>● Classification2:</li> <li>● Description: Reefing Device?</li> </ul>
	<p><b>BAL4.C0004</b></p> <ul style="list-style-type: none"> <li>● Click Position 30.1455129610 -87.6686061415 (WGS84) (X) 435608.04 (Y) 3335098.23 (Projected Coordinates)</li> <li>● Map Projection: UTM83-16</li> <li>● Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal4\Bal4_64.jsf</li> <li>● Heading: 198.890 Degrees</li> <li>● Line Name: Bal4_64</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 15.55 Meters</li> <li>● Target Height: 1.86 Meters</li> <li>● Target Length: 11.04 Meters</li> <li>● Target Shadow: 4.21 Meters</li> <li>● Mag Anomaly:</li> <li>● Avoidance Area:</li> <li>● Classification1:</li> <li>● Classification2:</li> <li>● Description: Reefing Device?</li> </ul>
	<p><b>BAL4.C0005</b></p> <ul style="list-style-type: none"> <li>● Click Position 30.1391420234 -87.6742350572 (WGS84) (X) 435061.75 (Y) 3334395.43 (Projected Coordinates)</li> <li>● Map Projection: UTM83-16</li> <li>● Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal4\Bal4_52.jsf</li> <li>● Heading: 197.000 Degrees</li> <li>● Line Name: Bal4_52</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.27 Meters</li> <li>● Target Height: 0.29 Meters</li> <li>● Target Length: 3.05 Meters</li> <li>● Target Shadow: 1.30 Meters</li> <li>● Mag Anomaly:</li> <li>● Avoidance Area:</li> <li>● Classification1:</li> <li>● Classification2:</li> <li>● Description: Debris</li> </ul>

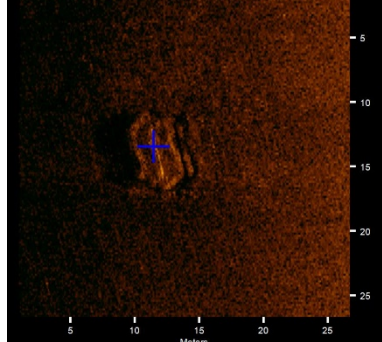
Target Image	Target Info	User Entered Info
	<p><b>BAL4.C0006</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1380074290 -87.6830915369 (WGS84) (X) 434207.97 (Y) 3334274.77 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal4\Bal4_36.jsf</li> <li>Heading: 196.390 Degrees</li> <li>Line Name: Bal4_36</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.71 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 3.13 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Reefing Device?</li> </ul>
	<p><b>BAL4.C0007</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1377817827 -87.6906009935 (WGS84) (X) 433484.53 (Y) 3334254.12 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal4\Bal4_22.jsf</li> <li>Heading: 347.700 Degrees</li> <li>Line Name: Bal4_22</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.37 Meters</li> <li>Target Height: 0.55 Meters</li> <li>Target Length: 3.30 Meters</li> <li>Target Shadow: 2.31 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL4.C0008</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1339562427 -87.6831323039 (WGS84) (X) 434201.36 (Y) 3333825.87 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal4\Bal4_35.jsf</li> <li>Heading: 346.390 Degrees</li> <li>Line Name: Bal4_35</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.96 Meters</li> <li>Target Height: 0.52 Meters</li> <li>Target Length: 7.88 Meters</li> <li>Target Shadow: 2.23 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
<b>BAL5</b>		
	<p><b>BAL5.C0001</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1112639714 -87.6746847177 (WGS84) (X) 435000.18 (Y) 3331306.41 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_59.jsf</li> <li>Heading: 196.890 Degrees</li> <li>Line Name: Bal5_59</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.06 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 3.85 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL5.C0002</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1069342451 -87.6769596549 (WGS84) (X) 434778.16 (Y) 3330827.91 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_56.jsf</li> <li>Heading: 348.890 Degrees</li> <li>Line Name: Bal5_56</li> </ul>	<p>Dimensions and attributes</p> <ul style="list-style-type: none"> <li>Target Width: 3.95 Meters</li> <li>Target Height: 1.49 Meters</li> <li>Target Length: 2.60 Meters</li> <li>Target Shadow: 5.41 Meters</li> <li>Mag Anomaly: Bal5.M027</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0003</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1071582054 -87.6801945279 (WGS84) (X) 434466.64 (Y) 3330854.58 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_50.jsf</li> <li>Heading: 351.700 Degrees</li> <li>Line Name: Bal5_50</li> </ul>	<p>Dimensions and attributes</p> <ul style="list-style-type: none"> <li>Target Width: 2.82 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 2.98 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0004</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1069335081 -87.6796478735 (WGS84) (X) 434519.16 (Y) 3330829.37 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_50.jsf</li> <li>Heading: 350.200 Degrees</li> <li>Line Name: Bal5_50</li> </ul>	<p>Dimensions and attributes</p> <ul style="list-style-type: none"> <li>Target Width: 0.00 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 0.00 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0005</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1154113899 -87.6887824144 (WGS84) (X) 433644.73 (Y) 3331774.11 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_32.jsf</li> <li>Heading: 349.500 Degrees</li> <li>Line Name: Bal5_32</li> </ul>	<p>Dimensions and attributes</p> <ul style="list-style-type: none"> <li>Target Width: 2.71 Meters</li> <li>Target Height: 0.54 Meters</li> <li>Target Length: 2.61 Meters</li> <li>Target Shadow: 1.35 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL5.C0006</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1129610759 -87.6894960132 (WGS84) (X) 433574.35 (Y) 3331502.99 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_32.jsf</li> <li>Heading: 350.600 Degrees</li> <li>Line Name: Bal5_32</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.07 Meters</li> <li>Target Height: 0.89 Meters</li> <li>Target Length: 3.46 Meters</li> <li>Target Shadow: 4.07 Meters</li> <li>Mag Anomaly: Bal5.M018</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0008</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1244843983 -87.6941990936 (WGS84) (X) 433129.01 (Y) 3332782.68 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_23.jsf</li> <li>Heading: 197.690 Degrees</li> <li>Line Name: Bal5_23</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.79 Meters</li> <li>Target Height: 0.49 Meters</li> <li>Target Length: 3.63 Meters</li> <li>Target Shadow: 2.45 Meters</li> <li>Mag Anomaly: Bal5.M001</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0009</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1170322765 -87.6951587007 (WGS84) (X) 433031.54 (Y) 3331957.45 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_20.jsf</li> <li>Heading: 349.000 Degrees</li> <li>Line Name: Bal5_20</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.77 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 1.57 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly: Bal5.M012</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0010</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1101323278 -87.6969484361 (WGS84) (X) 432854.45 (Y) 3331193.89 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_17.jsf</li> <li>Heading: 196.690 Degrees</li> <li>Line Name: Bal5_17</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.92 Meters</li> <li>Target Height: 0.98 Meters</li> <li>Target Length: 4.25 Meters</li> <li>Target Shadow: 2.36 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL5.C0011</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1169358703 -87.6964804965 (WGS84) (X) 432904.14 (Y) 3331947.54 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal5\Bal5_17.jsf</li> <li>Heading: 196.600 Degrees</li> <li>Line Name: Bal5_17</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.71 Meters</li> <li>Target Height: 0.53 Meters</li> <li>Target Length: 2.73 Meters</li> <li>Target Shadow: 1.22 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0012</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1252159217 -87.6970597939 (WGS84) (X) 432853.93 (Y) 3332865.43 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal5\Bal5_17.jsf</li> <li>Heading: 197.000 Degrees</li> <li>Line Name: Bal5_17</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.00 Meters</li> <li>Target Height: 0.41 Meters</li> <li>Target Length: 2.94 Meters</li> <li>Target Shadow: 1.16 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0013</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1124018902 -87.6978278789 (WGS84) (X) 432771.26 (Y) 3331445.90 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal5\Bal5_16.jsf</li> <li>Heading: 348.890 Degrees</li> <li>Line Name: Bal5_16</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.38 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 4.03 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly: Bal5.M019</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0014</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1048857115 -87.6860152551 (WGS84) (X) 433904.31 (Y) 3330606.11 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal5\Bal5_37.jsf</li> <li>Heading: 202.000 Degrees</li> <li>Line Name: Bal5_37</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.38 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 1.91 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL5.C0015</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1033239563 -87.6693940616 (WGS84) (X) 435504.74 (Y) 3330423.54 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_70.jsf</li> <li>Heading: 342.390 Degrees</li> <li>Line Name: Bal5_70</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.04 Meters</li> <li>Target Height: 0.74 Meters</li> <li>Target Length: 2.32 Meters</li> <li>Target Shadow: 1.30 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0016</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1104909119 -87.6778640494 (WGS84) (X) 434693.37 (Y) 3331222.55 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_54.jsf</li> <li>Heading: 346.100 Degrees</li> <li>Line Name: Bal5_54</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.55 Meters</li> <li>Target Height: 1.92 Meters</li> <li>Target Length: 3.43 Meters</li> <li>Target Shadow: 4.84 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Reefing Device?</li> </ul>
	<p><b>BAL5.C0017</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1168314637 -87.6841093627 (WGS84) (X) 434095.88 (Y) 3331928.76 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_42.jsf</li> <li>Heading: 347.700 Degrees</li> <li>Line Name: Bal5_42</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.56 Meters</li> <li>Target Height: 1.01 Meters</li> <li>Target Length: 3.10 Meters</li> <li>Target Shadow: 3.09 Meters</li> <li>Mag Anomaly: Bal5.M013</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL5.C0018</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1043966851 -87.7043238876 (WGS84) (X) 432139.95 (Y) 3330562.65 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_03.001.jsf</li> <li>Heading: 192.190 Degrees</li> <li>Line Name: Bal5_03.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.79 Meters</li> <li>Target Height: 0.69 Meters</li> <li>Target Length: 2.61 Meters</li> <li>Target Shadow: 2.28 Meters</li> <li>Mag Anomaly: Bal5.M032</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL5.C0019</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1073397904 -87.6909791579 (WGS84) (X) 433427.69 (Y) 3330880.94 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal5\Bal5_27.jsf</li> <li>Heading: 200.690 Degrees</li> <li>Line Name: Bal5_27</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.70 Meters</li> <li>Target Height: 0.58 Meters</li> <li>Target Length: 6.43 Meters</li> <li>Target Shadow: 3.02 Meters</li> <li>Mag Anomaly: Bal5.M025</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>

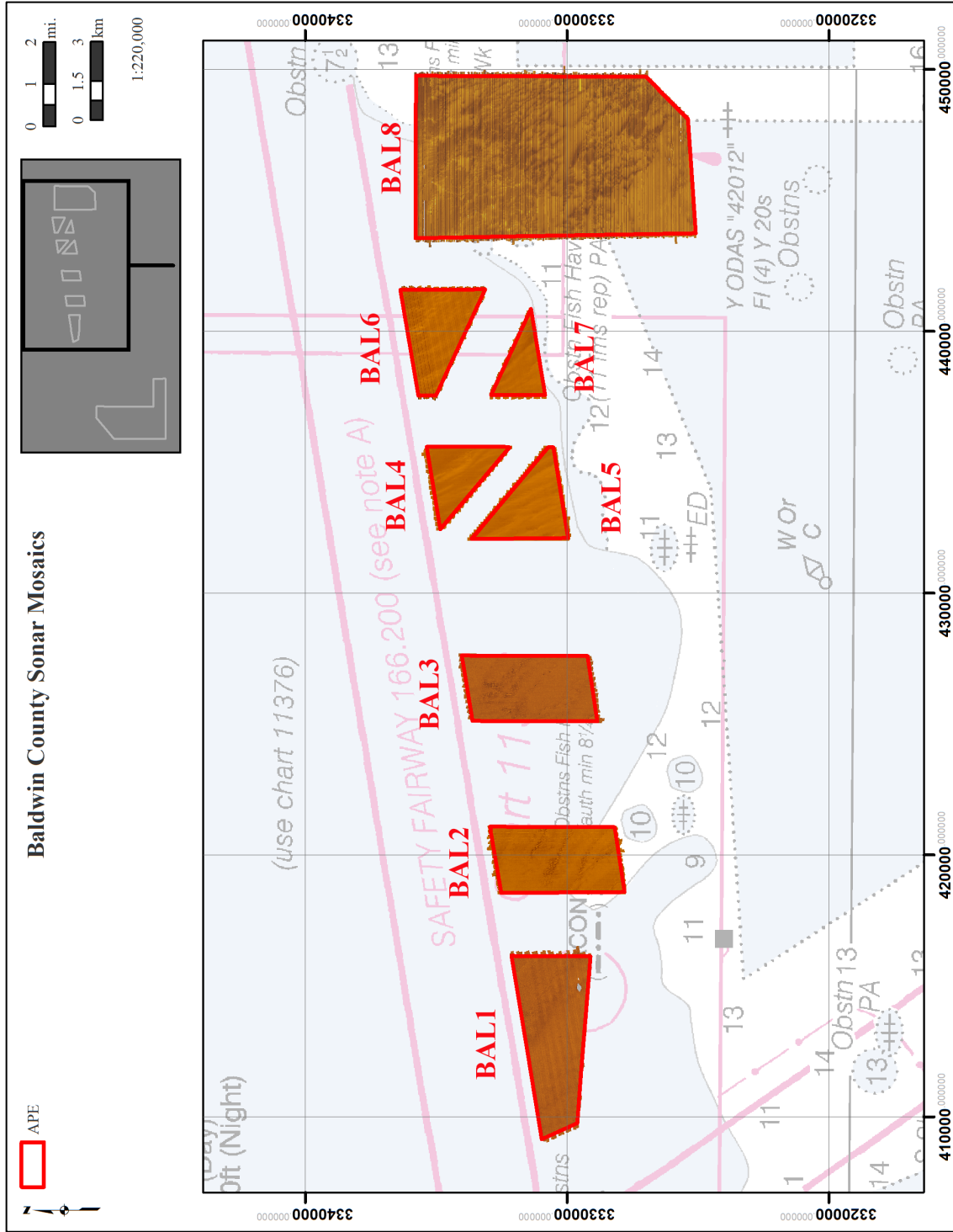


Figure I-1. Sonar Mosaics showing coverage for all Baldwin Cells (SAM-2014-00487-DEM) including BAL4 & BAL5.

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## **APPENDIX J: BAL4 & BAL5 MAGNETIC CONTOUR MAPS**

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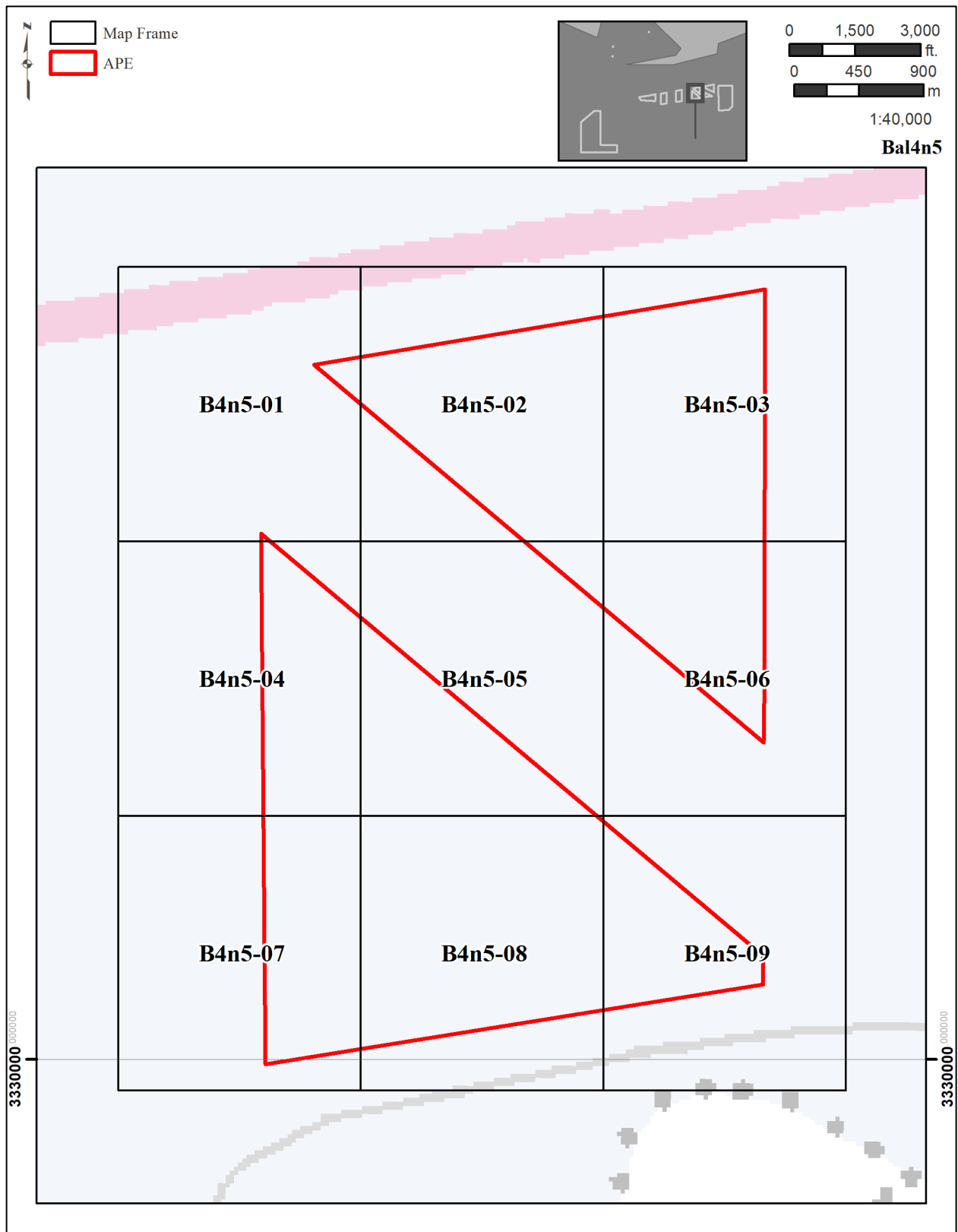


Figure J-01. Magnetic Contour Map Key for BAL4 & BAL5 (SAM-2014-00487-DEM).

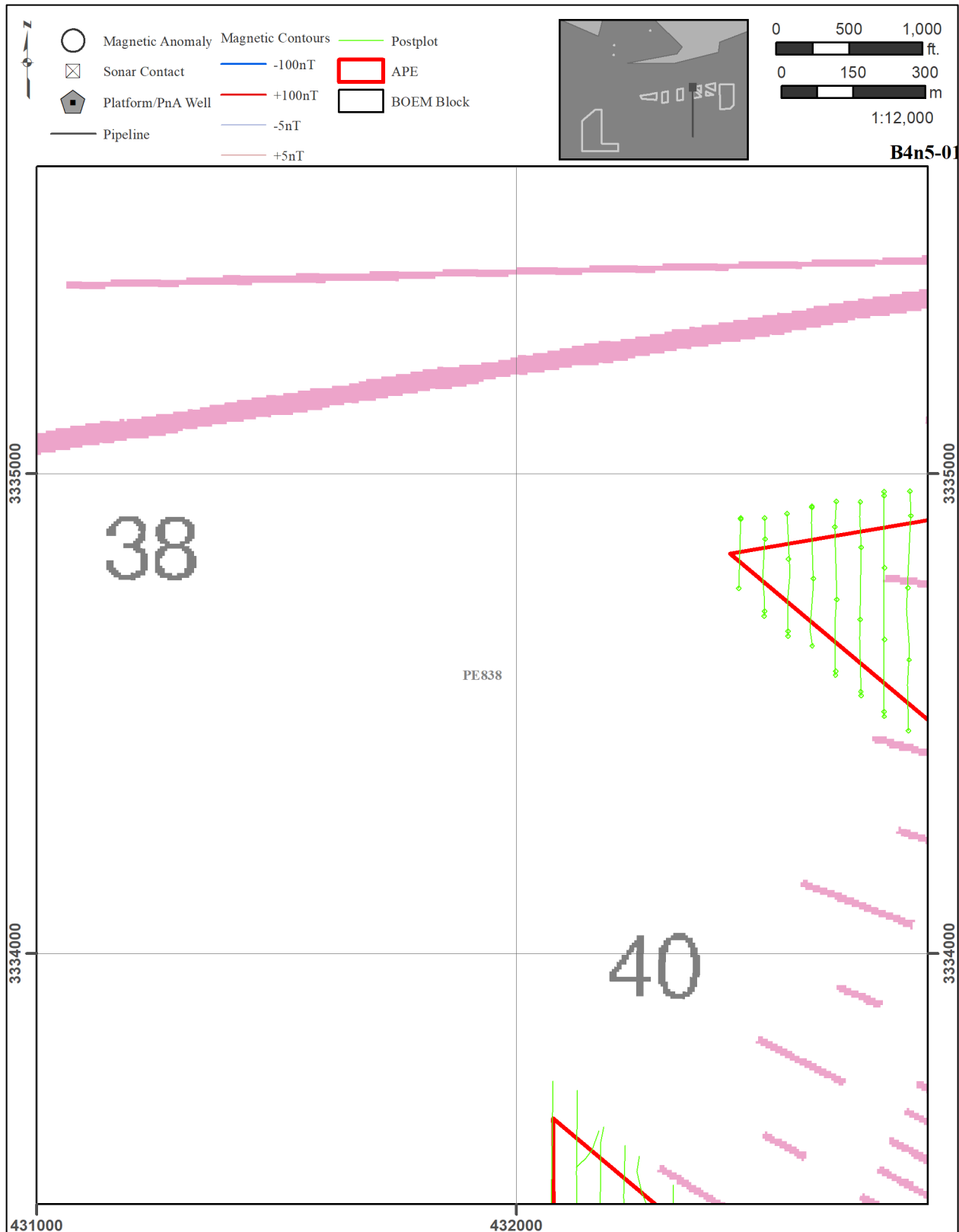


Figure J-02. BAL4 & BAL5 Map 1.

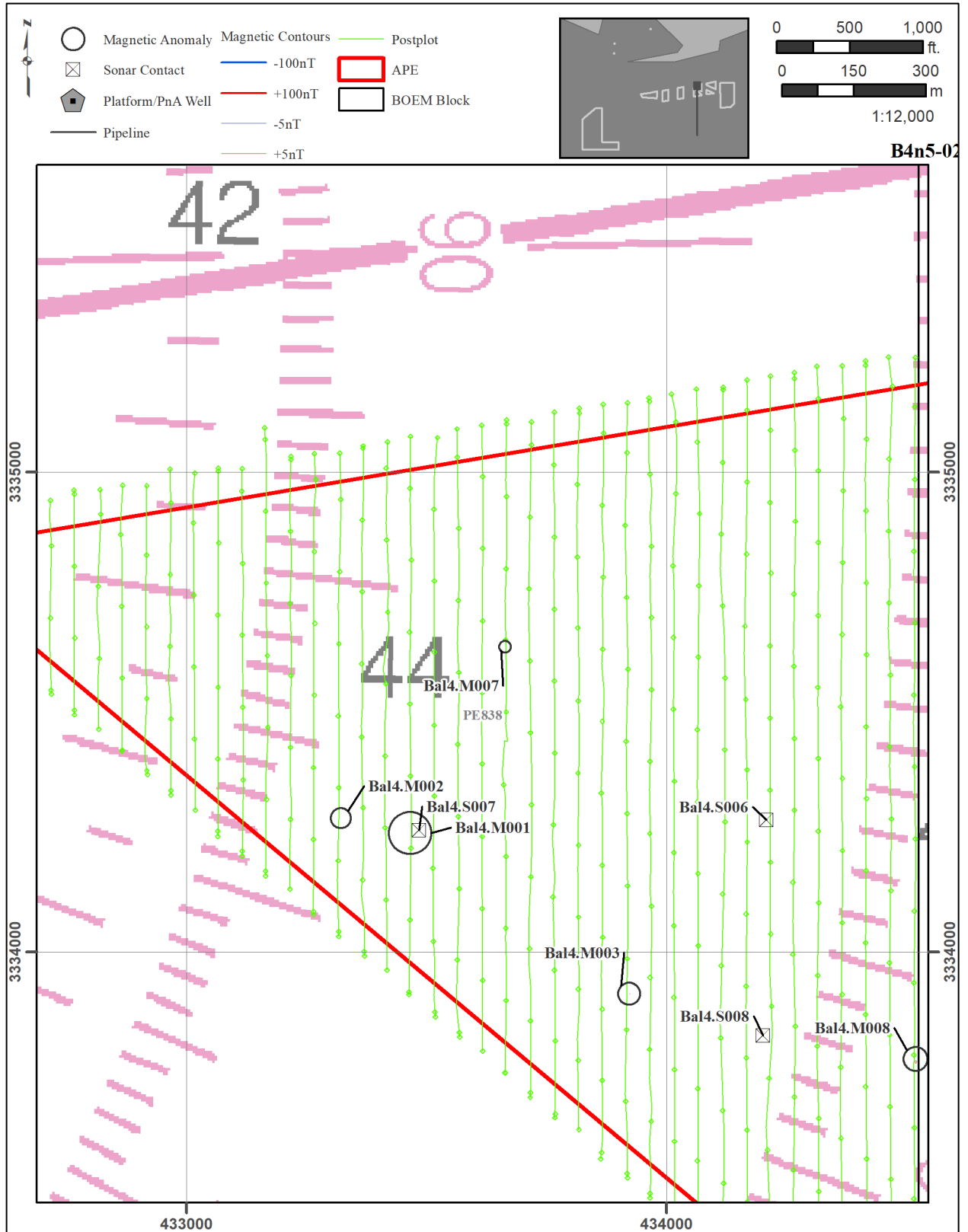


Figure J-03. BAL4 & BAL5 Map 2.

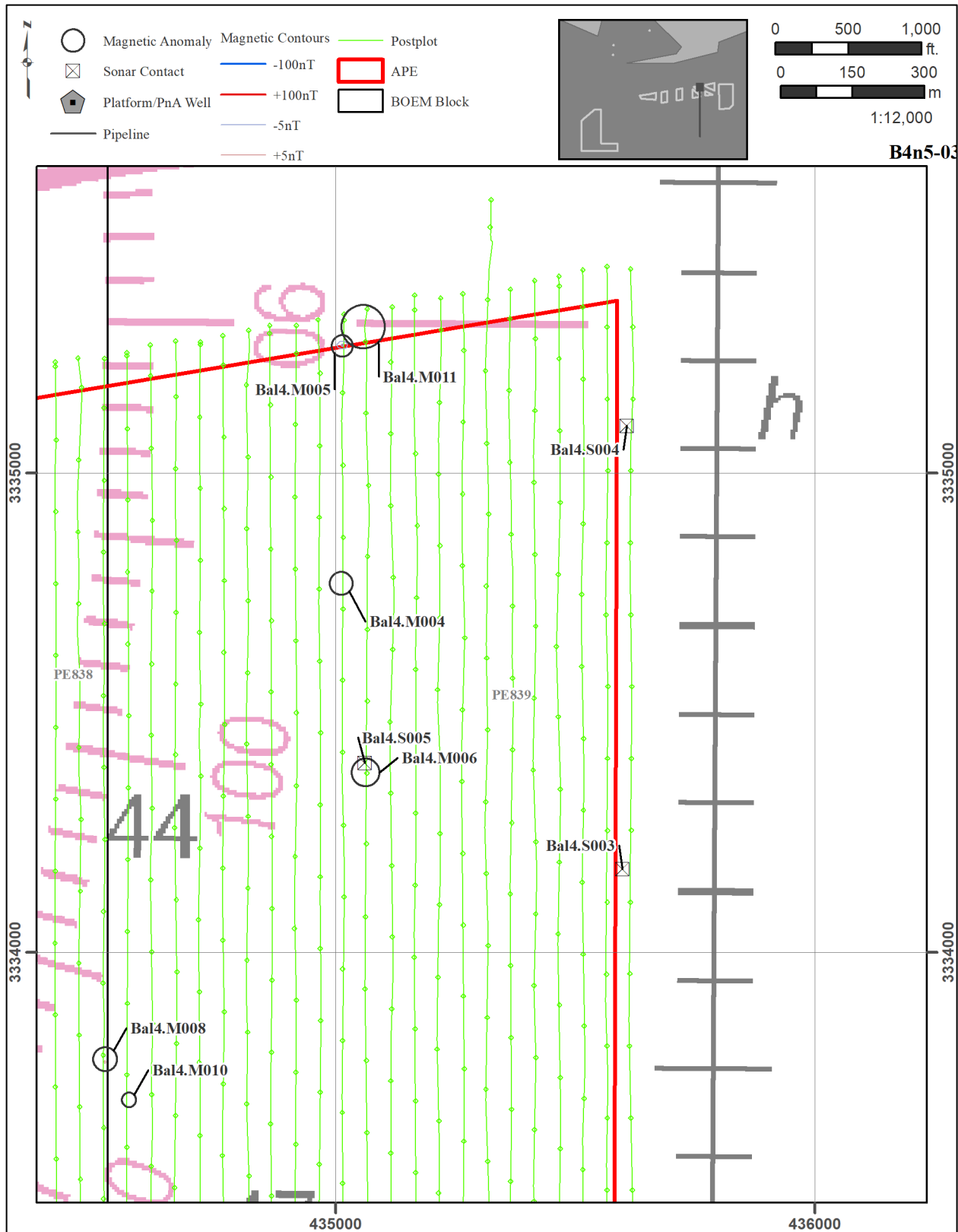


Figure J-04. BAL4 & BAL5 Map 3.

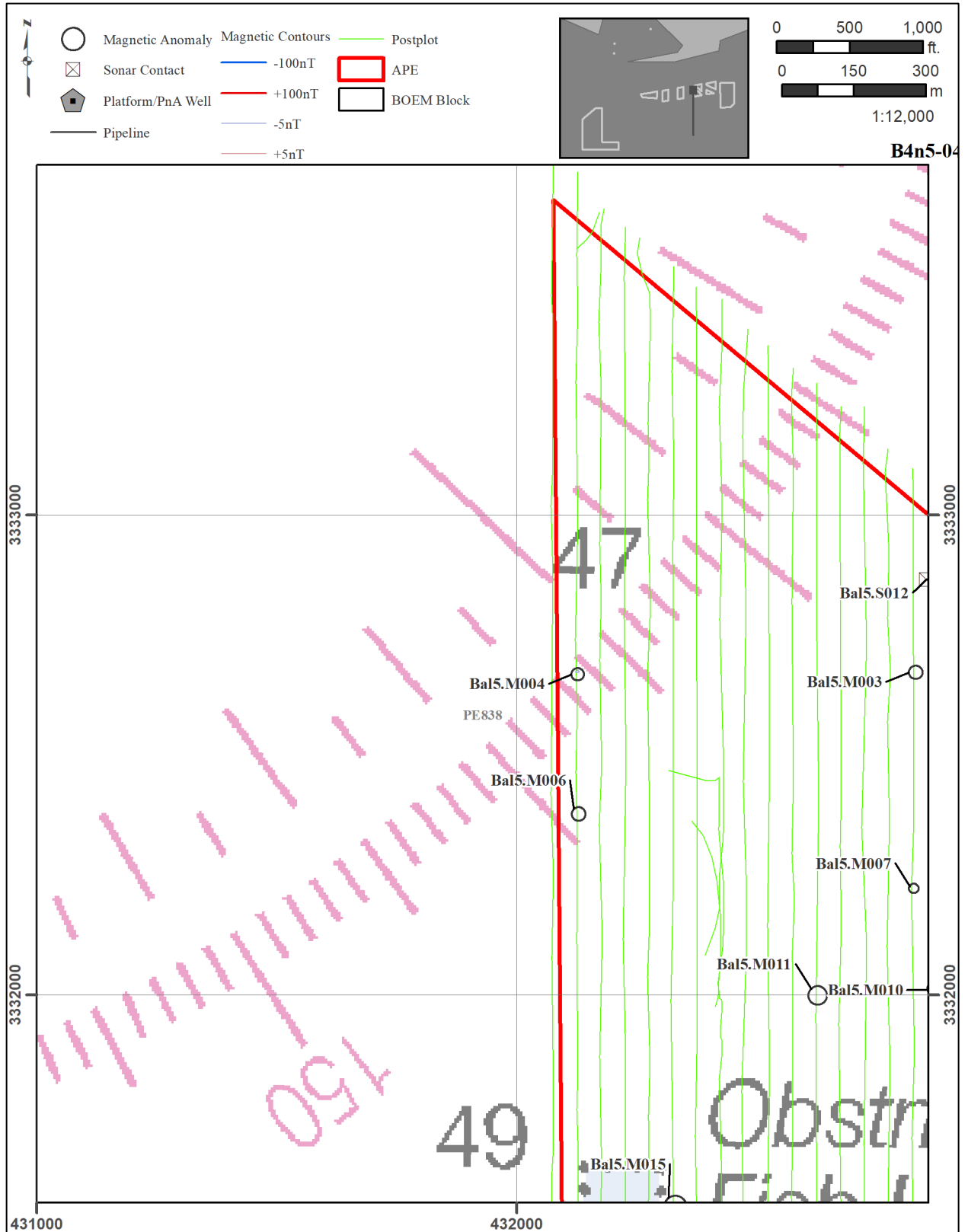


Figure J-05. BAL4 & BAL5 Map 4.

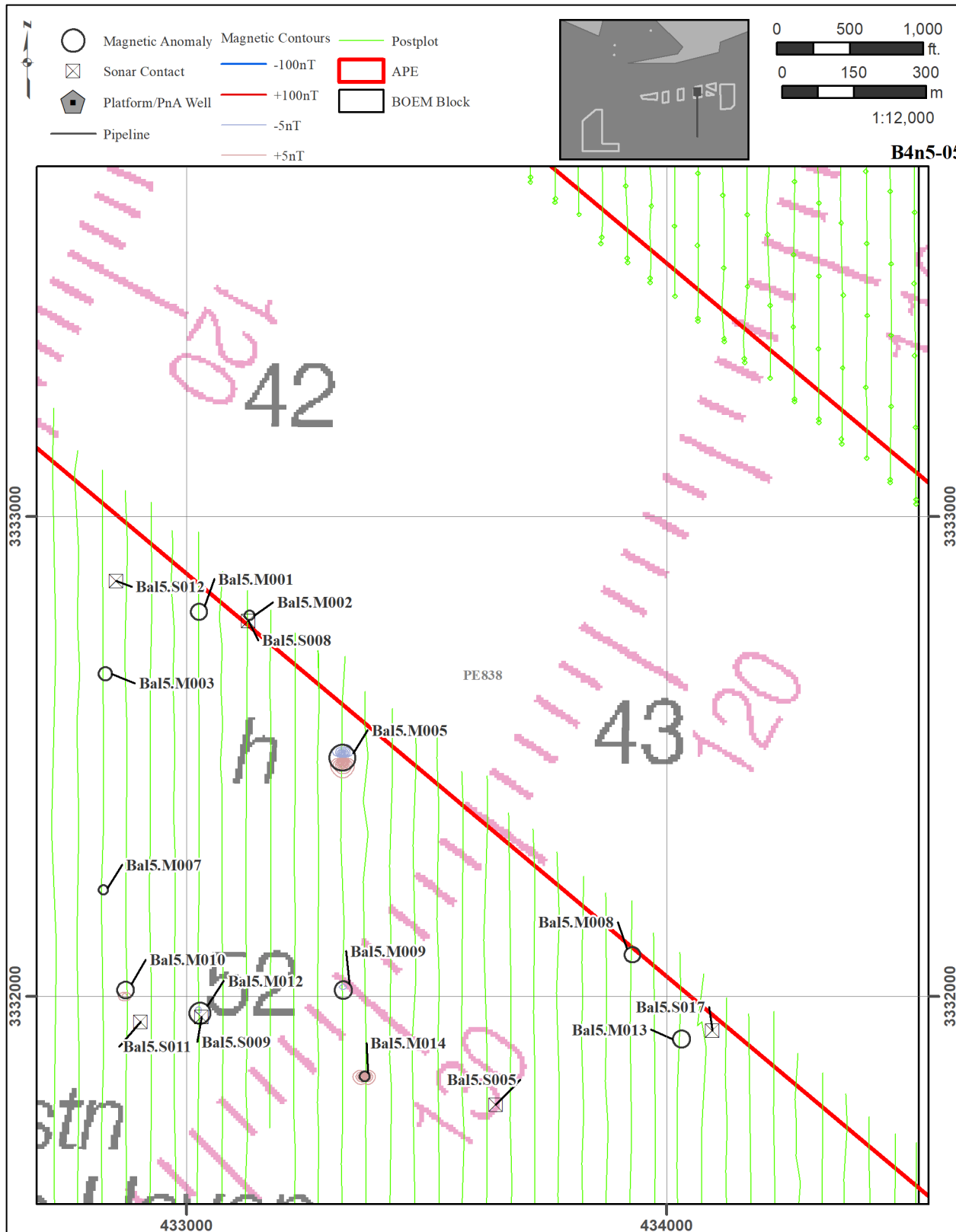


Figure J-06. BAL4 & BAL5 Map 5.

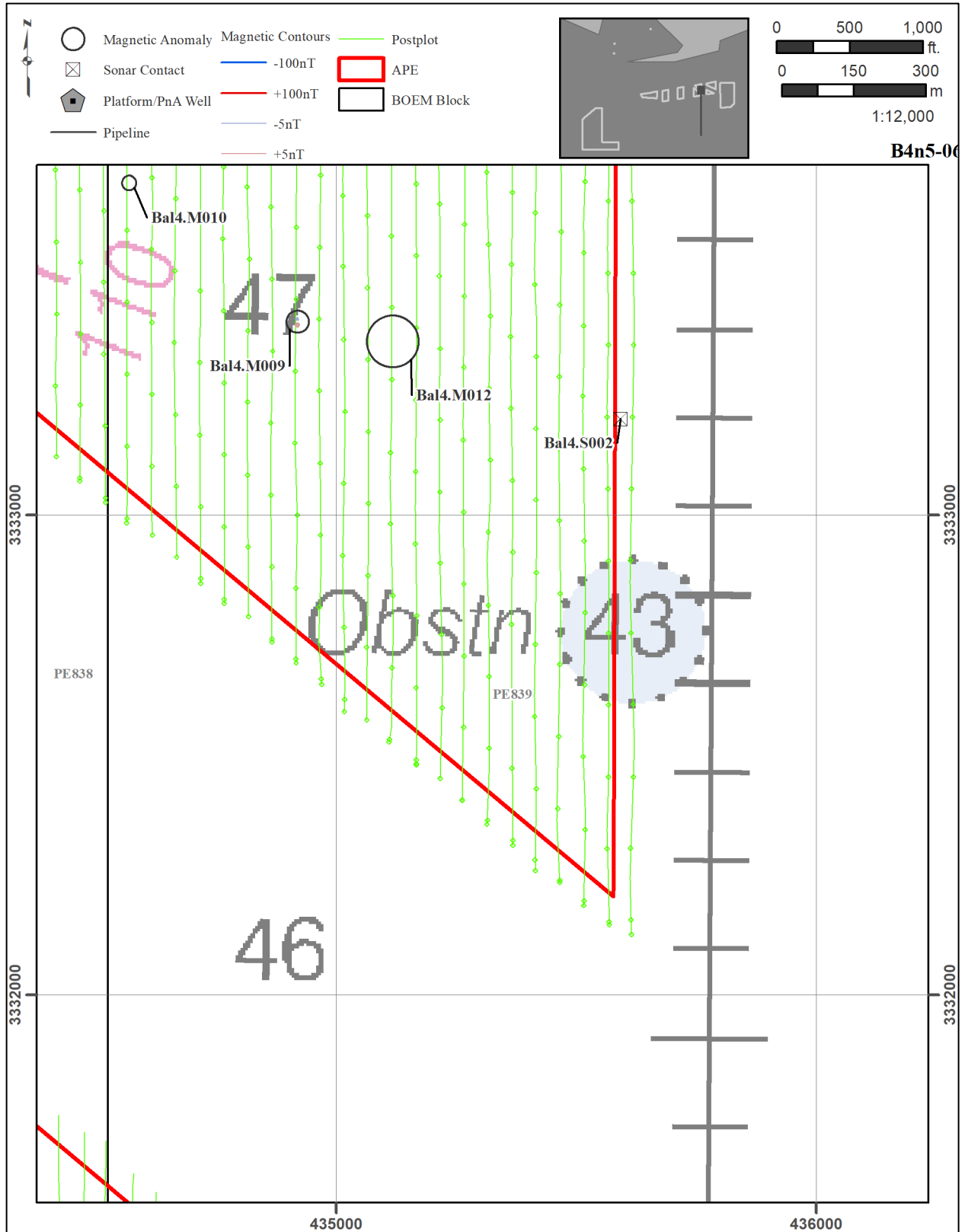


Figure J-07. BAL4 & BAL5 Map 6.

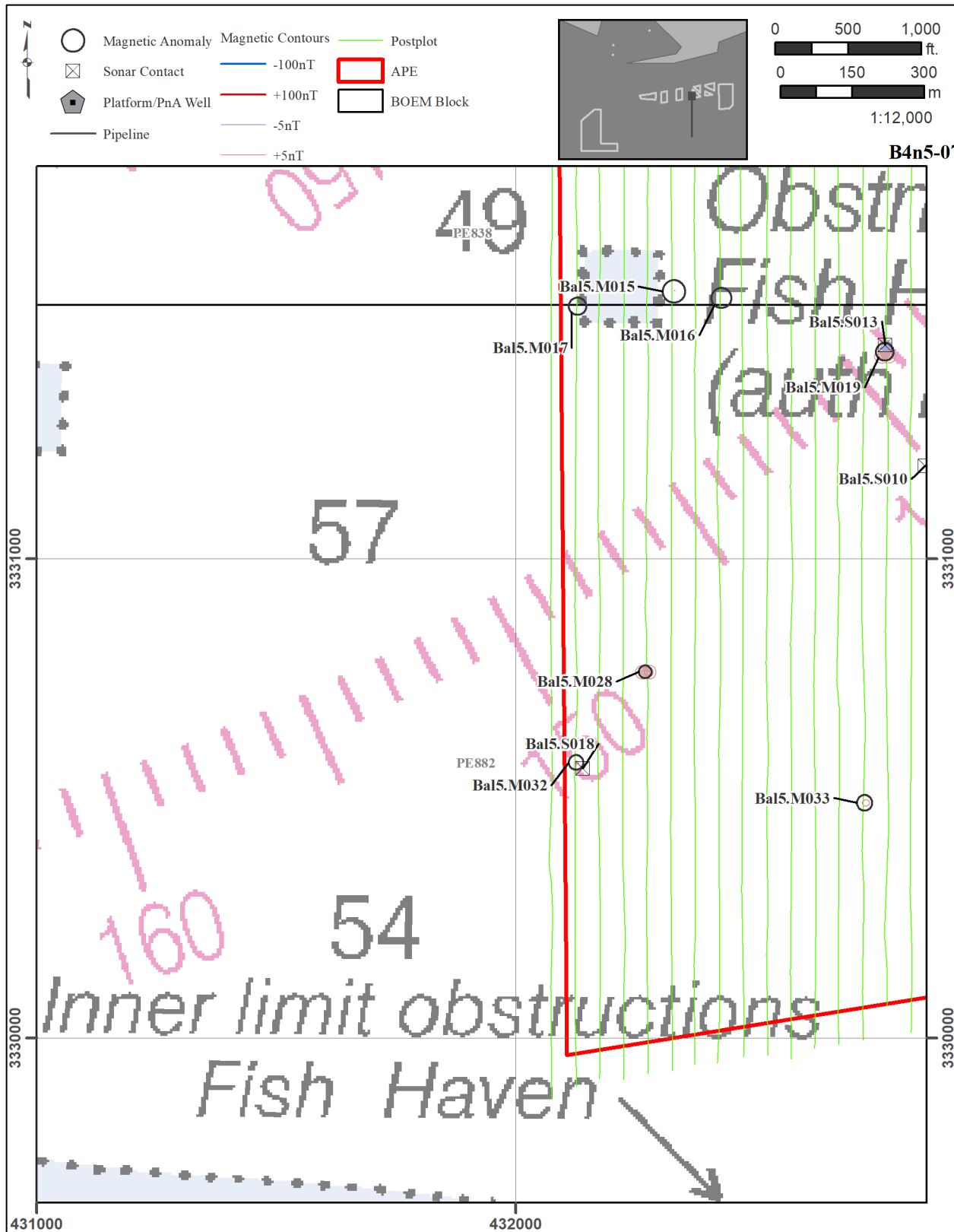


Figure J-08. BAL4 & BAL5 Map 7.

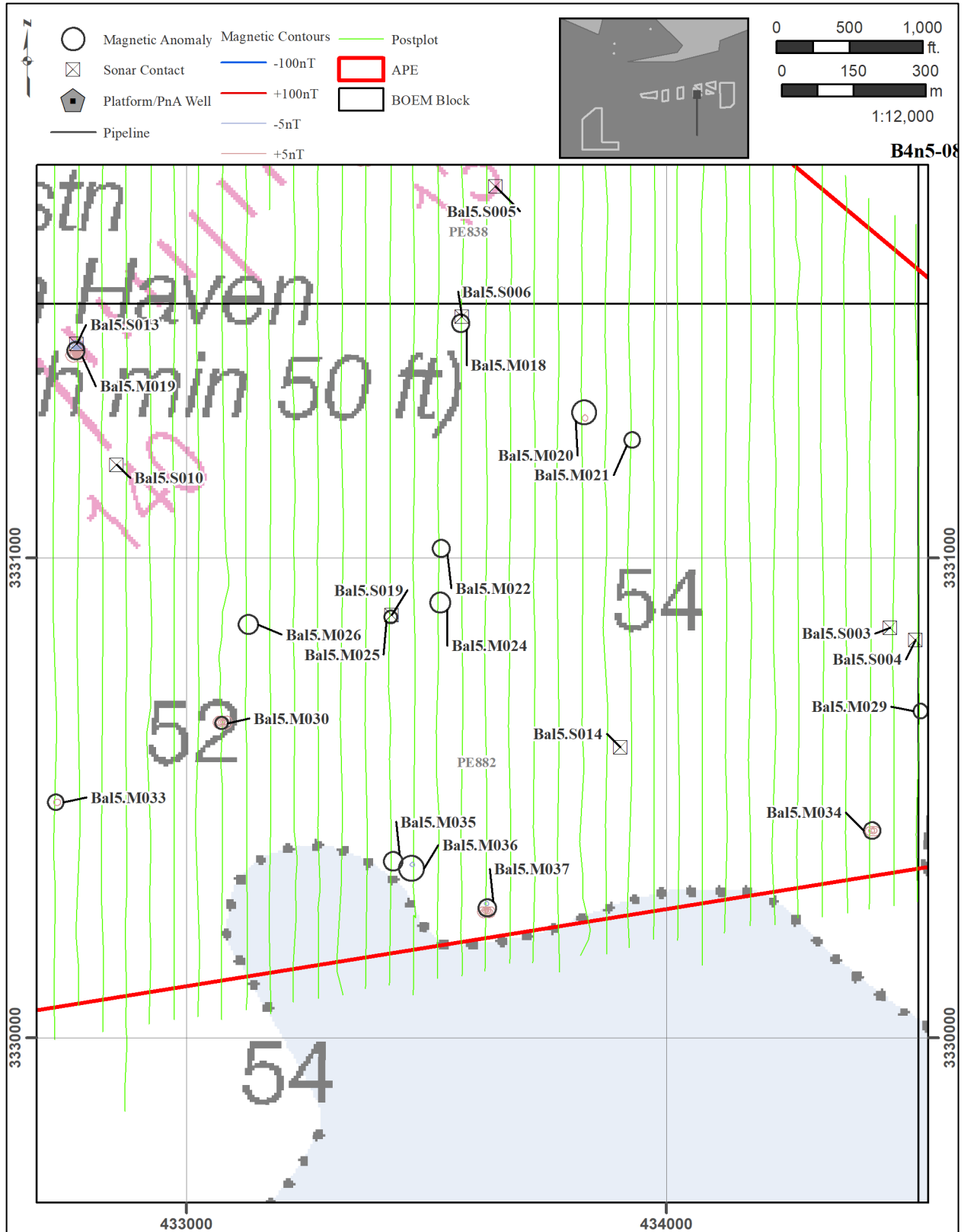


Figure J-09. BAL4 & BAL5 Map 8.

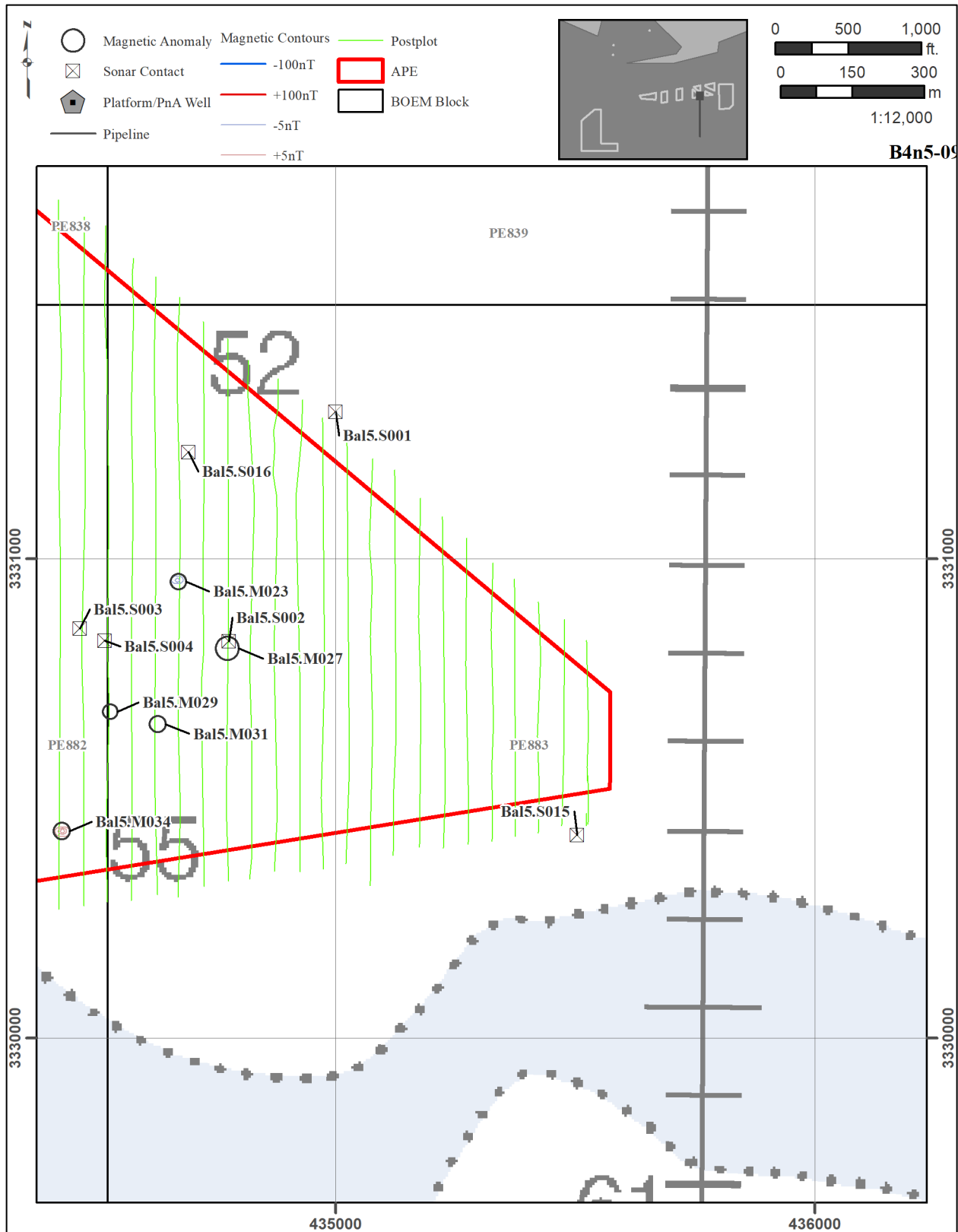


Figure J-10. BAL4 & BAL5 Map 9.

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## **APPENDIX K: BAL6 & BAL7 REMOTE SENSING DATA**

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Table K-1. Magnetic Anomalies Recorded for the BAL6 &amp; BAL7 Cells.

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
<b>BAL6</b>										
Bal6.M001	439517	3335951	D	26	8.0		SPS		B6n7-02	PE840
Bal6.M002	439353	3335778	D	25	8.3		SPS		B6n7-02	PE840
Bal6.M003	441138	3335820	D	74	37.0		SPS		B6n7-03	PE840
Bal6.M004	439006	3335418	M	34	10.2		SPS		B6n7-02	PE839
Bal6.M005	440093	3335047	D	98	35.2		SPS		B6n7-02	PE840
Bal6.M006	439593	3335006	M	31	14.5		SPS		B6n7-02	PE840
Bal6.M007	438166	3334769	M	26	9.0		SPS		B6n7-01	PE839
Bal6.M008	439996	3334304	D	48	14.7		SPS		B6n7-05	PE840
Bal6.M009	440044	3334117	M	31	21.6		debris	Bal6.S006	B6n7-05	PE840
<b>BAL7</b>										
Bal7.M001	437545	3332614	M	32	37.9		Reefing Device?		B6n7-07	PE839
Bal7.M002	439150	3331352	M	40	5.3		SPS		B6n7-08	PE883
Bal7.M003	438201	3331161	D	41	12.8		SPS		B6n7-07	PE883
Bal7.M004	438571	3331007	M	31	11.3		debris	Bal7.S002	B6n7-07	PE883

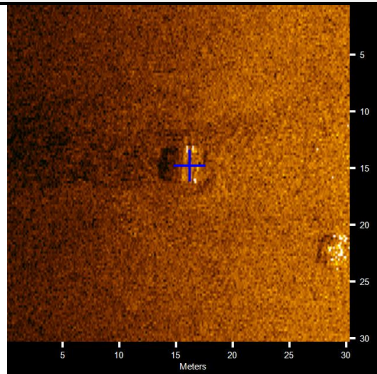
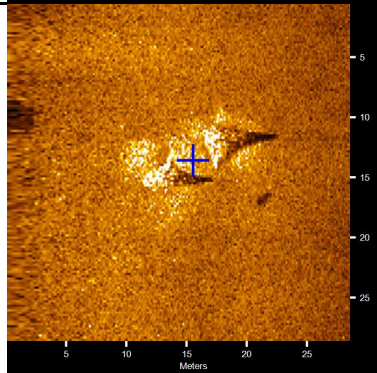
\* M = Monopole, D = Dipole, MC = Multi Component.

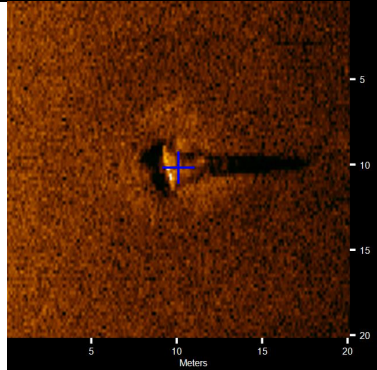
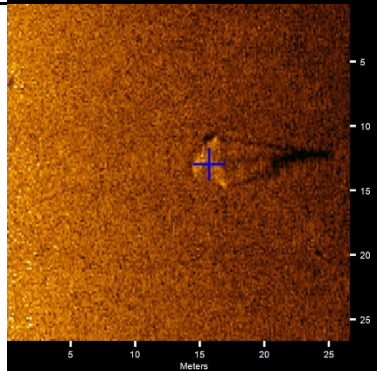
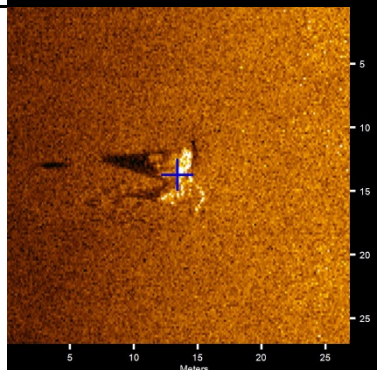
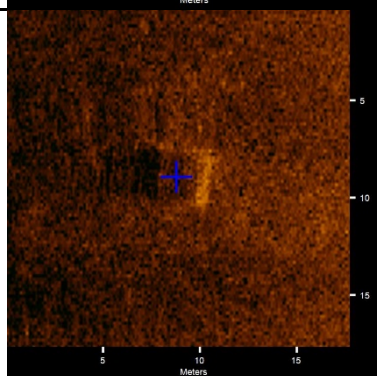
Table K-2. Sonar Contacts for the BAL6 &amp; BAL7 Cells.

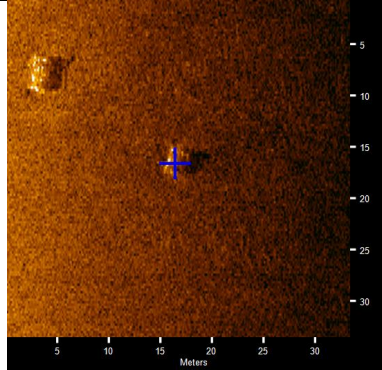
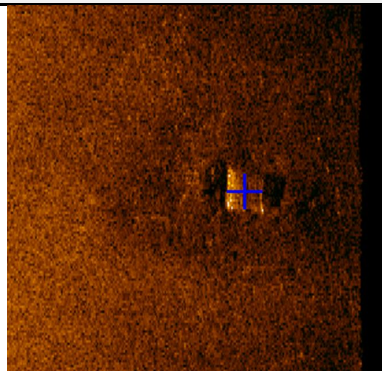
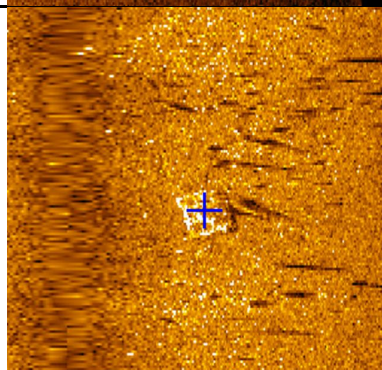
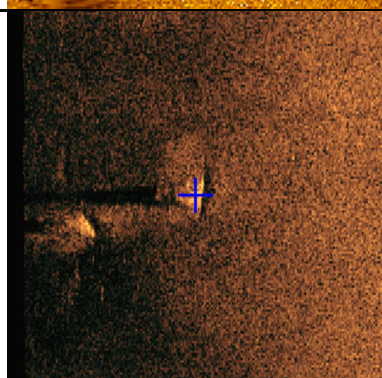
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
<b>BAL6</b>									
Bal6.S001	440775	3333808	debris	3.4	2.0	0.6		B6n7-06	PE840
Bal6.S002	441607	3333780	Reefing Device?	7.5	3.7	1.9		B6n7-06	PE840
Bal6.S003	441279	3333771	Reefing Device?	3.1	2.7	1.2		B6n7-06	PE840
Bal6.S004	440001	3335608	AWOIS obstruction record no. 14306	4.1	2.4	1.3		B6n7-02	PE840
Bal6.S005	437538	3335444	Reefing Device?	4.9	3.0	1.2		B6n7-01	PE839
Bal6.S006	440051	3334115	debris	2.3	2.4	0.3	Bal6.M009	B6n7-05	PE840
Bal6.S007	440782	3333796	debris	2.7	1.5	0.4		B6n7-06	PE840
<b>BAL7</b>									
Bal7.S001	439783	3331162	debris	2.7	2.7	0.4		B6n7-08	PE884
Bal7.S002	438564	3331002	debris	3.4	3.7	0.0	Bal7.M004	B6n7-07	PE883
Bal7.S003	437529	3330951	Reefing Device?	3.4	2.1	2.8		B6n7-07	PE883
Bal7.S004	437689	3331215	debris	2.0	3.6	0.4		B6n7-07	PE883
Bal7.S005	439098	3331698	debris	1.5	2.0	1.3		B6n7-08	PE839
Bal7.S006	437806	3331686	debris	12.9	6.6	1.0		B6n7-07	PE839
Bal7.S007	438146	3332123	Debris-Linear feature	4.2	1.1	0.0		B6n7-07	PE839
Bal7.S008	438014	3332555	debris	2.1	2.1	0.4		B6n7-07	PE839

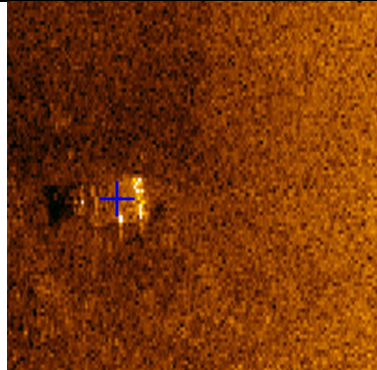
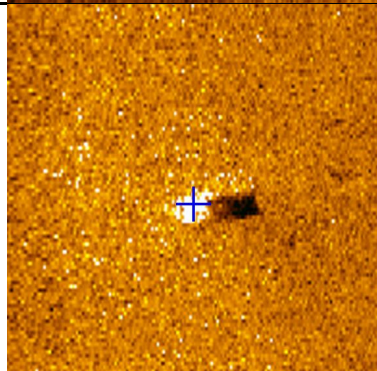
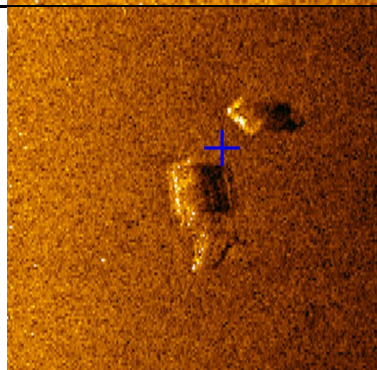
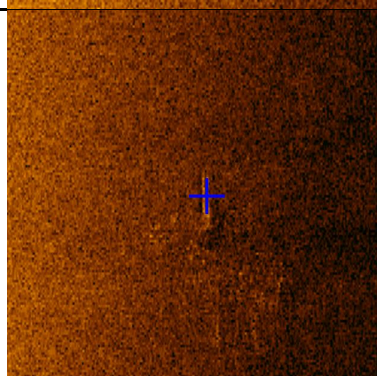
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal7.S009	437535	3332613	debris	9.3	3.0	2.0		B6n7-07	PE839
Bal7.S010	438258	3331572	debris	1.7	1.2	0.6		B6n7-07	PE839
Bal7.S011	439763	3331740	debris	2.5	2.6	0.4		B6n7-08	PE840
Bal7.S012	439064	3331430	debris	2.7	3.2	0.0		B6n7-08	PE883
Bal7.S013	437850	3330983	debris	2.9	3.2	0.8		B6n7-07	PE883

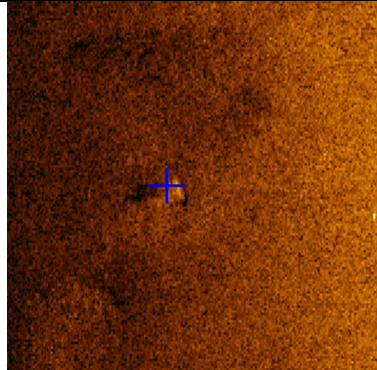
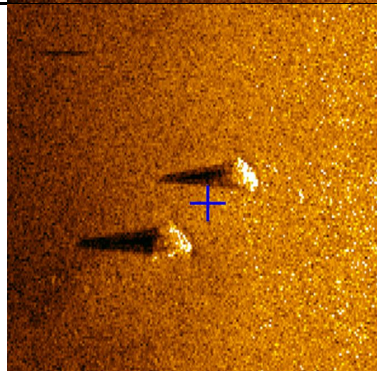
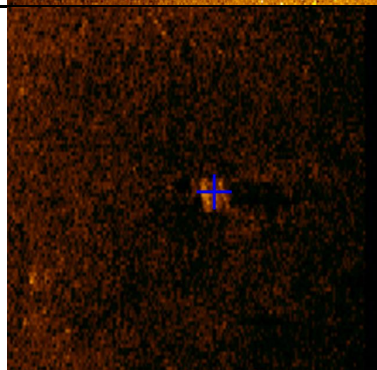
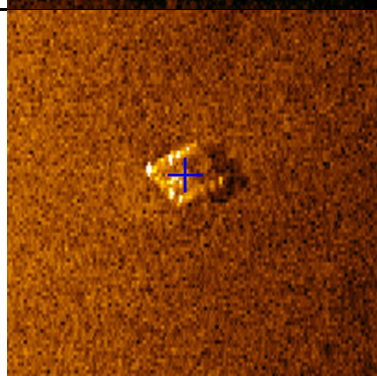
Table K-3. Acoustic Target Images recorded for the BAL6 & BAL7 Cells.

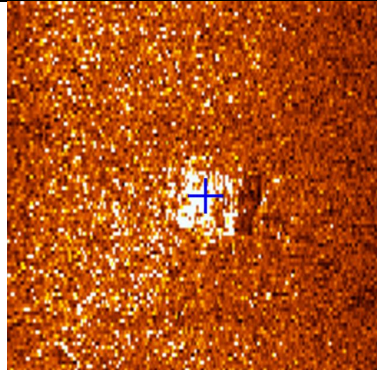
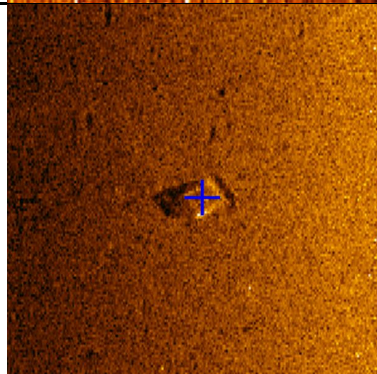
Target Image	Target Info	User Entered Info
<b>BAL6</b>		
	<p><b>BAL6.C0001</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1341280632 -87.6148903126 (WGS84) (X) 440774.60 (Y) 3333807.53 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal6\Bal6_16.jsf</li> <li>Heading: 80.900 Degrees</li> <li>Line Name: Bal6_16</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.0 Meters</li> <li>Target Height: 0.6 Meters</li> <li>Target Length: 3.4 Meters</li> <li>Target Shadow: 1.7 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
	<p><b>BAL6.C0002</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1339159007 -87.6062492663 (WGS84) (X) 441606.78 (Y) 3333779.56 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal6\Bal6_13.jsf</li> <li>Heading: 267.700 Degrees</li> <li>Line Name: Bal6_13</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.7 Meters</li> <li>Target Height: 1.9 Meters</li> <li>Target Length: 7.5 Meters</li> <li>Target Shadow: 3.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Reefing Device?</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL6.C0003</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1338254197 -87.6096549563 (WGS84) (X) 441278.69 (Y) 3333771.29 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal6\Bal6_15.jsf</li> <li>Heading: 85.090 Degrees</li> <li>Line Name: Bal6_15</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.7 Meters</li> <li>Target Height: 1.2 Meters</li> <li>Target Length: 3.1 Meters</li> <li>Target Shadow: 5.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Reefing Device?</li> </ul>
	<p><b>BAL6.C0004</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1503345157 -87.6230193344 (WGS84) (X) 440001.41 (Y) 3335607.67 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal6\Bal6_54.jsf</li> <li>Heading: 264.790 Degrees</li> <li>Line Name: Bal6_54</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.4 Meters</li> <li>Target Height: 1.3 Meters</li> <li>Target Length: 4.1 Meters</li> <li>Target Shadow: 5.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>BAL6.C0005</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1487379776 -87.6485925173 (WGS84) (X) 437537.58 (Y) 3335444.48 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal6\Bal6_60.jsf</li> <li>Heading: 259.390 Degrees</li> <li>Line Name: Bal6_60</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.0 Meters</li> <li>Target Height: 1.2 Meters</li> <li>Target Length: 4.9 Meters</li> <li>Target Shadow: 3.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Reefing Device?</li> </ul>
	<p><b>BAL6.C0006</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1368683408 -87.6224249280 (WGS84) (X) 440050.52 (Y) 3334115.12 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal6\Bal6_26.jsf</li> <li>Heading: 265.700 Degrees</li> <li>Line Name: Bal6_26</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.4 Meters</li> <li>Target Height: 0.3 Meters</li> <li>Target Length: 2.3 Meters</li> <li>Target Shadow: 1.1 Meters</li> <li>Mag Anomaly: Bal6.M013</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL6.C0007</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1340255192 -87.6148100439 (WGS84) (X) 440782.27 (Y) 3333796.12 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal6\Bal6_17.jsf</li> <li>Heading: 83.500 Degrees</li> <li>Line Name: Bal6_17</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.5 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 2.7 Meters</li> <li>Target Shadow: 1.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description: Debris</li> </ul>
<b>BAL7</b>		
	<p><b>Bal7.S001</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1102106656 -87.6250387663 (WGS84) (X) 439782.58 (Y) 3331162.47 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal7\Bal7_01.jsf</li> <li>Heading: 74.500 Degrees</li> <li>Line Name: Bal7_01</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.67 Meters</li> <li>Target Height: 0.44 Meters</li> <li>Target Length: 2.69 Meters</li> <li>Target Shadow: 1.66 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Description: Debris</li> </ul>
	<p><b>Bal7.S002</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1087051332 -87.6376807523 (WGS84) (X) 438563.67 (Y) 3331002.37 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal7\Bal7_01.jsf</li> <li>Heading: 79.300 Degrees</li> <li>Line Name: Bal7_01</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.74 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 3.39 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly: Bal7.M004</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Description: Debris</li> </ul>
	<p><b>Bal7.S003</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1081918852 -87.6484149615 (WGS84) (X) 437529.16 (Y) 3330951.32 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore Alabama\SS\Bal7\Bal7_04.jsf</li> <li>Heading: 267.000 Degrees</li> <li>Line Name: Bal7_04</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.11 Meters</li> <li>Target Height: 2.79 Meters</li> <li>Target Length: 3.35 Meters</li> <li>Target Shadow: 9.27 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Description: Reefing Device?</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal7.S004</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1105773752 -87.6467691233 (WGS84) (X) 437689.23 (Y) 3331214.76 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_07.jsf</li> <li>Heading: 78.500 Degrees</li> <li>Line Name: Bal7_07</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.63 Meters</li> <li>Target Height: 0.42 Meters</li> <li>Target Length: 1.96 Meters</li> <li>Target Shadow: 1.27 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: debris</li> </ul>
	<p><b>Bal7.S005</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1150099601 -87.6321726987 (WGS84) (X) 439098.22 (Y) 3331698.08 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_13.001.jsf</li> <li>Heading: 86.900 Degrees</li> <li>Line Name: Bal7_13.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.96 Meters</li> <li>Target Height: 1.32 Meters</li> <li>Target Length: 1.54 Meters</li> <li>Target Shadow: 2.28 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Debris</li> </ul>
	<p><b>Bal7.S006</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1148372671 -87.6455842102 (WGS84) (X) 437806.05 (Y) 3331686.17 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_16.jsf</li> <li>Heading: 267.100 Degrees</li> <li>Line Name: Bal7_16</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 6.55 Meters</li> <li>Target Height: 1.05 Meters</li> <li>Target Length: 12.89 Meters</li> <li>Target Shadow: 3.36 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Debris</li> </ul>
	<p><b>Bal7.S007</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1188005359 -87.6420784159 (WGS84) (X) 438146.27 (Y) 3332123.45 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_25.jsf</li> <li>Heading: 82.400 Degrees</li> <li>Line Name: Bal7_25</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.06 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 4.22 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Linear feature</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal7.S008</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1226901447 -87.6434785630 (WGS84) (X) 438013.81 (Y) 3332555.23 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_34.jsf</li> <li>Heading: 266.290 Degrees</li> <li>Line Name: Bal7_34</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.14 Meters</li> <li>Target Height: 0.38 Meters</li> <li>Target Length: 2.06 Meters</li> <li>Target Shadow: 1.25 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Debris</li> </ul>
	<p><b>Bal7.S09</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1231895085 -87.6484573404 (WGS84) (X) 437534.51 (Y) 3332613.28 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_35.jsf</li> <li>Heading: 94.190 Degrees</li> <li>Line Name: Bal7_35</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.03 Meters</li> <li>Target Height: 1.98 Meters</li> <li>Target Length: 9.30 Meters</li> <li>Target Shadow: 5.61 Meters</li> <li>Mag Anomaly: Bal7.M001</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Reefing Device?</li> </ul>
	<p><b>Bal7.S010</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1138273880 -87.6408826873 (WGS84) (X) 438258.37 (Y) 3331571.71 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_14.jsf</li> <li>Heading: 87.400 Degrees</li> <li>Line Name: Bal7_14</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.21 Meters</li> <li>Target Height: 0.60 Meters</li> <li>Target Length: 1.74 Meters</li> <li>Target Shadow: 3.17 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Debris</li> </ul>
	<p><b>Bal7.S011</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1154244665 -87.6252748016 (WGS84) (X) 439763.01 (Y) 3331740.35 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_11.jsf</li> <li>Heading: 260.790 Degrees</li> <li>Line Name: Bal7_11</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.63 Meters</li> <li>Target Height: 0.41 Meters</li> <li>Target Length: 2.48 Meters</li> <li>Target Shadow: 1.22 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Debris</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>Bal7.S012</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1125933830 -87.6325168130 (WGS84) (X) 439063.58 (Y) 3331430.47 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_08.jsf</li> <li>Heading: 83.190 Degrees</li> <li>Line Name: Bal7_08</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.24 Meters</li> <li>Target Height: 0.00 Meters</li> <li>Target Length: 2.75 Meters</li> <li>Target Shadow: 0.00 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Debris</li> </ul>
	<p><b>Bal7.S013</b></p> <ul style="list-style-type: none"> <li>Click Position 30.1084918590 -87.6450853264 (WGS84) (X) 437850.14 (Y) 3330982.74 (Projected Coordinates)</li> <li>Map Projection: UTM83-16</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\Bal7\Bal7_02.jsf</li> <li>Heading: 85.090 Degrees</li> <li>Line Name: Bal7_02</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.16 Meters</li> <li>Target Height: 0.79 Meters</li> <li>Target Length: 2.88 Meters</li> <li>Target Shadow: 2.06 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Description: Debris</li> </ul>

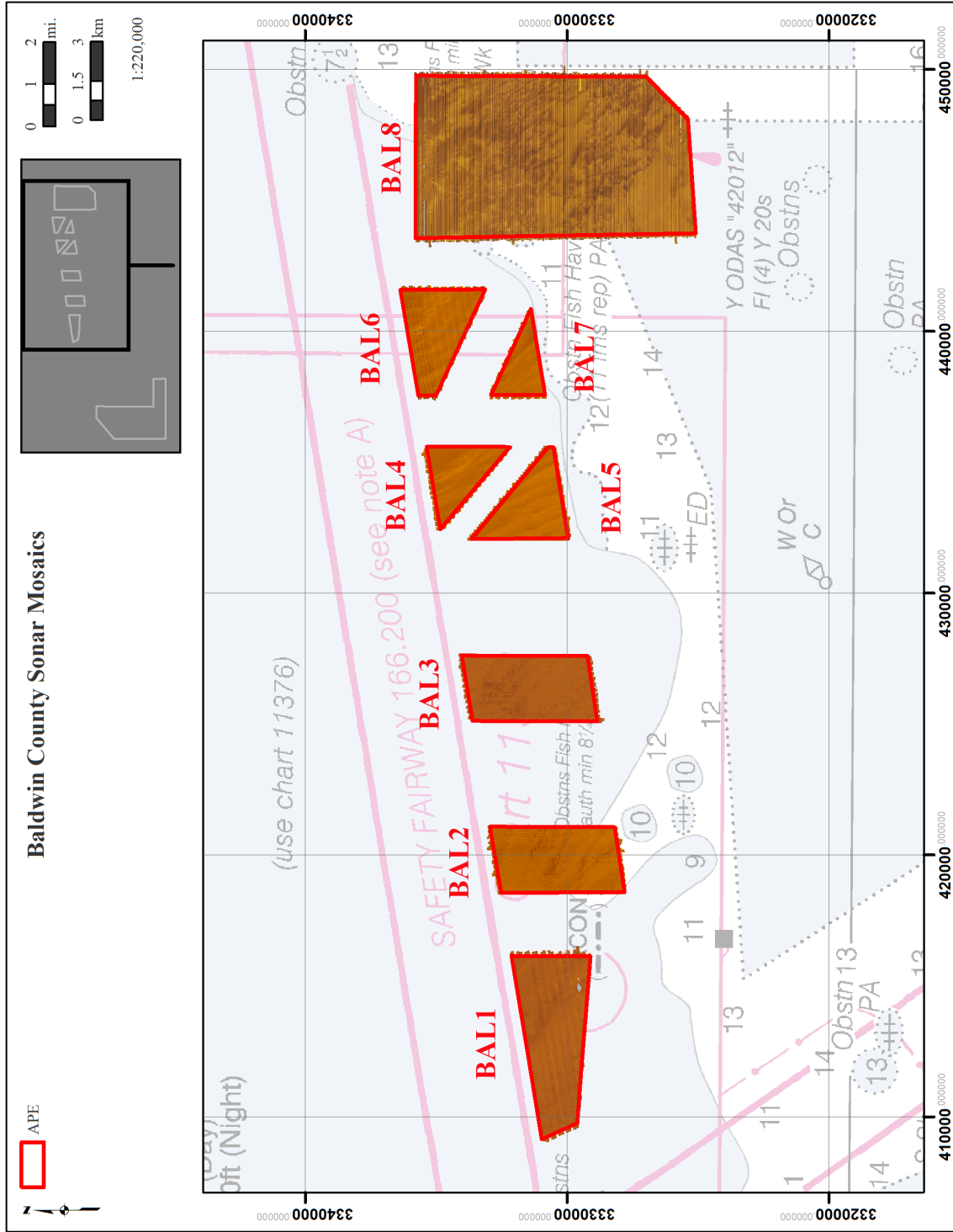


Figure K-1. Sonar Mosaics showing coverage for all Baldwin Cells (SAM-2014-00487-DEM) including BAL6 & BAL7.

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## **APPENDIX L: BAL4 & BAL5 MAGNETIC CONTOUR MAPS**

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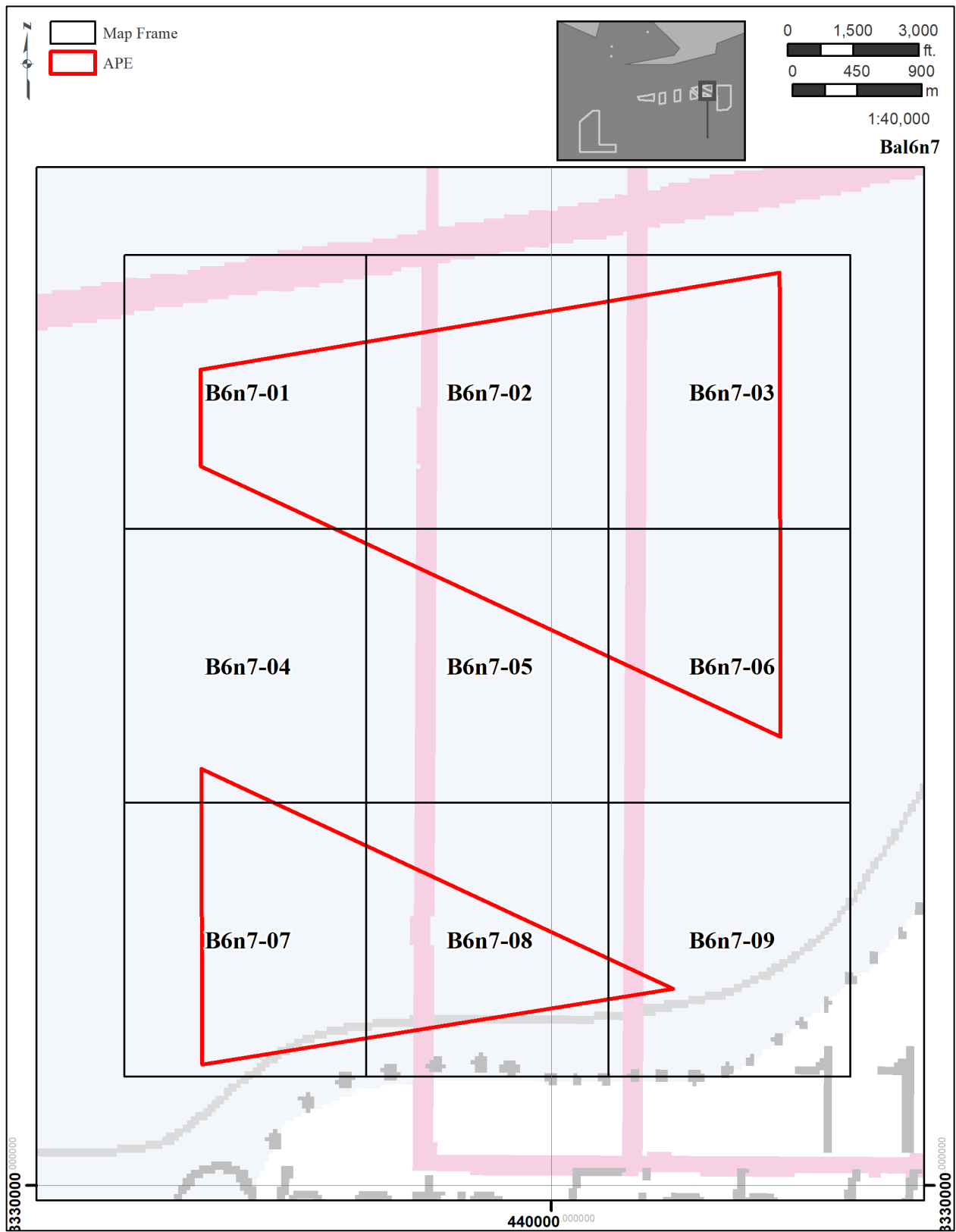


Figure L-01. Magnetic Contour Map Key for BAL6 & BAL7 (SAM-2014-00487-DEM).

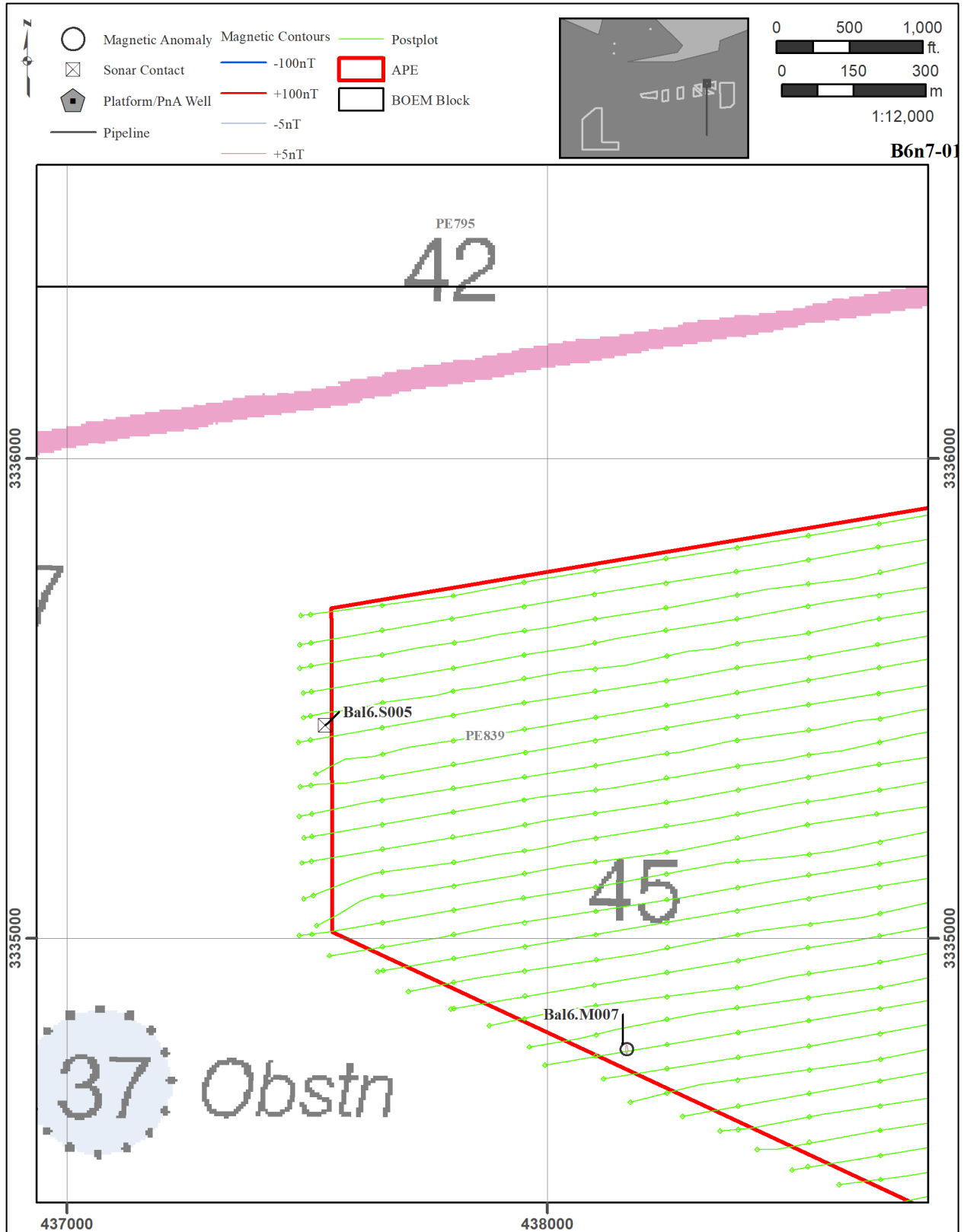


Figure L-02. BAL6 & BAL7 Map 1.

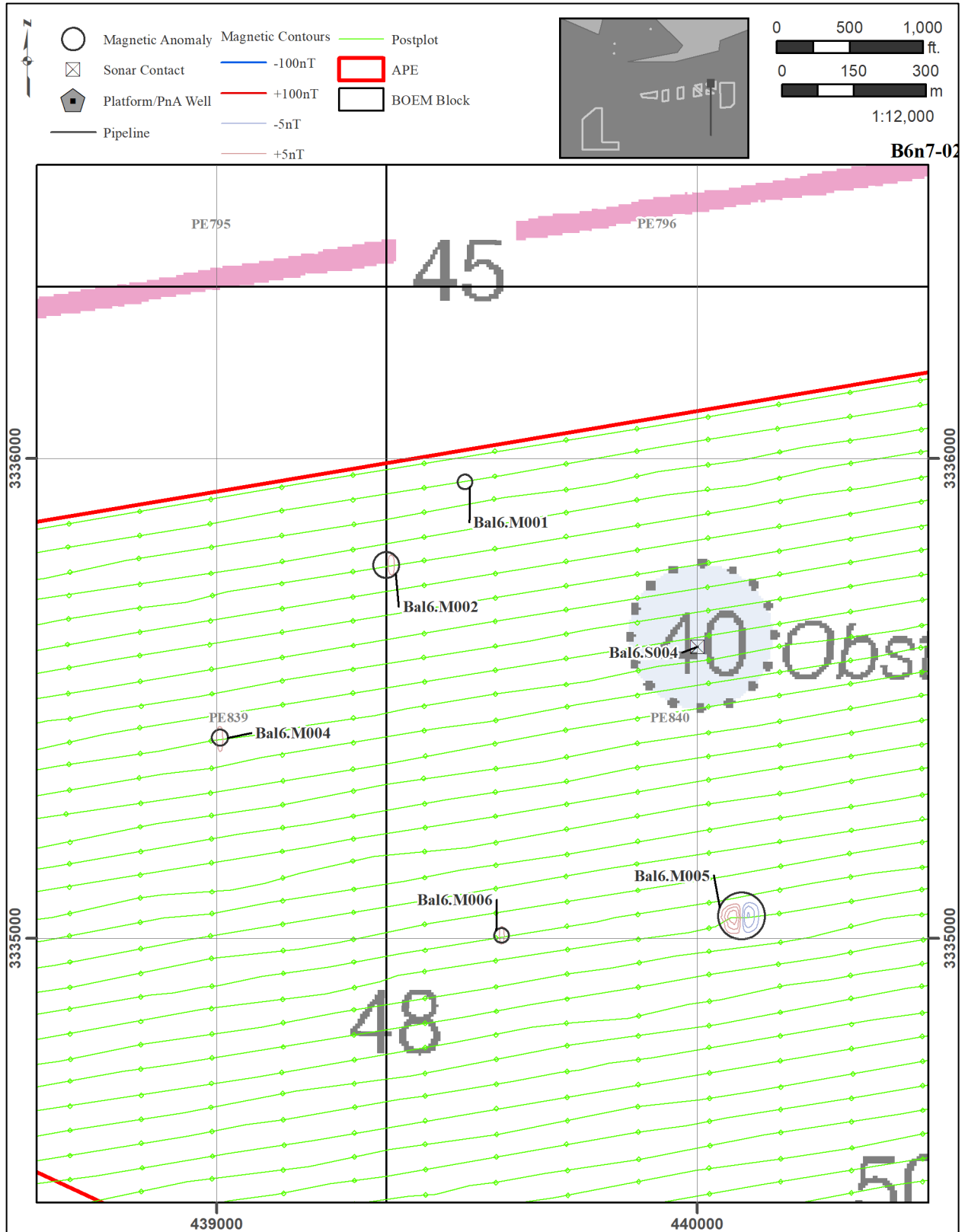
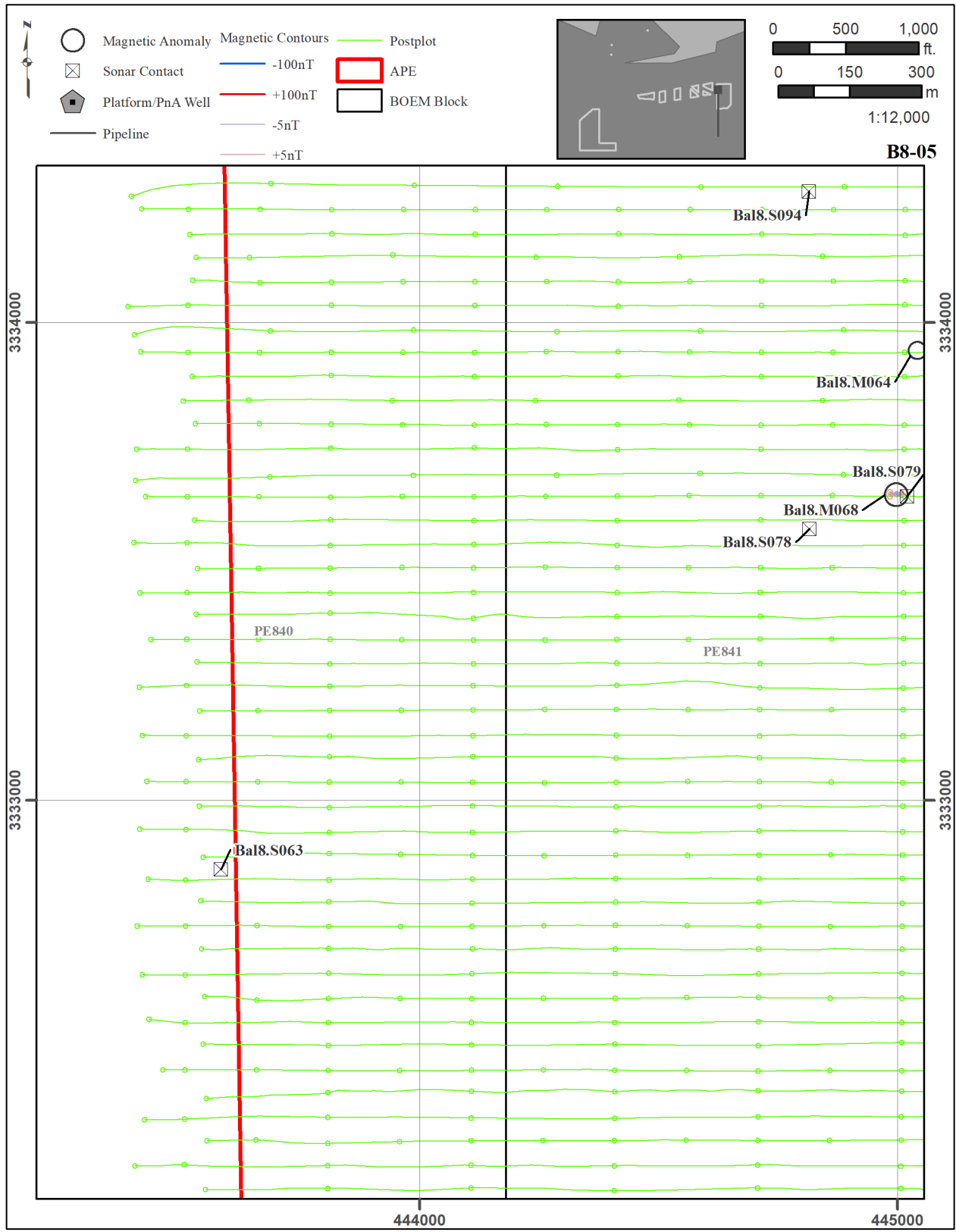


Figure L-03. BAL6 & BAL7 Map 2.



Figure L-04. BAL6 & BAL7 Map 3.



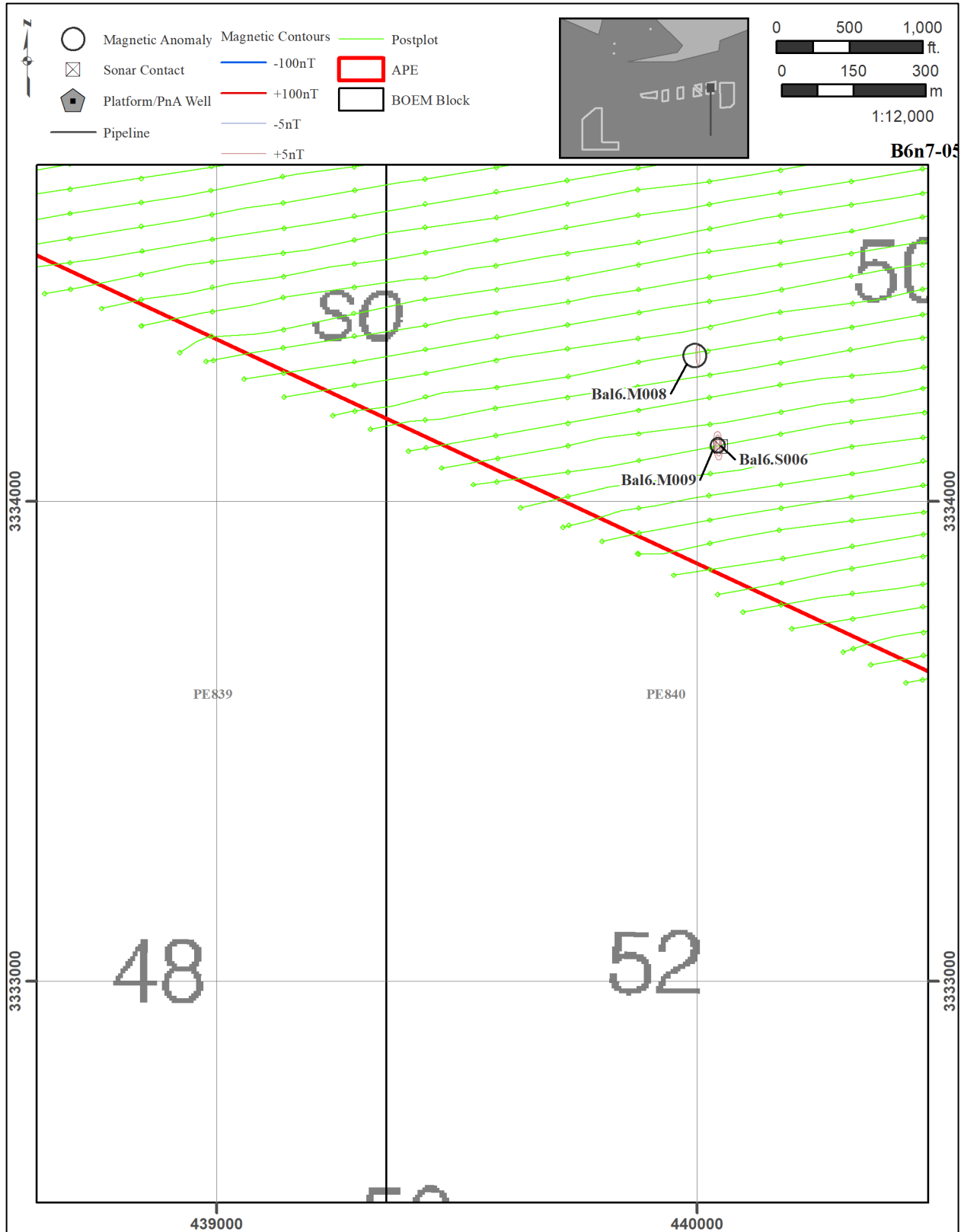


Figure L-06. BAL6 & BAL7 Map 5.

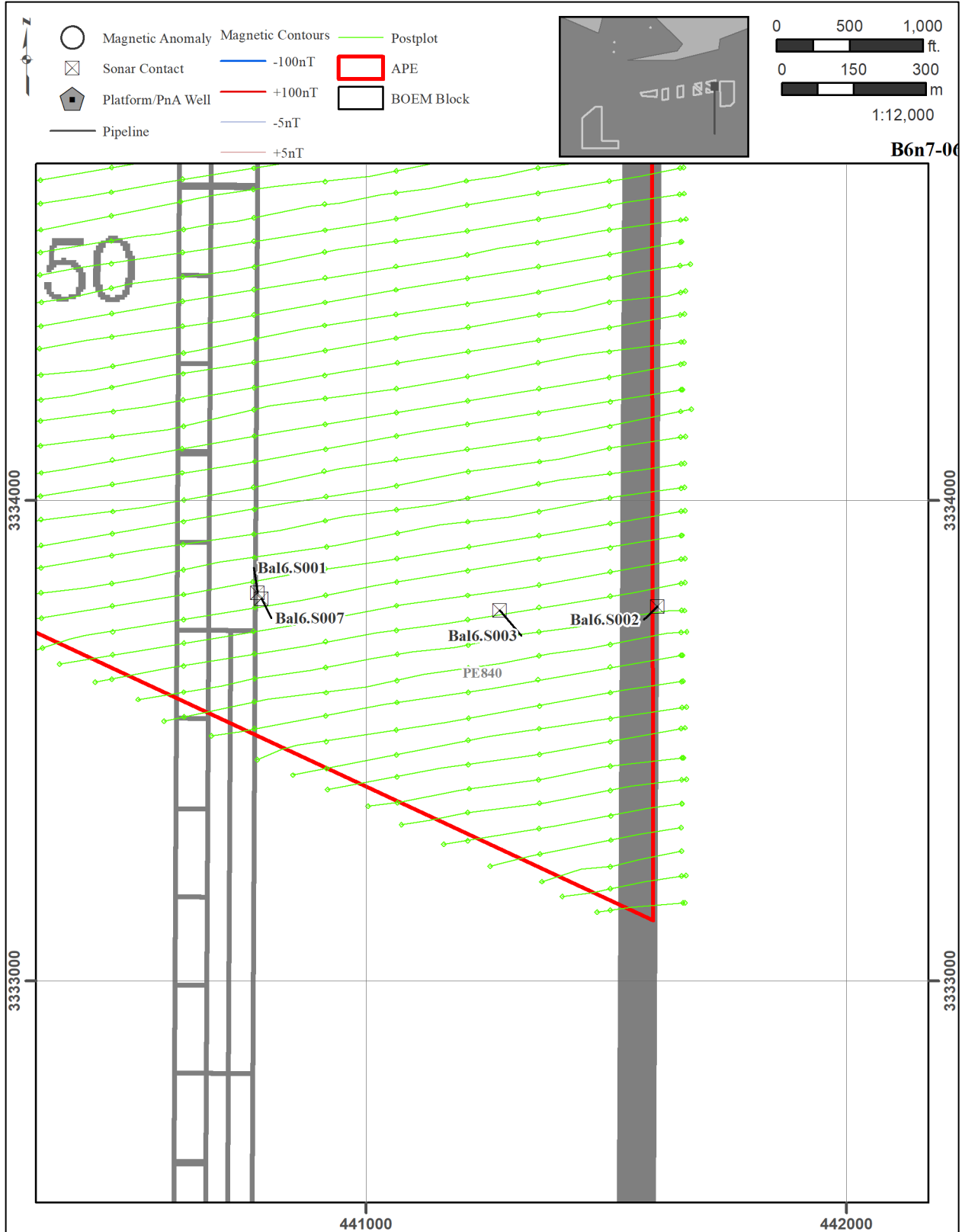


Figure L-07. BAL6 & BAL7 Map 6.

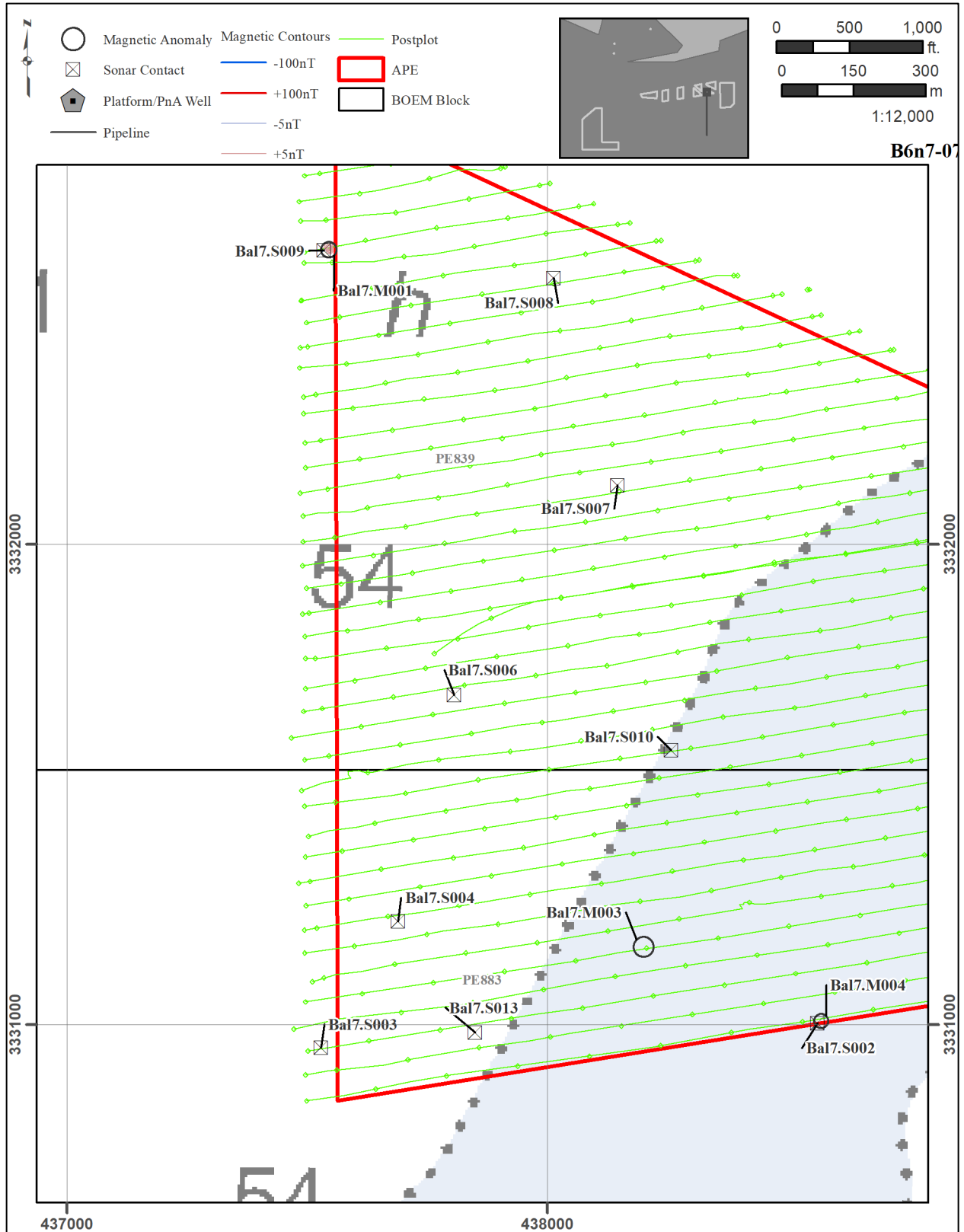
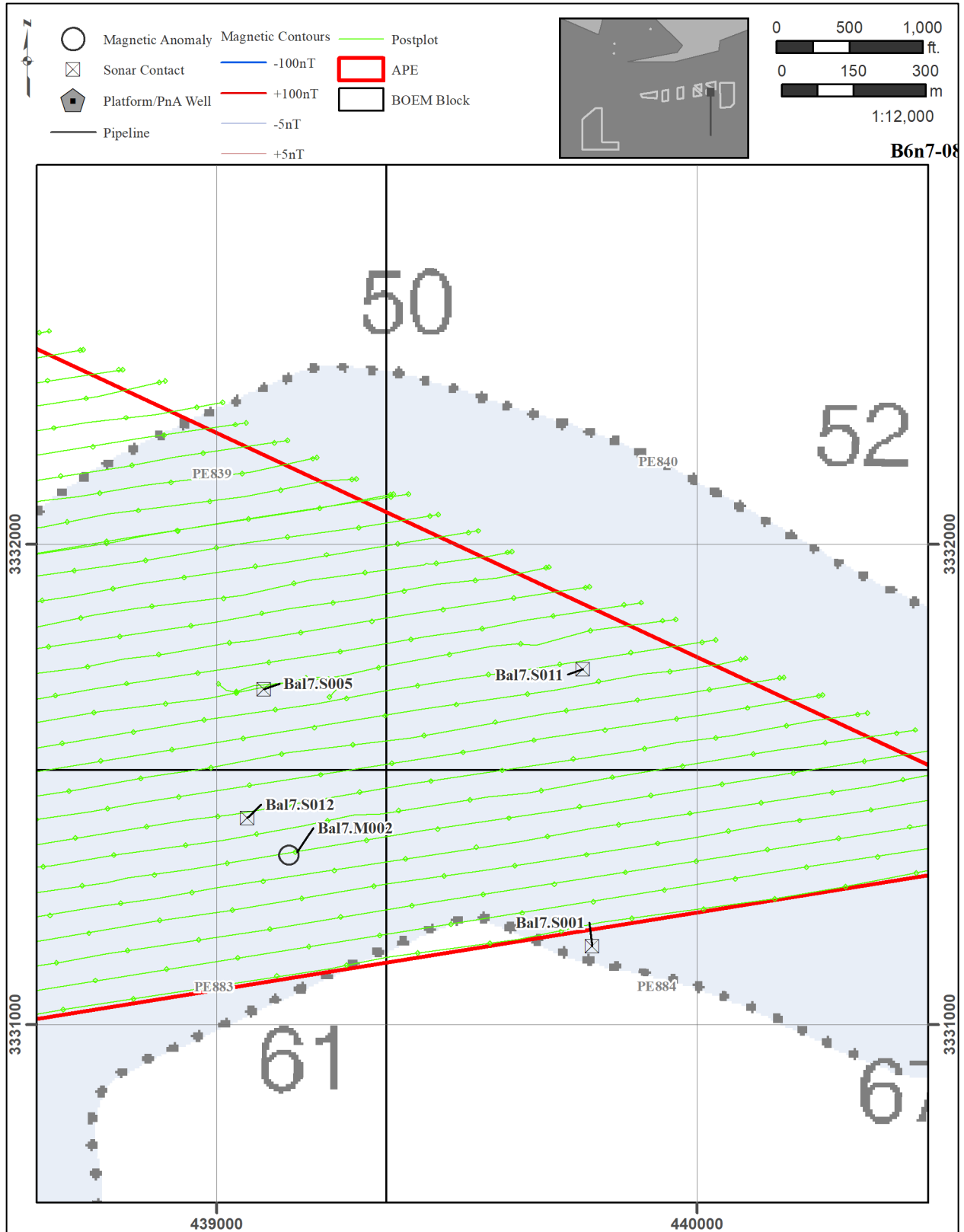


Figure L-08. BAL6 & BAL7 Map 7.



B6n7-08

Figure L-09. BAL6 & BAL7 Map 8.

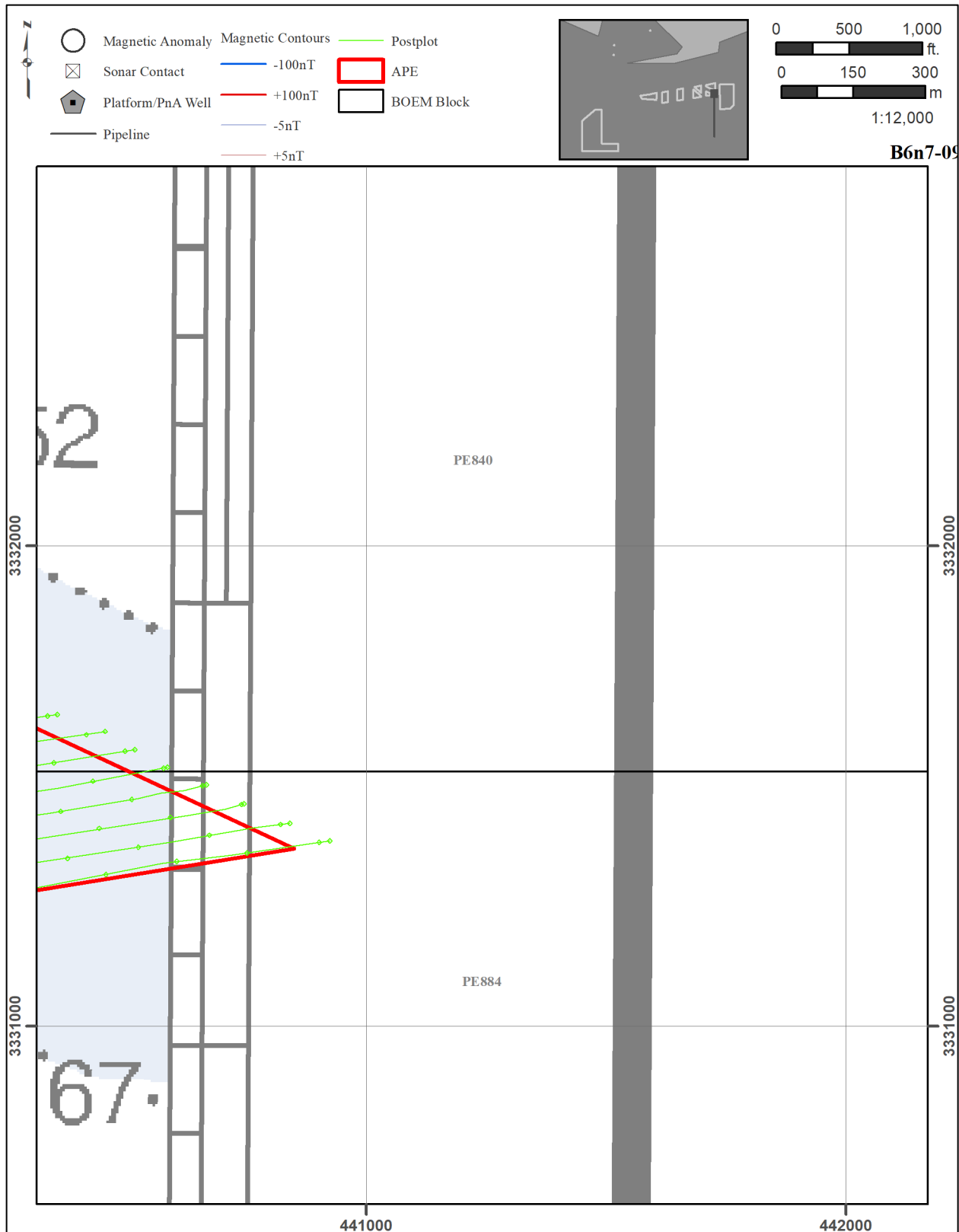


Figure L-10. BAL6 & BAL7 Map 9.

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## **APPENDIX M: BAL8 REMOTE SENSING DATA**

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Table M-1. Magnetic Anomalies Recorded for the BAL8 Cell.

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal8.M001	444038	3335682	M	37	19.2		SPS		B8-01	PE840
Bal8.M002	444867	3335539	M	85	8.6		SPS		B8-01	PE841
Bal8.M003	444976	3335338	D	45	38.0		RSWC Reef Module		B8-02	PE841
Bal8.M004	443741	3335283	M	27	12.9		debris	Bal8. S160	B8-01	PE840
Bal8.M005	445220	3335283	D	51	8.6		RSWC Reef Module		B8-02	PE841
Bal8.M006	445110	3335282	D	35	19.2		RSWC Reef Module		B8-02	PE841
Bal8.M007	445170	3335282	M	20	138.5		RSWC Reef Module		B8-02	PE841
Bal8.M008	449303	3335240	M	48	1123.5		SPS		B8-04	PE842
Bal8.M009	445695	3335237	D	61	49.5		debris scatter	Bal8. S158	B8-02	PE841
Bal8.M010	445386	3335235	M	87	334.2		RSWC Reef Module		B8-02	PE841
Bal8.M011	445997	3335142	D	31	93.5		RSWC Reef Module		B8-02	PE841
Bal8.M012	445930	3335142	M	28	14.4		RSWC Reef Module		B8-02	PE841
Bal8.M013	444554	3335142	M	15	5.4		SPS		B8-01	PE841
Bal8.M014	444036	3335142	D	29	194.4		SPS		B8-01	PE840
Bal8.M015	446255	3335140	D	27	143.8		RSWC Reef Module		B8-02	PE841
Bal8.M016	445673	3335140	M	19	39.5		RSWC Reef Module		B8-02	PE841
Bal8.M017	446633	3335139	M	24	11.9		SPS		B8-02	PE841
Bal8.M018	449148	3335137	D	31	8.0		SPS		B8-04	PE842
Bal8.M019	446025	3335080	M	89	5.5		Gulf State Park Pavilion in AL reef database	Bal8. S152	B8-02	PE841
Bal8.M020	445023	3334982	M	22	23.0		SPS		B8-02	PE841
Bal8.M021	446620	3334982	M	20	64.8		RSWC Reef Module		B8-02	PE841
Bal8.M022	447087	3334982	D	22	542.0		RSWC Reef Module		B8-03	PE841
Bal8.M023	447120	3334982	M	16	90.4		RSWC Reef Module		B8-03	PE841
Bal8.M024	447202	3334982	M	13	264.3		RSWC Reef Module		B8-03	PE841
Bal8.M025	447234	3334982	M	13	33.3		RSWC Reef Module		B8-03	PE841
Bal8.M026	447298	3334982	M	10	103.1		RSWC Reef Module		B8-03	PE841
Bal8.M027	447333	3334982	M	32	246.0		RSWC Reef Module		B8-03	PE841
Bal8.M028	447355	3334982	D	17	57.4		RSWC Reef Module		B8-03	PE841
Bal8.M029	445553	3334981	C	113	98.3		SPS		B8-02	PE841
Bal8.M030	445493	3334980	M	83	82.1		debris	Bal8. S132	B8-02	PE841
Bal8.M031	445165	3334937	D	67	6.3		tire	Bal8. S133	B8-02	PE841
Bal8.M032	447366	3334933	M	42	5.9		RSWC Reef Module		B8-03	PE841
Bal8.M033	444810	3334840	D	39	5.9		SPS		B8-01	PE841
Bal8.M034	445290	3334839	D	27	122.4		SPS		B8-02	PE841
Bal8.M035	444727	3334839	D	62	24.0		Unknown structural debris	Bal8. S125	B8-01	PE841
Bal8.M036	447453	3334838	D	30	44.0		RSWC Reef Module		B8-03	PE841
Bal8.M037	446882	3334838	D	30	10.8		debris	Bal8. S124	B8-03	PE841

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal8.M038	447533	3334784	M	43	8.3		RSWC Reef Module		B8-03	PE841
Bal8.M039	444759	3334783	C	212	48.7		Unknown structural debris	Bal8.S125	B8-01	PE841
Bal8.M041	443570	3334682	M	23	63.2		reefing pyramid	Bal8.S121	B8-01	PE840
Bal8.M042	444970	3334741	D	141	754.4		"Perdido Pass Bridge 2" artificial reef	Bal8.S119, Bal8.S120	B8-01	PE841
Bal8.M043	445119	3334682	M	38	5.3		SPS		B8-02	PE841
Bal8.M044	445198	3334682	M	31	4.5		SPS		B8-02	PE841
Bal8.M045	447635	3334681	C	42	18.3		RSWC Reef Module		B8-03	PE841
Bal8.M046	447748	3334539	D	45	20.6		RSWC Reef Module		B8-03	PE841
Bal8.M047	447062	3334539	M	24	5.5		SPS		B8-03	PE841
Bal8.M048	445464	3334537	M	281	1120.0		SPS		B8-02	PE841
Bal8.M049	445221	3334537	M	27	6.0		SPS		B8-02	PE841
Bal8.M050	445140	3334537	M	27	21.0		SPS		B8-02	PE841
Bal8.M051	444975	3334537	D	34	24.2		SPS		B8-02	PE841
Bal8.M053	445621	3334484	M	73	11.0		SPS		B8-02	PE841
Bal8.M054	445156	3334459	C	140	435.8		debris scatter	Bal8.S106, Bal8.S107	B8-02	PE841
Bal8.M055	447921	3334381	D	40	26.8		RSWC Reef Module		B8-03	PE841
Bal8.M056	448053	3334239	M	30	11.9		RSWC Reef Module		B8-03	PE841
Bal8.M057	448031	3334239	M	20	4.6		RSWC Reef Module		B8-03	PE841
Bal8.M058	448209	3334112	D	91	162.6		RSWC Reef Module		B8-07	PE841
Bal8.M059	445086	3334080	D	41	43.5		SPS		B8-06	PE841
Bal8.M060	448448	3334080	D	190	181.0	Y	Rookie Barge; flat deck steel barge	Bal8.S091	B8-08	PE841
Bal8.M061	448004	3334040	M	73	5.0		SPS		B8-07	PE841
Bal8.M062	448674	3334011	D	134	26.5		Gulf State Pier Pilings	Bal8.S088	B8-08	PE841
Bal8.M064	445042	3333941	D	36	5.3		SPS		B8-06	PE841
Bal8.M065	448350	3333782	M	81	37.4		linear feature	Bal8.S084, Bal8.S087	B8-08	PE841
Bal8.M066	448524	3333782	D	62	5.5		SPS		B8-08	PE841
Bal8.M067	448819	3333662	D	355	81.7		Gulf State Pier Pilings	Bal8.S082	B8-08	PE841
Bal8.M068	444998	3333639	C	49	59.0		debris	Bal8.S079	B8-06	PE841
Bal8.M072	448968	3333397	C	189	6918.6	Y	Liberty Ship "Allen"	Bal8.S069, Bal8.S076	B8-08	PE841
Bal8.M075	448562	3333185	D	83	36.5		Gulf State Park Pavilion	Bal8.	B8-08	PE841

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Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
								S067		
Bal8.M076	445915	3333184	M	24	5.8		SPS		B8-06	PE841
Bal8.M078	448538	3333140	D	58	6.9		SPS		B8-08	PE841
Bal8.M079	449495	3332881	M	27	5.3		SPS		B8-08	PE842
Bal8.M080	446712	3332438	M	36	13.3		SPS		B8-07	PE841
Bal8.M081	447141	3332263	D	85	33.2		SPS		B8-11	PE841
Bal8.M082	448706	3332280	M	30	5.9		SPS		B8-12	PE841
Bal8.M084	447805	3332083	M	65	11.2		SPS		B8-11	PE841
Bal8.M085	447454	3331980	D	63	10.5		SPS		B8-11	PE841
Bal8.M086	447319	3331682	D	87	73.2		SPS		B8-11	PE841
Bal8.M087	443821	3331679	D	32	14.6		SPS		B8-09	PE840
Bal8.M088	443610	3331678	C	75	21.4		SPS		B8-09	PE840
Bal8.M089	447407	3331615	D	207	12.8		Lillian Bridge artificial reef	Bal8.S057	B8-11	PE841
Bal8.M090	446397	3331539	M	40	6.4		SPS		B8-10	PE841
Bal8.M091	447392	3331538	D	73	18.2		SPS		B8-11	PE841
Bal8.M092	446939	3331538	M	28	5.4		SPS		B8-11	PE841
Bal8.M093	447268	3331460	D	123	17.0		SPS		B8-11	PE885
Bal8.M094	447277	3331381	M	49	9.3		SPS		B8-11	PE885
Bal8.M095	447340	3331238	M	29	6.1		SPS		B8-11	PE885
Bal8.M096	445230	3331088	D	190	645.4		Large unknown structural debris	Bal8.S053	B8-10	PE885
Bal8.M098	444287	3330884	D	77	19.6		SPS		B8-09	PE885
Bal8.M099	445193	3330882	M	159	21.4		SPS		B8-10	PE885
Bal8.M100	448470	3330342	D	35	6.9		SPS		B8-16	PE885
Bal8.M101	445612	3330341	M	19	5.8		SPS		B8-14	PE885
Bal8.M102	449476	3330280	M	73	7.2		debris	Bal8.S048	B8-16	PE886
Bal8.M103	449254	3330184	D	26	35.3		SPS		B8-16	PE886
Bal8.M104	443771	3330041	M	21	3.7		SPS		B8-13	PE884
Bal8.M105	448242	3329885	M	19	5.4		SPS		B8-15	PE885
Bal8.M106	449646	3329884	D	25	10.1		SPS		B8-16	PE886
Bal8.M107	449203	3329840	D	112	9.7		SPS		B8-16	PE886
Bal8.M108	446554	3329838	D	104	6.6		debris	Bal8.S041	B8-14	PE885
Bal8.M109	444191	3329739	M	31	11.2		SPS		B8-13	PE885
Bal8.M110	444951	3329560	D	381	721.2	Y	Wrecked barge; in BOEM wreck db as "Unknown Vessel"	Bal8.S034	B8-13	PE885
Bal8.M111	446639	3329583	M	26	5.3		SPS		B8-14	PE885
Bal8.M113	448899	3329036	M	84	8.6		SPS		B8-16	PE885
Bal8.M114	446469	3328890	M	57	8.7		SPS		B8-14	PE885
Bal8.M118	448961	3328681	M	55	5.3		debris	Bal8.S019	B8-16	PE885
Bal8.M122	444987	3328538	M	30	5.4		SPS		B8-14	PE885
Bal8.M123	444370	3328559	D	460	670.2	Y	Liberty Ship "Wallace"	Bal8.S017	B8-13	PE885

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
Bal8.M127	444097	3328239	M	30	10.2		SPS		B8-17	PE884
Bal8.M128	447547	3327942	M	82	7.2		SPS		B8-19	PE885
Bal8.M129	448153	3327639	M	30	11.1		SPS		B8-19	PE885
Bal8.M130	447736	3327639	D	33	13.9		SPS		B8-19	PE885
Bal8.M131	445330	3327182	D	46	6.5		SPS		B8-18	PE885
Bal8.M132	445635	3326884	D	47	4.6		SPS		B8-18	PE885
Bal8.M133	449351	3326884	M	41	6.6		SPS		B8-20	PE886
Bal8.M134	443997	3326583	D	71	5.6		SPS		B8-17	PE928
Bal8.M135	444132	3326282	M	31	7.6		SPS		B8-21	PE928
Bal8.M136	445044	3326070	D	145	57.0	Y	M60 Tank	Bal8.S003	B8-22	PE929
Bal8.M137	445067	3326182	D	37	13.9	Y	M60 Tank	Bal8.S004	B8-22	PE929
Bal8.M138	444968	3325985	D	34	13.1		SPS		B8-21	PE929
Bal8.M139	444633	3325680	D	24	9.4		SPS		B8-21	PE929
Bal8.M140	447472	3325617	C	226	416.2		Perdido Pass Bridge	Bal8.S001, Bal8.S002	B8-23	PE929
Bal8.M141	445997	3335590	D	48	96.1		SPS		B8-02	PE841

\* M = Monopole, D = Dipole, MC = Multi Component.

Table M-2. Sonar Contacts for the BAL8 Cell.

Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal8.S001	447444	3325633	Perdido Pass Bridge artificial reef	15.8	9.7	1.4		B8-23	PE929
Bal8.S002	447509	3325633	Perdido Pass Bridge artificial reef	18.3	16.0	1.7		B8-23	PE929
Bal8.S003	445037	3326111	M60 Tank	2.8	2.2	1.6	Bal8.M136	B8-22	PE929
Bal8.S004	445074	3326166	M60 Tank	0.0	0.0	0.0	Bal8.M137	B8-22	PE929
Bal8.S005	448963	3326316	debris	0.0	0.0	0.0		B8-24	PE929
Bal8.S006	443822	3326791	debris	0.0	0.0	0.0		B8-17	PE884
Bal8.S007	448762	3326701	RSWC Reef Module	0.0	0.0	0.0		B8-20	PE929
Bal8.S008	446035	3326814	RSWC Reef Module	0.0	0.0	0.0		B8-18	PE885
Bal8.S009	447716	3326983	debris	0.0	0.0	0.0		B8-19	PE885
Bal8.S010	445907	3327376	debris	0.0	0.0	0.0		B8-18	PE885
Bal8.S011	444157	3327375	debris	0.0	0.0	0.0		B8-17	PE884
Bal8.S012	449013	3327381	debris	0.0	0.0	0.0		B8-20	PE886

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Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal8.S013	444981	3327856	debris	0.0	0.0	0.0		B8-18	PE885
Bal8.S014	448290	3328000	debris	0.0	0.0	0.0		B8-19	PE885
Bal8.S015	446983	3328150	RSWC Reef Module	0.0	0.0	0.0		B8-19	PE885
Bal8.S016	447366	3328339	debris	0.0	0.0	0.0		B8-19	PE885
Bal8.S017	444360	3328585	Liberty Ship Wallace	76.4	19.7	3.5	Bal8.M123	B8-13	PE885
Bal8.S017 a	444336	3328630	Liberty Ship Wallace	57.7	18.0	2.8	Bal8.M123	B8-13	PE885
Bal8.S018	446948	3328722	RSWC Reef Module	0.0	0.0	0.0		B8-15	PE885
Bal8.S019	448945	3328708	debris	0.0	0.0	0.0	Bal8.M118	B8-16	PE885
Bal8.S020	448901	3328747	debris	0.0	0.0	0.0		B8-16	PE885
Bal8.S021	445555	3328858	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S022	444277	3328922	debris	0.0	0.0	0.0		B8-13	PE885
Bal8.S023	445009	3328976	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S024	448935	3329063	Linear feature	0.0	0.0	0.0		B8-16	PE885
Bal8.S025	446144	3329057	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S026	447672	3329264	RSWC Reef Module	0.0	0.0	0.0		B8-15	PE885
Bal8.S027	448323	3329248	debris	0.0	0.0	0.0		B8-15	PE885
Bal8.S028	449601	3329319	debris	0.0	0.0	0.0		B8-16	PE886
Bal8.S029	443643	3329253	debris	0.0	0.0	0.0		B8-13	PE884
Bal8.S030	447313	3329349	Linear feature	0.0	0.0	0.0		B8-15	PE885
Bal8.S031	443898	3329471	debris	0.0	0.0	0.0		B8-13	PE884
Bal8.S032	449876	3329560	debris	0.0	0.0	0.0		B8-16	PE886
Bal8.S033	449485	3329573	debris	0.0	0.0	0.0		B8-16	PE886
Bal8.S034	444946	3329560	Unknown wrecked barge; in BOEM db as Unknown Vessel	30.7	11.3	1.4	Bal8.M110	B8-13	PE885
Bal8.S035	447164	3329630	debris	0.0	0.0	0.0		B8-15	PE885
Bal8.S036	449887	3329654	debris	0.0	0.0	0.0		B8-16	PE886
Bal8.S037	445459	3329735	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S038	446914	3329670	debris	0.0	0.0	0.0		B8-15	PE885
Bal8.S039	446357	3329688	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S040	445650	3329789	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S041	446535	3329849	debris	0.0	0.0	0.0	Bal8.M108	B8-14	PE885
Bal8.S042	447556	3329925	debris	0.0	0.0	0.0		B8-15	PE885
Bal8.S043	446379	3329946	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S044	446756	3330045	debris	0.0	0.0	0.0		B8-15	PE885
Bal8.S045	447731	3329999	debris	0.0	0.0	0.0		B8-15	PE885
Bal8.S046	445359	3330167	debris	0.0	0.0	0.0		B8-14	PE885
Bal8.S047	443624	3330373	debris	0.0	0.0	0.0		B8-13	PE884
Bal8.S048	449468	3330287	debris	0.0	0.0	0.0	Bal8.M102	B8-16	PE886
Bal8.S049	448457	3330544	debris	0.0	0.0	0.0		B8-12	PE885
Bal8.S050	448905	3330663	debris	0.0	0.0	0.0		B8-12	PE885
Bal8.S051	446080	3330800	RSWC Reef Module	0.0	0.0	0.0		B8-10	PE885

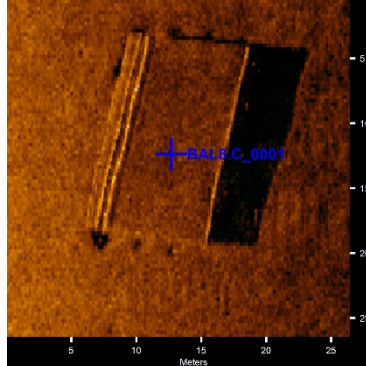
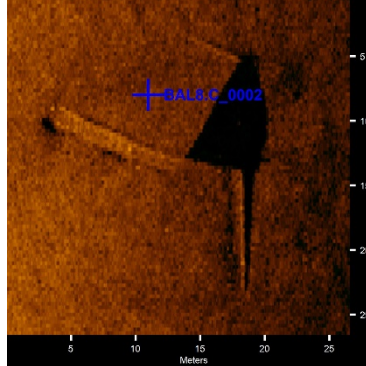
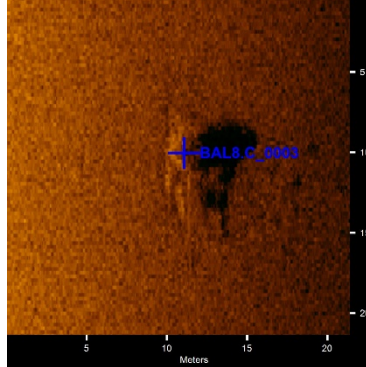
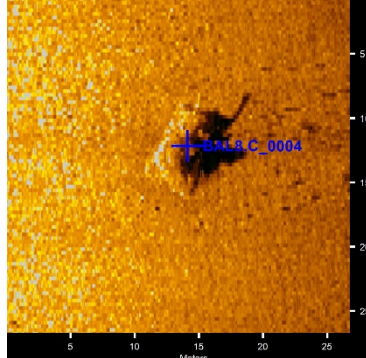
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal8.S052	449800	3331114	RSWC Reef Module	0.0	0.0	0.0		B8-12	PE886
Bal8.S053	445206	3331087	Large unknown structure	20.2	13.0	1.2	Bal8.M096	B8-10	PE885
Bal8.S054	446420	3331578	Linear feature	0.0	0.0	0.0		B8-10	PE841
Bal8.S055	449133	3331690	debris	0.0	0.0	0.0		B8-12	PE842
Bal8.S056	447936	3331591	debris	0.0	0.0	0.0		B8-11	PE841
Bal8.S057	447449	3331618	Lillian Bridge debris artificial reef	5.2	5.4	1.4	Bal8.M089	B8-11	PE841
Bal8.S058	443516	3331916	RSWC Reef Module	0.0	0.0	0.0		B8-09	PE840
Bal8.S059	447760	3331941	debris	0.0	0.0	0.0		B8-11	PE841
Bal8.S060	443514	3332020	RSWC Reef Module	0.0	0.0	0.0		B8-09	PE840
Bal8.S061	443624	3331919	RSWC Reef Module	0.0	0.0	0.0		B8-09	PE840
Bal8.S062	445311	3332161	wreck	5.3	1.7	0.0		B8-10	PE841
Bal8.S063	443584	3332855	RSWC Reef Module	0.0	0.0	0.0		B8-05	PE840
Bal8.S064	447884	3332945	debris	0.0	0.0	0.0		B8-07	PE841
Bal8.S065	449817	3333078	RSWC Reef Module	0.0	0.0	0.0		B8-08	PE842
Bal8.S066	448149	3333057	debris	0.0	0.0	0.0		B8-07	PE841
Bal8.S067	448544	3333191	Gulf State Pavilion walls and pilings	25.7	21.1	0.0	Bal8.M075	B8-08	PE841
Bal8.S068	448520	3333255	Part of larger concentration of debris.	60.5	23.1	0.0		B8-08	PE841
Bal8.S069	448955	3333388	Liberty Ship "Allen"	85.1	19.0	3.0		B8-08	PE841
Bal8.S070	448431	3333369	RSWC Reef Module	0.0	0.0	0.0		B8-08	PE841
Bal8.S072	448708	3333465	debris Scatter	61.3	48.1	0.0		B8-08	PE841
Bal8.S073	446405	3333434	Unknown	0.0	0.0	0.0		B8-06	PE841
Bal8.S074	448762	3333523	RSWC Reef Module	61.8	34.0	0.0		B8-08	PE841
Bal8.S075	448732	3333461	Debris Field	0.0	0.0	0.0		B8-08	PE841
Bal8.S076	448982	3333417	Liberty Ship "Allen"	60.6	16.9	1.2		B8-08	PE841
Bal8.S077	448454	3333559	Decommissioned voting machines	0.0	0.0	0.0		B8-08	PE841
Bal8.S078	444817	3333568	debris	0.0	0.0	0.0		B8-05	PE841
Bal8.S079	445020	3333636	debris	9.8	4.9	0.9		B8-06	PE841
Bal8.S080	448661	3333621	RSWC Reef Module	61.9	3.5	0.0		B8-08	PE841
Bal8.S081	448694	3333572	RSWC Reef Module	0.0	0.0	0.0		B8-08	PE841
Bal8.S082	448810	3333690	Gulf State Pier Pilings	50.6	23.7	0.0	Bal8.M067	B8-08	PE841
Bal8.S083	448570	3333686	RSWC Reef Module	0.0	0.0	0.0		B8-08	PE841
Bal8.S084	448323	3333809	Linear feature	0.0	0.0	0.0	Bal8.M065	B8-07	PE841
Bal8.S085	448475	3333828	RSWC Reef Module	0.0	0.0	0.0		B8-08	PE841
Bal8.S086	448302	3333860	debris	0.0	0.0	0.0		B8-07	PE841
Bal8.S087	448307	3333810	Linear feature	0.0	0.0	0.0	Bal8.M065	B8-07	PE841
Bal8.S088	448677	3334031	Gulf State Pier Pilings	0.0	0.0	0.0	Bal8.M062	B8-08	PE841
Bal8.S089	448237	3334043	RSWC Reef Module	0.0	0.0	0.0		B8-07	PE841

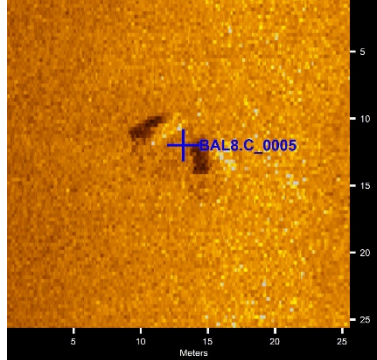
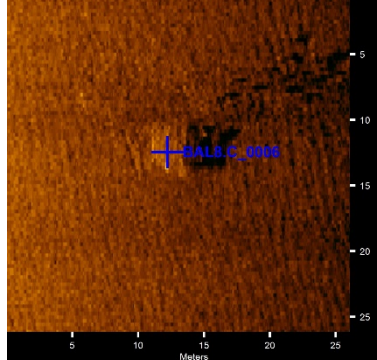
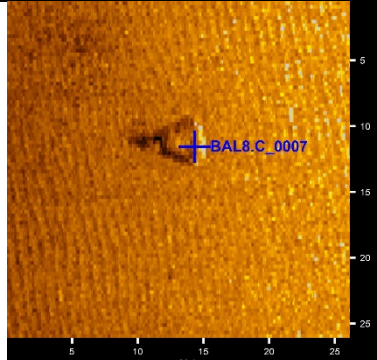
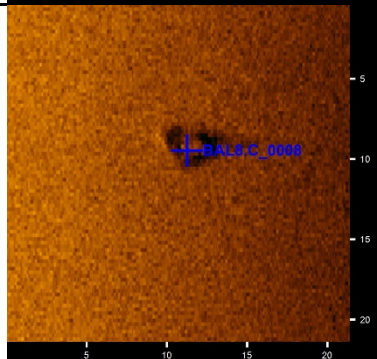
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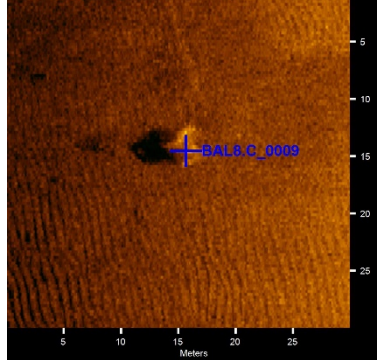
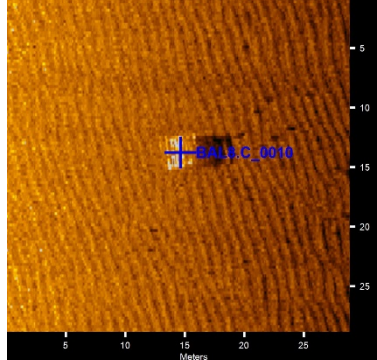
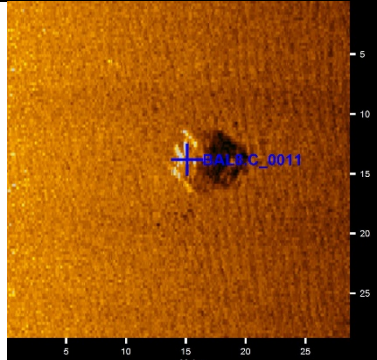
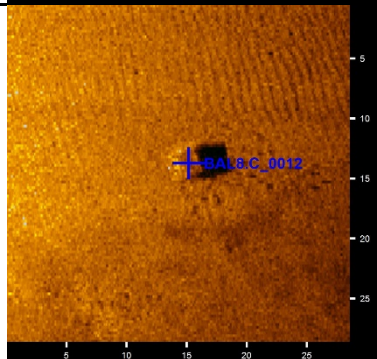
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal8.S090	448367	3333917	RSWC Reef Module	0.0	0.0	0.0		B8-08	PE841
Bal8.S091	448435	3334106	Flat deck steel barge "Rookie"	22.7	6.5	1.3		B8-08	PE841
Bal8.S092	448092	3334217	debris Scatter	0.0	0.0	0.0		B8-03	PE841
Bal8.S093	445362	3334263	debris Scatter	37.7	13.1	0.0		B8-02	PE841
Bal8.S094	444816	3334274	Linear feature	0.0	0.0	0.0		B8-01	PE841
Bal8.S095	448033	3334262	RSWC Reef Module	48.7	0.0	0.0		B8-03	PE841
Bal8.S096	447941	3334344	RSWC Reef Module	81.1	0.0	0.0		B8-03	PE841
Bal8.S097	445299	3334362	debris	6.9	2.7	0.8		B8-02	PE841
Bal8.S098	445305	3334390	Tire	0.0	0.0	0.0		B8-02	PE841
Bal8.S099	447892	3334424	RSWC Reef Module	37.8	0.0	0.0		B8-03	PE841
Bal8.S100	444707	3334407	debris	0.0	0.0	0.0		B8-01	PE841
Bal8.S101	445368	3334458	Linear feature	0.0	0.0	0.0		B8-02	PE841
Bal8.S102	445336	3334456	Linear feature	0.0	0.0	0.0		B8-02	PE841
Bal8.S103	445361	3334476	Linear feature and tires	0.0	0.0	0.0		B8-02	PE841
Bal8.S104	445308	3334450	Linear feature	0.0	0.0	0.0		B8-02	PE841
Bal8.S105	445322	3334478	debris Scatter	0.0	0.0	0.0		B8-02	PE841
Bal8.S106	445181	3334456	Linear features and tires.	32.4	21.9	0.0		B8-02	PE841
Bal8.S107	445129	3334448	Unknown debris	25.7	15.8	4.1		B8-02	PE841
Bal8.S108	447785	3334523	RSWC Reef Module	81.5	0.0	0.0		B8-03	PE841
Bal8.S109	447849	3334463	RSWC Reef Module	52.7	0.0	0.0		B8-03	PE841
Bal8.S110	444628	3334581	Linear feature	0.0	0.0	0.0		B8-01	PE841
Bal8.S111	445086	3334615	Unknown debris	9.1	3.1	0.5		B8-02	PE841
Bal8.S112	445103	3334605	debris Scatter	14.3	5.3	0.0		B8-02	PE841
Bal8.S113	445527	3334558	Perdido Pass Bridge rubble used as artificial reef; spans and pilings	9.4	4.9	2.5		B8-02	PE841
Bal8.S115	447681	3334622	RSWC Reef Module	55.3	0.0	0.0		B8-03	PE841
Bal8.S116	447735	3334560	RSWC Reef Module	62.0	0.0	0.0		B8-03	PE841
Bal8.S117	445088	3334595	Linear feature Tires	0.0	0.0	0.0		B8-02	PE841
Bal8.S118	445139	3334604	Tire	0.0	0.0	0.0		B8-02	PE841
Bal8.S119	444971	3334734	Perdido Pass Bridge Rubble	16.2	9.3	0.8		B8-01	PE841
Bal8.S120	445008	3334736	Perdido Pass Bridge Rubble	13.7	15.8	1.4		B8-02	PE841
Bal8.S121	443535	3334693	RSWC Reef Module	22.4	0.0	1.1		B8-01	PE840
Bal8.S122	447594	3334695	RSWC Reef Module	24.3	0.0	0.0		B8-03	PE841
Bal8.S123	447520	3334764	debris	0.0	0.0	0.0		B8-03	PE841
Bal8.S124	446893	3334822	debris	0.0	0.0	0.0	Bal8.M037	B8-03	PE841
Bal8.S125	444738	3334810	Unknown Structure	20.8	14.7	0.0		B8-01	PE841
Bal8.S126	447421	3334824	debris	0.0	0.0	0.0		B8-03	PE841
Bal8.S127	444169	3334890	debris	0.0	0.0	0.0		B8-01	PE840

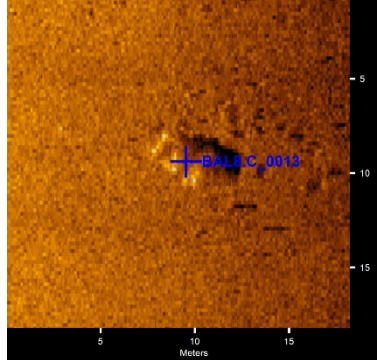
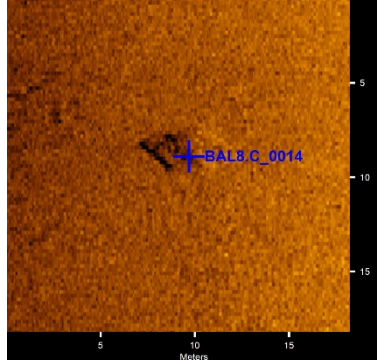
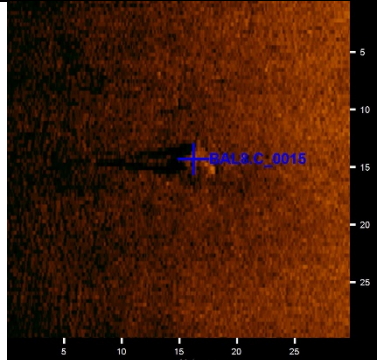
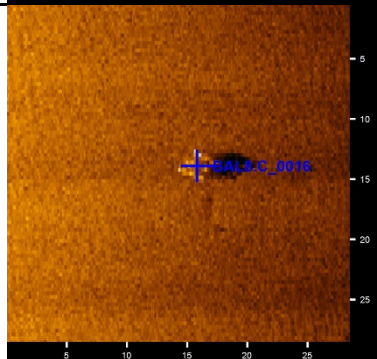
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
Bal8.S128	444329	3334920	debris	0.0	0.0	0.0		B8-01	PE841
Bal8.S129	446943	3334861	debris	0.0	0.0	0.0		B8-03	PE841
Bal8.S130	447403	3334902	RSWC Reef Module	0.0	0.0	0.0		B8-03	PE841
Bal8.S131	447436	3334860	RSWC Reef Module	0.0	0.0	0.0		B8-03	PE841
Bal8.S132	445500	3334966	debris	0.0	0.0	0.0	Bal8.M030	B8-02	PE841
Bal8.S133	445153	3334915	Tire	0.0	0.0	0.0		B8-02	PE841
Bal8.S134	445128	3334979	Linear feature	0.0	0.0	0.0		B8-02	PE841
Bal8.S135	446353	3335041	RSWC Reef Module	65.9	0.0	0.0		B8-02	PE841
Bal8.S136	446266	3335049	RSWC Reef Module	73.8	0.0	0.0		B8-02	PE841
Bal8.S137	446464	3335034	RSWC Reef Module	74.4	52.6	0.0		B8-02	PE841
Bal8.S138	446570	3335027	RSWC Reef Module	86.3	28.1	0.0		B8-02	PE841
Bal8.S139	446691	3335022	RSWC Reef Module	0.0	0.0	0.0		B8-03	PE841
Bal8.S140	446802	3335016	RSWC Reef Module	65.0	0.0	0.0		B8-03	PE841
Bal8.S141	446914	3335003	RSWC Reef Module	89.1	0.0	0.0		B8-03	PE841
Bal8.S142	447034	3335003	RSWC Reef Module	37.9	0.0	0.0		B8-03	PE841
Bal8.S143	447152	3334996	RSWC Reef Module	62.8	0.0	0.0		B8-03	PE841
Bal8.S144	447237	3334994	RSWC Reef Module	17.7	0.0	0.0		B8-03	PE841
Bal8.S145	447351	3334965	RSWC Reef Module	75.9	0.0	0.0		B8-03	PE841
Bal8.S146	447382	3335003	debris	0.0	0.0	0.0		B8-03	PE841
Bal8.S147	445180	3335028	debris	4.0	0.0	0.0		B8-02	PE841
Bal8.S148	445179	3335048	Tire	0.0	0.0	0.0		B8-02	PE841
Bal8.S149	444910	3335041	debris	0.0	0.0	0.0		B8-01	PE841
Bal8.S150	445911	3335076	RSWC Reef Module	30.8	0.0	0.0		B8-02	PE841
Bal8.S151	445981	3335064	debris	0.0	0.0	0.0		B8-02	PE841
Bal8.S152	446012	3335102	Gulf State Park Pavilion in AL reef database	41.8	28.7	0.0		B8-02	PE841
Bal8.S153	446103	3335066	RSWC Reef Module	0.0	0.0	0.0		B8-02	PE841
Bal8.S154	445523	3335184	RSWC Reef Module	89.5	0.0	0.0		B8-02	PE841
Bal8.S155	445209	3335227	Tires	0.0	0.0	0.0		B8-02	PE841
Bal8.S156	445409	3335223	RSWC Reef Module	40.1	0.0	0.0		B8-02	PE841
Bal8.S157	445650	3335158	Unknown	0.0	0.0	0.0		B8-02	PE841
Bal8.S158	445695	3335250	debris Scatter	23.6	7.4	0.3		B8-02	PE841
Bal8.S159	449351	3335234	debris	0.0	0.0	0.0		B8-04	PE842
Bal8.S160	443738	3335297	debris	0.0	0.0	0.0	Bal8.M004	B8-01	PE840
Bal8.S161	444998	3335333	RSWC Reef Module	76.6	0.0	0.0		B8-02	PE841
Bal8.S162	445098	3335310	RSWC Reef Module	52.0	0.0	0.0		B8-02	PE841
Bal8.S163	445755	3335350	debris	6.5	5.0	0.0		B8-02	PE841
Bal8.S164	445405	3335359	debris	0.0	0.0	0.0		B8-02	PE841
Bal8.S165	445250	3335505	"Mexico Rock" in AL reef database	0.0	0.0	0.0		B8-02	PE841
Bal8.S166	446891	3335558	debris	0.0	0.0	0.0		B8-03	PE841

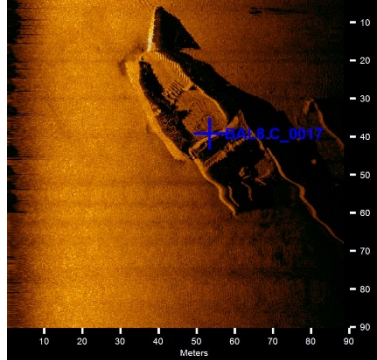

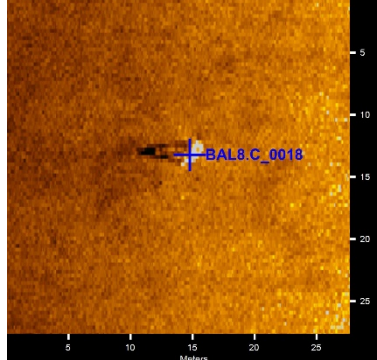
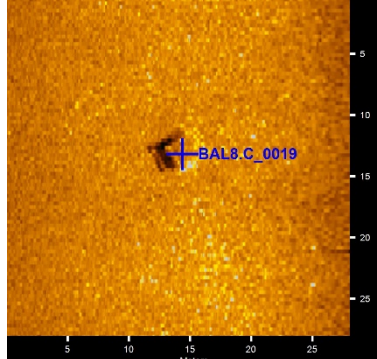
Table M-3. Acoustic Target Images recorded for the BAL8 Cell.

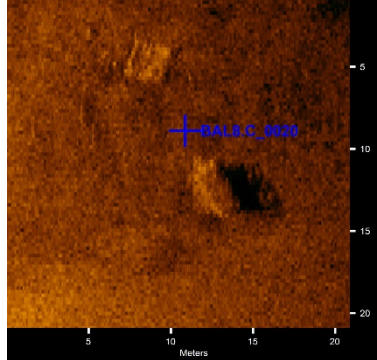
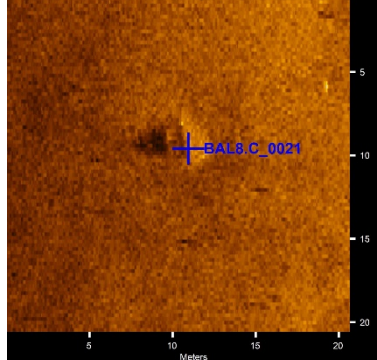
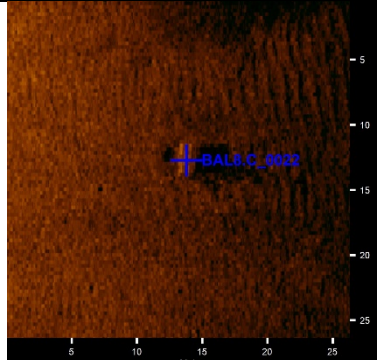
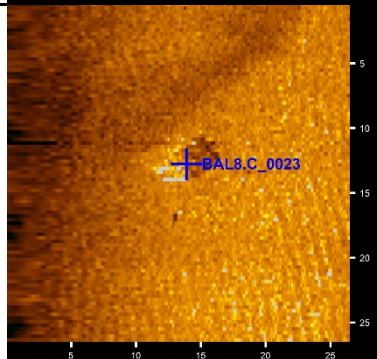
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S001</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 9:49:08 AM</li> <li>● Click Position 30.0606708861 -87.5452461943 (WGS84) (X) 447443.89 (Y) 3325633.48 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_13.001.jsf</li> <li>● Heading: 128.290 Degrees</li> <li>● Line Name: BAL8_13.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 9.75 Meters</li> <li>● Target Height: 1.37 Meters</li> <li>● Target Length: 15.83 Meters</li> <li>● Target Shadow: 4.50 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Perdido Pass</li> <li>● Classification2:</li> <li>● Description: Perdido Pass brdige artificial reef</li> </ul>
	<p><b>BAL8.S002</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 9:49:37 AM</li> <li>● Click Position 30.0606668354 -87.5445700819 (WGS84) (X) 447509.06 (Y) 3325632.72 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_13.001.jsf</li> <li>● Heading: 127.700 Degrees</li> <li>● Line Name: BAL8_13.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 16.04 Meters</li> <li>● Target Height: 1.75 Meters</li> <li>● Target Length: 18.28 Meters</li> <li>● Target Shadow: 6.13 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Perdido Pass</li> <li>● Classification2:</li> <li>● Description: Perdido Pass Bridge artificial reef</li> </ul>
	<p><b>BAL8.S003</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/17/2020 1:20:36 PM</li> <li>● Click Position 30.0648747061 -87.5702434504 (WGS84) (X) 445036.69 (Y) 3326111.06 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_21.jsf</li> <li>● Heading: 271.700 Degrees</li> <li>● Line Name: BAL8_21</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 2.17 Meters</li> <li>● Target Height: 1.56 Meters</li> <li>● Target Length: 2.77 Meters</li> <li>● Target Shadow: 3.25 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: M60 Tank</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S004</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 12:25:02 PM</li> <li>● Click Position 30.0653726384 -87.5698607986 (WGS84) (X) 445073.85 (Y) 3326166.05 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_22.001.jsf</li> <li>● Heading: 125.700 Degrees</li> <li>● Line Name: BAL8_22.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: M60 Tank</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

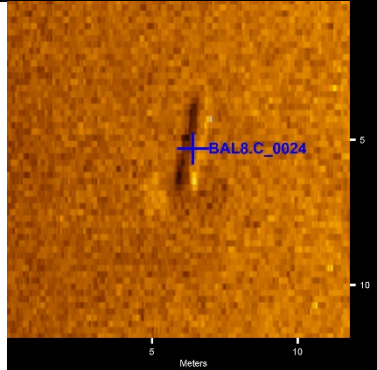
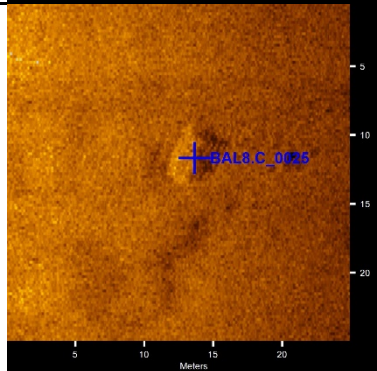
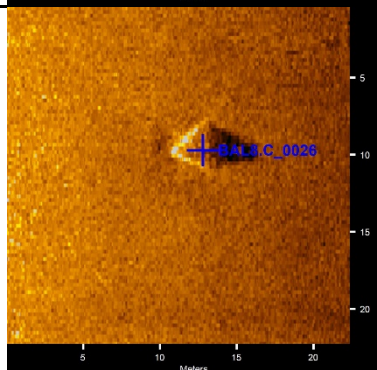
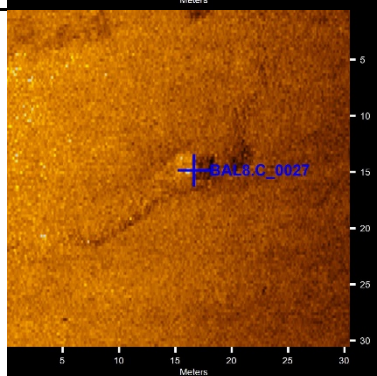
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S005</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 1:31:21 PM</li> <li>● Click Position 30.0668955494 -87.5295145178 (WGS84) (X) 448963.47 (Y) 3326316.12 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_25.002.jsf</li> <li>● Heading: 127.290 Degrees</li> <li>● Line Name: BAL8_25.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S006</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 4:18:10 PM</li> <li>● Click Position 30.0709527150 -87.5828858809 (WGS84) (X) 443821.55 (Y) 3326790.72 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_34.002.jsf</li> <li>● Heading: 125.500 Degrees</li> <li>● Line Name: BAL8_34.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S007</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 3:39:49 PM</li> <li>● Click Position 30.0703582708 -87.5316220204 (WGS84) (X) 448762.13 (Y) 3326700.77 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_34.jsf</li> <li>● Heading: 126.500 Degrees</li> <li>● Line Name: BAL8_34</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S008</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/16/2020 11:57:54 PM</li> <li>● Click Position 30.0712636173 -87.5599219058 (WGS84) (X) 446035.02 (Y) 3326814.11 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_035.jsf</li> <li>● Heading: 275.100 Degrees</li> <li>● Line Name: BAL8_035</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

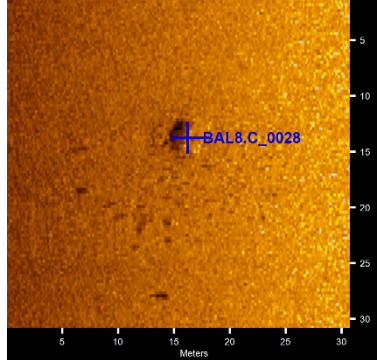
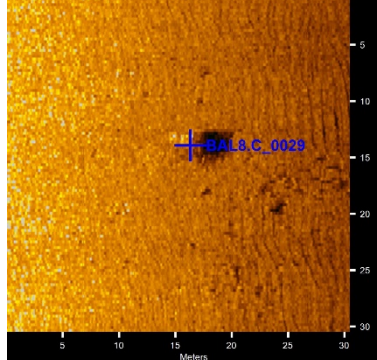
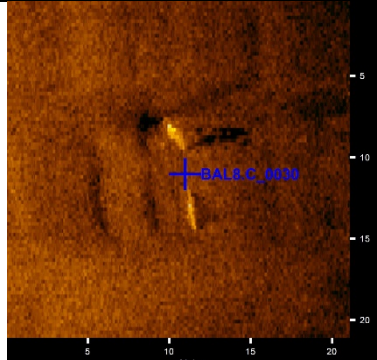
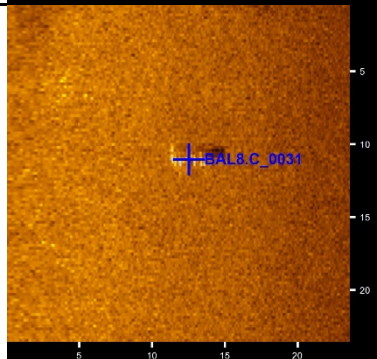
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S009</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 5:44:23 PM</li> <li>● Click Position 30.0728583325 -87.5424887194 (WGS84) (X) 447716.09 (Y) 3326982.72 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_40.001.jsf</li> <li>● Heading: 129.290 Degrees</li> <li>● Line Name: BAL8_40.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S010</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 8:02:21 PM</li> <li>● Click Position 30.0763253247 -87.5612837251 (WGS84) (X) 445906.52 (Y) 3327375.65 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_46.002.jsf</li> <li>● Heading: 127.390 Degrees</li> <li>● Line Name: BAL8_46.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S011</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 8:18:30 PM</li> <li>● Click Position 30.0762420010 -87.5794397523 (WGS84) (X) 444156.67 (Y) 3327375.15 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_46.003.jsf</li> <li>● Heading: 126.890 Degrees</li> <li>● Line Name: BAL8_46.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S012</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/9/2020 7:34:01 PM</li> <li>● Click Position 30.0765046510 -87.5290567603 (WGS84) (X) 449012.52 (Y) 3327380.71 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_46.jsf</li> <li>● Heading: 130.390 Degrees</li> <li>● Line Name: BAL8_46</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

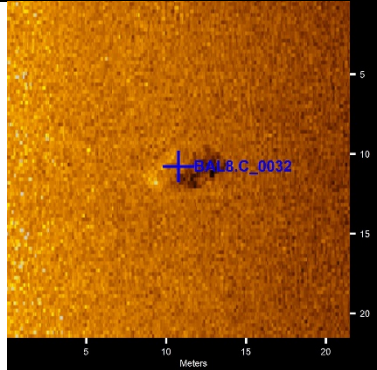
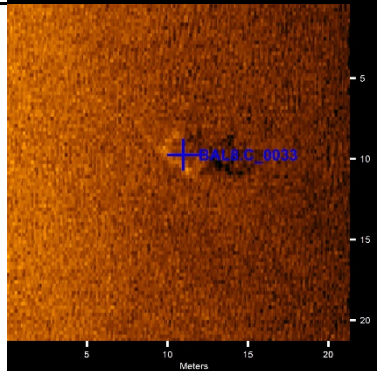
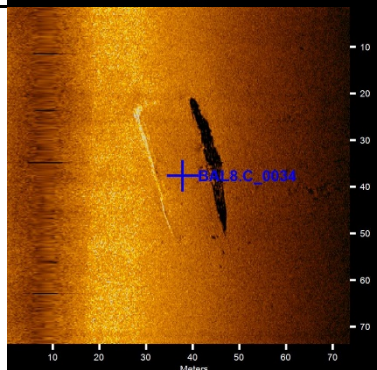
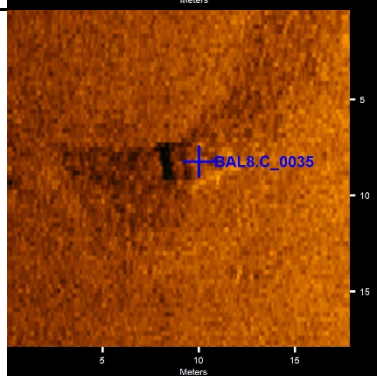
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S013</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 9:06:15 AM</li> <li>● Click Position 30.0806199894 -87.5709081983 (WGS84) (X) 444981.33 (Y) 3327856.15 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_57.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_57</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S014</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 10:03:59 AM</li> <li>● Click Position 30.0820637706 -87.5365812835 (WGS84) (X) 448290.23 (Y) 3328000.11 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_60.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_60</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S015</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 1:01:06 AM</li> <li>● Click Position 30.0833641570 -87.5501565609 (WGS84) (X) 446982.67 (Y) 3328150.43 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_61.001.jsf</li> <li>● Heading: 126.700 Degrees</li> <li>● Line Name: BAL8_61.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S016</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 3:05:20 AM</li> <li>● Click Position 30.0850831511 -87.5461843250 (WGS84) (X) 447366.38 (Y) 3328339.08 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_67.001.jsf</li> <li>● Heading: 126.790 Degrees</li> <li>● Line Name: BAL8_67.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

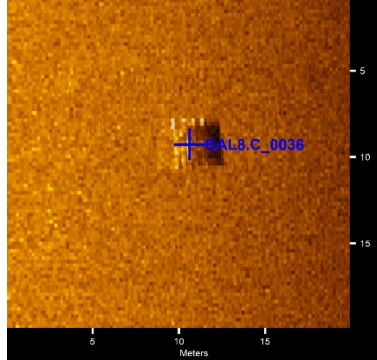
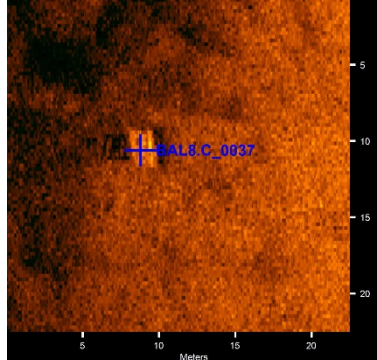
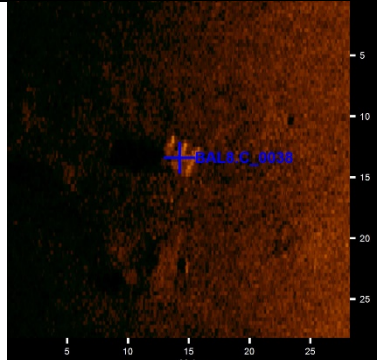
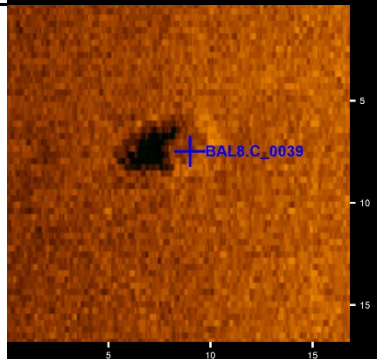
Target Image	Target Info	User Entered Info
 <p>A sonar image showing a large, dark, elongated object on a sandy seabed. A blue crosshair is positioned over the object, with the label 'BAL8.C_0017' in blue text. The image includes a vertical depth scale on the right (10 to 90 meters) and a horizontal distance scale at the bottom (10 to 90 meters).</p>	<p><b>BAL8.S017</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 4:25:46 AM</li> <li>● Click Position 30.0871696306 -87.5773967936 (WGS84) (X) 444359.68 (Y) 3328585.07 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_70.003.jsf</li> <li>● Heading: 130.500 Degrees</li> <li>● Line Name: BAL8_70.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 19.74 Meters</li> <li>● Target Height: 3.47 Meters</li> <li>● Target Length: 76.40 Meters</li> <li>● Target Shadow: 13.61 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: <i>Wallace</i></li> <li>● Classification2:</li> <li>● Description: Liberty Ship</li> </ul>
 <p>A sonar image showing a large, dark, elongated object on a sandy seabed, similar to the first target. A blue crosshair is positioned over the object, with the label 'BAL8.C_0017a' in blue text. The image includes a vertical depth scale on the right (10 to 60 meters) and a horizontal distance scale at the bottom (10 to 60 meters).</p>	<p><b>BAL8.S017a</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/16/2020 1:09:51 PM</li> <li>● Click Position 30.0875696004 -87.5776476018 (WGS84) (X) 444335.73 (Y) 3328629.51 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_071.jsf</li> <li>● Heading: 276.790 Degrees</li> <li>● Line Name: BAL8_071</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 18.03 Meters</li> <li>● Target Height: 2.76 Meters</li> <li>● Target Length: 57.73 Meters</li> <li>● Target Shadow: 6.88 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: <i>Wallace</i></li> <li>● Classification2:</li> <li>● Description: Liberty Ship</li> </ul>
 <p>A sonar image showing a small, dark, rectangular object on a sandy seabed. A blue crosshair is positioned over the object, with the label 'BAL8.C_0018' in blue text. The image includes a vertical depth scale on the right (5 to 25 meters) and a horizontal distance scale at the bottom (5 to 25 meters).</p>	<p><b>BAL8.S018</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 5:06:08 AM</li> <li>● Click Position 30.0885195599 -87.5505482247 (WGS84) (X) 446947.68 (Y) 3328721.89 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_73.001.jsf</li> <li>● Heading: 126.700 Degrees</li> <li>● Line Name: BAL8_73.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing a small, dark, rectangular object on a sandy seabed, similar to the third target. A blue crosshair is positioned over the object, with the label 'BAL8.C_0019' in blue text. The image includes a vertical depth scale on the right (5 to 25 meters) and a horizontal distance scale at the bottom (5 to 25 meters).</p>	<p><b>BAL8.S019</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 5:20:20 AM</li> <li>● Click Position 30.0884824797 -87.5298214732 (WGS84) (X) 448944.97 (Y) 3328708.34 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_73.002.jsf</li> <li>● Heading: 124.500 Degrees</li> <li>● Line Name: BAL8_73.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

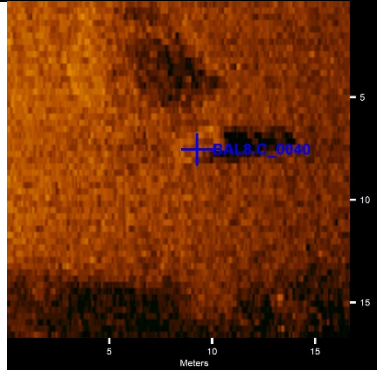
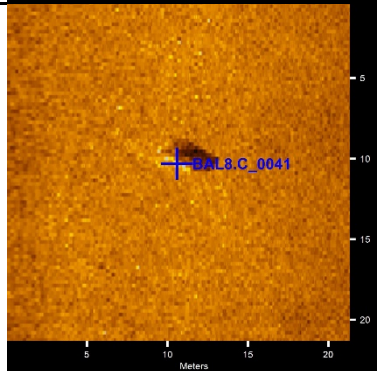
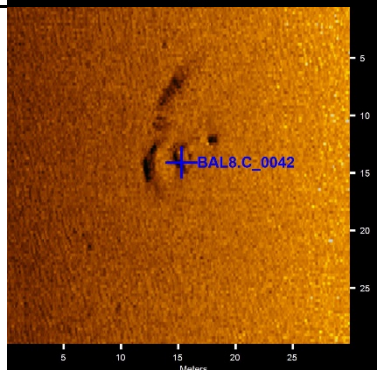
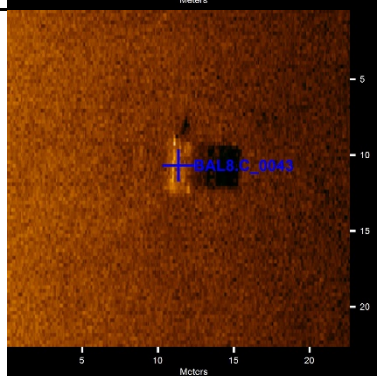
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S020</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 3:14:41 PM</li> <li>● Click Position 30.0888286936 -87.5302775554 (WGS84) (X) 448901.20 (Y) 3328746.91 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_75.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_75</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description: Multiple features</li> </ul>
	<p><b>BAL8.S021</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/16/2020 11:10:08 AM</li> <li>● Click Position 30.0896876527 -87.5650107562 (WGS84) (X) 445554.65 (Y) 3328858.13 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_077.jsf</li> <li>● Heading: 271.600 Degrees</li> <li>● Line Name: BAL8_077</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S022</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 6:46:58 AM</li> <li>● Click Position 30.0902095509 -87.5782770329 (WGS84) (X) 444276.56 (Y) 3328922.36 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_79.jsf</li> <li>● Heading: 127.100 Degrees</li> <li>● Line Name: BAL8_79</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S023</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 6:52:36 AM</li> <li>● Click Position 30.0907292370 -87.5706801905 (WGS84) (X) 445008.90 (Y) 3328976.27 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_79.jsf</li> <li>● Heading: 127.290 Degrees</li> <li>● Line Name: BAL8_79</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

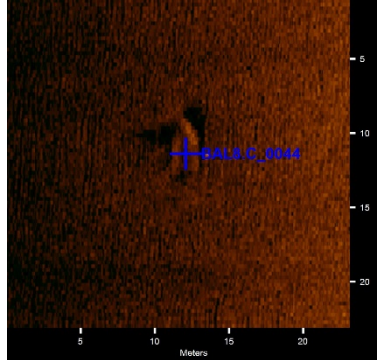
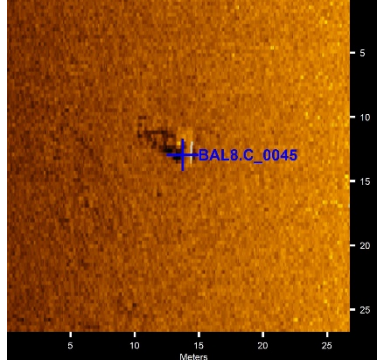
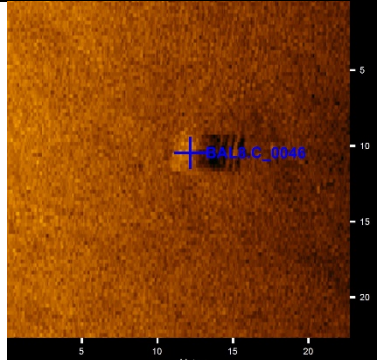
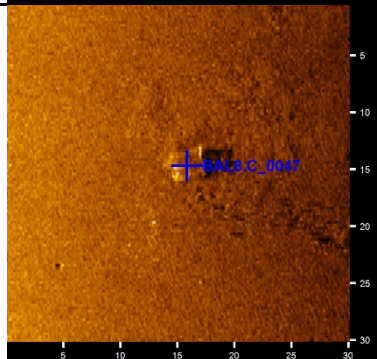
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S024</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/16/2020 10:22:30 AM</li> <li>• Click Position 30.0916803418 -87.5299374658 (WGS84) (X) 448935.44 (Y) 3329062.75 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_080.jsf</li> <li>• Heading: 91.500 Degrees</li> <li>• Line Name: BAL8_080</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Linear feature</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S025</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/20/2020 4:44:23 PM</li> <li>• Click Position 30.0915116775 -87.5589055655 (WGS84) (X) 446143.95 (Y) 3329057.36 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_81.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_81</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S026</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/20/2020 5:37:02 PM</li> <li>• Click Position 30.0934399932 -87.5430611693 (WGS84) (X) 447671.75 (Y) 3329263.68 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_84.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_84</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S027</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/10/2020 9:21:27 AM</li> <li>• Click Position 30.0933270926 -87.5362980005 (WGS84) (X) 448323.39 (Y) 3329248.09 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_85.002.jsf</li> <li>• Heading: 130.000 Degrees</li> <li>• Line Name: BAL8_85.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

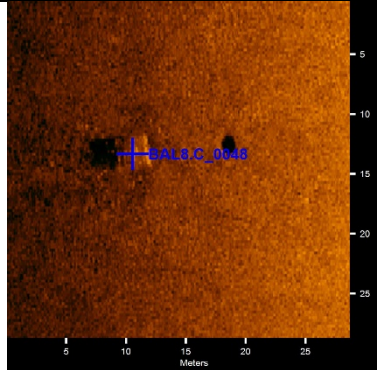
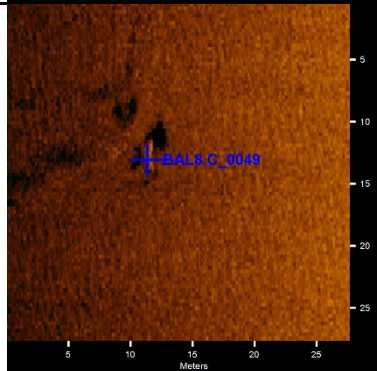
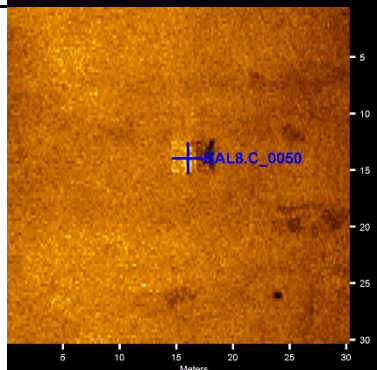
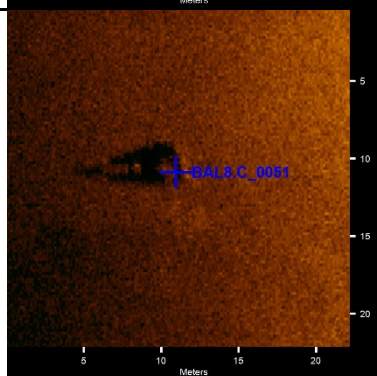
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S028</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/10/2020 9:32:07 AM</li> <li>• Click Position 30.0940240616 -87.5230439486 (WGS84) (X) 449600.89 (Y) 3329319.40 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_85.003.jsf</li> <li>• Heading: 128.600 Degrees</li> <li>• Line Name: BAL8_85.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S029</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/10/2020 8:42:16 AM</li> <li>• Click Position 30.0931624024 -87.5848657305 (WGS84) (X) 443643.33 (Y) 3329252.80 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_85.jsf</li> <li>• Heading: 127.600 Degrees</li> <li>• Line Name: BAL8_85</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S030</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/20/2020 6:43:13 PM</li> <li>• Click Position 30.0941946439 -87.5467845194 (WGS84) (X) 447313.37 (Y) 3329349.02 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_87.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_87</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Linear feature</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S031</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/16/2020 4:39:34 AM</li> <li>• Click Position 30.0951451971 -87.5822393582 (WGS84) (X) 443897.52 (Y) 3329471.23 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_089.jsf</li> <li>• Heading: 88.000 Degrees</li> <li>• Line Name: BAL8_089</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

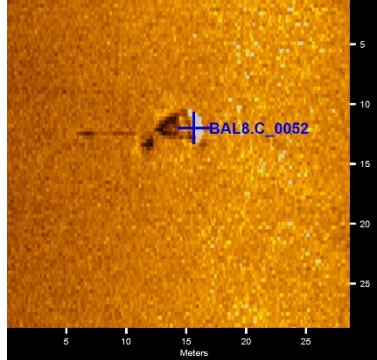
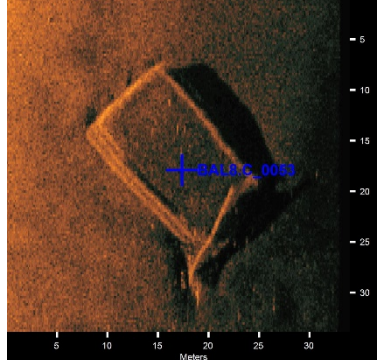
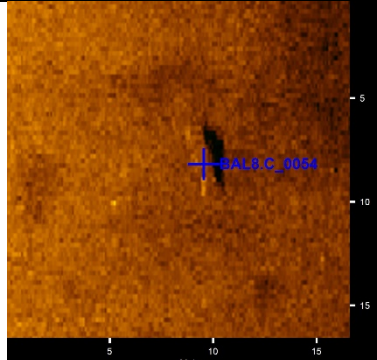
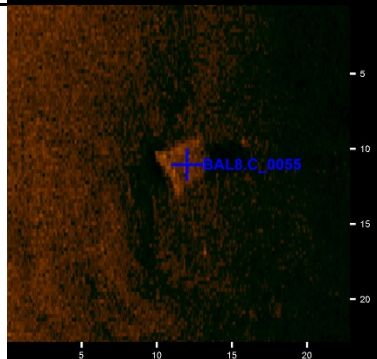
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S032</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 7:08:53 PM</li> <li>● Click Position 30.0962023847 -87.5202033807 (WGS84) (X) 449875.71 (Y) 3329559.54 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_90.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_90</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S033</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 7:11:52 PM</li> <li>● Click Position 30.0963092022 -87.5242579318 (WGS84) (X) 449485.08 (Y) 3329573.16 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_90.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_90</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S034</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 7:45:28 PM</li> <li>● Click Position 30.0959938847 -87.5713628034 (WGS84) (X) 444946.04 (Y) 3329559.98 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_90.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_90</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 11.29 Meters</li> <li>● Target Height: 1.38 Meters</li> <li>● Target Length: 30.75 Meters</li> <li>● Target Shadow: 2.46 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Wreck, Barge</li> <li>● Classification2:</li> <li>● Description: In BOEM db as "Unknown Vessel"</li> </ul>
	<p><b>BAL8.S035</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 11:14:51 AM</li> <li>● Click Position 30.0967199073 -87.5483438350 (WGS84) (X) 447164.46 (Y) 3329629.57 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_91.001.jsf</li> <li>● Heading: 127.100 Degrees</li> <li>● Line Name: BAL8_91.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

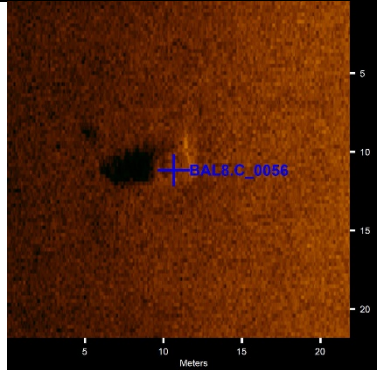
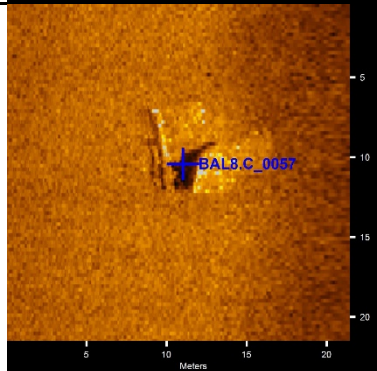
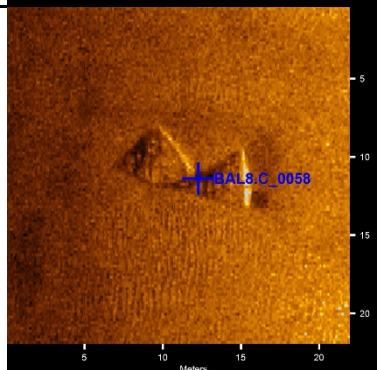
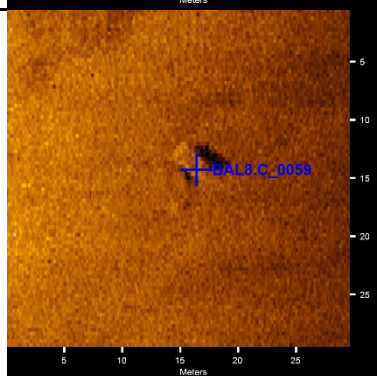
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S036</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/16/2020 3:36:13 AM</li> <li>● Click Position 30.0970534482 -87.5200956330 (WGS84) (X) 449886.52 (Y) 3329653.80 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_092.jsf</li> <li>● Heading: 279.200 Degrees</li> <li>● Line Name: BAL8_092</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S037</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 8:18:01 PM</li> <li>● Click Position 30.0975978138 -87.5660433446 (WGS84) (X) 445459.48 (Y) 3329735.17 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_93.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_93</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S038</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 12:10:08 PM</li> <li>● Click Position 30.0970717582 -87.5509413819 (WGS84) (X) 446914.36 (Y) 3329669.76 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_94.001.jsf</li> <li>● Heading: 126.390 Degrees</li> <li>● Line Name: BAL8_94.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S039</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 12:14:05 PM</li> <li>● Click Position 30.0972144301 -87.5567308916 (WGS84) (X) 446356.58 (Y) 3329688.27 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_94.001.jsf</li> <li>● Heading: 126.390 Degrees</li> <li>● Line Name: BAL8_94.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

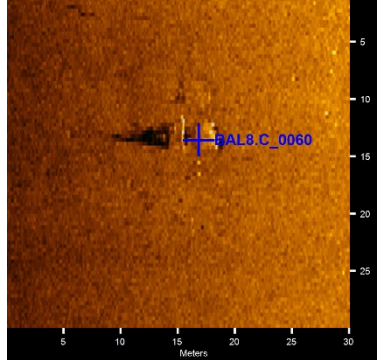
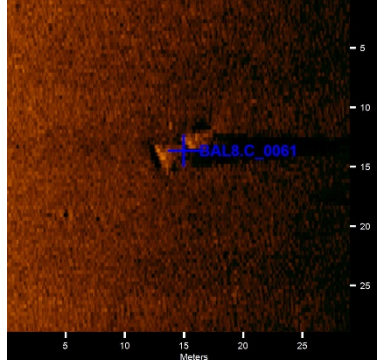
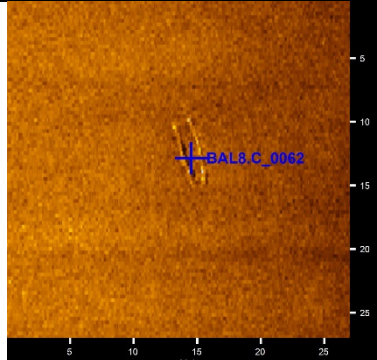
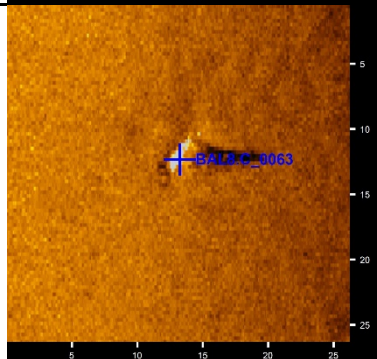
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S040</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 12:19:05 PM</li> <li>● Click Position 30.0980891155 -87.5640670884 (WGS84) (X) 445650.18 (Y) 3329788.67 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_94.001.jsf</li> <li>● Heading: 127.290 Degrees</li> <li>● Line Name: BAL8_94.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S041</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 9:22:47 PM</li> <li>● Click Position 30.0986701882 -87.5548879363 (WGS84) (X) 446534.95 (Y) 3329848.73 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_96.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_96</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S042</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 1:21:53 PM</li> <li>● Click Position 30.0994030645 -87.5442994759 (WGS84) (X) 447555.58 (Y) 3329925.03 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_97.002.jsf</li> <li>● Heading: 125.390 Degrees</li> <li>● Line Name: BAL8_97.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S043</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 10:13:38 PM</li> <li>● Click Position 30.0995422173 -87.5565144129 (WGS84) (X) 446378.70 (Y) 3329946.12 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_99.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_99</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

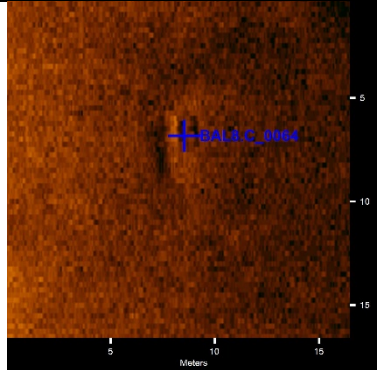
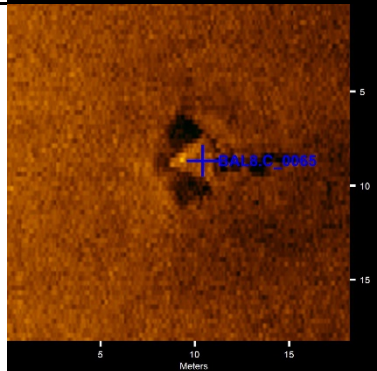
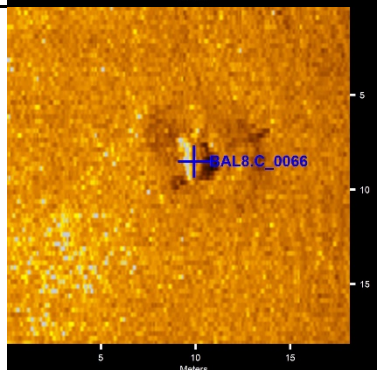
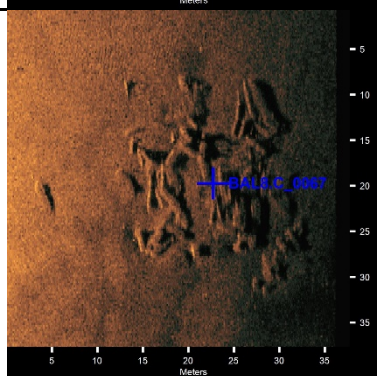
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S044</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 10:16:17 PM</li> <li>● Click Position 30.1004484272 -87.5526074473 (WGS84) (X) 446755.63 (Y) 3330044.71 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_99.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_99</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S045</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 2:09:30 PM</li> <li>● Click Position 30.1000820166 -87.5424788539 (WGS84) (X) 447731.36 (Y) 3329999.43 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_100.001.jsf</li> <li>● Heading: 126.390 Degrees</li> <li>● Line Name: BAL8_100.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S046</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/20/2020 11:19:23 PM</li> <li>● Click Position 30.1014900723 -87.5671060904 (WGS84) (X) 445359.22 (Y) 3330166.99 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_102.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_102</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S047</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/10/2020 4:49:49 PM</li> <li>● Click Position 30.1032700285 -87.5851303407 (WGS84) (X) 443623.57 (Y) 3330372.99 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_106.003.jsf</li> <li>● Heading: 124.100 Degrees</li> <li>● Line Name: BAL8_106.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

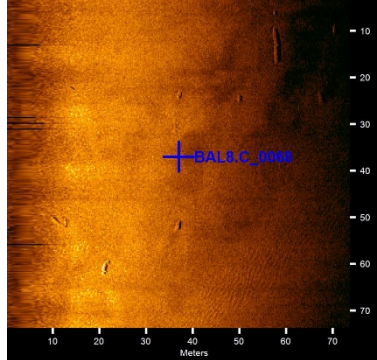
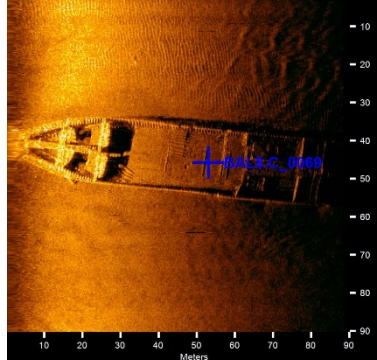
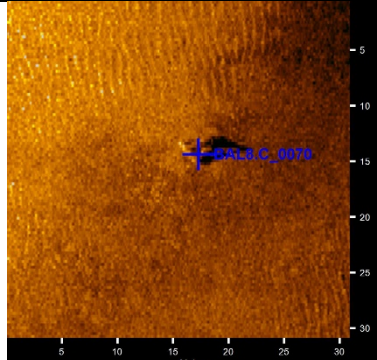
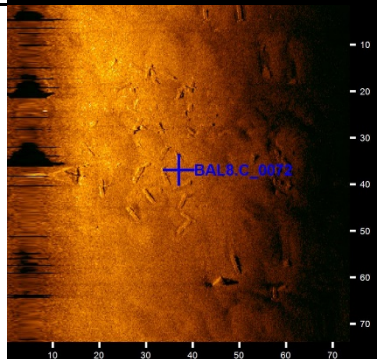
Target Image	Target Info	User Entered Info
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0048' next to it. A scale bar at the bottom indicates 0 to 25 meters.</p>	<p><b>BAL8.S048</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/10/2020 3:58:29 PM</li> <li>• Click Position 30.1027534546 -87.5244676188 (WGS84) (X) 449468.15 (Y) 3330287.36 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_106.jsf</li> <li>• Heading: 127.790 Degrees</li> <li>• Line Name: BAL8_106</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0049' next to it. A scale bar at the bottom indicates 0 to 25 meters.</p>	<p><b>BAL8.S049</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/10/2020 5:33:55 PM</li> <li>• Click Position 30.1050302027 -87.5349710529 (WGS84) (X) 448457.32 (Y) 3330544.34 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_109.002.jsf</li> <li>• Heading: 126.200 Degrees</li> <li>• Line Name: BAL8_109.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0050' next to it. A scale bar at the bottom indicates 0 to 30 meters.</p>	<p><b>BAL8.S050</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/10/2020 6:02:40 PM</li> <li>• Click Position 30.1061165740 -87.5303286542 (WGS84) (X) 448905.17 (Y) 3330662.64 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_112.jsf</li> <li>• Heading: 123.700 Degrees</li> <li>• Line Name: BAL8_112</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0051' next to it. A scale bar at the bottom indicates 0 to 20 meters.</p>	<p><b>BAL8.S051</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/15/2020 7:54:17 PM</li> <li>• Click Position 30.1072342310 -87.5596592848 (WGS84) (X) 446079.86 (Y) 3330799.97 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_116.jsf</li> <li>• Heading: 271.290 Degrees</li> <li>• Line Name: BAL8_116</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

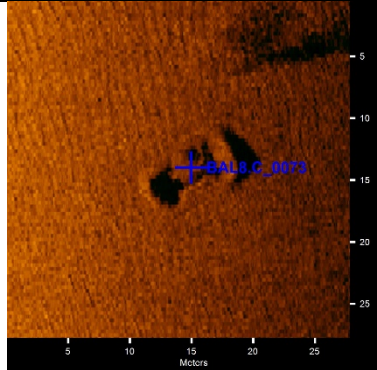
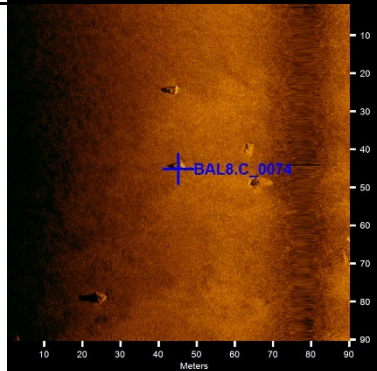
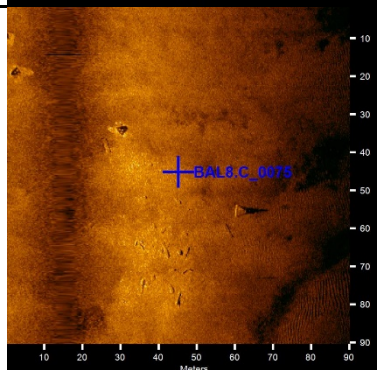
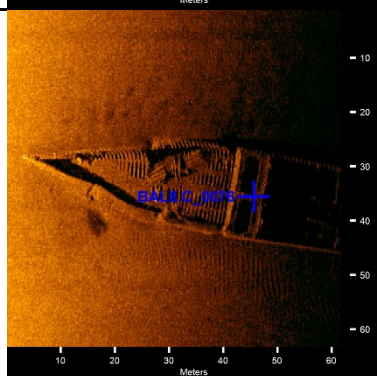
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S052</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/10/2020 9:39:09 PM</li> <li>• Click Position 30.1102226887 -87.5210615770 (WGS84) (X) 449800.10 (Y) 3331113.54 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_121.002.jsf</li> <li>• Heading: 123.890 Degrees</li> <li>• Line Name: BAL8_121.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S053</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/21/2020 5:04:44 AM</li> <li>• Click Position 30.1097863590 -87.5687391516 (WGS84) (X) 445206.45 (Y) 3331087.10 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_120.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_120</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 13.05 Meters</li> <li>• Target Height: 1.19 Meters</li> <li>• Target Length: 20.16 Meters</li> <li>• Target Shadow: 4.47 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description: Large unknown structure</li> </ul>
	<p><b>BAL8.S054</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 12:15:49 AM</li> <li>• Click Position 30.1142681917 -87.5561680387 (WGS84) (X) 446420.02 (Y) 3331577.78 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_130.001.jsf</li> <li>• Heading: 127.100 Degrees</li> <li>• Line Name: BAL8_130.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Linear feature</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S055</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/21/2020 8:40:14 AM</li> <li>• Click Position 30.1153992381 -87.5280144208 (WGS84) (X) 449132.89 (Y) 3331690.24 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_132.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_132</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

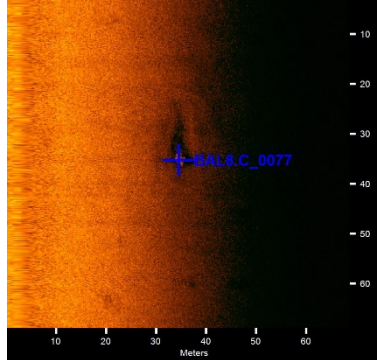
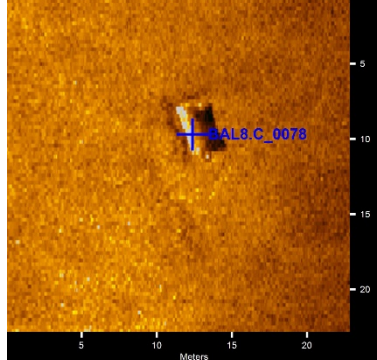
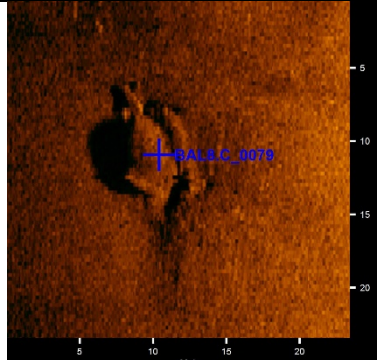
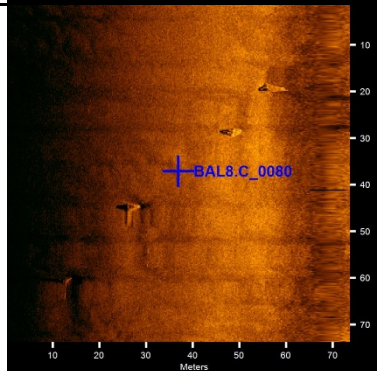
Target Image	Target Info	User Entered Info
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0036' in blue text. The image includes a depth scale on the right (0 to 20 meters) and a horizontal scale at the bottom (0 to 20 meters).</p>	<p><b>BAL8.S056</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/21/2020 8:49:04 AM</li> <li>• Click Position 30.1144513968 -87.5404282131 (WGS84) (X) 447936.48 (Y) 3331590.80 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_132.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_132</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0037' in blue text. The image includes a depth scale on the right (0 to 20 meters) and a horizontal scale at the bottom (0 to 20 meters).</p>	<p><b>BAL8.S057</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/21/2020 8:52:40 AM</li> <li>• Click Position 30.1146793885 -87.5454865066 (WGS84) (X) 447449.29 (Y) 3331618.38 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_132.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_132</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 5.43 Meters</li> <li>• Target Height: 1.35 Meters</li> <li>• Target Length: 5.24 Meters</li> <li>• Target Shadow: 1.22 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Lillian Bridge artificial reef</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0058' in blue text. The image includes a depth scale on the right (0 to 20 meters) and a horizontal scale at the bottom (0 to 20 meters).</p>	<p><b>BAL8.S058</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/15/2020 11:50:41 AM</li> <li>• Click Position 30.1171930178 -87.5863261104 (WGS84) (X) 443516.27 (Y) 3331916.42 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_137.jsf</li> <li>• Heading: 87.800 Degrees</li> <li>• Line Name: BAL8_137</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0059' in blue text. The image includes a depth scale on the right (0 to 25 meters) and a horizontal scale at the bottom (0 to 25 meters).</p>	<p><b>BAL8.S059</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 3:09:40 AM</li> <li>• Click Position 30.1176022526 -87.5422747713 (WGS84) (X) 447760.24 (Y) 3331940.80 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_139.001.jsf</li> <li>• Heading: 123.500 Degrees</li> <li>• Line Name: BAL8_139.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

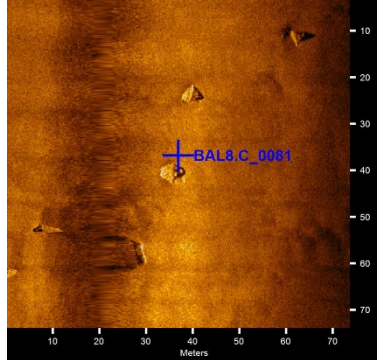
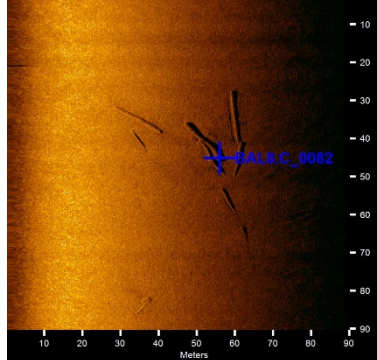
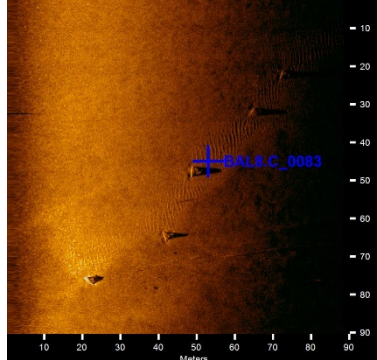
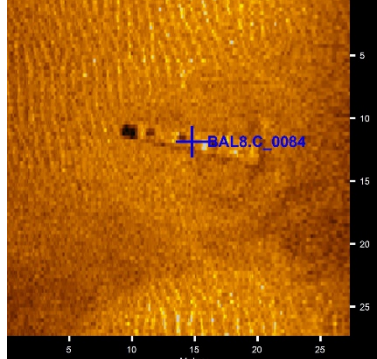
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S060</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 2:41:31 AM</li> <li>● Click Position 30.1181235396 -87.5863603545 (WGS84) (X) 443513.50 (Y) 3332019.55 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_139.jsf</li> <li>● Heading: 126.000 Degrees</li> <li>● Line Name: BAL8_139</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S061</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 2:42:13 AM</li> <li>● Click Position 30.1172232367 -87.5852118212 (WGS84) (X) 443623.64 (Y) 3331919.22 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_139.jsf</li> <li>● Heading: 123.790 Degrees</li> <li>● Line Name: BAL8_139</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S062</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 4:11:40 AM</li> <li>● Click Position 30.1194841112 -87.5677138351 (WGS84) (X) 445310.58 (Y) 3332161.24 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_142.002.jsf</li> <li>● Heading: 128.100 Degrees</li> <li>● Line Name: BAL8_142.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 1.74 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 5.34 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: wreck</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S063</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 11:51:34 AM</li> <li>● Click Position 30.1256691184 -87.5856690736 (WGS84) (X) 443584.39 (Y) 3332855.36 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_157.jsf</li> <li>● Heading: 78.390 Degrees</li> <li>● Line Name: BAL8_157</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

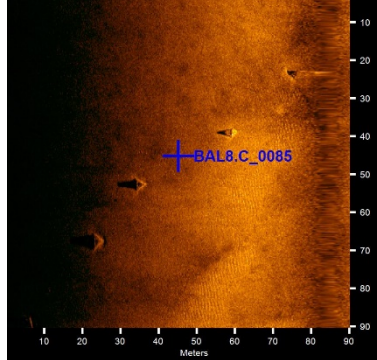
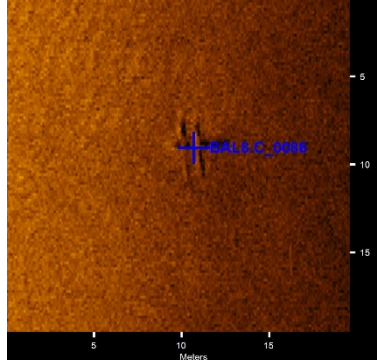
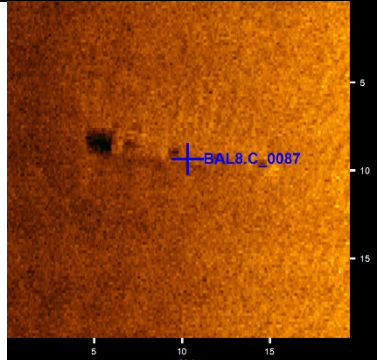
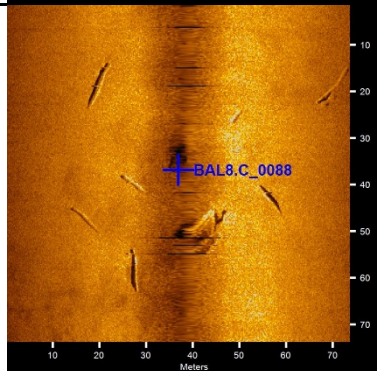
Target Image	Target Info	User Entered Info
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 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0065' next to it. A scale bar at the bottom indicates 0, 5, 10, and 15 meters. The vertical axis on the right is labeled from -5 to -15 meters.</p>	<p><b>BAL8.S065</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 12:52:18 PM</li> <li>● Click Position 30.1279509247 -87.5209786678 (WGS84) (X) 449817.05 (Y) 3333078.01 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_160.jsf</li> <li>● Heading: 275.400 Degrees</li> <li>● Line Name: BAL8_160</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0066' next to it. A scale bar at the bottom indicates 0, 5, 10, and 15 meters. The vertical axis on the right is labeled from -5 to -15 meters.</p>	<p><b>BAL8.S066</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 1:06:34 PM</li> <li>● Click Position 30.1276908109 -87.5382984585 (WGS84) (X) 448148.57 (Y) 3333056.93 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_160.jsf</li> <li>● Heading: 276.300 Degrees</li> <li>● Line Name: BAL8_160</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing a large, complex, and somewhat rectangular target on a sandy seabed. A blue crosshair is positioned over the target, with the label 'BAL8.C_0087' next to it. A scale bar at the bottom indicates 0, 5, 10, 15, 20, 25, 30, and 35 meters. The vertical axis on the right is labeled from -5 to -35 meters.</p>	<p><b>BAL8.S067</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 6:10:46 PM</li> <li>● Click Position 30.1289131479 -87.5341992622 (WGS84) (X) 448544.07 (Y) 3333190.52 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_162.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_162</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 21.13 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 25.71 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Gulf State Park Pavilion</li> <li>● Classification2:</li> <li>● Description: Gulf State Pavilion walls and pilings</li> </ul>

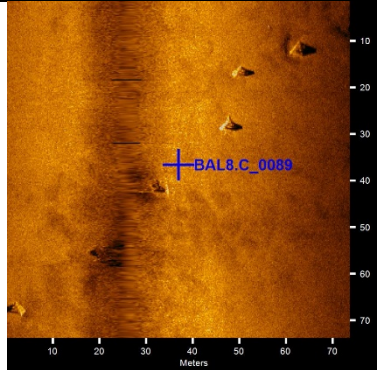
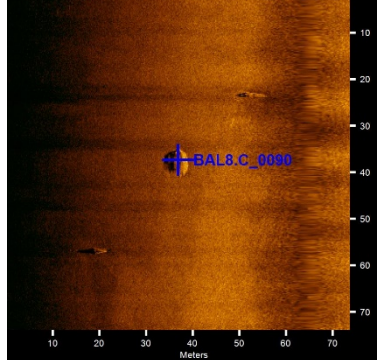
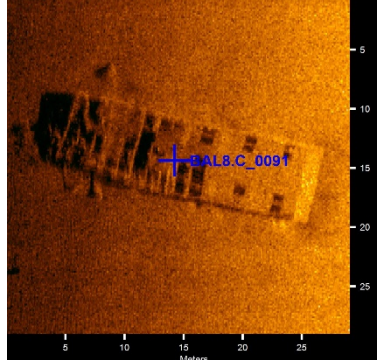
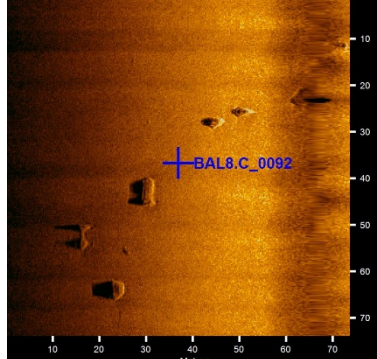
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S068</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 7:32:08 PM</li> <li>● Click Position 30.1294978657 -87.5344492382 (WGS84) (X) 448520.29 (Y) 3333255.43 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_165.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_165</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 23.11 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 60.51 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description: Part of larger concentration of debris.</li> </ul>
	<p><b>BAL8.S069</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 3:04:10 PM</li> <li>● Click Position 30.1307136778 -87.5299473436 (WGS84) (X) 448954.56 (Y) 3333388.13 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_166.jsf</li> <li>● Heading: 279.000 Degrees</li> <li>● Line Name: BAL8_166</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 18.97 Meters</li> <li>● Target Height: 3.03 Meters</li> <li>● Target Length: 85.06 Meters</li> <li>● Target Shadow: 11.49 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Allen</li> <li>● Classification2:</li> <li>● Description: Liberty Ship <i>Allen</i></li> </ul>
	<p><b>BAL8.S070</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 3:08:35 PM</li> <li>● Click Position 30.1305230244 -87.5353835061 (WGS84) (X) 448430.83 (Y) 3333369.45 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_166.jsf</li> <li>● Heading: 279.090 Degrees</li> <li>● Line Name: BAL8_166</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S072</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 7:57:21 PM</li> <li>● Click Position 30.1313959865 -87.5325130402 (WGS84) (X) 448707.78 (Y) 3333464.89 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_168.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_168</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 48.15 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 61.31 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

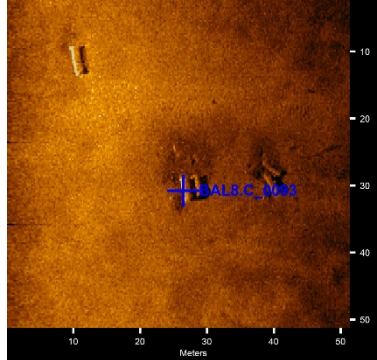
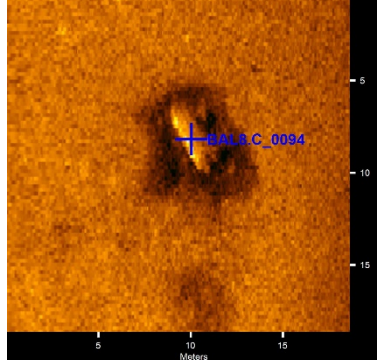
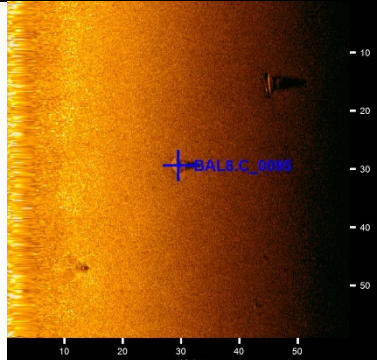
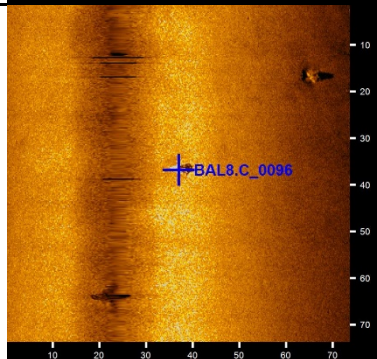
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S073</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 4:16:53 PM</li> <li>• Click Position 30.1310202664 -87.5564162553 (WGS84) (X) 446405.15 (Y) 3333434.24 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_169.001.jsf</li> <li>• Heading: 72.800 Degrees</li> <li>• Line Name: BAL8_I69.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Unknown</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S074</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 4:34:14 PM</li> <li>• Click Position 30.1319263738 -87.5319507168 (WGS84) (X) 448762.21 (Y) 3333523.41 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_169.002.jsf</li> <li>• Heading: 72.390 Degrees</li> <li>• Line Name: BAL8_I69.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 33.96 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 61.79 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S075</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 4:34:00 PM</li> <li>• Click Position 30.1313620829 -87.5322664585 (WGS84) (X) 448731.51 (Y) 3333461.02 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_169.002.jsf</li> <li>• Heading: 70.600 Degrees</li> <li>• Line Name: BAL8_I69.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S076</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 4:35:54 PM</li> <li>• Click Position 30.1309786886 -87.5296640163 (WGS84) (X) 448981.99 (Y) 3333417.37 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_169.002.jsf</li> <li>• Heading: 78.290 Degrees</li> <li>• Line Name: BAL8_I69.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 16.94 Meters</li> <li>• Target Height: 1.23 Meters</li> <li>• Target Length: 60.62 Meters</li> <li>• Target Shadow: 5.90 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Allen</li> <li>• Classification2:</li> <li>• Description: Liberty Ship <i>Allen</i></li> </ul>

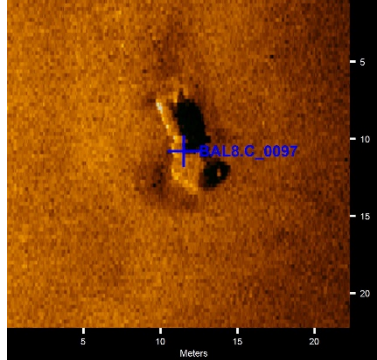
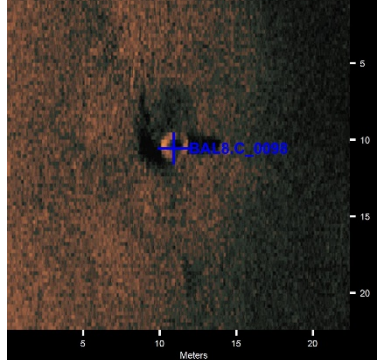
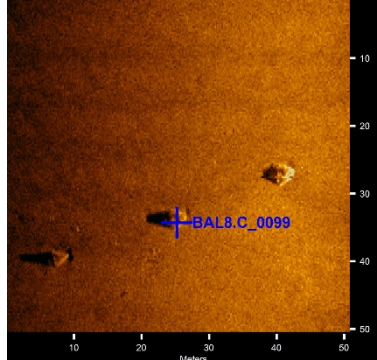
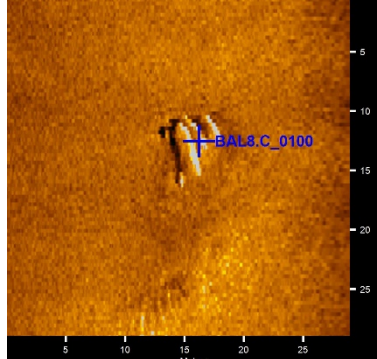
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	<p><b>BAL8.S077</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 11:23:50 PM</li> <li>● Click Position 30.1322379618 -87.5351508021 (WGS84) (X) 448454.14 (Y) 3333559.38 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_170.jsf</li> <li>● Heading: 274.390 Degrees</li> <li>● Line Name: BAL8_170</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: voting machine</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S078</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 8:53:49 PM</li> <li>● Click Position 30.1321544663 -87.5729140705 (WGS84) (X) 444816.66 (Y) 3333567.79 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_171.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_171</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S079</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 8:55:11 PM</li> <li>● Click Position 30.1327750094 -87.5708034820 (WGS84) (X) 445020.30 (Y) 3333635.53 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_171.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_171</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 4.87 Meters</li> <li>● Target Height: 0.90 Meters</li> <li>● Target Length: 9.76 Meters</li> <li>● Target Shadow: 2.99 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S080</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 9:20:20 PM</li> <li>● Click Position 30.1328016039 -87.5330098502 (WGS84) (X) 448660.65 (Y) 3333620.88 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_171.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_171</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.48 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 61.88 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

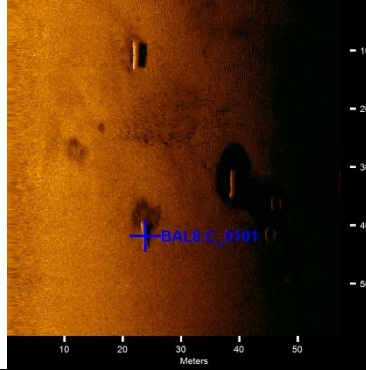
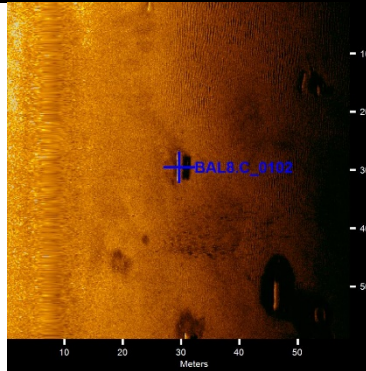
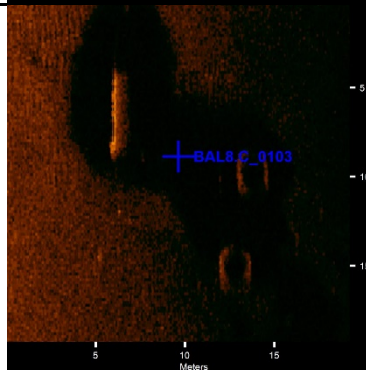
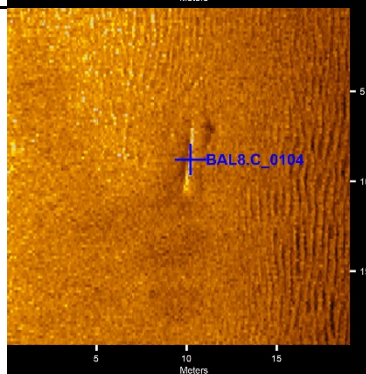
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	<p><b>BAL8.S081</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 9:20:34 PM</li> <li>● Click Position 30.1323654220 -87.5326621901 (WGS84) (X) 448693.91 (Y) 3333572.38 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_171.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_171</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S082</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 5:01:09 PM</li> <li>● Click Position 30.1334356988 -87.5314658484 (WGS84) (X) 448809.70 (Y) 3333690.45 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_172.jsf</li> <li>● Heading: 277.900 Degrees</li> <li>● Line Name: BAL8_172</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 23.70 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 50.56 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Gulf State Pier Pilings</li> <li>● Classification2:</li> <li>● Description: Gulf State Pier Pilings</li> </ul>
	<p><b>BAL8.S083</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 5:03:06 PM</li> <li>● Click Position 30.1333880188 -87.5339583639 (WGS84) (X) 448569.59 (Y) 3333686.28 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_172.jsf</li> <li>● Heading: 278.090 Degrees</li> <li>● Line Name: BAL8_172</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S084</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 6:26:41 PM</li> <li>● Click Position 30.1344848517 -87.5365218418 (WGS84) (X) 448323.25 (Y) 3333808.99 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_175.002.jsf</li> <li>● Heading: 64.690 Degrees</li> <li>● Line Name: BAL8_175.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Linear feature</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

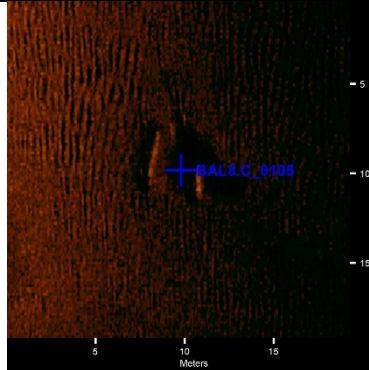
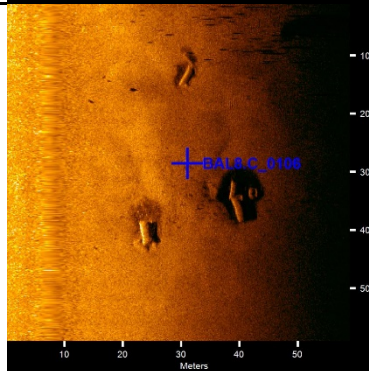
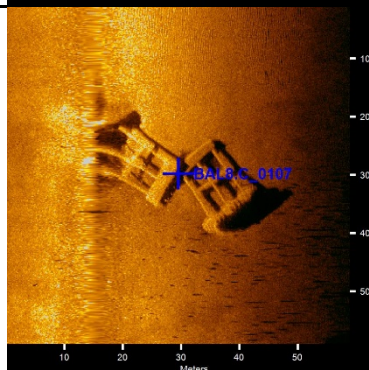
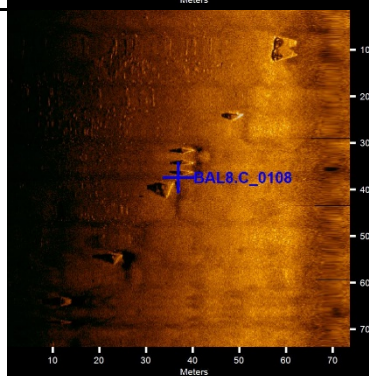
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S085</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 6:27:48 PM</li> <li>● Click Position 30.1346671548 -87.5349519974 (WGS84) (X) 448474.55 (Y) 3333828.48 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_175.002.jsf</li> <li>● Heading: 64.390 Degrees</li> <li>● Line Name: BAL8_175.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S086</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 9:13:03 PM</li> <li>● Click Position 30.1349408629 -87.5367467161 (WGS84) (X) 448301.82 (Y) 3333859.62 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_176.jsf</li> <li>● Heading: 275.000 Degrees</li> <li>● Line Name: BAL8_176</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S087</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 9:13:00 PM</li> <li>● Click Position 30.1344924170 -87.5366869916 (WGS84) (X) 448307.34 (Y) 3333809.90 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_176.jsf</li> <li>● Heading: 275.500 Degrees</li> <li>● Line Name: BAL8_176</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Linear feature</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S088</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 11:38:35 PM</li> <li>● Click Position 30.1364997375 -87.5328561942 (WGS84) (X) 448677.36 (Y) 3334030.61 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_177.001.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_177.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Gulf State Pier Pilings</li> <li>● Classification2:</li> <li>● Description: Gulf State Pier Pilings</li> </ul>

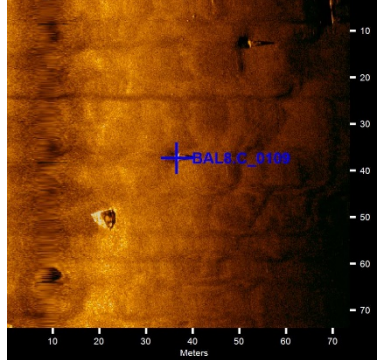
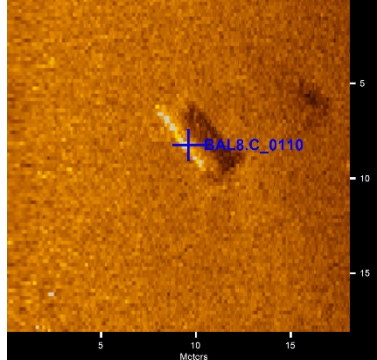
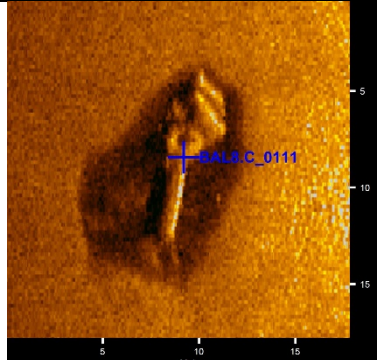
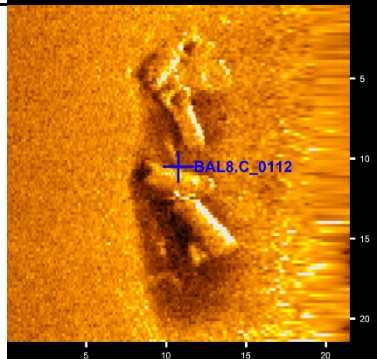
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S089</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 11:41:56 PM</li> <li>● Click Position 30.1365893025 -87.5374301618 (WGS84) (X) 448236.86 (Y) 3334042.60 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_177.001.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_177.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S090</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/21/2020 11:09:30 PM</li> <li>● Click Position 30.1354618595 -87.5360749960 (WGS84) (X) 448366.80 (Y) 3333917.05 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_177.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_177</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S091</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 7:11:16 PM</li> <li>● Click Position 30.1371680051 -87.5353790806 (WGS84) (X) 448434.71 (Y) 3334105.80 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_182.jsf</li> <li>● Heading: 275.290 Degrees</li> <li>● Line Name: BAL8_182</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 6.48 Meters</li> <li>● Target Height: 1.29 Meters</li> <li>● Target Length: 22.73 Meters</li> <li>● Target Shadow: 2.65 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Rookie Barge</li> <li>● Classification2:</li> <li>● Description: Flat deck steel barge</li> </ul>
	<p><b>BAL8.S092</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 1:00:49 AM</li> <li>● Click Position 30.1381596815 -87.5389436929 (WGS84) (X) 448091.90 (Y) 3334217.30 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_183.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_183</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1:</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

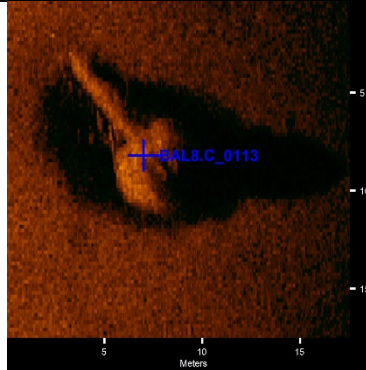
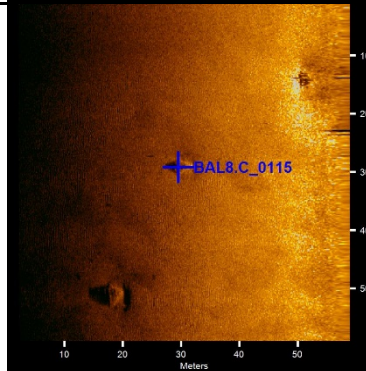
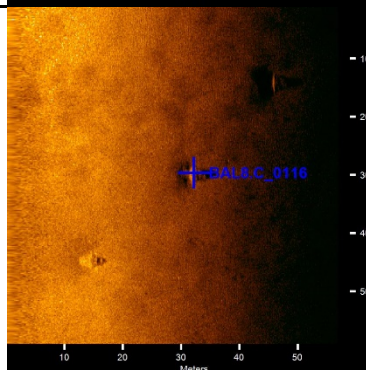
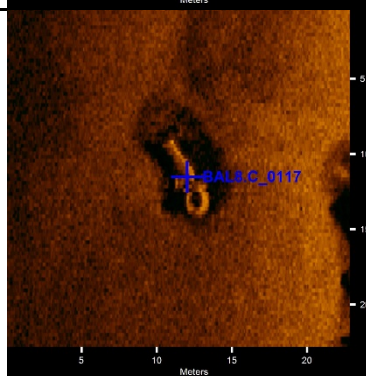
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S093</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 9:26:43 PM</li> <li>• Click Position 30.1384560760 -87.5672915298 (WGS84) (X) 445361.71 (Y) 3334263.38 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_184.002.jsf</li> <li>• Heading: 278.000 Degrees</li> <li>• Line Name: BAL8_184.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 13.13 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 37.71 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris Scatter</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S094</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/14/2020 6:12:36 PM</li> <li>• Click Position 30.1385264828 -87.5729621389 (WGS84) (X) 444815.58 (Y) 3334273.91 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_185.jsf</li> <li>• Heading: 89.190 Degrees</li> <li>• Line Name: BAL8_185</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Linear feature</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S095</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/14/2020 6:34:46 PM</li> <li>• Click Position 30.1385575548 -87.5395602207 (WGS84) (X) 448032.73 (Y) 3334261.67 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_185.jsf</li> <li>• Heading: 85.090 Degrees</li> <li>• Line Name: BAL8_185</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 48.67 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S096</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/22/2020 1:37:36 AM</li> <li>• Click Position 30.1392968490 -87.5405116599 (WGS84) (X) 447941.48 (Y) 3334344.03 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_186.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_186</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 81.12 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

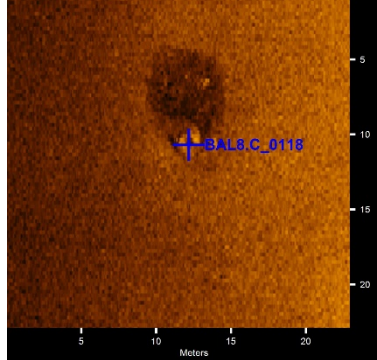
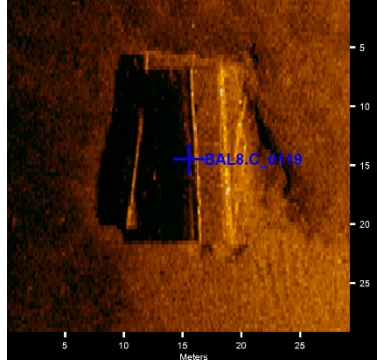
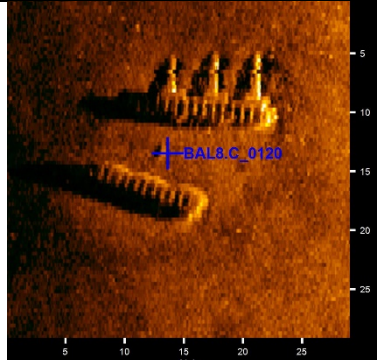
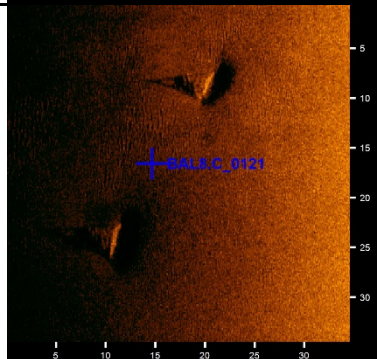
Target Image	Target Info	User Entered Info
 <p>A sonar image showing a dark, irregularly shaped object on a sandy seabed. A blue crosshair is positioned over the object, with the label 'BAL8.C_0097' next to it. A vertical depth scale on the right ranges from 0 to 20 meters. A horizontal scale at the bottom ranges from 0 to 20 meters.</p>	<p><b>BAL8.S097</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/22/2020 1:57:10 AM</li> <li>• Click Position 30.1393473510 -87.5679517819 (WGS84) (X) 445298.61 (Y) 3334362.46 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_186.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_186</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 2.70 Meters</li> <li>• Target Height: 0.78 Meters</li> <li>• Target Length: 6.90 Meters</li> <li>• Target Shadow: 1.71 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a small, dark object on a sandy seabed. A blue crosshair is positioned over the object, with the label 'BAL8.C_0098' next to it. A vertical depth scale on the right ranges from 0 to 20 meters. A horizontal scale at the bottom ranges from 0 to 20 meters.</p>	<p><b>BAL8.S098</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/22/2020 1:57:07 AM</li> <li>• Click Position 30.1395958896 -87.5678910035 (WGS84) (X) 445304.60 (Y) 3334389.98 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_186.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_186</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Tire</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a small, dark object on a sandy seabed. A blue crosshair is positioned over the object, with the label 'BAL8.C_0099' next to it. A vertical depth scale on the right ranges from 0 to 50 meters. A horizontal scale at the bottom ranges from 0 to 50 meters.</p>	<p><b>BAL8.S099</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 10:22:58 PM</li> <li>• Click Position 30.1400152441 -87.5410339903 (WGS84) (X) 447891.54 (Y) 3334423.88 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_187.002.jsf</li> <li>• Heading: 78.600 Degrees</li> <li>• Line Name: BAL8_187.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 37.82 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a small, dark object on a sandy seabed. A blue crosshair is positioned over the object, with the label 'BAL8.C_0100' next to it. A vertical depth scale on the right ranges from 0 to 25 meters. A horizontal scale at the bottom ranges from 0 to 25 meters.</p>	<p><b>BAL8.S100</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/11/2020 10:00:02 PM</li> <li>• Click Position 30.1397264820 -87.5740989277 (WGS84) (X) 444706.76 (Y) 3334407.44 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_187.jsf</li> <li>• Heading: 65.000 Degrees</li> <li>• Line Name: BAL8_187</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

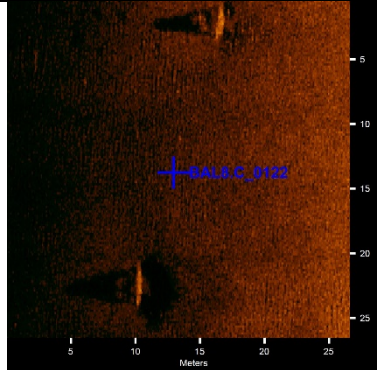
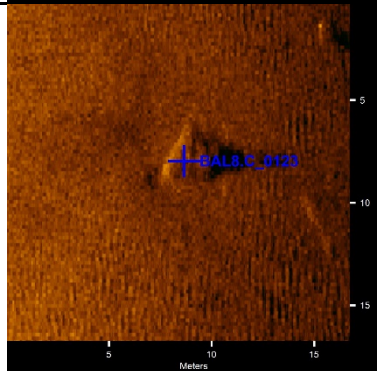
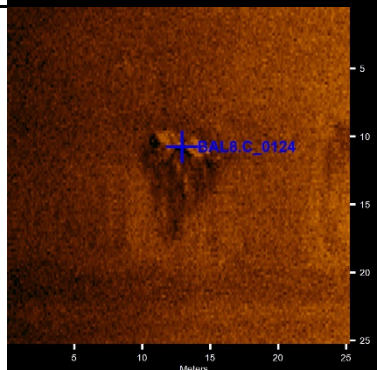
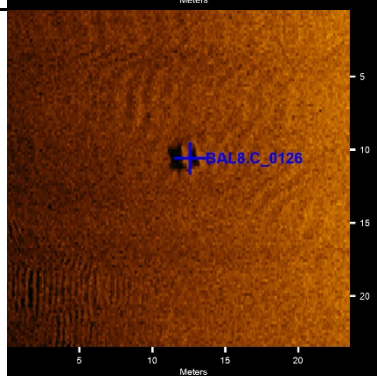
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S101</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 5:37:30 PM</li> <li>● Click Position 30.1402131565 -87.5672401607 (WGS84) (X) 445367.63 (Y) 3334458.07 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_188.jsf</li> <li>● Heading: 275.700 Degrees</li> <li>● Line Name: BAL8_188</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Linear feature</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S102</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 5:37:40 PM</li> <li>● Click Position 30.1401901034 -87.5675637142 (WGS84) (X) 445336.45 (Y) 3334455.67 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_188.jsf</li> <li>● Heading: 273.790 Degrees</li> <li>● Line Name: BAL8_188</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Linear feature</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S103</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 5:37:27 PM</li> <li>● Click Position 30.1403768049 -87.5673135832 (WGS84) (X) 445360.64 (Y) 3334476.24 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_188.jsf</li> <li>● Heading: 274.290 Degrees</li> <li>● Line Name: BAL8_188</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description: Linear feature and tires</li> </ul>
	<p><b>BAL8.S104</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 5:37:55 PM</li> <li>● Click Position 30.1401403378 -87.5678543825 (WGS84) (X) 445308.43 (Y) 3334450.29 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_188.jsf</li> <li>● Heading: 275.600 Degrees</li> <li>● Line Name: BAL8_188</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Linear feature</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

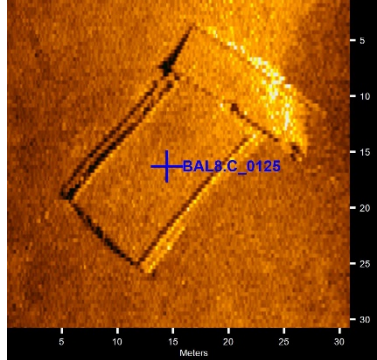
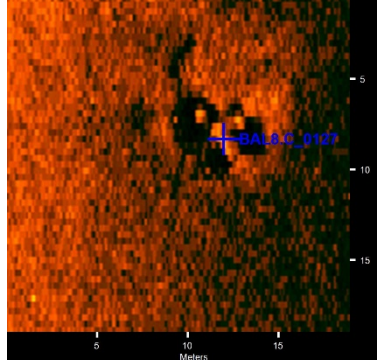
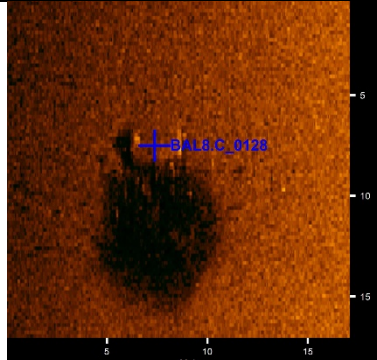
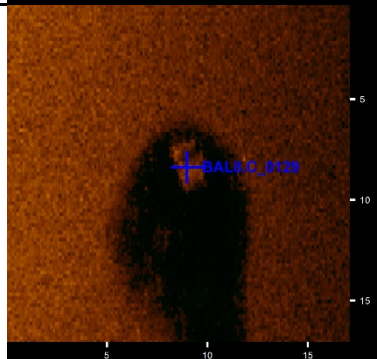
Target Image	Target Info	User Entered Info
 <p>A sonar image showing a small, dark, rectangular object on a sandy seabed. A blue crosshair is positioned over the object, labeled 'BAL8.C_0105'. The image includes a depth scale on the right (0 to -15 meters) and a horizontal scale at the bottom (0 to 15 meters).</p>	<p><b>BAL8.S105</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 5:37:47 PM</li> <li>● Click Position 30.1403925427 -87.5677109609 (WGS84) (X) 445322.38 (Y) 3334478.17 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_188.jsf</li> <li>● Heading: 275.200 Degrees</li> <li>● Line Name: BAL8_188</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing several small, dark, rectangular objects on a sandy seabed. A blue crosshair is positioned over one of the objects, labeled 'BAL8.C_0106'. The image includes a depth scale on the right (0 to -50 meters) and a horizontal scale at the bottom (0 to 50 meters).</p>	<p><b>BAL8.S106</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 5:39:02 PM</li> <li>● Click Position 30.1401837452 -87.5691795794 (WGS84) (X) 445180.82 (Y) 3334455.74 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_188.jsf</li> <li>● Heading: 277.890 Degrees</li> <li>● Line Name: BAL8_188</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 21.88 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 32.44 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description: Linear features and tires.</li> </ul>
 <p>A sonar image showing a large, dark, rectangular object on a sandy seabed. A blue crosshair is positioned over the object, labeled 'BAL8.C_0107'. The image includes a depth scale on the right (0 to -50 meters) and a horizontal scale at the bottom (0 to 50 meters).</p>	<p><b>BAL8.S107</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 5:39:31 PM</li> <li>● Click Position 30.1401122189 -87.5697214858 (WGS84) (X) 445128.58 (Y) 3334448.07 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_188.jsf</li> <li>● Heading: 276.290 Degrees</li> <li>● Line Name: BAL8_188</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 15.84 Meters</li> <li>● Target Height: 4.12 Meters</li> <li>● Target Length: 25.75 Meters</li> <li>● Target Shadow: 6.47 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Unknown Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing several small, dark, rectangular objects on a sandy seabed. A blue crosshair is positioned over one of the objects, labeled 'BAL8.C_0108'. The image includes a depth scale on the right (0 to -70 meters) and a horizontal scale at the bottom (0 to 70 meters).</p>	<p><b>BAL8.S108</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 2:57:12 AM</li> <li>● Click Position 30.1409051668 -87.5421486520 (WGS84) (X) 447784.66 (Y) 3334523.00 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_189.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_189</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 81.51 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

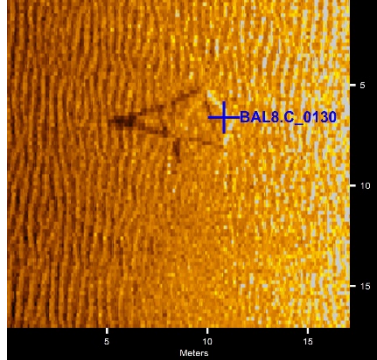
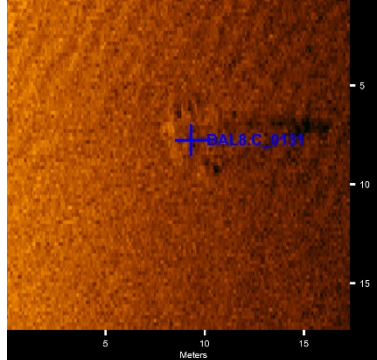
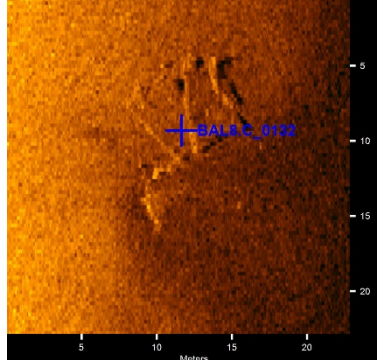
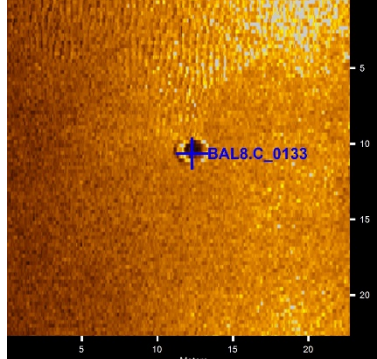
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S109</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 2:57:48 AM</li> <li>● Click Position 30.1403644226 -87.5414760748 (WGS84) (X) 447849.15 (Y) 3334462.77 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_189.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_189</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 52.74 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S110</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 4:11:26 PM</li> <li>● Click Position 30.1412915883 -87.5749211838 (WGS84) (X) 444628.44 (Y) 3334581.27 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_191.jsf</li> <li>● Heading: 89.400 Degrees</li> <li>● Line Name: BAL8_191</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Linear feature</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S111</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 4:14:45 PM</li> <li>● Click Position 30.1416142890 -87.5701757900 (WGS84) (X) 445085.66 (Y) 3334614.74 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_191.jsf</li> <li>● Heading: 88.400 Degrees</li> <li>● Line Name: BAL8_191</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 3.08 Meters</li> <li>● Target Height: 0.51 Meters</li> <li>● Target Length: 9.13 Meters</li> <li>● Target Shadow: 0.76 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Unknown Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S112</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 4:14:53 PM</li> <li>● Click Position 30.1415228401 -87.5699996750 (WGS84) (X) 445102.57 (Y) 3334604.52 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_191.jsf</li> <li>● Heading: 88.590 Degrees</li> <li>● Line Name: BAL8_191</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 5.27 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 14.26 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

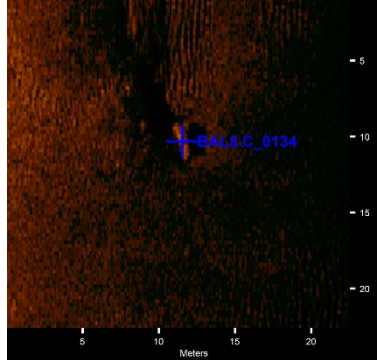
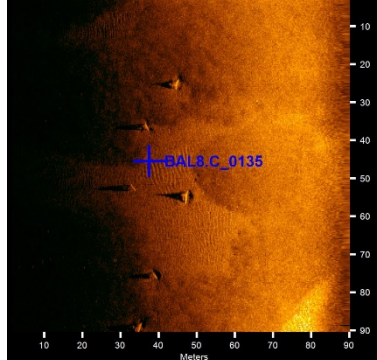
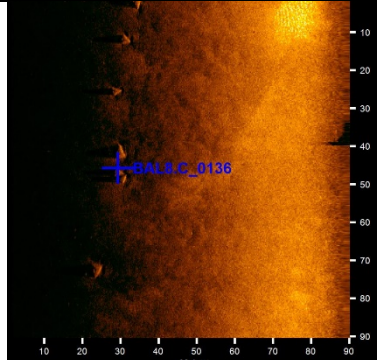
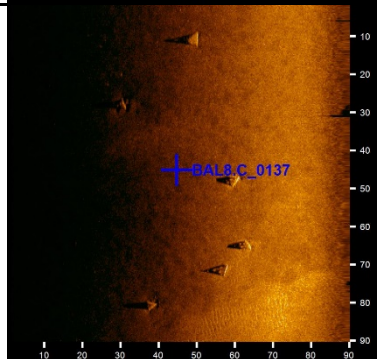
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S113</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 4:17:58 PM</li> <li>● Click Position 30.1411223461 -87.5655868677 (WGS84) (X) 445527.36 (Y) 3334558.03 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_191.jsf</li> <li>● Heading: 89.300 Degrees</li> <li>● Line Name: BAL8_I91</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 4.92 Meters</li> <li>● Target Height: 2.48 Meters</li> <li>● Target Length: 9.37 Meters</li> <li>● Target Shadow: 8.63 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Perdido Pass Bridge 7</li> <li>● Classification2:</li> <li>● Description: Perdido Pass Bridge rubble used as artificial reef; spans and pilings</li> </ul>
	<p><b>BAL8.S115</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 4:33:28 PM</li> <li>● Click Position 30.1417909577 -87.5432326934 (WGS84) (X) 447680.72 (Y) 3334621.65 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_191.jsf</li> <li>● Heading: 85.590 Degrees</li> <li>● Line Name: BAL8_I91</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 55.26 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S116</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 4:33:51 PM</li> <li>● Click Position 30.1412338308 -87.5426693043 (WGS84) (X) 447734.68 (Y) 3334559.66 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_191.jsf</li> <li>● Heading: 87.500 Degrees</li> <li>● Line Name: BAL8_I91</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 62.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S117</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 3:58:39 AM</li> <li>● Click Position 30.1414334308 -87.5701501463 (WGS84) (X) 445088.03 (Y) 3334594.68 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_192.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_I92</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description: Linear feature, Tires</li> </ul>

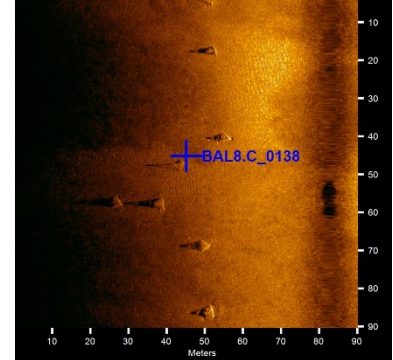
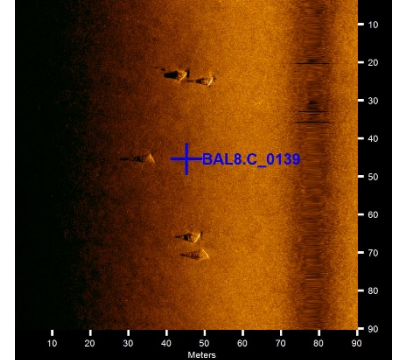
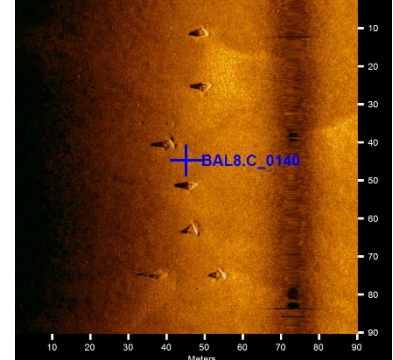
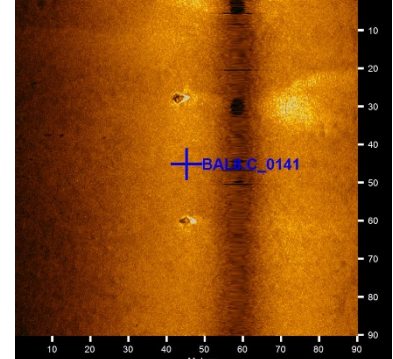
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S118</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 3:58:18 AM</li> <li>● Click Position 30.1415203720 -87.5696185473 (WGS84) (X) 445139.28 (Y) 3334604.06 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_192.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_192</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Tire</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S119</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 11:56:13 PM</li> <li>● Click Position 30.1426875559 -87.5713766980 (WGS84) (X) 444970.59 (Y) 3334734.25 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_193.jsf</li> <li>● Heading: 80.100 Degrees</li> <li>● Line Name: BAL8_193</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 9.28 Meters</li> <li>● Target Height: 0.76 Meters</li> <li>● Target Length: 16.19 Meters</li> <li>● Target Shadow: 2.84 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Perdido Pass Bridge</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S120</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/11/2020 11:56:28 PM</li> <li>● Click Position 30.1427039686 -87.5709838039 (WGS84) (X) 445008.44 (Y) 3334735.88 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_193.jsf</li> <li>● Heading: 85.600 Degrees</li> <li>● Line Name: BAL8_193</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 15.79 Meters</li> <li>● Target Height: 1.44 Meters</li> <li>● Target Length: 13.72 Meters</li> <li>● Target Shadow: 5.95 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Perdido Pass Bridge</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S121</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 3:52:41 PM</li> <li>● Click Position 30.1422486709 -87.5862813696 (WGS84) (X) 443534.84 (Y) 3334692.90 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_194.001.jsf</li> <li>● Heading: 275.100 Degrees</li> <li>● Line Name: BAL8_194.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 1.09 Meters</li> <li>● Target Length: 22.38 Meters</li> <li>● Target Shadow: 5.32 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

Target Image	Target Info	User Entered Info
 <p>A sonar image showing a dark, irregularly shaped object on a sandy seabed. A blue crosshair is positioned over the object, with the text 'BAL8.C_0122' next to it. A vertical depth scale on the right ranges from 0 to 25 meters. A horizontal distance scale at the bottom ranges from 0 to 25 meters.</p>	<p><b>BAL8.S122</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 3:18:27 PM</li> <li>● Click Position 30.1424478591 -87.5441394172 (WGS84) (X) 447593.73 (Y) 3334694.86 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_194.jsf</li> <li>● Heading: 278.700 Degrees</li> <li>● Line Name: BAL8_194</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 24.28 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped object on a sandy seabed. A blue crosshair is positioned over the object, with the text 'BAL8.C_0123' next to it. A vertical depth scale on the right ranges from 0 to 15 meters. A horizontal distance scale at the bottom ranges from 0 to 15 meters.</p>	<p><b>BAL8.S123</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 3:19:03 PM</li> <li>● Click Position 30.1430665217 -87.5449119561 (WGS84) (X) 447519.66 (Y) 3334763.78 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_194.jsf</li> <li>● Heading: 277.890 Degrees</li> <li>● Line Name: BAL8_194</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped object on a sandy seabed. A blue crosshair is positioned over the object, with the text 'BAL8.C_0124' next to it. A vertical depth scale on the right ranges from 0 to 25 meters. A horizontal distance scale at the bottom ranges from 0 to 25 meters.</p>	<p><b>BAL8.S124</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 4:51:51 AM</li> <li>● Click Position 30.1435645226 -87.5514188836 (WGS84) (X) 446893.23 (Y) 3334821.97 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_195.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_195</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A sonar image showing a dark, irregularly shaped object on a sandy seabed. A blue crosshair is positioned over the object, with the text 'BAL8.C_0126' next to it. A vertical depth scale on the right ranges from 0 to 20 meters. A horizontal distance scale at the bottom ranges from 0 to 20 meters.</p>	<p><b>BAL8.S126</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 4:56:52 AM</li> <li>● Click Position 30.1436045616 -87.5459422076 (WGS84) (X) 447420.72 (Y) 3334823.87 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_195.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_195</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

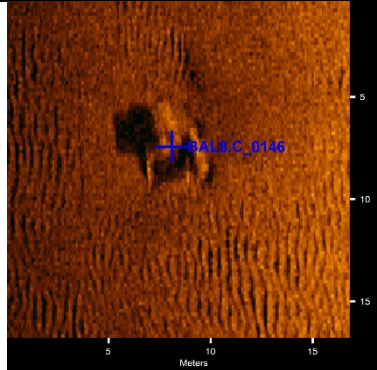
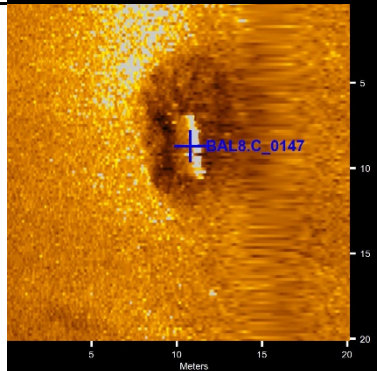
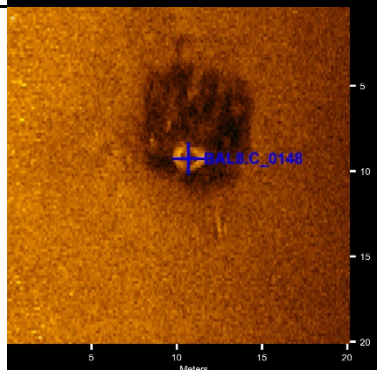
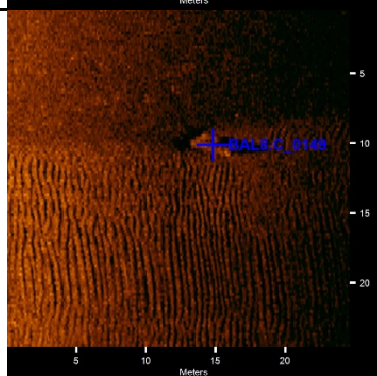
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S125</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:19:57 AM</li> <li>● Click Position 30.1433647775 -87.5738003575 (WGS84) (X) 444737.54 (Y) 3334810.47 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_196.002.jsf</li> <li>● Heading: 276.300 Degrees</li> <li>● Line Name: BAL8_196.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 14.72 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 20.84 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Unknown Structure</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S127</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:23:28 AM</li> <li>● Click Position 30.1440558841 -87.5797033377 (WGS84) (X) 444169.41 (Y) 3334889.92 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_196.002.jsf</li> <li>● Heading: 276.900 Degrees</li> <li>● Line Name: BAL8_196.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S128</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 2:09:32 PM</li> <li>● Click Position 30.1443313854 -87.5780469498 (WGS84) (X) 444329.09 (Y) 3334919.64 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_197.jsf</li> <li>● Heading: 86.300 Degrees</li> <li>● Line Name: BAL8_197</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S129</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 2:29:38 PM</li> <li>● Click Position 30.1439187454 -87.5509011322 (WGS84) (X) 446943.29 (Y) 3334860.98 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_197.jsf</li> <li>● Heading: 88.300 Degrees</li> <li>● Line Name: BAL8_197</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

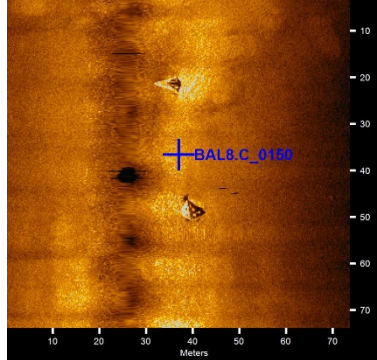
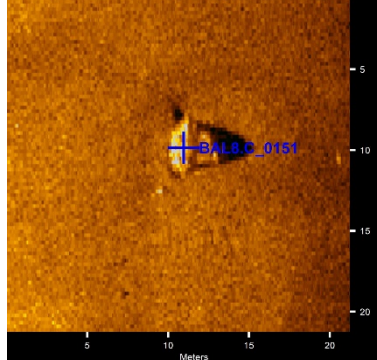
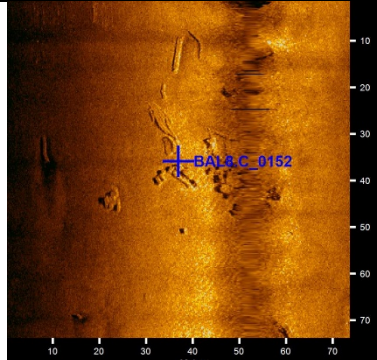
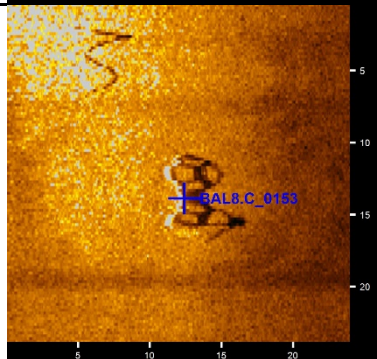
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S130</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 2:33:07 PM</li> <li>● Click Position 30.1443078200 -87.5461336885 (WGS84) (X) 447402.65 (Y) 3334901.89 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_197.jsf</li> <li>● Heading: 88.300 Degrees</li> <li>● Line Name: BAL8_197</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S131</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 2:33:22 PM</li> <li>● Click Position 30.1439283970 -87.5457864222 (WGS84) (X) 447435.89 (Y) 3334859.68 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_197.jsf</li> <li>● Heading: 85.190 Degrees</li> <li>● Line Name: BAL8_197</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S132</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 5:57:32 AM</li> <li>● Click Position 30.1448034005 -87.5658970808 (WGS84) (X) 445499.51 (Y) 3334966.08 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_198.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_198</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S133</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 6:00:00 AM</li> <li>● Click Position 30.1443223366 -87.5694915907 (WGS84) (X) 445153.05 (Y) 3334914.50 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_198.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_198</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Tire</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

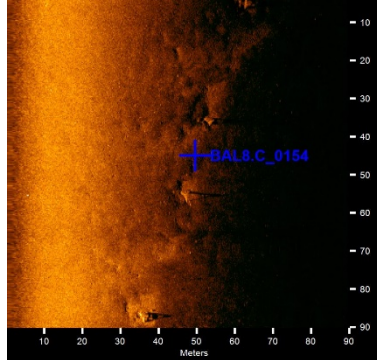
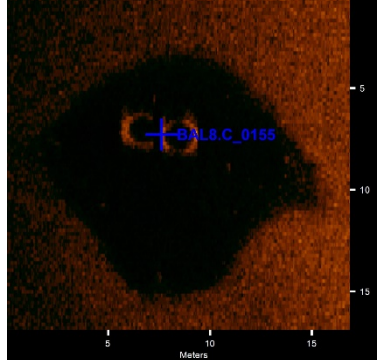
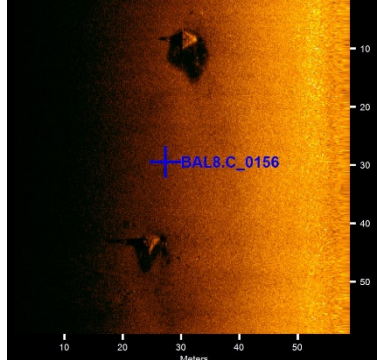

Target Image	Target Info	User Entered Info
	<p><b>BAL8.S134</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 6:00:10 AM</li> <li>● Click Position 30.1449006936 -87.5697577097 (WGS84) (X) 445127.74 (Y) 3334978.71 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_198.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_198</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Linear feature</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S135</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:53:56 AM</li> <li>● Click Position 30.1455200862 -87.5570383589 (WGS84) (X) 446353.07 (Y) 3335041.30 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>● Heading: 81.700 Degrees</li> <li>● Line Name: BAL8_199.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 65.94 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S136</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:53:15 AM</li> <li>● Click Position 30.1455872810 -87.5579454582 (WGS84) (X) 446265.75 (Y) 3335049.18 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>● Heading: 77.700 Degrees</li> <li>● Line Name: BAL8_199.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 73.77 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S137</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:54:49 AM</li> <li>● Click Position 30.1454612181 -87.5558865207 (WGS84) (X) 446463.98 (Y) 3335034.24 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>● Heading: 88.290 Degrees</li> <li>● Line Name: BAL8_199.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 52.63 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 74.36 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

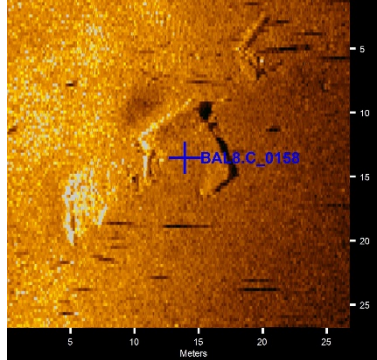
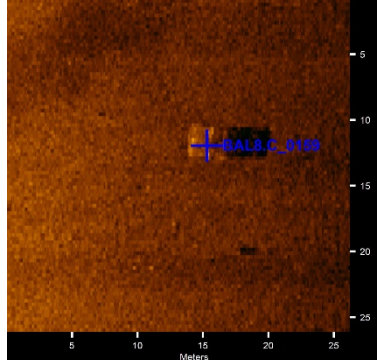
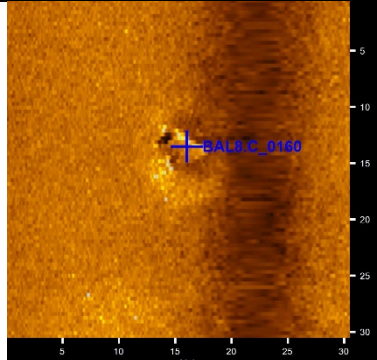
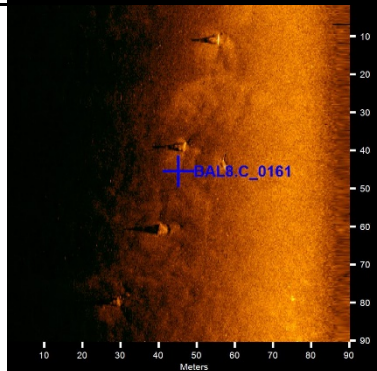
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S138</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:55:40 AM</li> <li>● Click Position 30.1454019707 -87.5547897130 (WGS84) (X) 446569.58 (Y) 3335027.16 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>● Heading: 91.000 Degrees</li> <li>● Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 28.11 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 86.33 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S139</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:56:39 AM</li> <li>● Click Position 30.1453588913 -87.5535321109 (WGS84) (X) 446690.67 (Y) 3335021.80 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>● Heading: 87.290 Degrees</li> <li>● Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S140</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:57:35 AM</li> <li>● Click Position 30.1453151867 -87.5523741509 (WGS84) (X) 446802.17 (Y) 3335016.41 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>● Heading: 81.700 Degrees</li> <li>● Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 65.01 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S141</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 1:58:29 AM</li> <li>● Click Position 30.1452006242 -87.5512142848 (WGS84) (X) 446913.81 (Y) 3335003.18 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>● Heading: 90.290 Degrees</li> <li>● Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 89.10 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

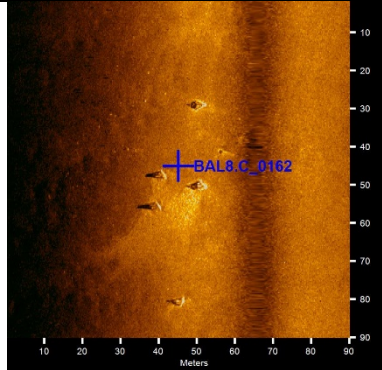
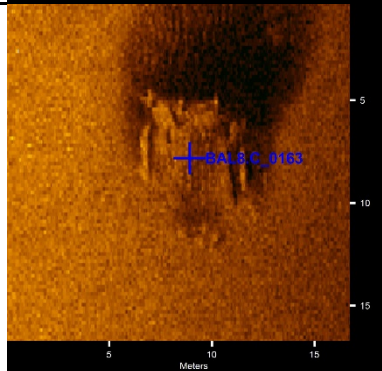
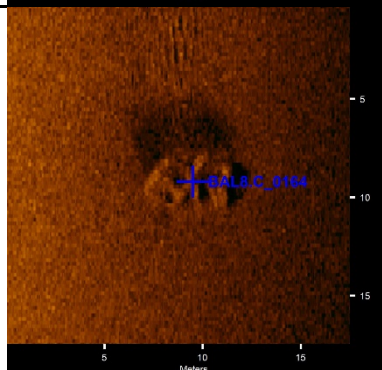
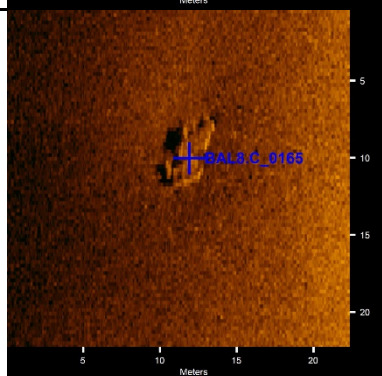
Target Image	Target Info	User Entered Info
	<p><b>BAL8.S142</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/12/2020 1:59:28 AM</li> <li>• Click Position 30.1452007441 -87.5499707585 (WGS84) (X) 447033.58 (Y) 3335002.61 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>• Heading: 86.390 Degrees</li> <li>• Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 37.88 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S143</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/12/2020 2:00:28 AM</li> <li>• Click Position 30.1451468125 -87.5487384650 (WGS84) (X) 447152.23 (Y) 3334996.06 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>• Heading: 93.890 Degrees</li> <li>• Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 62.76 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S144</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/12/2020 2:01:11 AM</li> <li>• Click Position 30.1451358266 -87.5478568324 (WGS84) (X) 447237.13 (Y) 3334994.44 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>• Heading: 91.000 Degrees</li> <li>• Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 17.72 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
	<p><b>BAL8.S145</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/12/2020 2:02:07 AM</li> <li>• Click Position 30.1448733198 -87.5466720063 (WGS84) (X) 447351.10 (Y) 3334964.80 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_199.001.jsf</li> <li>• Heading: 85.100 Degrees</li> <li>• Line Name: BAL8_I99.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 75.91 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

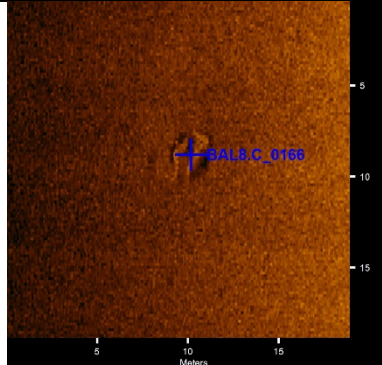
Target Image	Target Info	User Entered Info
 <p>A side-scan sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, labeled 'BAL8.S146'. The image includes a scale bar at the bottom with markings at 5, 10, and 15 meters.</p>	<p><b>BAL8.S146</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 1:21:46 PM</li> <li>● Click Position 30.1452236795 -87.5463506519 (WGS84) (X) 447382.24 (Y) 3335003.48 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_200.jsf</li> <li>● Heading: 277.290 Degrees</li> <li>● Line Name: BAL8_200</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A side-scan sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, labeled 'BAL8.S147'. The image includes a scale bar at the bottom with markings at 5, 10, 15, and 20 meters.</p>	<p><b>BAL8.S147</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 1:38:58 PM</li> <li>● Click Position 30.1453447230 -87.5692144034 (WGS84) (X) 445180.32 (Y) 3335027.66 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_200.jsf</li> <li>● Heading: 277.790 Degrees</li> <li>● Line Name: BAL8_200</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 4.04 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A side-scan sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, labeled 'BAL8.S148'. The image includes a scale bar at the bottom with markings at 5, 10, 15, and 20 meters.</p>	<p><b>BAL8.S148</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 1:38:59 PM</li> <li>● Click Position 30.1455291129 -87.5692310981 (WGS84) (X) 445178.81 (Y) 3335048.10 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_200.jsf</li> <li>● Heading: 278.790 Degrees</li> <li>● Line Name: BAL8_200</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Tire</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
 <p>A side-scan sonar image showing a dark, irregularly shaped target on a sandy seabed. A blue crosshair is positioned over the target, labeled 'BAL8.S149'. The image includes a scale bar at the bottom with markings at 5, 10, 15, and 20 meters.</p>	<p><b>BAL8.S149</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 6:34:22 AM</li> <li>● Click Position 30.1454513846 -87.5720233878 (WGS84) (X) 444909.84 (Y) 3335040.83 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_201.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_201</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL8.S150</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 6:43:40 AM</li> <li>● Click Position 30.1458136497 -87.5616286475 (WGS84) (X) 445911.15 (Y) 3335076.00 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_201.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_201</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 30.82 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S151</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 6:44:13 AM</li> <li>● Click Position 30.1457089887 -87.5609023422 (WGS84) (X) 445981.04 (Y) 3335064.06 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_201.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_201</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S152</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 6:44:27 AM</li> <li>● Click Position 30.1460526163 -87.5605810126 (WGS84) (X) 446012.18 (Y) 3335101.98 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_201.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_201</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 28.66 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 41.83 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Gulf State Park Pavilion</li> <li>● Classification2:</li> <li>● Description: "Gulf State Park Pavilion" in AL reef database</li> </ul>
	<p><b>BAL8.S153</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 6:45:09 AM</li> <li>● Click Position 30.1457357613 -87.5596355555 (WGS84) (X) 446103.06 (Y) 3335066.43 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_201.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_201</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL8.S154</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 3:06:56 AM</li> <li>● Click Position 30.1467682909 -87.5656686114 (WGS84) (X) 445522.59 (Y) 3335183.71 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_202.002.jsf</li> <li>● Heading: 275.500 Degrees</li> <li>● Line Name: BAL8_202.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 89.46 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S155</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 12:17:17 PM</li> <li>● Click Position 30.1471163865 -87.5689220834 (WGS84) (X) 445209.46 (Y) 3335226.60 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_203.jsf</li> <li>● Heading: 87.500 Degrees</li> <li>● Line Name: BAL8_203</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Tires</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S156</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 12:18:50 PM</li> <li>● Click Position 30.1471163865 -87.5668511953 (WGS84) (X) 445408.89 (Y) 3335222.85 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_203.jsf</li> <li>● Heading: 89.400 Degrees</li> <li>● Line Name: BAL8_203</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 40.09 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S157</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/14/2020 12:20:42 PM</li> <li>● Click Position 30.1465421497 -87.5643459853 (WGS84) (X) 445649.84 (Y) 3335158.02 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_203.jsf</li> <li>● Heading: 88.500 Degrees</li> <li>● Line Name: BAL8_203</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Unknown</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL8.S158</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 10/22/2020 7:55:15 AM</li> <li>● Click Position 30.1473771912 -87.5638843214 (WGS84) (X) 445694.76 (Y) 3335250.33 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\Bal8_204.jsf</li> <li>● Heading: 0.000 Degrees</li> <li>● Line Name: Bal8_204</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 7.38 Meters</li> <li>● Target Height: 0.33 Meters</li> <li>● Target Length: 23.58 Meters</li> <li>● Target Shadow: 0.70 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris Scatter</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S159</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 4:11:12 AM</li> <li>● Click Position 30.1473843956 -87.5259204332 (WGS84) (X) 449350.96 (Y) 3335233.67 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_205.002.jsf</li> <li>● Heading: 85.290 Degrees</li> <li>● Line Name: BAL8_205.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S160</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 3:31:54 AM</li> <li>● Click Position 30.1477066796 -87.5842080719 (WGS84) (X) 443737.63 (Y) 3335296.69 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_205.jsf</li> <li>● Heading: 81.000 Degrees</li> <li>● Line Name: BAL8_205</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 0.00 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: Debris</li> <li>● Classification2:</li> <li>● Description:</li> </ul>
	<p><b>BAL8.S161</b></p> <ul style="list-style-type: none"> <li>● Sonar Time at Target: 8/12/2020 3:39:47 AM</li> <li>● Click Position 30.1480931561 -87.5711212375 (WGS84) (X) 444998.19 (Y) 3335333.14 (Projected Coordinates)</li> <li>● Map Projection: UTM84-16N</li> <li>● Acoustic Source File: E:\SS BAL8\BAL8_205.jsf</li> <li>● Heading: 80.390 Degrees</li> <li>● Line Name: BAL8_205</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>● Target Width: 0.00 Meters</li> <li>● Target Height: 0.00 Meters</li> <li>● Target Length: 76.63 Meters</li> <li>● Target Shadow: 0.00 Meters</li> <li>● Mag Anomaly:</li> <li>● Classification1: RSWC Reef Module</li> <li>● Classification2:</li> <li>● Description:</li> </ul>

Target Image	Target Info	User Entered Info
 <p>A sonar image showing a target labeled 'BAL8.C_0162' with a blue crosshair. The image has a vertical depth scale on the right from 10 to 90 meters and a horizontal distance scale at the bottom from 10 to 90 meters.</p>	<p><b>BAL8.S162</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 8/12/2020 3:40:27 AM</li> <li>• Click Position 30.1478924186 -87.5700833213 (WGS84) (X) 445098.04 (Y) 3335310.39 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_205.jsf</li> <li>• Heading: 86.290 Degrees</li> <li>• Line Name: BAL8_205</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 52.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: RSWC Reef Module</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a target labeled 'BAL8.C_0163' with a blue crosshair. The image has a vertical depth scale on the right from 5 to 15 meters and a horizontal distance scale at the bottom from 5 to 15 meters.</p>	<p><b>BAL8.S163</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/14/2020 11:35:18 AM</li> <li>• Click Position 30.1482824753 -87.5632647177 (WGS84) (X) 445754.93 (Y) 3335350.36 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_206.jsf</li> <li>• Heading: 272.500 Degrees</li> <li>• Line Name: BAL8_206</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 5.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 6.51 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a target labeled 'BAL8.C_0164' with a blue crosshair. The image has a vertical depth scale on the right from 5 to 15 meters and a horizontal distance scale at the bottom from 5 to 15 meters.</p>	<p><b>BAL8.S164</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/14/2020 11:38:00 AM</li> <li>• Click Position 30.1483458662 -87.5668940810 (WGS84) (X) 445405.44 (Y) 3335359.11 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_206.jsf</li> <li>• Heading: 271.600 Degrees</li> <li>• Line Name: BAL8_206</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>
 <p>A sonar image showing a target labeled 'BAL8.C_0168' with a blue crosshair. The image has a vertical depth scale on the right from 5 to 20 meters and a horizontal distance scale at the bottom from 5 to 20 meters.</p>	<p><b>BAL8.S165</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/22/2020 9:51:38 AM</li> <li>• Click Position 30.1496542458 -87.5685114505 (WGS84) (X) 445250.40 (Y) 3335504.87 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\Bal8_210.jsf</li> <li>• Heading: 0.000 Degrees</li> <li>• Line Name: Bal8_210</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Mexico Rock</li> <li>• Classification2:</li> <li>• Description: Listed as "Mexico Rock" in Alabama Public Reefs database</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>BAL8.S166</b></p> <ul style="list-style-type: none"> <li>• Sonar Time at Target: 10/14/2020 7:25:18 AM</li> <li>• Click Position 30.1502073916 -87.5514781598 (WGS84) (X) 446891.08 (Y) 3335558.12 (Projected Coordinates)</li> <li>• Map Projection: UTM84-16N</li> <li>• Acoustic Source File: E:\SS BAL8\BAL8_211.jsf</li> <li>• Heading: 272.500 Degrees</li> <li>• Line Name: BAL8_211</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>• Target Width: 0.00 Meters</li> <li>• Target Height: 0.00 Meters</li> <li>• Target Length: 0.00 Meters</li> <li>• Target Shadow: 0.00 Meters</li> <li>• Mag Anomaly:</li> <li>• Classification1: Debris</li> <li>• Classification2:</li> <li>• Description:</li> </ul>

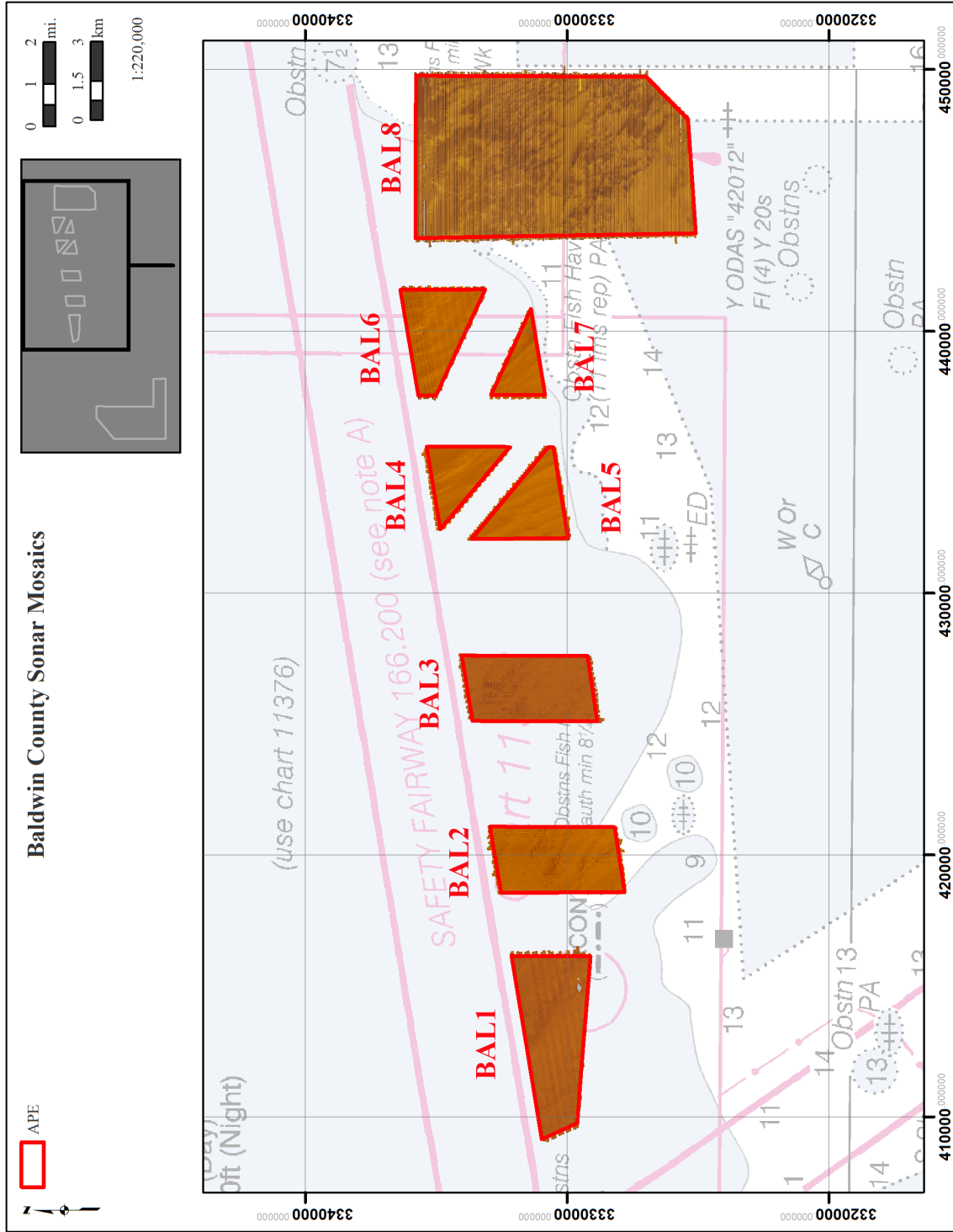


Figure M-1. Sonar Mosaics showing coverage for all Baldwin Cells (SAM-2014-00487-DEM) including BAL8.

## **APPENDIX N: BAL8 MAGNETIC CONTOUR MAPS**

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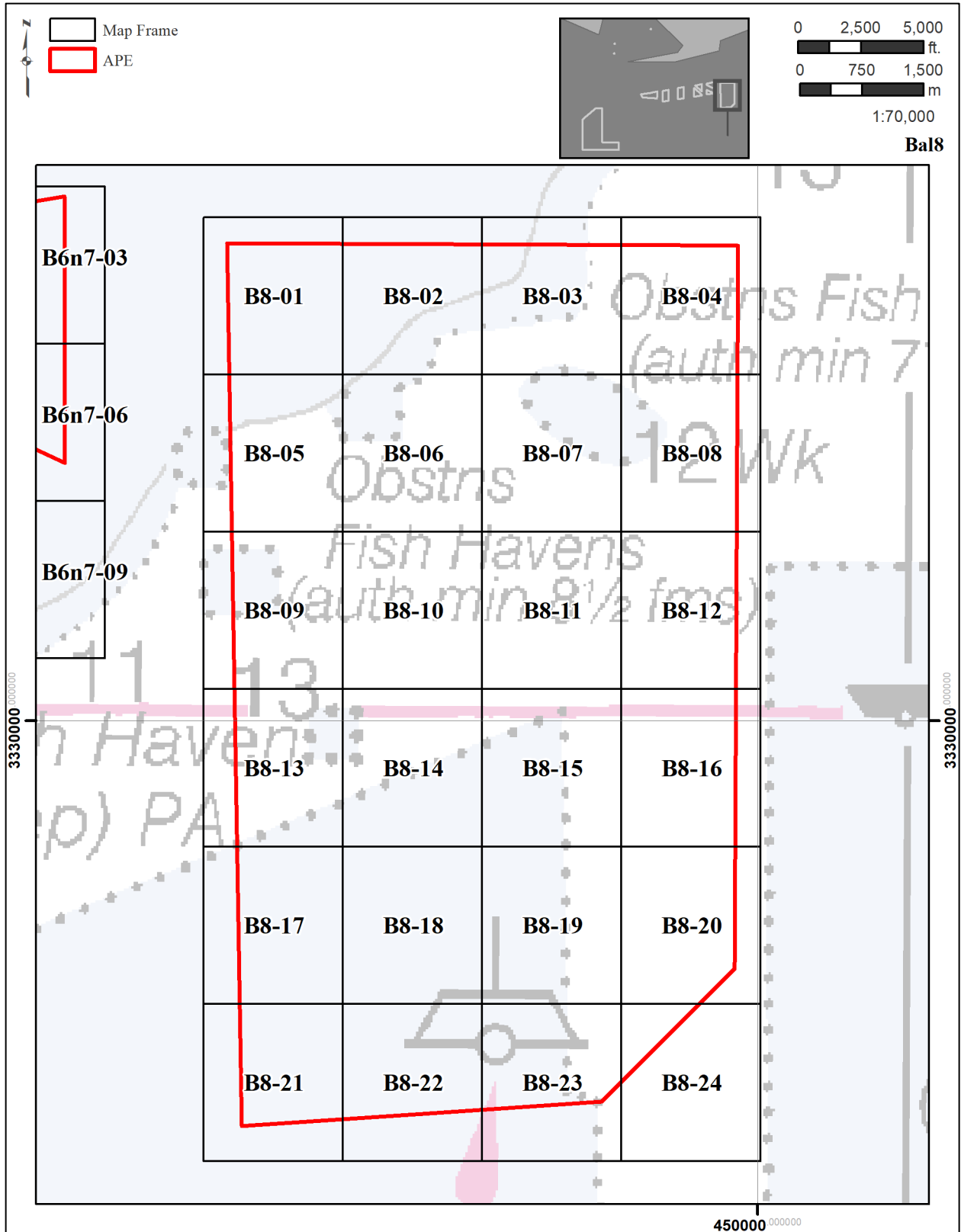


Figure N-01. Magnetic Contour Map Key for BAL8 (SAM-2014-00487-DEM).

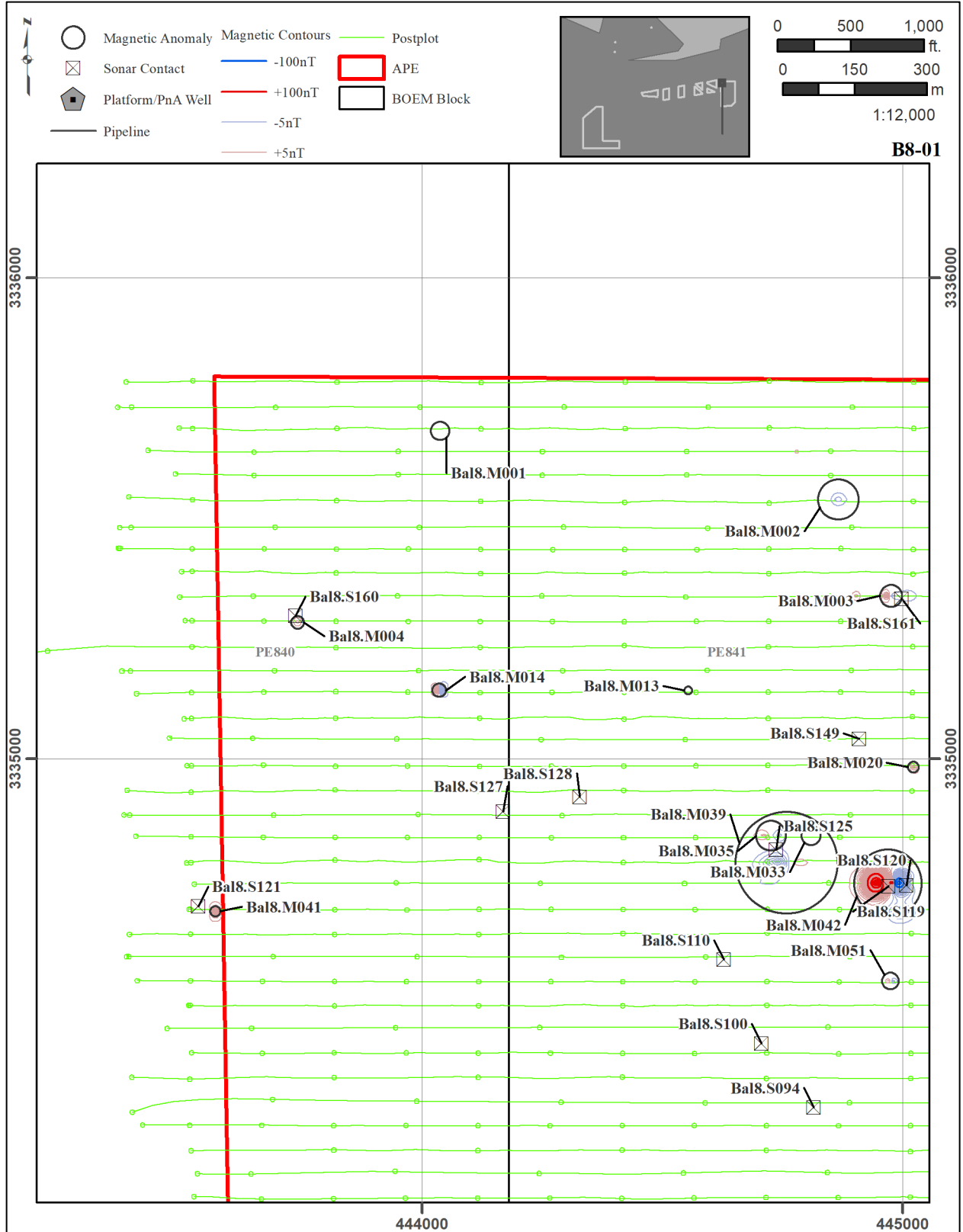


Figure N-02. BAL8 Map 1.

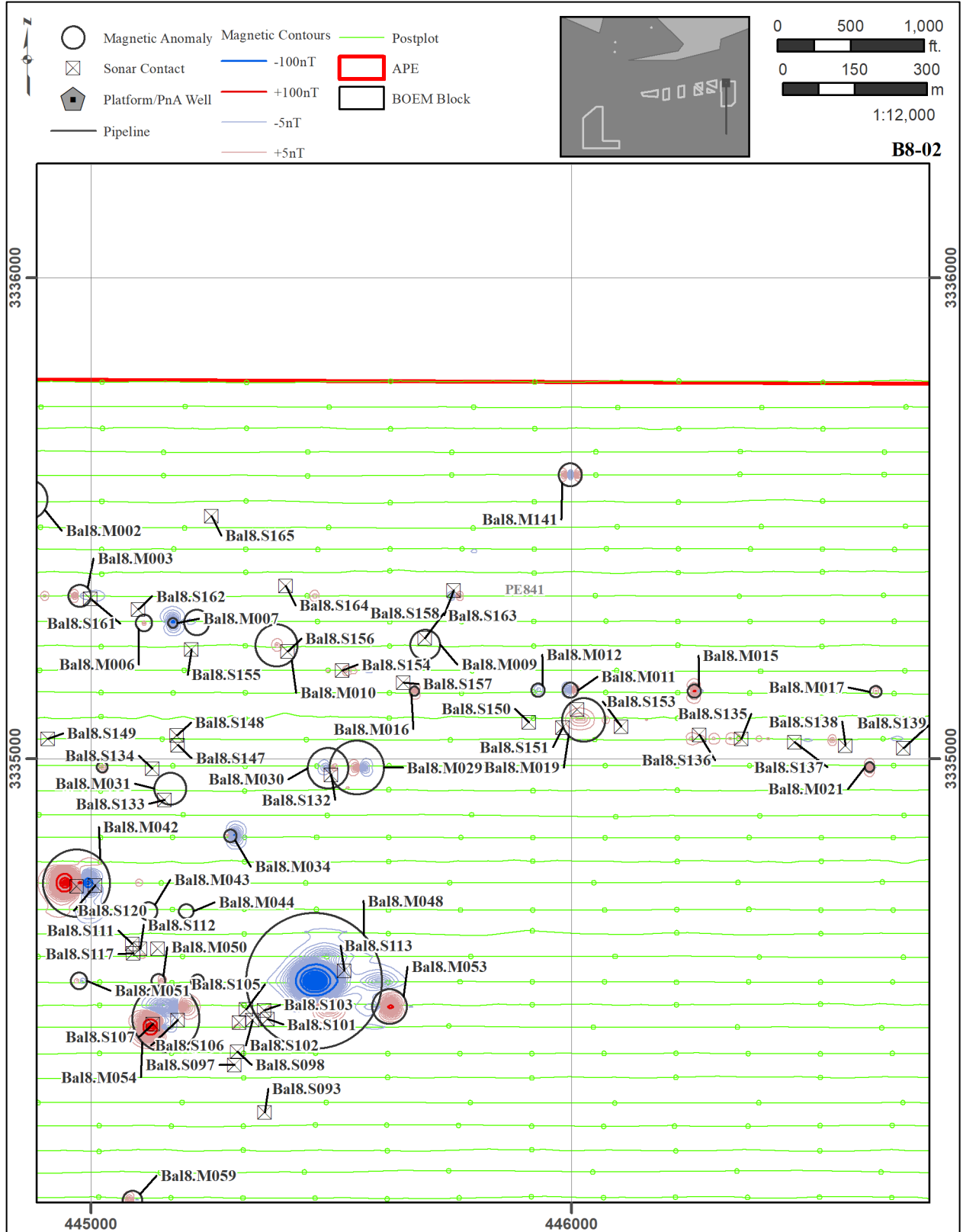


Figure N-03. BAL8 Map 2.

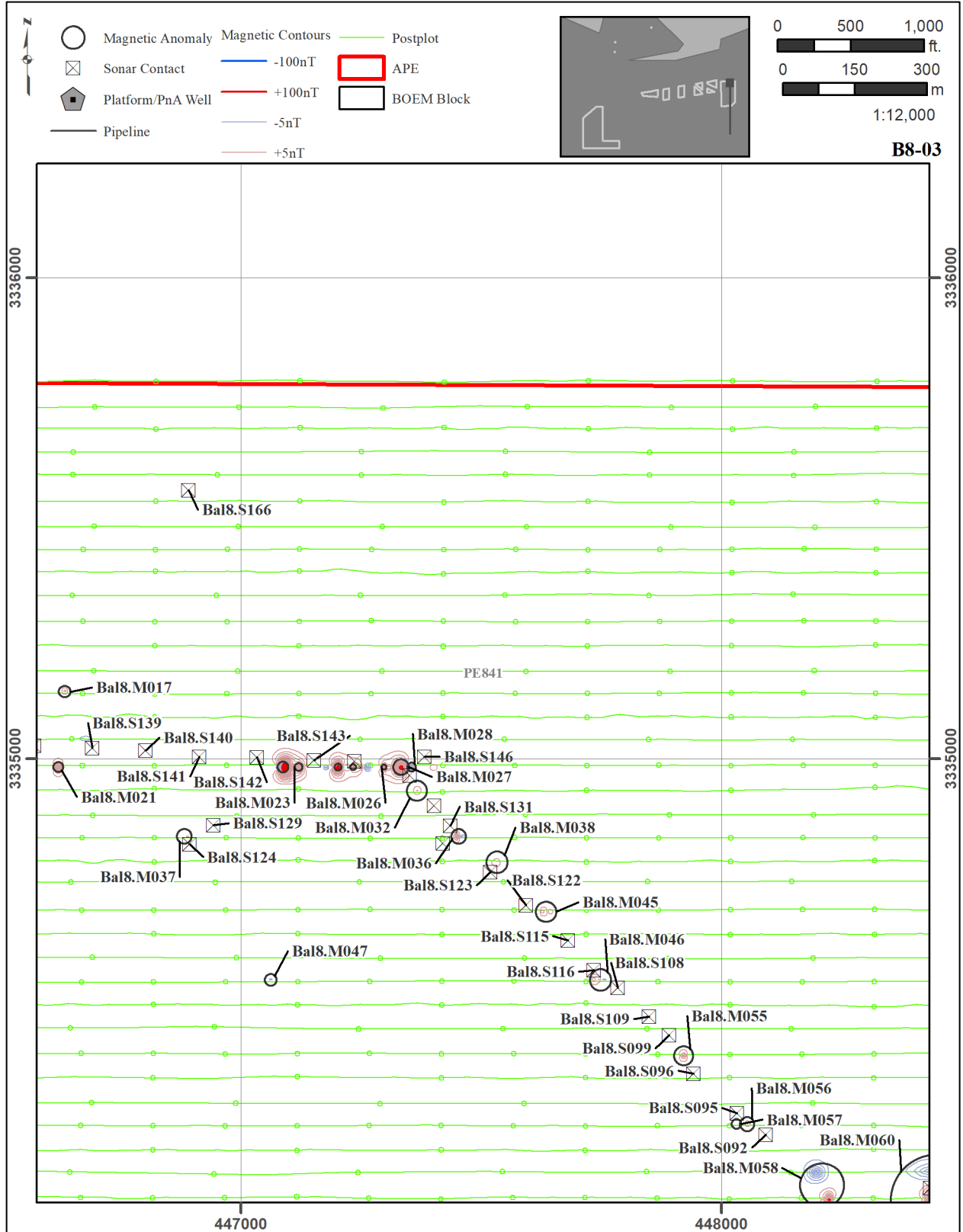


Figure N-04. BAL8 Map 3.

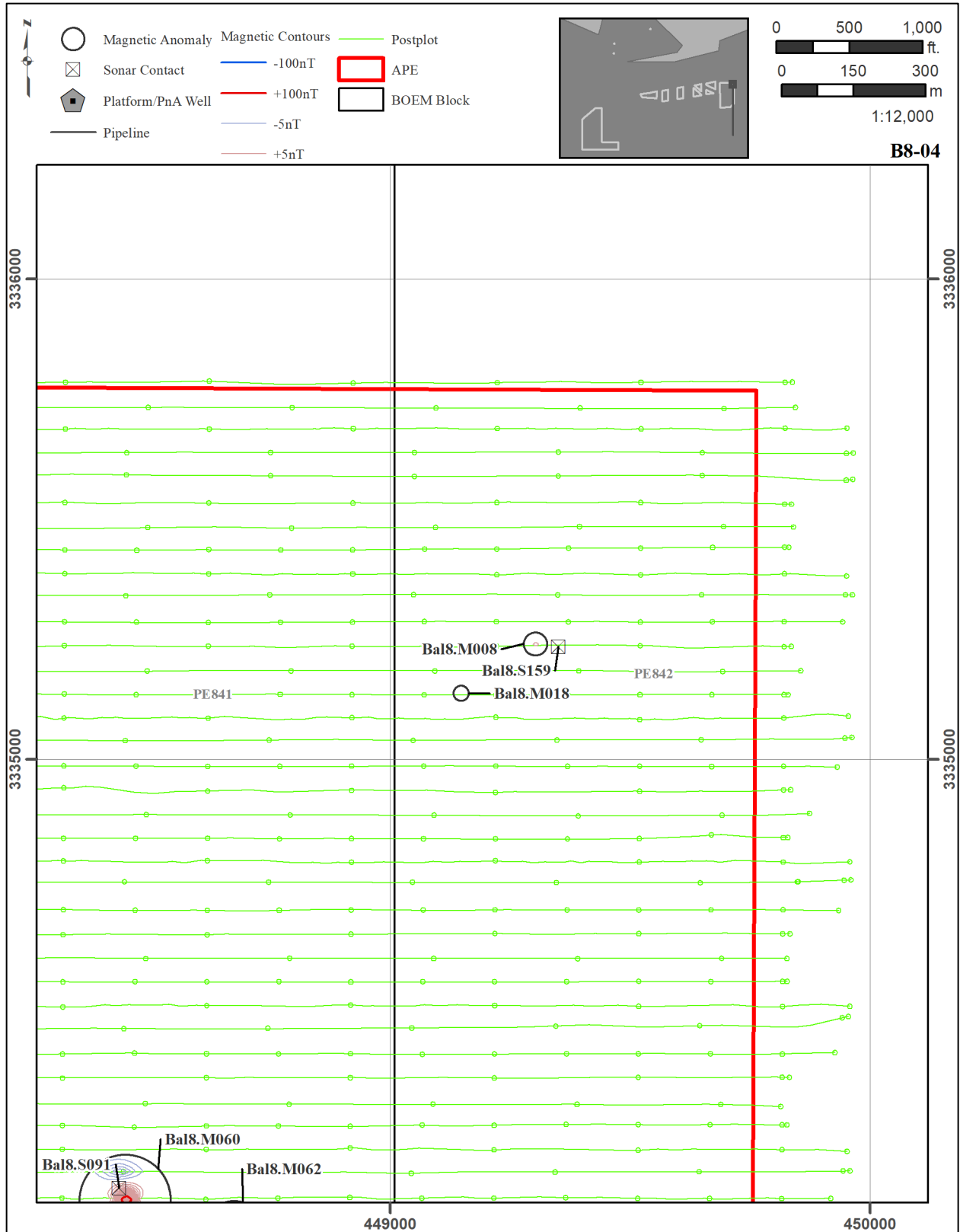
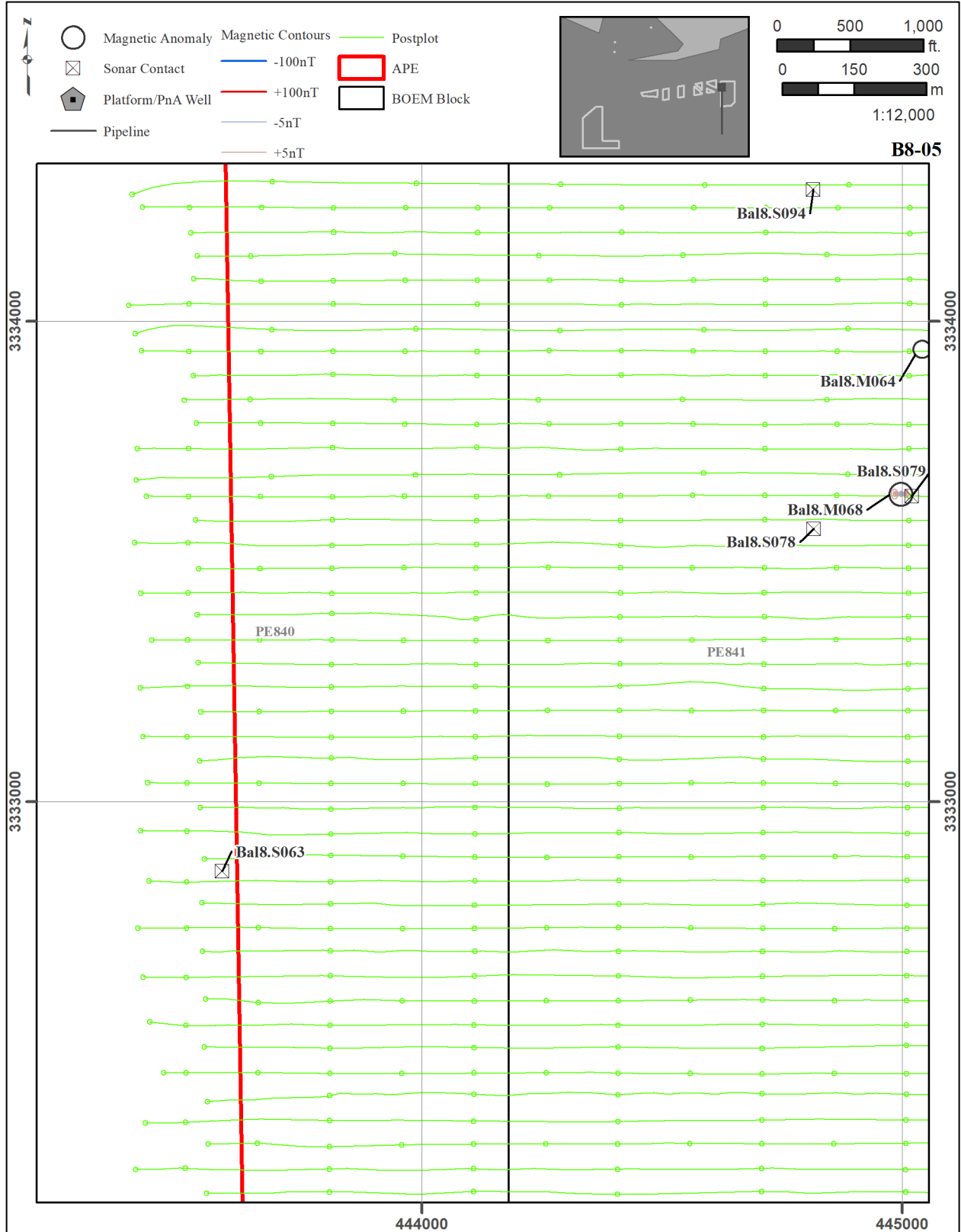


Figure N-05. BAL8 Map 4.





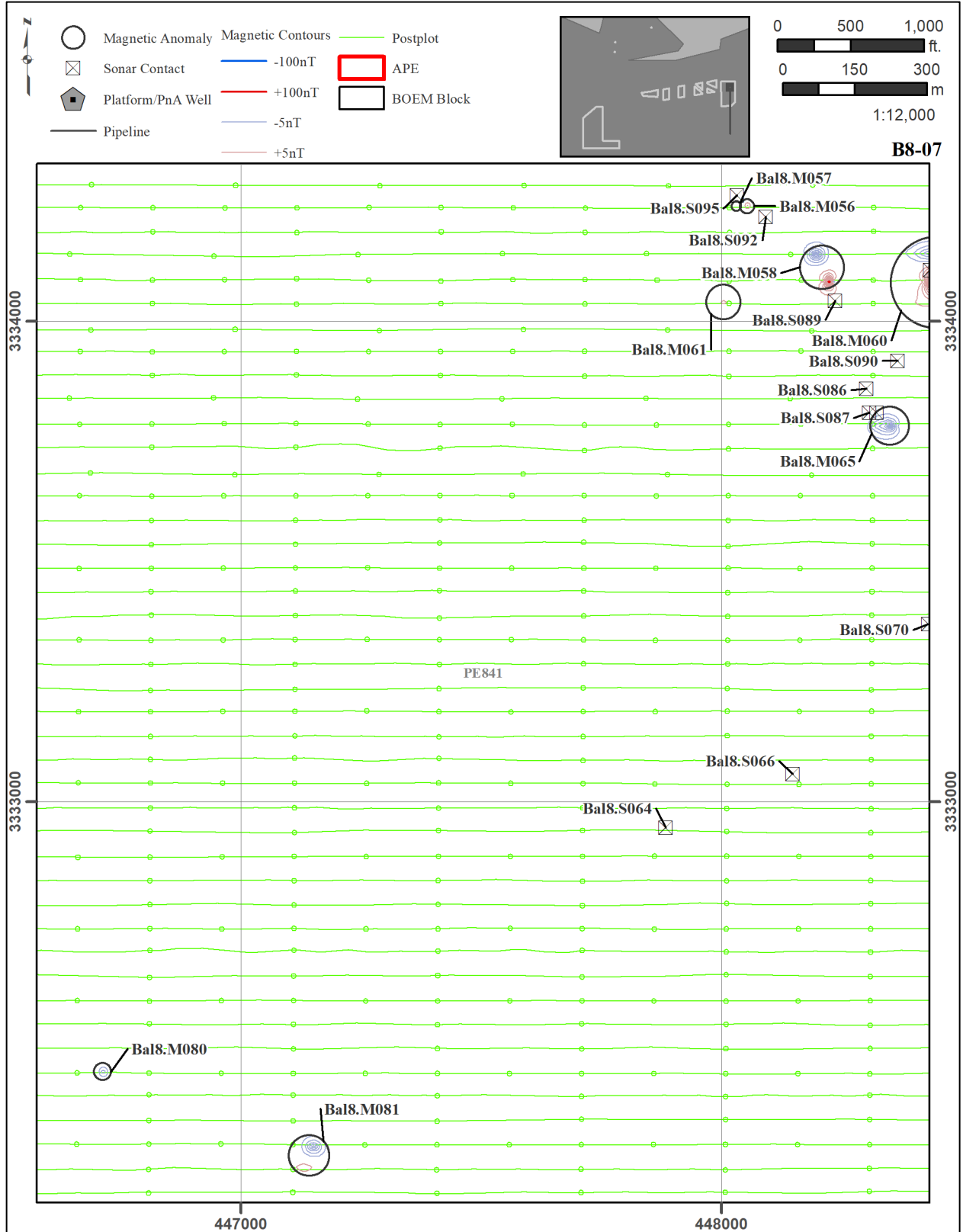


Figure N-08. BAL8 Map 7.

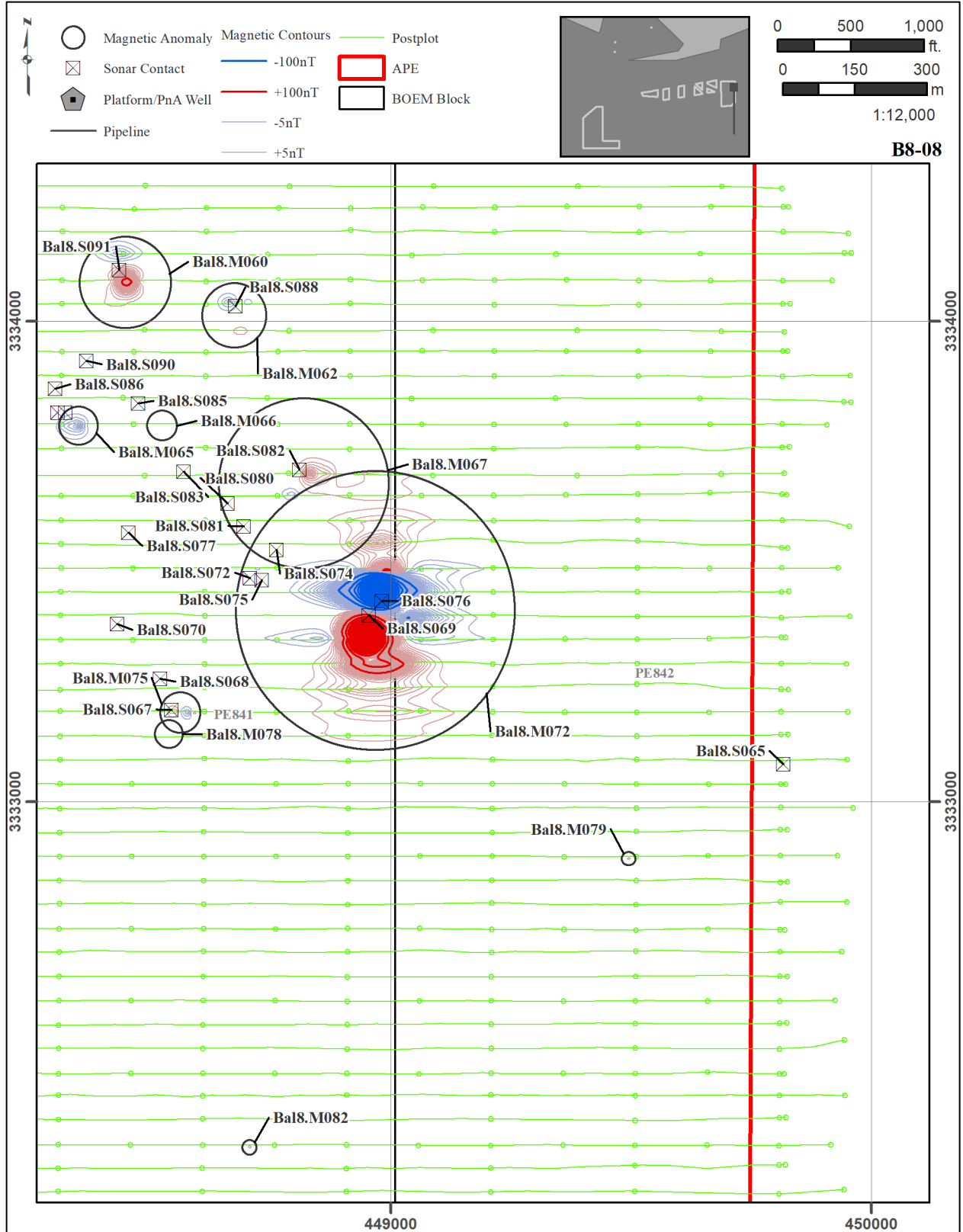


Figure N-09. BAL8 Map 8.

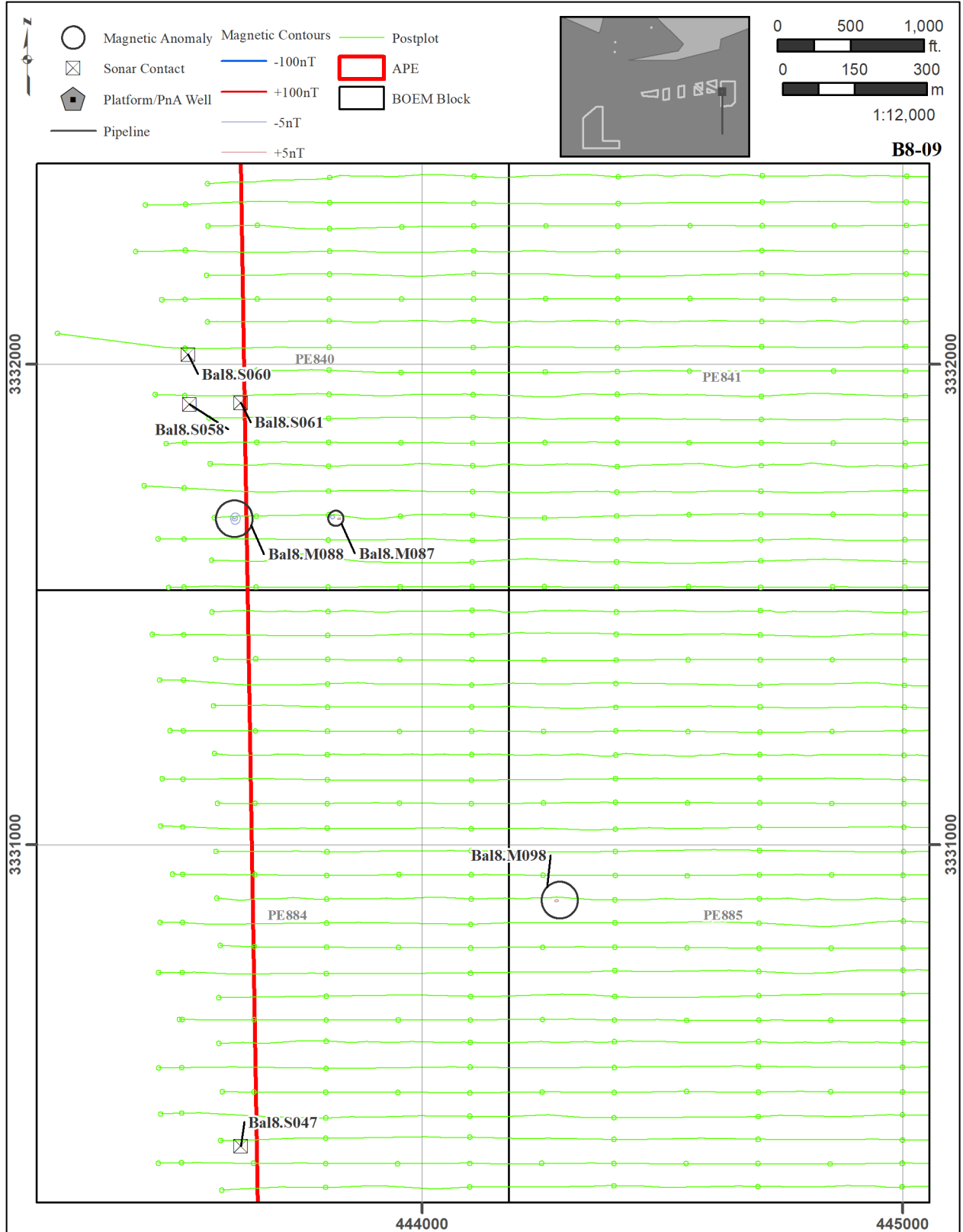


Figure N-10. BAL8 Map 9.

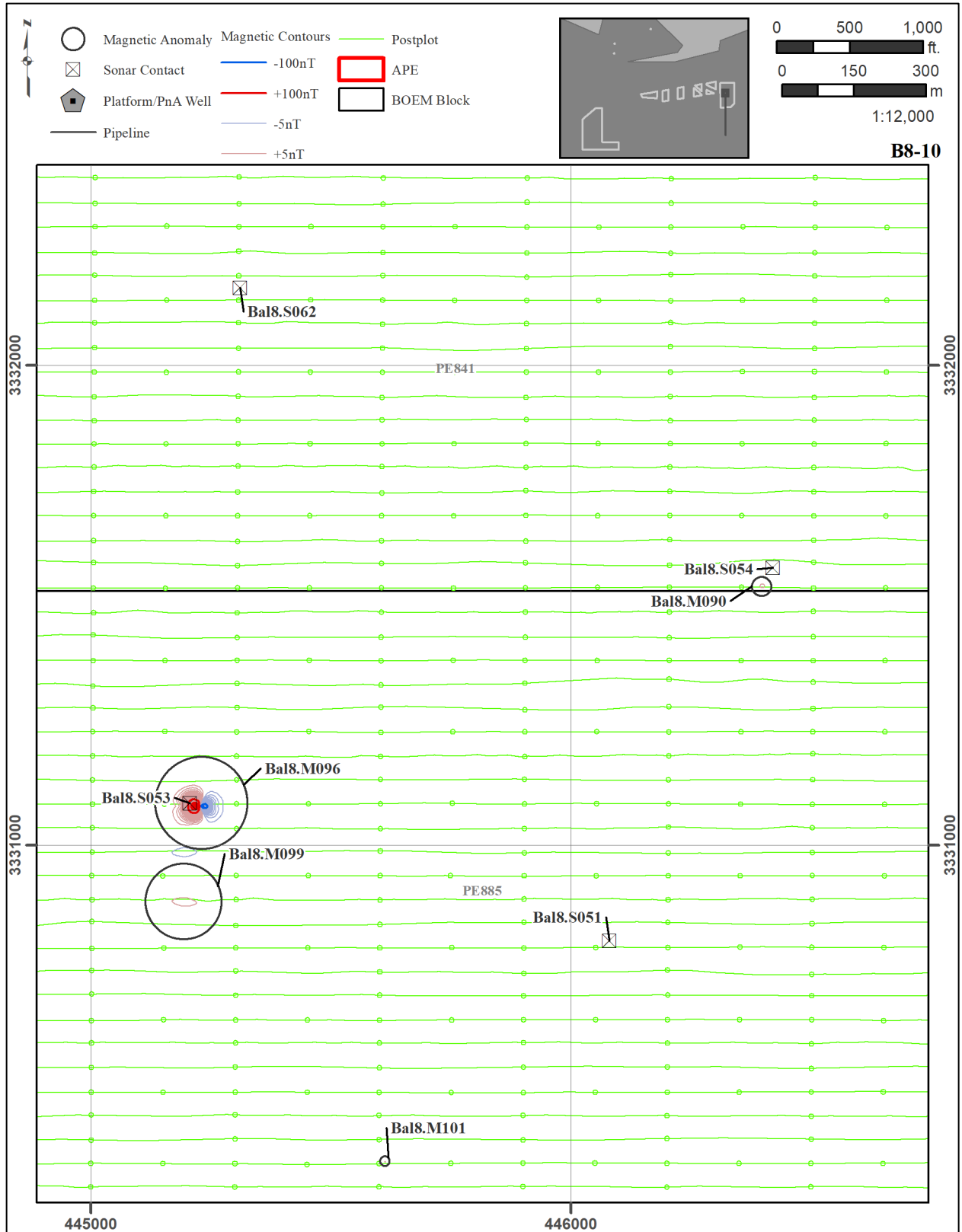


Figure N-11. BAL8 Map 10.

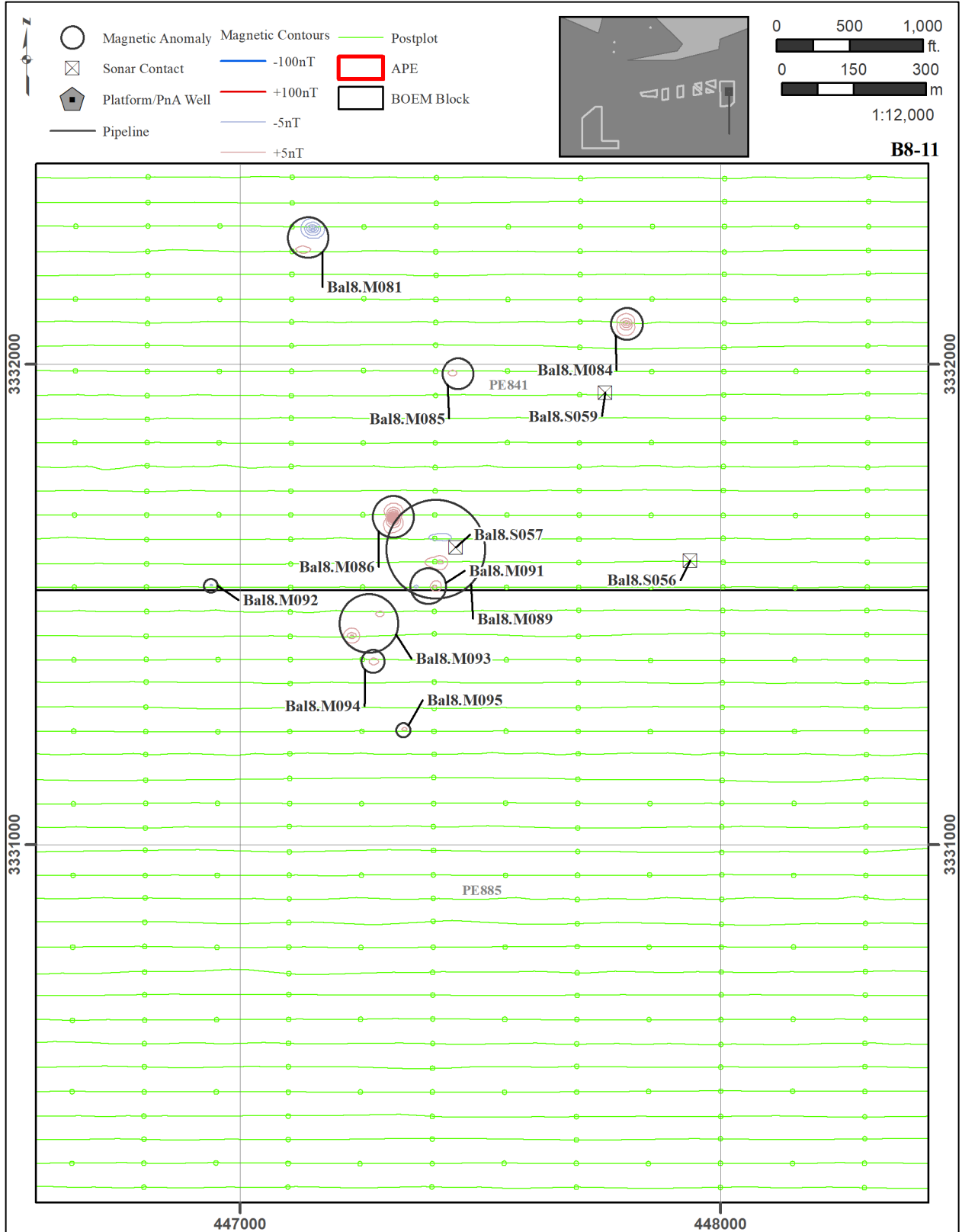


Figure N-12. BAL8 Map 11.

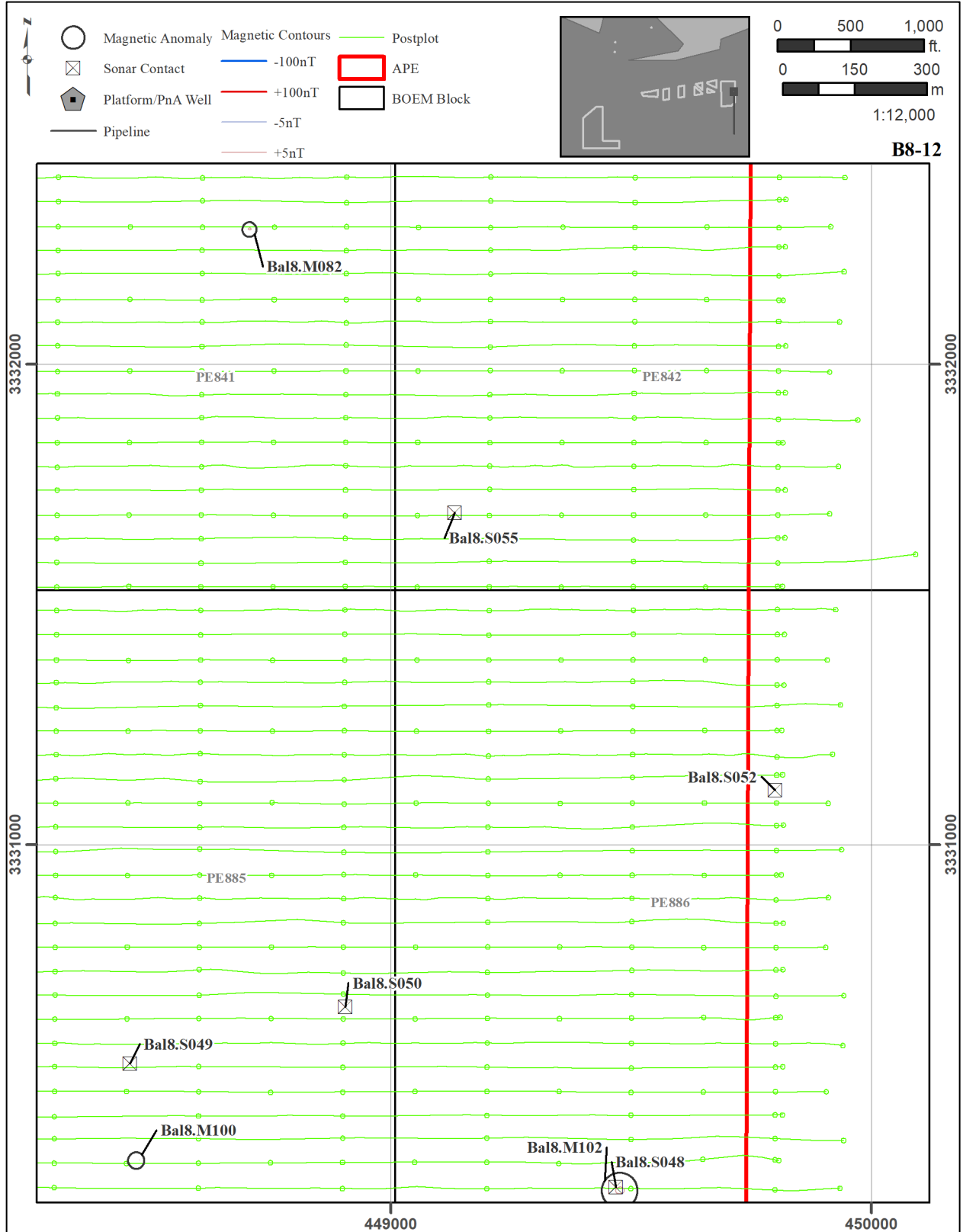


Figure N-13. BAL8 Map 12.

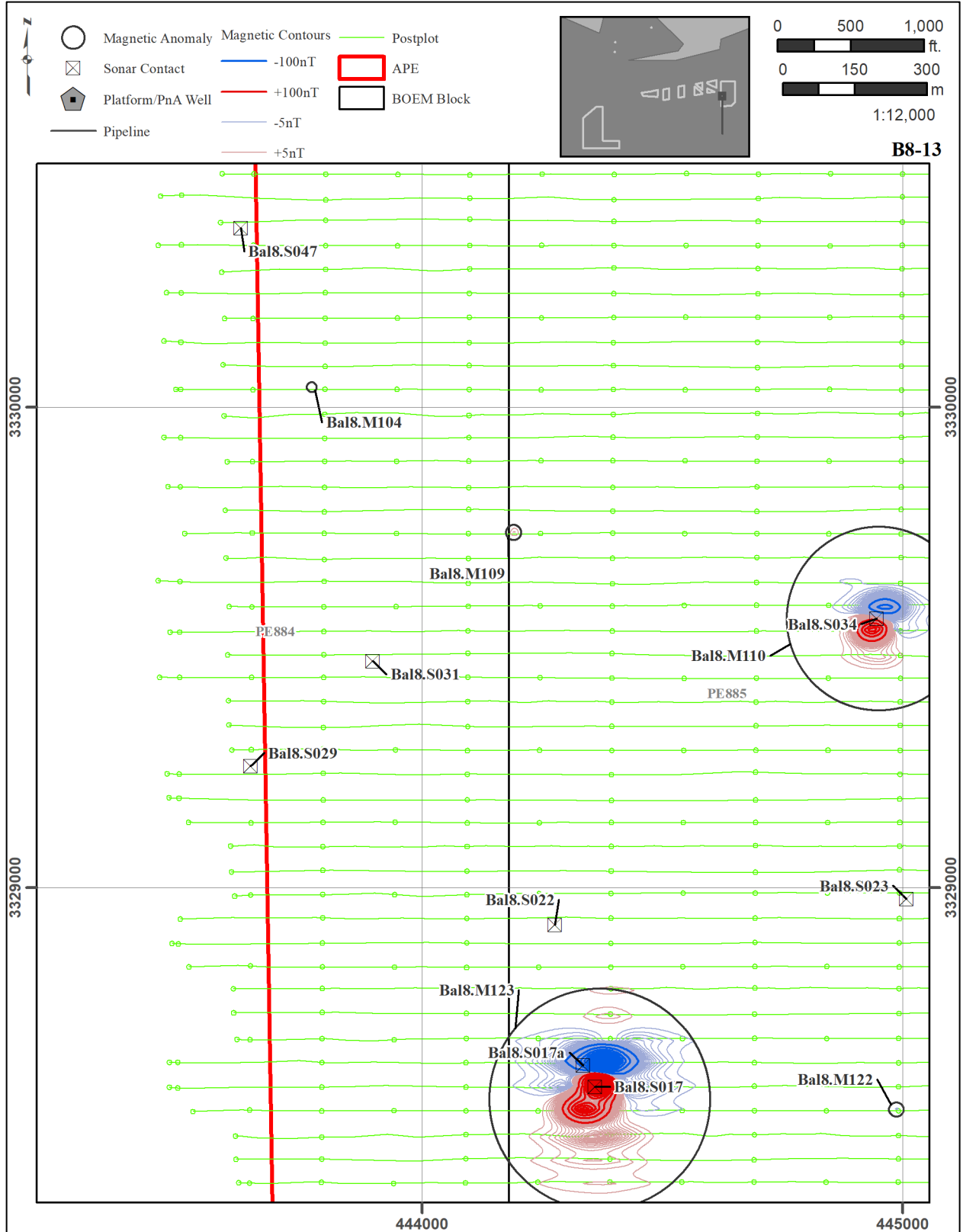


Figure N-14. BAL8 Map 13.

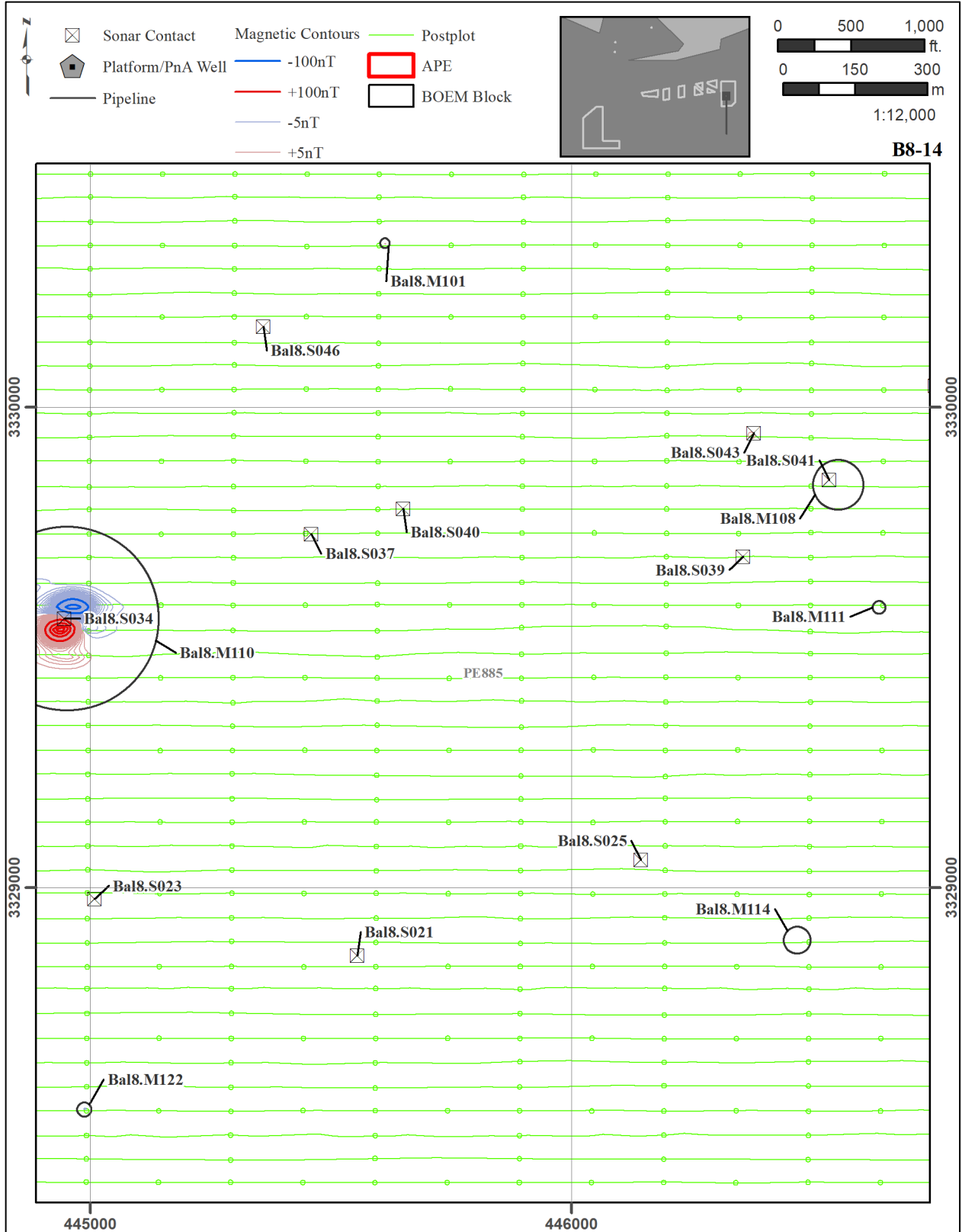


Figure N-15. BAL8 Map 14.

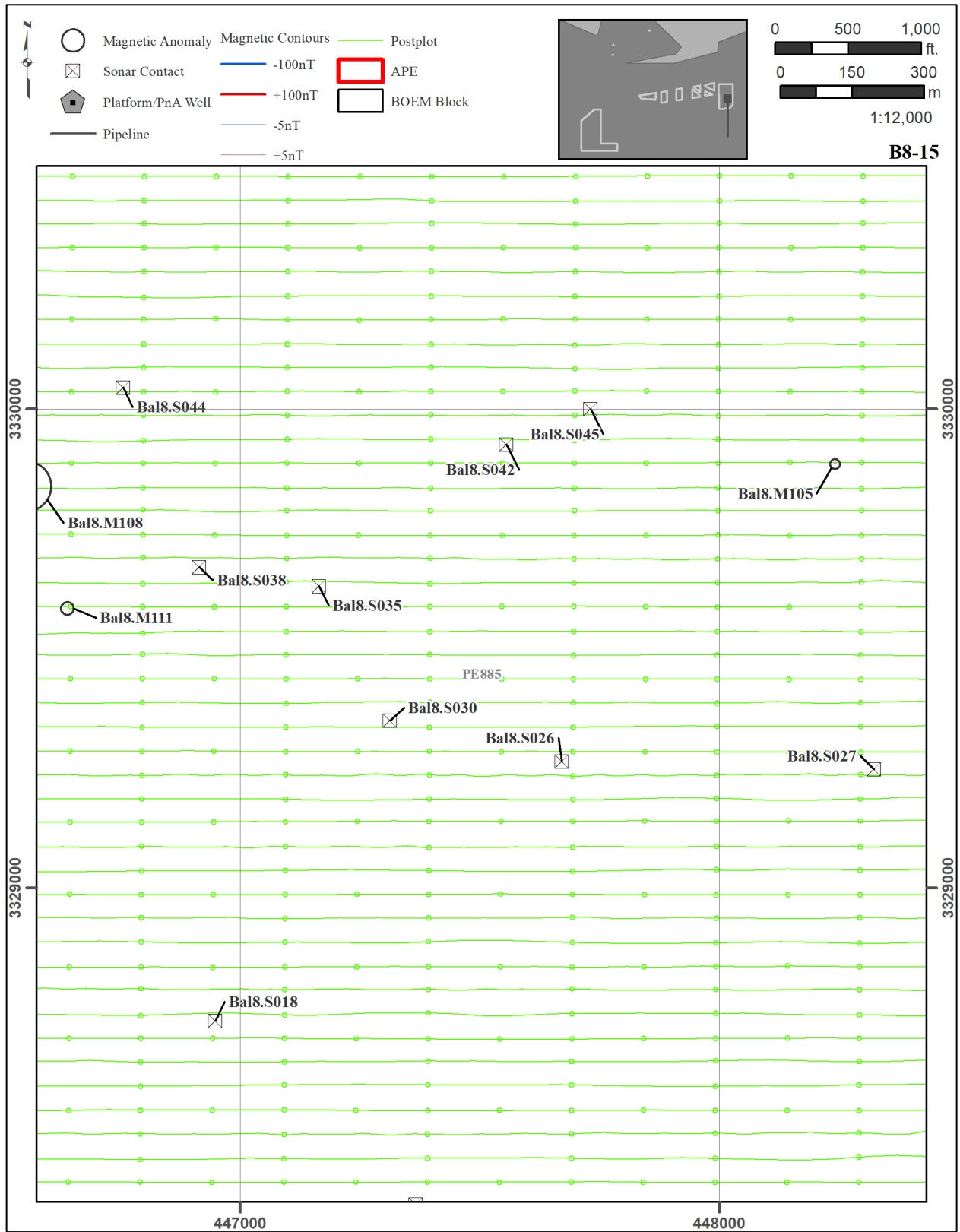


Figure N-16. BAL8 Map 15.

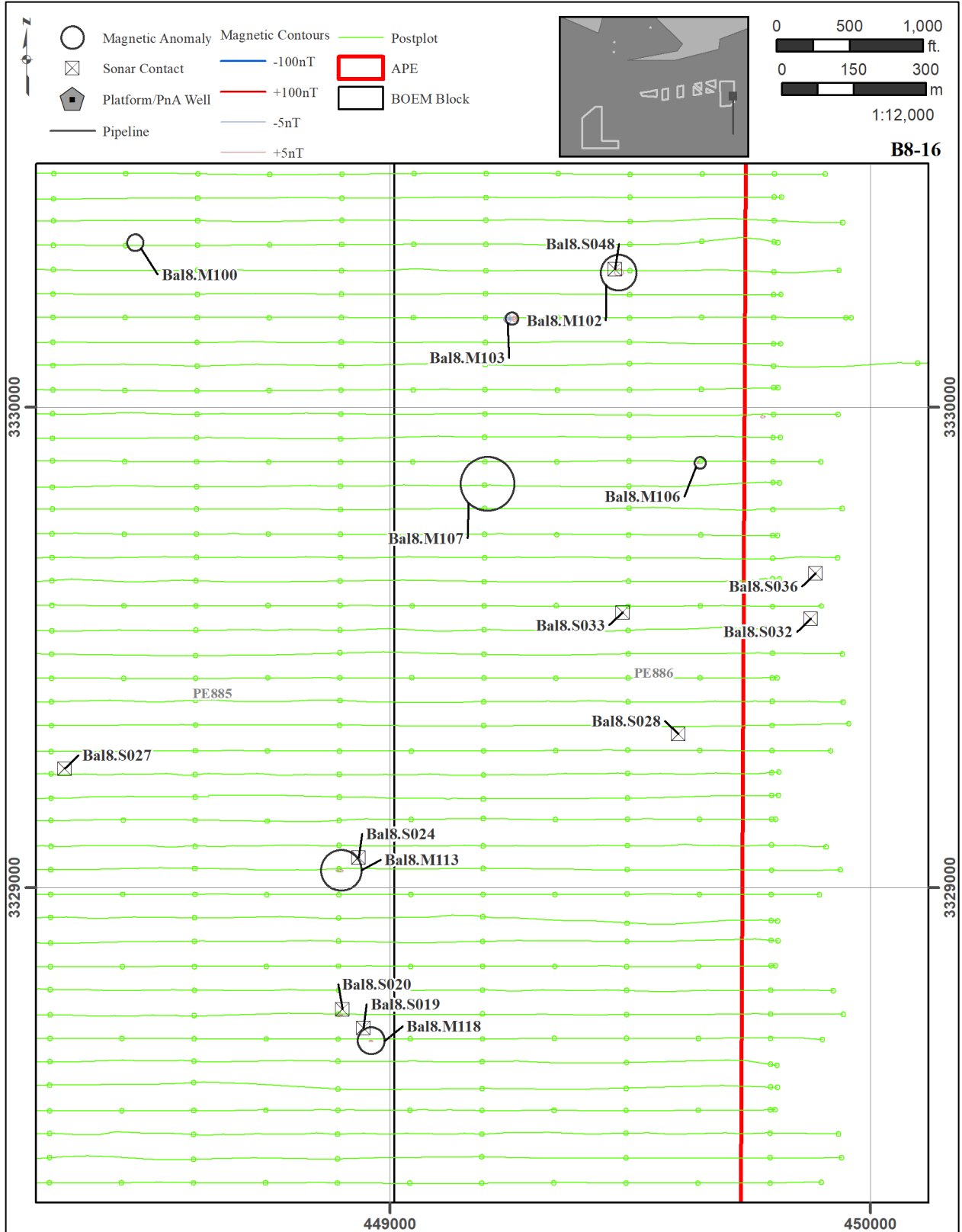


Figure N-17. BAL8 Map 16.

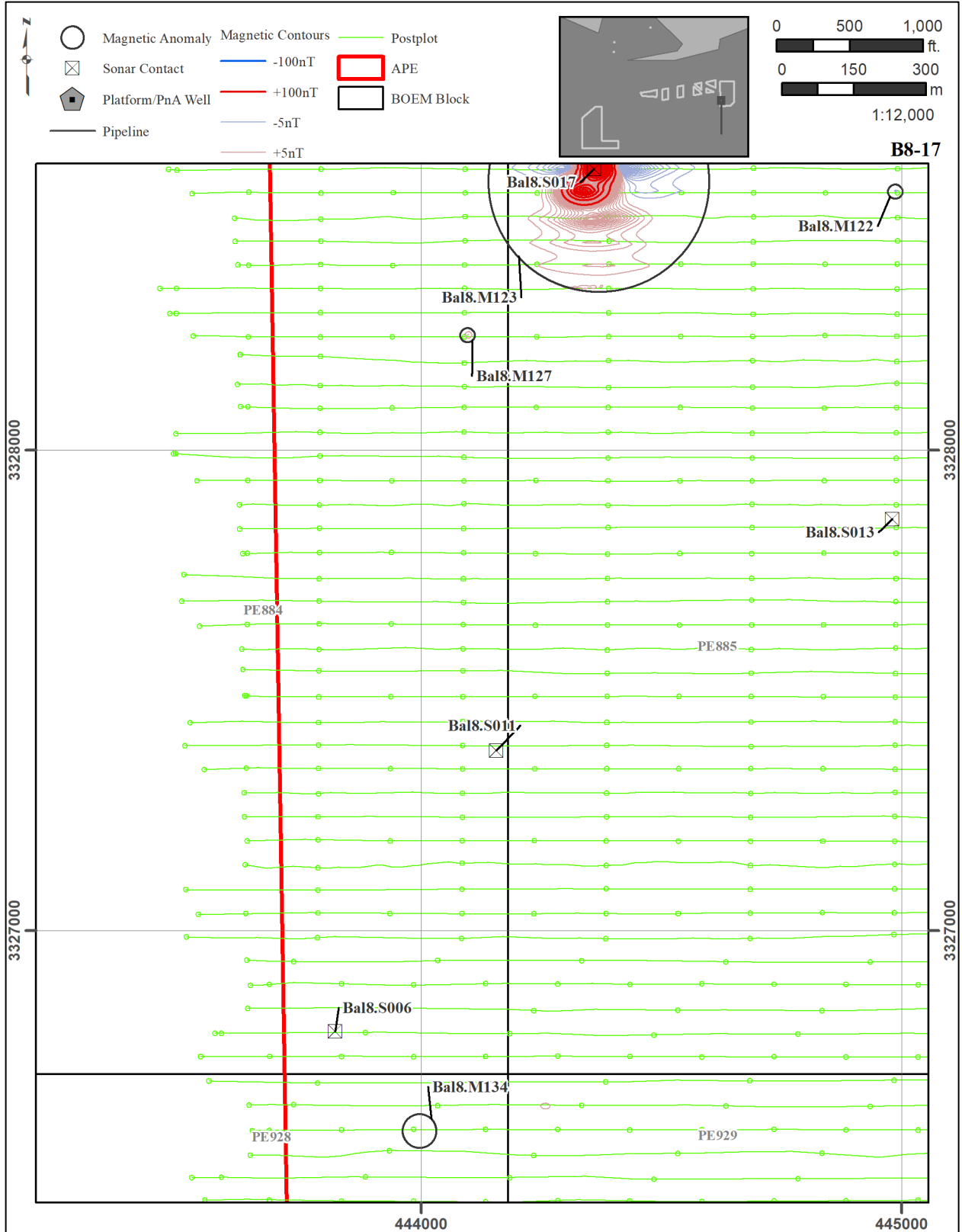


Figure N-18. BAL8 Map 17.



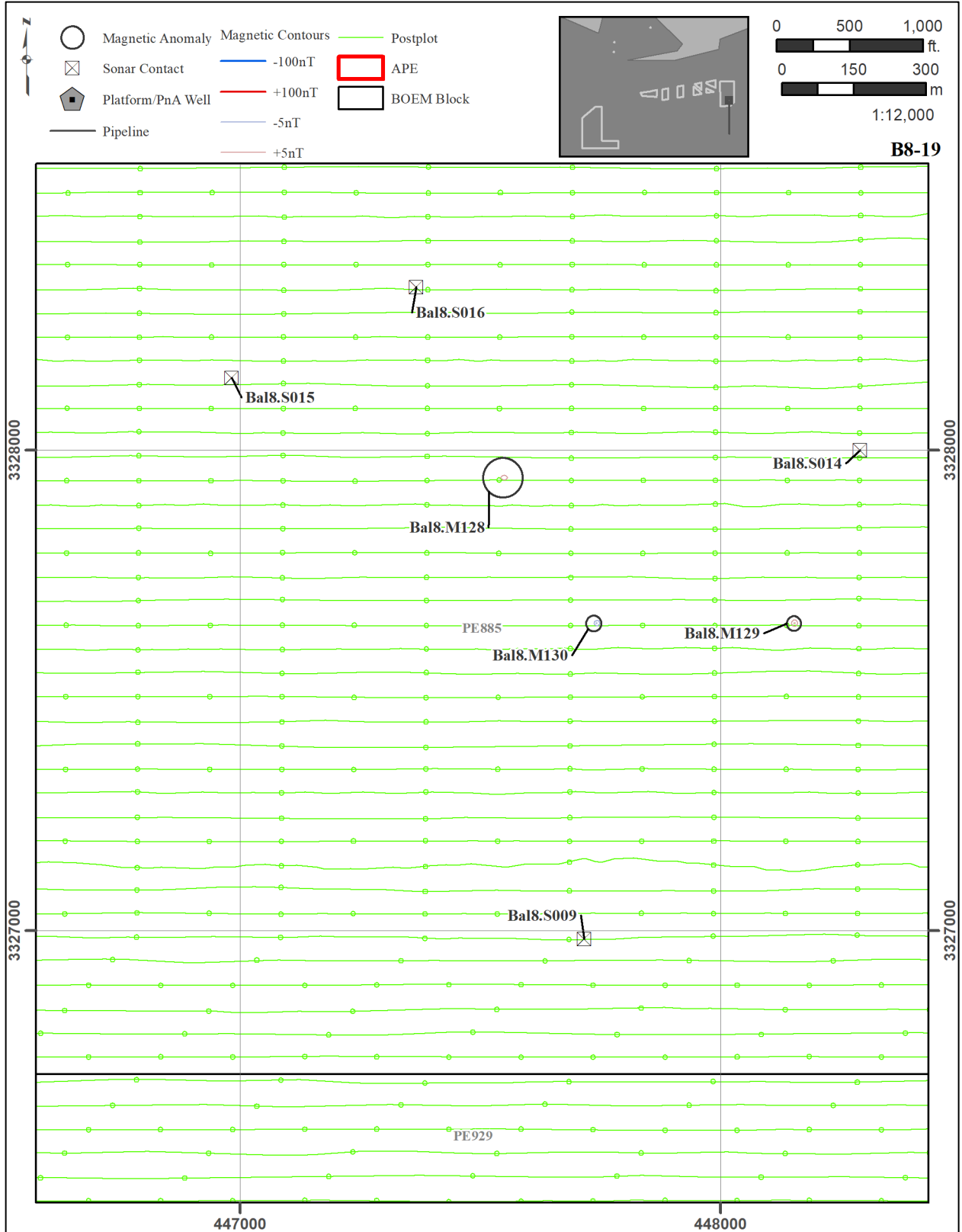


Figure N-20. BAL8 Map 19.

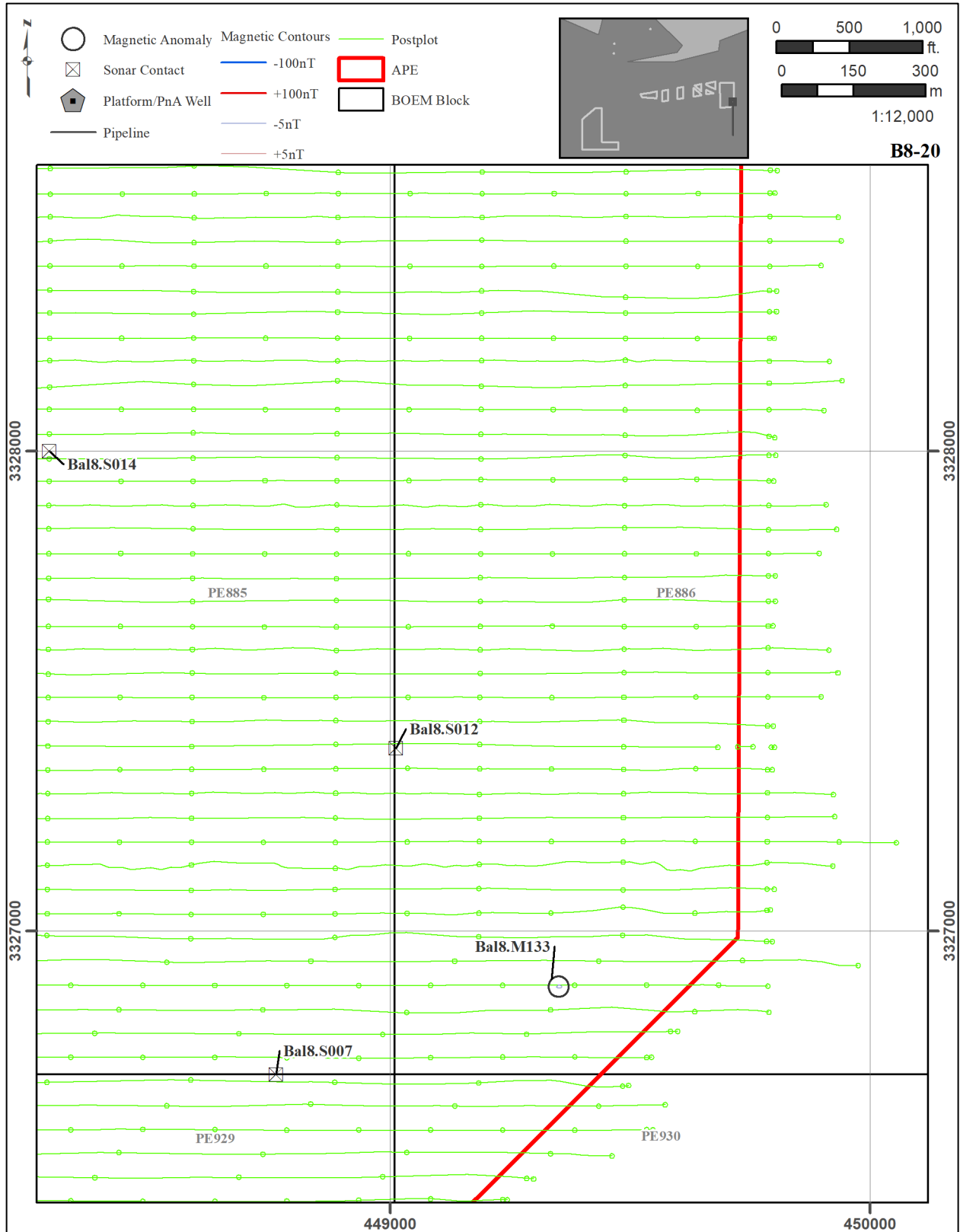


Figure N-21. BAL8 Map 20.

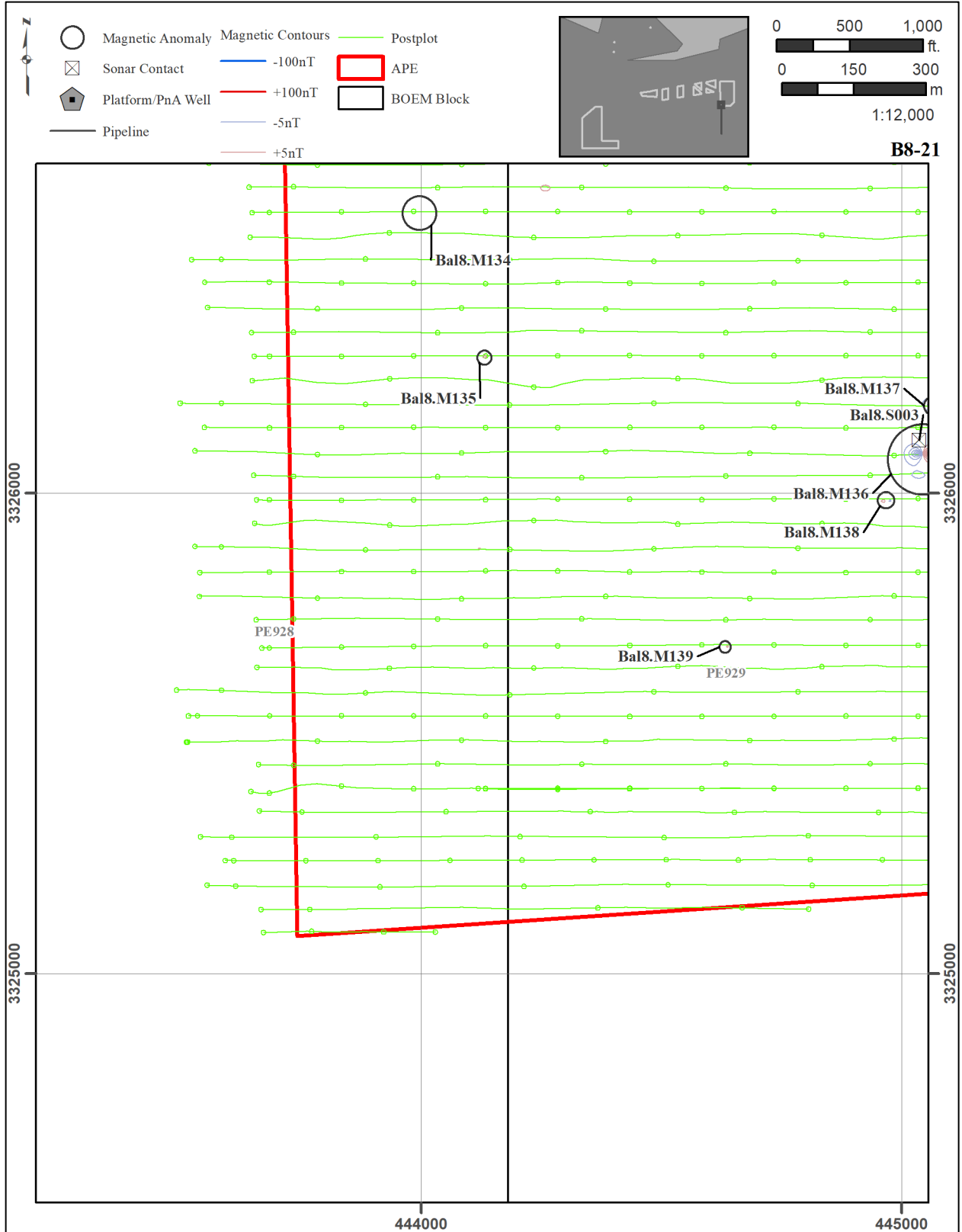


Figure N-22. BAL8 Map 21.

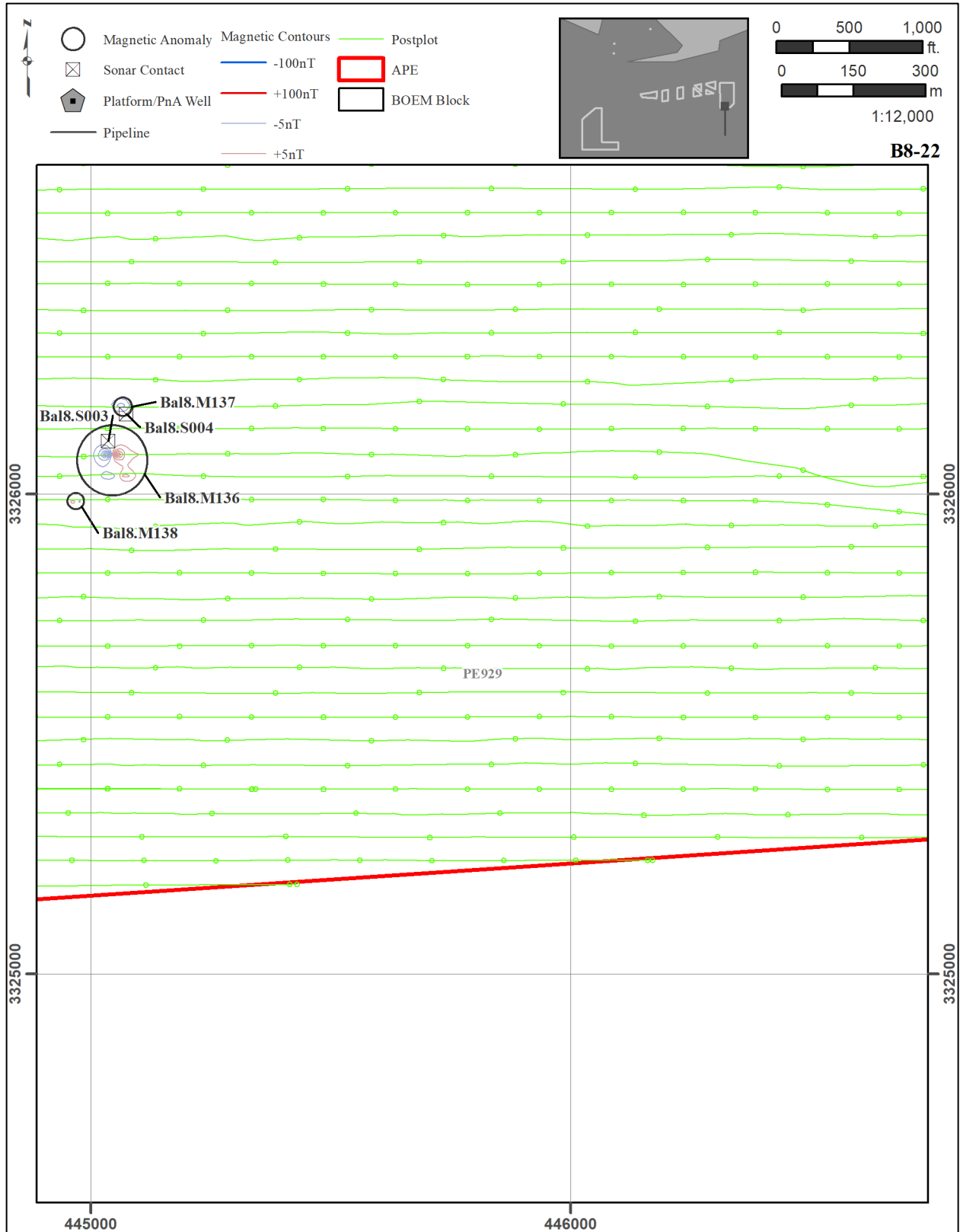


Figure N-23. BAL8 Map 22.

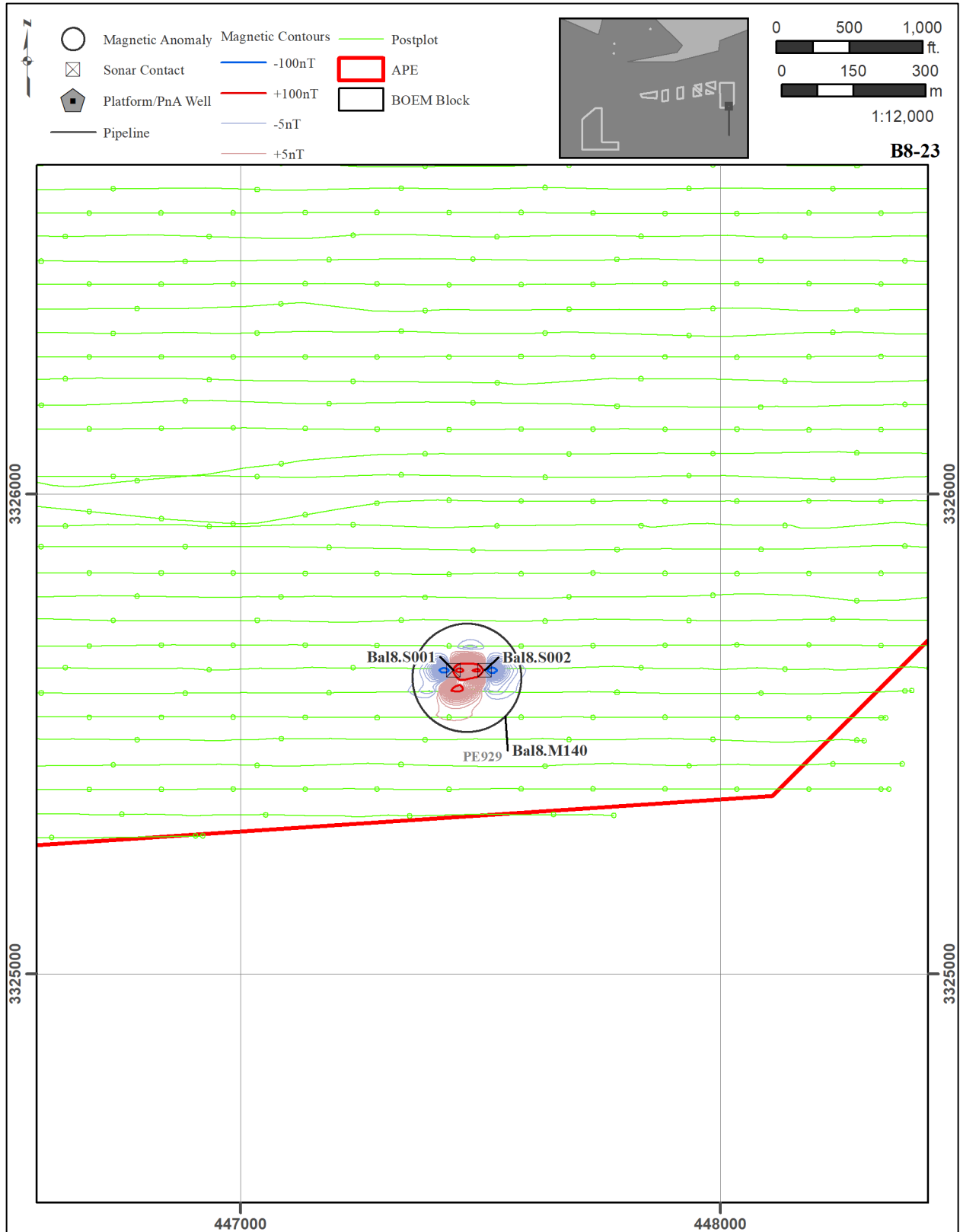


Figure N-24. BAL8 Map 23.

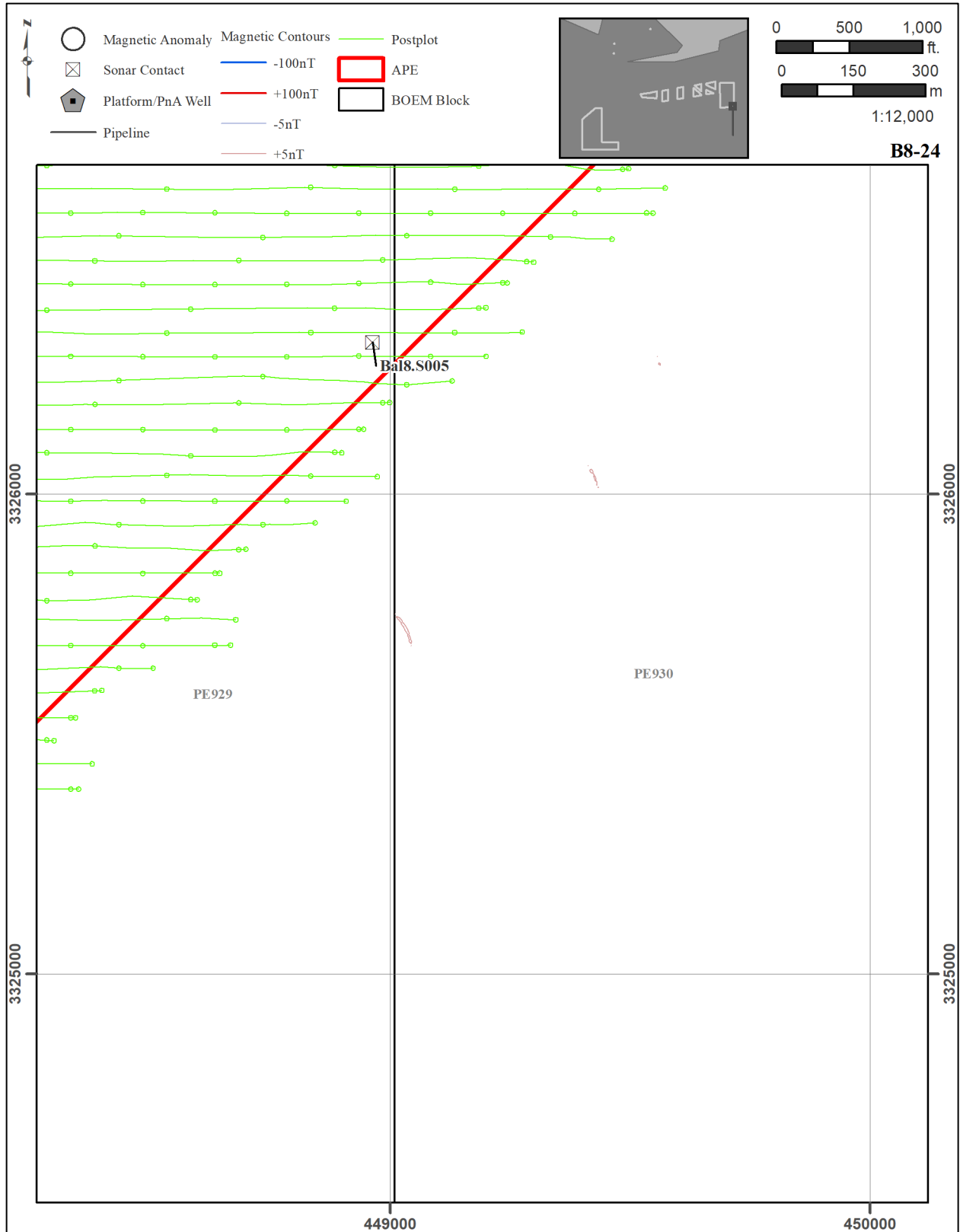


Figure N-25. BAL8 Map 24.

## **APPENDIX O: MOB REMOTE SENSING DATA**

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Table O-1. Magnetic Anomalies Recorded for the MOB Cell.

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M002	390324	3324815	C	8	12.6		SPS		M-02	MO955
MOB.M003	391563	3324772	M	50	83.6		SPS		M-03	MO956
MOB.M004	389895	3324675	D	57	22.7		SPS		M-02	MO955
MOB.M005	389078	3324673	D	43	8.2		SPS		M-01	MO955
MOB.M006	392054	3324616	M	28	8.2		SPS		M-03	MO956
MOB.M007	391132	3324616	D	20	5.5		SPS		M-03	MO956
MOB.M008	392170	3324615	M	30	27.6		SPS		M-03	MO956
MOB.M009	391821	3324615	M	22	5.7		SPS		M-03	MO956
MOB.M010	391220	3324515	D	17	8.8		SPS		M-03	MO956
MOB.M012	391957	3324514	D	5	9.8		SPS		M-03	MO956
MOB.M013	391889	3324514	M	15	5.8		SPS		M-03	MO956
MOB.M014	391702	3324514	M	24	9.0		SPS		M-03	MO956
MOB.M015	388869	3324514	M	26	12.4		SPS		M-01	MO955
MOB.M017	390560	3324473	M	58	8.4		SPS		M-02	MO955
MOB.M019	392339	3324420	C	890	608.2	Y	unknown; large buried debris field		M-03	MO956
MOB.M021	389394	3324317	M	20	32.8		SPS		M-02	MO955
MOB.M022	391114	3324294	D	70	88.7		SPS		M-03	MO956
MOB.M023	392328	3324215	D	31	26.5		SPS		M-03	MO956
MOB.M024	391991	3324208	D	61	136.6		linear	MOB.S004	M-03	MO956
MOB.M025	391569	3324214	M	26	83.7		SPS		M-03	MO956
MOB.M026	389119	3324212	M	27	11.4		SPS		M-01	MO955
MOB.M027	391516	3324173	M	28	5.7		SPS		M-03	MO956
MOB.M029	392447	3324170	C	150	9.7		SPS		M-03	MO956
MOB.M030	392400	3324073	M	76	129.9		SPS		M-03	MO956
MOB.M031	392357	3324015	M	27	5.5		SPS		M-03	MO956
MOB.M032	389417	3324015	M	33	6.3		SPS		M-02	MO955
MOB.M033	388992	3323916	D	54	64.4		SPS		M-01	MO955
MOB.M034	391355	3323914	D	30	13.3		SPS		M-03	MO956
MOB.M035	390206	3323914	M	20	26.4		SPS		M-02	MO955
MOB.M036	392339	3323913	M	81	9.0		SPS		M-03	MO956
MOB.M038	391846	3323913	M	25	6.3		SPS		M-03	MO956
MOB.M039	391642	3323913	M	22	21.0		SPS		M-03	MO956
MOB.M041	392381	3323872	M	57	201.9		SPS		M-03	MO956
MOB.M042	392257	3323869	C	137	1207.5		SPS		M-03	MO956
MOB.M043	388912	3323816	D	28	18.5		SPS		M-01	MO955
MOB.M044	392520	3323786	M	45	76.0		SPS		M-03	MO956
MOB.M047	387801	3323761	D	37	10.8		SPS		M-01	MO955
MOB.M048	392057	3323712	M	41	10.4		SPS		M-03	MO956
MOB.M049	392046	3323616	M	53	96.8		SPS		M-03	MO956
MOB.M050	388896	3323616	D	27	10.9		SPS		M-01	MO955
MOB.M051	391564	3323475	M	32	7.8		SPS		M-07	MO956
MOB.M052	388677	3323416	M	32	7.7		SPS		M-05	MO955

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M053	390772	3323415	M	23	8.1		SPS		M-07	MO955
MOB.M054	390580	3323316	D	22	15.2		SPS		M-06	MO955
MOB.M055	392335	3323355	M	110	120.7		unknown		M-07	MO956
MOB.M056	388086	3323315	D	27	26.8		SPS		M-05	MO955
MOB.M057	392215	3323313	D	53	20.7		debris	MOB.S024, MOB.S025	M-07	MO956
MOB.M058	387948	3323309	M	14	6.8		SPS		M-05	MO955
MOB.M061	388485	3323274	M	21	34.7		SPS		M-05	MO955
MOB.M063	391847	3323170	M	33	12.9		SPS		M-07	MO956
MOB.M064	388090	3323115	M	17	10.6		SPS		M-05	MO955
MOB.M065	390109	3323114	M	33	13.3		SPS		M-06	MO955
MOB.M066	391841	3323112	D	49	59.7		SPS		M-07	MO956
MOB.M067	391785	3323112	D	25	7.4		SPS		M-07	MO956
MOB.M068	391535	3322873	D	36	15.3		SPS		M-07	MO956
MOB.M069	388335	3322870	M	34	10.0		SPS		M-05	MO955
MOB.M070	388293	3322814	M	47	18.7		SPS		M-05	MO955
MOB.M071	389451	3322713	D	26	44.0		SPS		M-06	MO955
MOB.M072	391293	3322712	D	21	5.9		SPS		M-07	MO956
MOB.M073	390736	3322712	M	36	22.1		SPS		M-07	MO955
MOB.M074	392251	3322673	M	21	11.5		SPS		M-07	MO956
MOB.M075	390561	3322673	M	25	6.0		SPS		M-06	MO955
MOB.M076	387834	3322672	M	33	6.0		SPS		M-05	MO955
MOB.M077	388638	3322671	D	20	31.6		SPS		M-05	MO955
MOB.M078	390193	3322672	D	27	7.2		SPS		M-06	MO955
MOB.M079	391682	3322514	M	26	17.3		SPS		M-07	MO956
MOB.M080	391046	3322513	M	33	7.0		SPS		M-07	MO955
MOB.M081	389685	3322414	M	23	9.5		SPS		M-06	MO955
MOB.M082	390647	3322414	D	34	65.6		SPS		M-06	MO955
MOB.M083	388763	3322372	D	31	4.4		SPS		M-05	MO955
MOB.M085	390982	3322274	D	37	9.2		SPS		M-07	MO955
MOB.M086	391915	3322274	D	24	9.5		SPS		M-07	MO956
MOB.M087	387032	3322271	M	112	18.2		SPS		M-04	MO955
MOB.M088	387032	3322271	D	112	18.2		SPS		M-04	MO955
MOB.M089	388678	3322271	M	33	22.8		SPS		M-05	MO955
MOB.M091	391841	3322111	M	18	12.4		SPS		M-07	MO956
MOB.M093	391316	3321976	D	45	10.8		SPS		M-07	MO956
MOB.M094	390954	3321975	M	26	5.7		SPS		M-07	MO955
MOB.M095	388742	3321973	M	32	47.4		SPS		M-05	MO955
MOB.M097	386191	3321914	M	14	6.7		SPS		M-04	MO954
MOB.M102	387853	3321815	M	37	7.1		SPS		M-05	MO999
MOB.M103	392161	3321814	D	51	11.9		SPS		M-07	MO1000
MOB.M104	392105	3321814	D	28	11.0		SPS		M-07	MO1000
MOB.M105	392008	3321854	C	197	145.4	Y	At location of BOEM database entry "barge/unknow	MOB.S038	M-07	MO1000

2-MR-205 Artificial Reef Zones Marine Survey

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
							n vessel"			
MOB.M106	391918	3321814	M	22	11.3		SPS		M-07	MO1000
MOB.M109	388287	3321674	M	47	10.5		SPS		M-05	MO999
MOB.M110	388345	3321674	M	60	5.9		SPS		M-05	MO999
MOB.M111	388978	3321672	D	67	11.2		SPS		M-05	MO999
MOB.M112	389527	3321672	M	35	7.8		SPS		M-06	MO999
MOB.M114	385463	3321372	M	32	22.2		debris	MOB.S040	M-08	MO998
MOB.M115	388852	3321372	M	65	15.3		SPS		M-10	MO999
MOB.M118	385507	3321316	C	38	17.2		SPS		M-08	MO998
MOB.M122	391869	3320969	D	32	24.6		SPS		M-12	MO1000
MOB.M123	391713	3320968	D	37	158.7		SPS		M-12	MO1000
MOB.M125	389566	3320919	M	27	32.4		SPS		M-11	MO999
MOB.M129	391353	3320760	D	128	63.8		debris	MOB.S045	M-12	MO1000
MOB.M130	389039	3320771	M	45	10.5		SPS		M-11	MO999
MOB.M132	388570	3320712	M	25	20.4		SPS		M-10	MO999
MOB.M133	388570	3320712	M	25	20.4		SPS		M-10	MO999
MOB.M136	391215	3320415	D	33	24.4		SPS		M-12	MO1000
MOB.M137	384555	3320414	M	33	6.5		SPS		M-08	MO998
MOB.M138	386074	3320214	D	13	8.0		SPS		M-09	MO998
MOB.M139	385705	3320230	M	61	14.4		SPS		M-09	MO998
MOB.M140	386556	3319973	M	22	125.6		debris	MOB.S050	M-09	MO999
MOB.M141	388338	3319973	D	31	42.8		SPS		M-10	MO999
MOB.M143	385269	3319972	M	22	8.2		SPS		M-08	MO998
MOB.M169	391275	3318162	D	17	9.6		SPS		M-17	MO1000
MOB.M175	386289	3317564	M	21	24.9		SPS		M-19	MO999
MOB.M177	384436	3317264	M	16	9.5		SPS		M-18	MO998
MOB.M180	390513	3317263	M	37	16.1		SPS		M-21	MO999
MOB.M183	391753	3316964	D	27	126.3		SPS		M-22	VK32
MOB.M186	389332	3316825	M	24	13.1		SPS		M-21	VK31
MOB.M187	385365	3316417	M	30	25.7		SPS		M-18	VK30
MOB.M188	383780	3316417	M	21	7.6		SPS		M-18	VK30
MOB.M192	384016	3316118	D	18	4.9		SPS		M-18	VK30
MOB.M193	387972	3316114	M	22	30.1		SPS		M-20	VK31
MOB.M194	389047	3316115	D	40	75.8		SPS		M-21	VK31
MOB.M195	383887	3315977	D	27	7.5		SPS		M-18	VK30
MOB.M196	385729	3315974	D	37	53.8		debris	MOB.S080	M-19	VK30
MOB.M200	383743	3315763	D	11	7.0		SPS		M-23	VK30
MOB.M201	384536	3315718	M	15	9.6		SPS		M-23	VK30
MOB.M202	389441	3315672	M	23	14.8		SPS		M-26	VK31
MOB.M203	384895	3315672	D	39	20.7		SPS		M-23	VK30
MOB.M204	391264	3315515	M	37	44.5		SPS		M-27	VK32
MOB.M205	386054	3315512	M	24	6.4		SPS		M-24	VK30
MOB.M207	392304	3315464	M	20	15.5		SPS		M-27	VK32
MOB.M211	391294	3315421	M	29	5.4		SPS		M-27	VK32
MOB.M215	391441	3315213	M	32	21.0		SPS		M-27	VK32
MOB.M216	391178	3317564	M	32	21.6		SPS		M-22	MO1000

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M217	386766	3315213	M	28	41.9		SPS		M-24	VK31
MOB.M218	391558	3315214	D	40	6.6		SPS		M-27	VK32
MOB.M219	386991	3315214	M	20	9.2		SPS		M-24	VK31
MOB.M220	390305	3315213	D	24	6.1		SPS		M-26	VK31
MOB.M223	384463	3315165	M	19	5.7		SPS		M-23	VK30
MOB.M230	384110	3315072	M	34	6.8		SPS		M-23	VK30
MOB.M231	385672	3314912	D	39	229.3		SPS		M-24	VK30
MOB.M232	387607	3314914	M	17	23.5		SPS		M-25	VK31
MOB.M233	387903	3314888	C	164	2693.6	Y	"Nail Wreck"	MOB.M233, MOB.M234, MOB.M235, MOB.S083, MOB.S106	M-25	VK31
MOB.M234	387790	3314913	M	15	29.2	Y	"Nail Wreck"	MOB.M233, MOB.M234, MOB.M235, MOB.S083, MOB.S106	M-25	VK31
MOB.M235	387994	3314914	M	23	44.8	Y	"Nail Wreck"	MOB.M233, MOB.M234, MOB.M235, MOB.S083, MOB.S106	M-25	VK31
MOB.M240	387110	3314770	M	28	6.8		SPS		M-24	VK31
MOB.M241	392411	3314768	D	68	187.4		SPS		M-27	VK32
MOB.M245	385693	3314617	M	20	190.7		debris	MOB.S107	M-24	VK30
MOB.M246	384092	3314617	D	43	25.3		SPS		M-23	VK30
MOB.M247	387015	3314616	D	51	8.5		SPS		M-24	VK31
MOB.M248	384183	3314614	M	24	5.1		SPS		M-23	VK30
MOB.M250	391492	3314473	D	38	24.5		SPS		M-27	VK32
MOB.M251	389578	3314469	M	27	7.3		SPS		M-26	VK31
MOB.M252	385598	3314314	D	13	5.9		SPS		M-24	VK30
MOB.M253	392307	3314313	D	58	159.3		debris	MOB.S109	M-27	VK32
MOB.M255	389476	3314171	M	32	5.9		SPS		M-26	VK31
MOB.M259	385013	3314017	D	25	5.2		SPS		M-23	VK30
MOB.M260	389989	3313965	M	12	9.3		SPS		M-31	VK31
MOB.M262	385506	3313916	D	395	65.8		debris	MOB.S085	M-28	VK30
MOB.M263	390956	3313826	D	34	8.5		SPS		M-32	VK31
MOB.M265	387511	3313716	D	13	7.6		SPS		M-30	VK31
MOB.M266	388435	3313661	M	43	5.5		SPS		M-30	VK31
MOB.M267	387965	3313572	D	39	14.7		SPS		M-30	VK31
MOB.M268	388027	3313572	M	27	5.8		SPS		M-30	VK31
MOB.M270	385135	3313363	M	38	5.5		SPS		M-28	VK30
MOB.M271	385478	3313363	M	27	7.2		SPS		M-28	VK30
MOB.M273	391384	3313272	M	37	7.7		SPS		M-32	VK32
MOB.M275	389749	3313066	M	25	5.0		SPS		M-31	VK31
MOB.M277	391078	3312922	M	59	9.2		SPS		M-32	VK32

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Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M278	390417	3312921	D	33	7.6		SPS		M-31	VK31
MOB.M280	389531	3312814	M	76	44.0		debris	MOB.S111	M-31	VK31
MOB.M281	391255	3312761	D	45	24.5		SPS		M-32	VK32
MOB.M282	389739	3312762	M	30	4.8		SPS		M-31	VK31
MOB.M285	392349	3312464	M	18	11.1		debris	MOB.S115	M-32	VK32
MOB.M286	391384	3312372	M	63	6.3		SPS		M-32	VK32
MOB.M287	390362	3312372	M	33	11.0		SPS		M-31	VK31
MOB.M292	388371	3312214	M	12	5.1		SPS		M-30	VK75
MOB.M293	388377	3312214	M	12	5.2		SPS		M-30	VK75
MOB.M294	388360	3312214	M	14	5.3		SPS		M-30	VK75
MOB.M295	390518	3312214	D	30	9.3		SPS		M-31	VK75
MOB.M296	386576	3312164	M	20	124.2		SPS		M-29	VK75
MOB.M298	389526	3312162	D	34	31.2		SPS		M-31	VK75
MOB.M299	388333	3312161	M	38	42.7		SPS		M-30	VK75
MOB.M302	388038	3312074	M	24	21.5		SPS		M-35	VK75
MOB.M303	385693	3312023	D	66	6.0		SPS		M-34	VK74
MOB.M304	388687	3311914	D	29	8.3		SPS		M-35	VK75
MOB.M305	385822	3311861	M	18	43.4		SPS		M-34	VK74
MOB.M306	385254	3311863	M	25	8.5		SPS		M-33	VK74
MOB.M307	386912	3311864	D	16	9.9		SPS		M-34	VK75
MOB.M310	387687	3311864	D	14	11.4		SPS		M-35	VK75
MOB.M311	388443	3311858	M	51	75.4		debris	MOB.S116	M-35	VK75
MOB.M313	390467	3311862	D	27	33.4		SPS		M-36	VK75
MOB.M314	387397	3311722	M	75	29.2		SPS		M-35	VK75
MOB.M317	387853	3311616	M	25	18.6		SPS		M-35	VK75
MOB.M318	391992	3311619	M	41	135.0		debris	MOB.S118	M-37	VK76
MOB.M319	387283	3311564	M	76	106.6		SPS		M-35	VK75
MOB.M320	388824	3311563	D	33	32.3		SPS		M-35	VK75
MOB.M321	385486	3311564	M	49	40.0		SPS		M-33	VK74
MOB.M322	386178	3311563	M	18	7.0		SPS		M-34	VK74
MOB.M328	387135	3311471	D	73	14.3		SPS		M-34	VK75
MOB.M329	390289	3311469	D	35	8.1		SPS		M-36	VK75
MOB.M330	385920	3311425	D	43	6.0		SPS		M-34	VK74
MOB.M332	390297	3311422	D	35	6.9		SPS		M-36	VK75
MOB.M334	391240	3311315	M	62	11.8		debris	MOB.S119	M-37	VK76
MOB.M335	391410	3311315	D	34	5.5		SPS		M-37	VK76
MOB.M336	385153	3311269	M	28	19.3		SPS		M-33	VK74
MOB.M337	385153	3311269	M	28	19.3		SPS		M-33	VK74
MOB.M339	384748	3311268	M	21	5.4		SPS		M-33	VK74
MOB.M340	386467	3311268	M	44	6.7		SPS		M-34	VK75
MOB.M343	391502	3311264	M	55	4.9		SPS		M-37	VK76
MOB.M344	390413	3311263	D	24	4.8		SPS		M-36	VK75
MOB.M345	392307	3311181	M	33	31.3		SPS		M-37	VK76
MOB.M346	385881	3311173	D	66	16.0		SPS		M-34	VK74
MOB.M348	391797	3311123	M	58	16.2		SPS		M-37	VK76
MOB.M349	389465	3311123	D	34	4.6		SPS		M-36	VK75

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M351	386479	3311016	D	18	15.1		SPS		M-34	VK75
MOB.M352	386544	3311016	M	23	7.9		SPS		M-34	VK75
MOB.M353	391852	3311015	M	25	5.8		SPS		M-37	VK76
MOB.M354	387111	3311015	M	14	8.6		SPS		M-34	VK75
MOB.M355	389107	3311014	M	22	23.2		SPS		M-36	VK75
MOB.M356	389157	3310960	M	29	13.5		SPS		M-36	VK75
MOB.M358	385899	3310873	M	35	49.9		SPS		M-34	VK74
MOB.M359	392094	3310871	D	29	5.8		SPS		M-37	VK76
MOB.M361	386656	3310823	M	46	17.6		SPS		M-34	VK75
MOB.M363	390468	3310822	M	75	4.9		SPS		M-36	VK75
MOB.M364	386410	3310713	M	22	6.4		SPS		M-34	VK75
MOB.M365	390971	3310570	M	29	16.3		SPS		M-37	VK75
MOB.M366	384762	3310571	D	28	44.1		SPS		M-33	VK74
MOB.M367	390845	3310571	D	29	5.8		SPS		M-37	VK75
MOB.M368	385502	3310573	D	43	17.5		SPS		M-33	VK74
MOB.M370	386641	3310414	C	141	8.0		SPS		M-34	VK75
MOB.M371	388289	3310413	D	59	30.6		SPS		M-35	VK75
MOB.M372	390383	3310413	M	37	5.4		SPS		M-36	VK75
MOB.M373	390389	3310362	D	62	4.8		SPS		M-36	VK75
MOB.M374	386163	3310275	D	52	58.1		SPS		M-34	VK74
MOB.M375	386390	3310125	D	74	6.3		SPS		M-39	VK75
MOB.M376	383972	3310121	M	40	28.8		SPS		M-38	VK74
MOB.M378	398756	3309963	C	168	12.9		SPS		M-46	VK77
MOB.M379	384275	3309994	M	126	79.2		unknown		M-38	VK74
MOB.M380	398727	3309912	C	62	10.1		SPS		M-46	VK77
MOB.M381	394113	3309912	D	59	137.8		SPS		M-44	VK76
MOB.M382	398593	3309912	M	51	7.6		SPS		M-46	VK77
MOB.M387	396527	3309828	M	105	5.7		SPS		M-45	VK77
MOB.M388	393375	3309816	C	43	12.7		SPS		M-43	VK76
MOB.M389	386857	3309823	M	20	41.2		SPS		M-39	VK75
MOB.M390	395641	3309820	D	102	6.7		SPS		M-44	VK76
MOB.M391	394464	3309820	M	20	64.5		SPS		M-44	VK76
MOB.M392	392083	3309820	C	66	9.6		SPS		M-42	VK76
MOB.M394	398810	3309772	M	43	12.8		SPS		M-46	VK77
MOB.M395	394470	3309772	M	28	34.4		debris	MOB.S126	M-44	VK76
MOB.M400	397744	3309770	M	27	20.5		SPS		M-46	VK77
MOB.M401	396031	3309770	D	36	30.5		debris	MOB.S125	M-45	VK77
MOB.M402	389439	3309666	M	33	9.6		SPS		M-41	VK75
MOB.M403	390698	3309665	M	49	8.1		SPS		M-42	VK75
MOB.M404	398090	3309664	M	26	47.8		SPS		M-46	VK77
MOB.M405	383977	3309660	M	33	48.4		SPS		M-38	VK74
MOB.M406	399387	3309614	D	83	7.5		SPS		M-47	VK77
MOB.M407	394468	3309613	M	25	10.7		SPS		M-44	VK76
MOB.M408	389427	3309613	M	78	12.9		SPS		M-41	VK75
MOB.M409	393443	3309613	M	48	5.2		SPS		M-43	VK76
MOB.M412	398211	3309522	M	25	12.2		SPS		M-46	VK77

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Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M413	388984	3309522	M	45	27.8		SPS		M-41	VK75
MOB.M414	398144	3309522	D	20	45.2		SPS		M-46	VK77
MOB.M415	398702	3309522	M	31	8.5		SPS		M-46	VK77
MOB.M416	394585	3309520	D	27	5.6		SPS		M-44	VK76
MOB.M417	397248	3309363	M	51	5.5		SPS		M-45	VK77
MOB.M419	398629	3309222	M	54	5.1		SPS		M-46	VK77
MOB.M420	396960	3309221	M	19	6.3		SPS		M-45	VK77
MOB.M421	392501	3309222	M	30	7.4		SPS		M-43	VK76
MOB.M422	388080	3309221	M	12	84.3		SPS		M-40	VK75
MOB.M423	399119	3309171	M	65	14.0		SPS		M-47	VK77
MOB.M424	385302	3309171	D	28	15.2		SPS		M-38	VK74
MOB.M425	399065	3309171	M	27	6.2		SPS		M-47	VK77
MOB.M426	385106	3309171	D	28	7.2		SPS		M-38	VK74
MOB.M428	392393	3309171	M	14	5.3		SPS		M-43	VK76
MOB.M430	391060	3309170	D	21	11.9		SPS		M-42	VK75
MOB.M431	397014	3309170	D	49	13.7		SPS		M-45	VK77
MOB.M433	385889	3309170	D	19	6.3		SPS		M-39	VK74
MOB.M435	389469	3309169	M	27	32.5		SPS		M-41	VK75
MOB.M436	388379	3309169	C	46	6.1		SPS		M-40	VK75
MOB.M437	389676	3309169	M	13	8.3		SPS		M-41	VK75
MOB.M441	389381	3309168	D	21	13.5		SPS		M-41	VK75
MOB.M442	391955	3309176	D	36	24.5		SPS		M-42	VK76
MOB.M445	398323	3309064	D	69	6.4		SPS		M-46	VK77
MOB.M446	398925	3309064	D	112	8.4		SPS		M-46	VK77
MOB.M447	398638	3309064	M	64	9.1		SPS		M-46	VK77
MOB.M448	397973	3309063	M	86	5.2		SPS		M-46	VK77
MOB.M449	391430	3309062	C	245	5.1		SPS		M-42	VK76
MOB.M450	395075	3309013	D	16	9.1		SPS		M-44	VK76
MOB.M451	398270	3309016	M	67	9.8		SPS		M-46	VK77
MOB.M452	384229	3309005	D	63	8.3		SPS		M-38	VK74
MOB.M453	398776	3308921	D	73	10.6		SPS		M-46	VK77
MOB.M454	390158	3308917	C	75	108.4		SPS		M-41	VK75
MOB.M456	399023	3308864	D	36	5.0		SPS		M-46	VK77
MOB.M457	398790	3308863	D	104	5.3		SPS		M-46	VK77
MOB.M458	392007	3308863	D	38	5.7		SPS		M-42	VK76
MOB.M459	394216	3308862	D	33	9.4		SPS		M-44	VK76
MOB.M460	399622	3308857	M	99	20.6		reefing pyramid	MOB.S130	M-47	VK77
MOB.M461	399016	3308769	M	21	8.0		SPS		M-46	VK77
MOB.M462	393114	3308761	M	56	14.1		SPS		M-43	VK76
MOB.M463	399633	3308723	D	107	7.8		SPS		M-47	VK77
MOB.M464	398424	3308721	M	49	5.6		SPS		M-46	VK77
MOB.M465	398617	3308721	M	92	9.2		SPS		M-46	VK77
MOB.M466	396643	3308719	M	30	5.3		SPS		M-45	VK77
MOB.M467	393622	3308719	D	75	9.2		SPS		M-43	VK76
MOB.M468	399356	3308623	C	97	8.8		SPS		M-47	VK77
MOB.M469	395623	3308621	M	34	12.1		debris cluster	MOB.S131	M-44	VK76

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M470	397053	3308621	M	23	65.2		SPS		M-45	VK77
MOB.M471	390454	3308622	M	35	19.3		SPS		M-41	VK75
MOB.M472	398443	3308622	M	39	7.2		SPS		M-46	VK77
MOB.M473	398626	3308561	M	59	6.0		SPS		M-46	VK77
MOB.M474	399433	3308563	C	73	8.9		SPS		M-47	VK77
MOB.M475	384186	3308560	M	33	9.4		SPS		M-38	VK74
MOB.M476	398929	3308564	M	65	91.8		SPS		M-46	VK77
MOB.M477	391566	3308541	M	97	12.3		unknown		M-42	VK76
MOB.M478	396620	3308563	C	38	18.5		SPS		M-45	VK77
MOB.M479	390559	3308563	M	47	28.4		SPS		M-41	VK75
MOB.M480	387258	3308563	D	39	4.8		SPS		M-40	VK75
MOB.M481	396514	3308562	M	30	5.1		SPS		M-45	VK77
MOB.M482	399246	3308464	M	40	26.1		SPS		M-47	VK77
MOB.M483	389260	3308464	M	40	5.6		SPS		M-41	VK75
MOB.M484	390527	3308464	D	35	10.1		SPS		M-41	VK75
MOB.M486	399067	3308463	M	42	5.1		SPS		M-47	VK77
MOB.M487	396151	3308462	D	86	6.6		SPS		M-45	VK77
MOB.M488	398051	3308462	M	97	7.2		SPS		M-46	VK77
MOB.M491	383873	3308322	D	38	25.4		SPS		M-38	VK74
MOB.M492	398093	3308371	M	29	23.1		SPS		M-46	VK77
MOB.M493	396776	3308321	M	48	8.4		SPS		M-45	VK77
MOB.M496	394023	3308320	D	69	7.3		SPS		M-44	VK76
MOB.M497	386779	3308264	M	34	37.9		SPS		M-39	VK75
MOB.M498	398011	3308263	D	26	26.2		SPS		M-46	VK77
MOB.M499	392402	3308263	M	45	31.8		SPS		M-43	VK76
MOB.M500	397113	3308263	C	57	38.4		SPS		M-45	VK77
MOB.M501	395076	3308263	M	31	5.5		SPS		M-44	VK76
MOB.M502	386726	3308163	C	81	22.0		SPS		M-49	VK75
MOB.M503	393317	3308223	M	56	24.8		SPS		M-53	VK76
MOB.M505	397879	3308122	D	187	5.6		SPS		M-56	VK77
MOB.M506	398783	3308024	D	53	5.7		debris	MOB.S135	M-56	VK77
MOB.M507	398986	3308023	M	31	17.2		SPS		M-56	VK77
MOB.M508	399082	3308023	M	31	6.2		SPS		M-57	VK77
MOB.M509	397190	3308023	D	106	7.4		SPS		M-55	VK77
MOB.M510	384114	3308021	M	42	44.5		SPS		M-48	VK74
MOB.M511	388190	3308020	D	104	7.0		SPS		M-50	VK75
MOB.M512	396672	3307977	D	103	8.0		SPS		M-55	VK77
MOB.M513	393983	3307965	M	75	5.4		SPS		M-54	VK76
MOB.M514	399038	3307964	M	152	6.8		SPS		M-56	VK77
MOB.M515	390690	3307963	M	22	9.2		SPS		M-52	VK75
MOB.M516	397200	3307952	M	60	6.0		SPS		M-55	VK77
MOB.M517	386697	3307864	M	26	5.3		SPS		M-49	VK75
MOB.M518	386955	3307864	M	103	9.5		SPS		M-49	VK75
MOB.M519	387151	3307822	M	45	5.3		SPS		M-49	VK75
MOB.M520	391879	3307822	C	36	6.2		SPS		M-52	VK76
MOB.M521	389209	3307821	M	31	5.6		SPS		M-51	VK75

2-MR-205 Artificial Reef Zones Marine Survey

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M522	391843	3307821	M	13	6.3		SPS		M-52	VK76
MOB.M523	386530	3307821	M	41	7.1		SPS		M-49	VK75
MOB.M524	386707	3307821	M	15	11.7		SPS		M-49	VK75
MOB.M525	386689	3307821	M	18	5.2		SPS		M-49	VK75
MOB.M526	389222	3307821	M	33	5.6		SPS		M-51	VK75
MOB.M527	391857	3307821	M	18	6.5		SPS		M-52	VK76
MOB.M528	397232	3307821	M	61	7.2		SPS		M-55	VK77
MOB.M529	386544	3307821	M	46	7.7		SPS		M-49	VK75
MOB.M530	398832	3307664	M	17	5.9		SPS		M-56	VK77
MOB.M531	396394	3307663	C	70	8.0		SPS		M-55	VK77
MOB.M532	396857	3307662	M	17	13.9		SPS		M-55	VK77
MOB.M533	393488	3307661	M	29	9.7		SPS		M-53	VK76
MOB.M534	388361	3307565	M	18	41.5		SPS		M-50	VK75
MOB.M535	383929	3307521	M	32	7.2		SPS		M-48	VK74
MOB.M536	396869	3307520	D	25	5.5		SPS		M-55	VK77
MOB.M537	389309	3307519	M	27	7.3		SPS		M-51	VK75
MOB.M538	389532	3307518	D	23	11.5		SPS		M-51	VK75
MOB.M539	384870	3307423	M	22	5.7		SPS		M-48	VK74
MOB.M540	393117	3307419	D	41	4.9		SPS		M-53	VK76
MOB.M541	397585	3307363	M	45	9.7		SPS		M-56	VK121
MOB.M542	387216	3307361	M	38	7.0		SPS		M-49	VK119
MOB.M543	394768	3307361	M	29	8.0		SPS		M-54	VK120
MOB.M544	394536	3307361	D	27	9.9		SPS		M-54	VK120
MOB.M545	390239	3307360	D	25	6.9		SPS		M-51	VK119
MOB.M546	390727	3307359	M	28	16.1		SPS		M-52	VK119
MOB.M547	385763	3307260	M	33	16.4		SPS		M-49	VK118
MOB.M548	388990	3307263	M	45	6.3		SPS		M-51	VK119
MOB.M549	396006	3307262	M	38	5.5		SPS		M-55	VK121
MOB.M550	399679	3307225	M	16	139.0		reefing pyramid	MOB.S092	M-57	VK121
MOB.M553	394925	3307121	M	39	7.7		SPS		M-54	VK120
MOB.M554	396412	3307124	M	64	7.8		debris	MOB.S143	M-55	VK121
MOB.M555	398293	3307127	C	51	115.4		SPS		M-56	VK121
MOB.M560	393283	3307069	M	24	5.3		SPS		M-53	VK120
MOB.M561	385246	3307069	C	37	258.6		debris	MOB.S144	M-48	VK118
MOB.M563	388716	3307062	M	24	20.1		SPS		M-50	VK119
MOB.M564	388725	3307063	M	24	20.1		SPS		M-50	VK119
MOB.M565	386789	3307063	D	15	7.4		SPS		M-49	VK119
MOB.M566	384528	3307063	M	13	4.8		SPS		M-48	VK118
MOB.M567	395568	3306818	D	18	26.5		SPS		M-54	VK120
MOB.M567	391124	3324874	M	25	18.3		SPS		M-03	MO956
MOB.M568	392164	3324714	M	22	11.3		SPS		M-03	MO956
MOB.M569	392198	3324415	D	72	845.4		SPS		M-03	MO956
MOB.M570	389915	3324413	M	32	15.2		SPS		M-02	MO955
MOB.M571	389445	3324415	M	18	17.3		SPS		M-02	MO955
MOB.M572	390361	3324273	M	20	7.3		SPS		M-02	MO955
MOB.M573	391694	3324275	M	20	12.4		SPS		M-03	MO956

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M574	392406	3324275	M	38	72.7		SPS		M-03	MO956
MOB.M575	388712	3324116	M	10	7.1		SPS		M-01	MO955
MOB.M576	388893	3324115	M	24	34.8		SPS		M-01	MO955
MOB.M577	390787	3324113	M	17	16.9		SPS		M-02	MO955
MOB.M578	392069	3324413	M	56	9.5		SPS		M-03	MO956
MOB.M579	391422	3324419	M	14	10.0		SPS		M-03	MO956
MOB.M580	392169	3323815	D	33	63.2		SPS		M-03	MO956
MOB.M580	391875	3323815	D	33	19.4		SPS		M-03	MO956
MOB.M581	390897	3323815	D	48	53.5		SPS		M-03	MO955
MOB.M582	390599	3323815	D	26	18.1		SPS		M-02	MO955
MOB.M583	390508	3323815	D	19	30.3		SPS		M-02	MO955
MOB.M584	389177	3323816	C	198	1857.6	Y	Listed as possible wreck in BOEM database		M-02	MO955
MOB.M585	391692	3323515	M	28			SPS		M-07	MO956
MOB.M586	391500	3323514	D	46	104.1		SPS		M-07	MO956
MOB.M587	390983	3323675	M	17	14.6		SPS		M-03	MO955
MOB.M588	387312	3323015	M	9	10.0		SPS		M-04	MO955
MOB.M589	386864	3322620	M	21	20.3		SPS		M-04	MO955
MOB.M590	388179	3322472	M	28	15.3		SPS		M-05	MO955
MOB.M591	390038	3322614	M	18	15.2		SPS		M-06	MO955
MOB.M592	390904	3322614	M	18	8.9		SPS		M-07	MO955
MOB.M593	390770	3321770	M	30	30.2		SPS		M-07	MO999
MOB.M594	385678	3320816	M	18	9.9		SPS		M-09	MO998
MOB.M595	386785	3321072	M	19	10.7		SPS		M-09	MO999
MOB.M596	387907	3321272	M	40	24.1		SPS		M-10	MO999
MOB.M597	388838	3321173	M	24	16.1		SPS		M-10	MO999
MOB.M598	389552	3321298	D	93	37.1		unknown		M-11	MO999
MOB.M599	390165	3321114	D	38	100.8		SPS		M-11	MO999
MOB.M600	390430	3320972	D	35	15.4		SPS		M-11	MO999
MOB.M601	390454	3320814	M	31	12.8		SPS		M-11	MO999
MOB.M602	392371	3320975	M	16	13.1		SPS		M-12	MO1000
MOB.M603	391981	3320614	M	25	28.6		SPS		M-12	MO1000
MOB.M604	392468	3320567	M	76	64.2		SPS		M-12	MO1000
MOB.M605	390801	3320369	M	27	12.1		SPS		M-12	MO999
MOB.M606	389506	3320515	M	22	31.6		SPS		M-11	MO999
MOB.M607	388315	3320674	M	18	22.0		SPS		M-10	MO999
MOB.M608	387733	3320515	M	42	141.4		SPS		M-10	MO999
MOB.M609	386768	3320614	M	18	11.7		SPS		M-09	MO999
MOB.M610	385815	3320614	M	26	20.5		SPS		M-09	MO998
MOB.M611	386218	3320373	M	25	55.8		SPS		M-09	MO998
MOB.M612	384470	3320205	D	31	12.0		SPS		M-08	MO998
MOB.M613	384287	3319871	M	21	22.5		SPS		M-08	MO998
MOB.M614	385479	3319974	D	37	30.1		SPS		M-08	MO998
MOB.M615	386195	3319571	M	34	16.2		SPS		M-14	MO998

## 2-MR-205 Artificial Reef Zones Marine Survey

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M616	386268	3319375	M	36	11.1		SPS		M-14	MO999
MOB.M617	386663	3319272	D	41	839.7		SPS		M-14	MO999
MOB.M618	386165	3318566	M	44	35.1		SPS		M-14	MO998
MOB.M619	387361	3318832	M	96	33.3		unknown		M-15	MO999
MOB.M620	389726	3319413	M	26	11.5		debris	MOB.S052	M-16	MO999
MOB.M621	389002	3319375	M	36	18.2		SPS		M-16	MO999
MOB.M622	390038	3318767	M	55	46.5		SPS		M-16	MO999
MOB.M623	388943	3318765	D	26	18.2		SPS		M-16	MO999
MOB.M624	391534	3319274	C	162	3227.4	Y	wreck; "Papa Joe"	MOB.S053	M-17	MO1000
MOB.M625	391721	3318676	D	53	49.3		SPS		M-17	MO1000
MOB.M626	392119	3318430	M	41	25.9		debris	MOB.S063	M-17	MO1000
MOB.M627	391334	3318565	D	29	26.6		SPS		M-17	MO1000
MOB.M628	391489	3318215	D	31	62.5		SPS		M-17	MO1000
MOB.M629	390939	3317914	D	25	37.0		SPS		M-17	MO999
MOB.M630	390772	3317772	D	41	22.4		SPS		M-22	MO999
MOB.M631	390020	3318464	D	26	31.3		SPS		M-16	MO999
MOB.M632	389947	3318264	D	28	32.9		SPS		M-16	MO999
MOB.M633	391836	3320518	M	14	24.2		SPS		M-12	MO1000
MOB.M634	391545	3320014	M	23	13.1		SPS		M-12	MO1000
MOB.M635	385295	3318515	D	36	42.6		SPS		M-13	MO998
MOB.M636	385966	3318121	D	24	24.4		SPS		M-14	MO998
MOB.M637	386321	3318766	M	12			SPS		M-14	MO999
MOB.M638	387262	3318215	D	25	39.5		SPS		M-15	MO999
MOB.M639	387540	3318372	M	25	8.4		SPS		M-15	MO999
MOB.M640	390425	3317663	D	47	118.1		debris	MOB.S0093	M-21	MO999
MOB.M641	389609	3317662	D	37	227.2		debris	MOB.S0094	M-21	MO999
MOB.M642	384888	3317217	M	33	5.8		debris	MOB.S074, MOB.S097	M-18	MO998
MOB.M643	390052	3317067	M	44	9.8		debris	MOB.S098, MOB.S100	M-21	MO999
MOB.M644	390626	3317066	M	38	51.5		debris	MOB.S099	M-22	MO999
MOB.M645	392048	3316727	M	65	16.7		Large unknown contacts	MOB.S075, MOB.S102	M-22	VK32
MOB.M646	390758	3316320	M	16	5.9		debris	MOB.S078	M-22	VK31
MOB.M647	390560	3316164	M	41	149.8		SPS		M-21	VK31
MOB.M648	390717	3315723	M	24	8.3		SPS		M-27	VK31
MOB.M649	390778	3311223	D	33	26.5		SPS		M-37	VK75
MOB.M650	391801	3311664	M	25	13.7		SPS		M-37	VK76
MOB.M651	389624	3310621	D	29	29.4		SPS		M-36	VK75
MOB.M652	395267	3309422	D	43	92.4		SPS		M-44	VK76
MOB.M653	395337	3308066	M	40	15.3		SPS		M-54	VK76
MOB.M654	389619	3307462	M	36	13.0		SPS		M-51	VK75
MOB.M655	391927	3307317	M	34	24.0		SPS		M-52	VK120
MOB.M656	392613	3306867	D	45	20.4		SPS		M-53	VK120
MOB.M657	395979	3307161	M	29	12.2		SPS		M-55	VK121

Anomaly	Easting	Northing	Type	Duration (m)	Intensity (nT)	Avoid	Notes	Associations	Map	BOEM Block
MOB.M658	388102	3320069	M	27	30.8		SPS		M-10	MO999
MOB.M659	388200	3320019	M	23	25.4		SPS		M-10	MO999
MOB.M670	388298	3319815	M	20	12.9		SPS		M-10	MO999
MOB.M671	388381	3319815	M	16	15.1		SPS		M-10	MO999
MOB.M672	389531	3319818	M	23	26.4		linear	MOB.S051	M-11	MO999
MOB.M673	390863	3320015	M	31	28.4		SPS		M-12	MO999
MOB.M674	390984	3319815	D	78	799.5		SPS		M-12	MO999
MOB.M675	390868	3319775	D	41	114.9		SPS		M-12	MO999
MOB.M676	391483	3320015	M	25	18.0		SPS		M-12	MO1000
MOB.M677	385926	3317965	M	18	11.0		SPS		M-14	MO998
MOB.M678	387771	3317565	D	30	40.0		SPS		M-20	MO999
MOB.M680	388011	3316919	M	29	11.4		debris	MOB.S101	M-20	VK31
MOB.M681	388305	3316821	M	30	17.7		SPS		M-20	VK31
MOB.M682	389489	3316562	M	30	9.3		debris	MOB.S076, MOB.S103	M-21	VK31
MOB.M683	390704	3316223	D	45	93.0		debris	MOB.S079	M-22	VK31
MOB.M684	386978	3315163	M	21	10.8		SPS		M-24	VK31
MOB.M685	389862	3313163	M	37	27.7		SPS		M-31	VK31
MOB.M686	388422	3309370	D	39	54.1		SPS		M-40	VK75
MOB.M687	397268	3307720	M	53	12.1		SPS		M-55	VK77
MOB.M688	396200	3308523	M	27	15.8		SPS		M-45	VK77
MOB.M689	390494	3308522	D	17	12.8		SPS		M-41	VK75
MOB.M690	384162	3308523	M	27	10.9		SPS		M-38	VK74
MOB.M691	398161	3307564	D	31	50.2		debris	MOB.S140	M-56	VK77
MOB.M692	392427	3323977	D	80	142.1		SPS		M-03	MO956
MOB.M693	388776	3321914	M	25	30.2		debris	MOB.S037	M-05	MO955
MOB.M694	388287	3319573	M	25	24.3		SPS		M-15	MO999
MOB.M695	389204	3319615	M	23	14.7		SPS		M-16	MO999
MOB.M696	388732	3318212	M	31	9.9		debris	MOB.MS068	M-15	MO999
MOB.M697	389331	3309723	M	31	18.0		SPS		M-41	VK75

\* M = Monopole, D = Dipole, MC = Multi Component.

Table O-2. Sonar Contacts for the MOB Cell.

Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
MOB.S0001	391985	3324570	debris	11.6	4.5	2.5		M-03	MO956
MOB.S0002	391988	3324563	debris	12.0	4.1	1.0		M-03	MO956
MOB.S0003	392470	3324233	debris	3.8	1.1	0.0		M-03	MO956
MOB.S0004	391968	3324231	linear	9.8	1.4	0.4	MOB.M024	M-03	MO956
MOB.S0005	390796	3323953	debris	0.0	0.0	0.0		M-02	MO955
MOB.S0006	390781	3323947	debris	3.8	1.1	0.0		M-02	MO955
MOB.S0007	392433	3323854	debris	7.4	2.4	0.0		M-03	MO956
MOB.S0008	392433	3323854	debris	8.9	2.2	0.5		M-03	MO956
MOB.S0009	389789	3323847	debris	0.0	0.0	0.0		M-02	MO955
MOB.S0010	389752	3323847	debris	1.5	0.5	0.0		M-02	MO955
MOB.S0011	389483	3323847	debris	0.0	0.0	0.0		M-02	MO955
MOB.S0012	389771	3323834	debris	0.0	0.0	0.0		M-02	MO955
MOB.S0013	389733	3323834	debris	0.0	0.0	0.0		M-02	MO955
MOB.S0014	392199	3323809	debris	0.0	0.0	0.0		M-03	MO956
MOB.S0015	392199	3323808	debris	1.0	0.5	0.0		M-03	MO956
MOB.S0016	391777	3323810	debris	0.0	0.0	0.0		M-03	MO956
MOB.S0017	391781	3323808	debris	2.8	2.1	1.5		M-03	MO956
MOB.S0018	391543	3323797	debris	2.6	0.7	0.0		M-03	MO956
MOB.S0019	389766	3323554	debris	2.5	1.1	0.0		M-02	MO955
MOB.S0020	389765	3323554	debris	0.0	0.0	0.0		M-02	MO955
MOB.S0021	389309	3323484	debris	2.4	0.6	0.0		M-06	MO955
MOB.S0022	389312	3323476	debris	2.2	0.9	0.5		M-06	MO955
MOB.S0023	389312	3323476	debris	0.0	0.0	0.0		M-06	MO955
MOB.S0024	392211	3323316	debris	5.9	3.7	0.4	MOB.M057	M-07	MO956
MOB.S0025	392200	3323310	debris	5.4	3.0	1.7	MOB.M057	M-07	MO956
MOB.S0026	388253	3323088	debris	0.0	0.0	0.0		M-05	MO955
MOB.S0027	388440	3322946	debris	1.7	0.3	0.5		M-05	MO955
MOB.S0028	389091	3322838	debris	2.1	1.7	1.1		M-06	MO955
MOB.S0029	389090	3322838	debris	0.0	0.0	0.0		M-06	MO955
MOB.S0030	389433	3322708	debris	4.6	1.1	0.3		M-06	MO955
MOB.S0031	390520	3322551	debris	0.0	0.0	0.0		M-06	MO955
MOB.S0032	390520	3322550	debris	2.5	1.8	0.8		M-06	MO955
MOB.S0033	388607	3322414	Large unknown contact	20.7	7.8	0.7		M-05	MO955
MOB.S0034	387011	3322187	debris	3.2	3.8	0.9		M-04	MO955
MOB.S0035	387011	3322186	linear	3.1	1.3	2.2		M-04	MO955
MOB.S0036	388040	3322158	debris	0.0	0.0	0.0		M-05	MO955
MOB.S0037	388775	3321909	Unknown	5.2	1.6	1.6	MOB.M693	M-05	MO955
MOB.S0038	392010	3321842	BOEM db lists as "wreck, unknown vessel"	56.9	27.0	2.5	MOB.M105	M-07	MO1000
MOB.S0039	390359	3321753	Pipeline crossing	33.8	5.9	0.0		M-06	MO999
MOB.S0040	385465	3321372	debris	5.7	6.7	0.4	MOB.M114	M-08	MO998
MOB.S0041	389676	3321096	debris	2.9	1.8	0.7		M-11	MO999
MOB.S0042	386988	3321072	linear	6.1	2.9	1.7		M-09	MO999

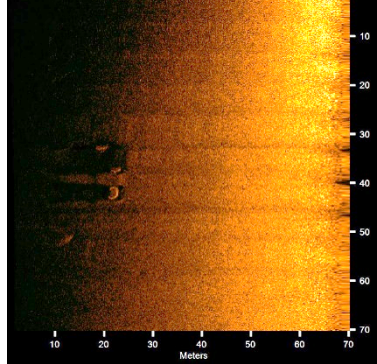
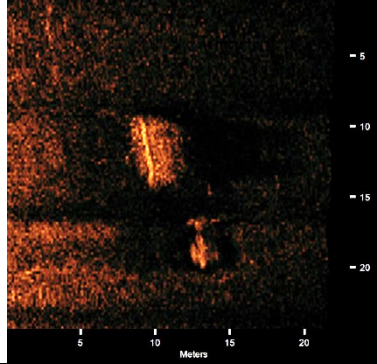
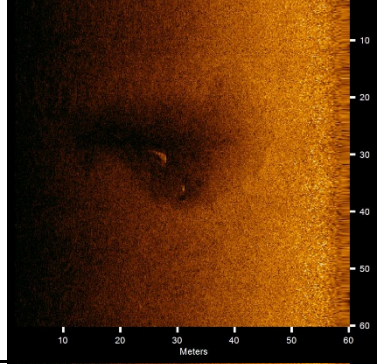
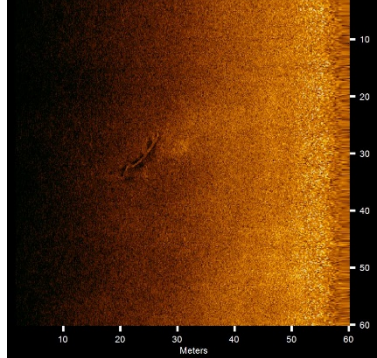
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MOB.S0043	391838	3320989	debris	6.0	1.0	2.5		M-12	MO1000
MOB.S0044	386515	3321017	debris	2.8	1.6	0.7		M-09	MO999
MOB.S0045	391367	3320787	debris	8.2	6.0	0.4	MOB.M129	M-12	MO1000
MOB.S0046	390282	3320369	debris	5.5	2.8	4.3		M-11	MO999
MOB.S0047	392413	3320225	Modern debris	6.7	4.4	0.0		M-12	MO1000
MOB.S0048	384705	3320194	debris	0.0	0.0	0.0		M-08	MO998
MOB.S0049	386635	3319975	Modern Debris	4.1	3.4	1.2		M-09	MO999
MOB.S0050	386572	3319966	linear	4.1	1.5	1.7	MOB.M140	M-09	MO999
MOB.S0051	389533	3319809	linear	3.1	1.0	1.9	MOB.M672	M-11	MO999
MOB.S0052	389707	3319413	debris	4.3	2.1	0.8	MOB.M620	M-16	MO999
MOB.S0053	391563	3319289	"Papa Joe" wreck	14.2	3.6	1.6	MOB.M624	M-17	MO1000
MOB.S0054	387441	3319275	debris	4.0	1.9	1.5		M-15	MO999
MOB.S0055	387441	3319275	debris	0.0	0.0	0.0		M-15	MO999
MOB.S0056	386996	3319232	Modern debris	23.6	5.1	0.5		M-14	MO999
MOB.S0057	391182	3319140	debris	2.2	1.0	1.2		M-17	MO1000
MOB.S0058	387387	3319000	debris	4.2	3.4	0.5		M-15	MO999
MOB.S0059	387386	3319000	debris	0.0	0.0	0.0		M-15	MO999
MOB.S0060	390431	3318674	debris	3.0	2.4	1.5		M-16	MO999
MOB.S0061	386212	3318568	debris	6.4	0.8	0.4		M-14	MO998
MOB.S0062	386238	3318561	debris	0.0	0.0	0.0		M-14	MO998
MOB.S0063	392128	3318433	debris	4.3	0.9	0.0	MOB.M626	M-17	MO1000
MOB.S0064	389238	3318328	debris	0.0	0.0	0.0		M-16	MO999
MOB.S0065	392517	3318245	debris	7.7	3.5	0.5		M-17	MO1000
MOB.S0066	388088	3318231	debris	3.2	4.5	0.9		M-15	MO999
MOB.S0067	388799	3318204	debris	4.6	4.0	0.0		M-15	MO999
MOB.S0068	388739	3318200	debris	4.3	2.9	0.3	MOB.M696	M-15	MO999
MOB.S0069	390250	3317935	debris	0.0	0.0	0.0		M-16	MO999
MOB.S0070	390249	3317934	debris	3.6	1.2	0.4		M-16	MO999
MOB.S0071	387954	3317893	debris	2.7	0.5	2.2		M-15	MO999
MOB.S0072	391346	3317648	debris	0.0	0.0	0.0		M-22	MO1000
MOB.S0073	392249	3317403	debris	0.0	0.0	0.0		M-22	MO1000
MOB.S0074	384883	3317209	debris	5.3	4.9	0.5	MOB.M642	M-18	MO998
MOB.S0075	392075	3316709	Unknown contact	13.1	3.2	0.4	MOB.M645	M-22	VK32
MOB.S0076	389473	3316552	debris	0.0	0.0	0.0	MOB.M682	M-21	VK31
MOB.S0077	391967	3316331	debris	0.0	0.0	0.0		M-22	VK32
MOB.S0078	390757	3316334	debris	0.0	0.0	0.0	MOB.M646	M-22	VK31
MOB.S0079	390701	3316227	debris	0.0	0.0	0.0	MOB.M683	M-22	VK31
MOB.S0080	385731	3315984	debris	0.0	0.0	0.0	MOB.M196	M-19	VK30
MOB.S0081	392203	3315589	debris	0.0	0.0	0.0		M-27	VK32
MOB.S0082	390063	3315263	Unknown large object	30.3	1.3	1.0		M-26	VK31
MOB.S0083	387924	3314898	Nail Wreck	41.5	23.1	0.9	MOB.M233	M-25	VK31
MOB.S0084	391810	3314377	debris	12.0	3.3	0.0		M-27	VK32
MOB.S0085	385522	3313916	debris	9.6	3.6	1.2	MOB.M262	M-28	VK30
MOB.S0086	387991	3313768	debris	4.9	2.3	0.8		M-30	VK31

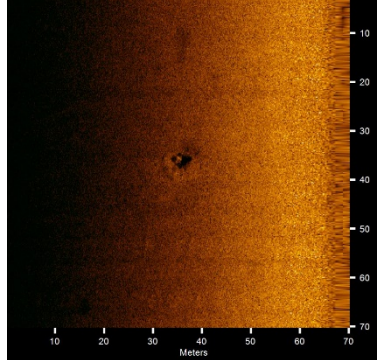
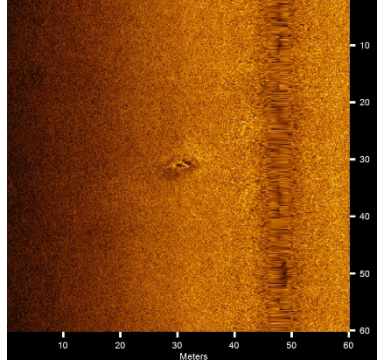
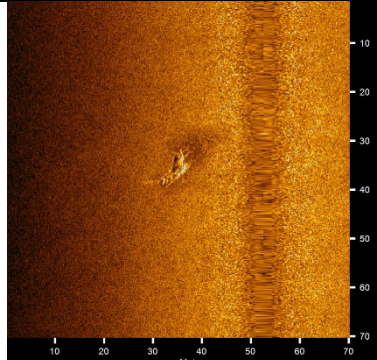
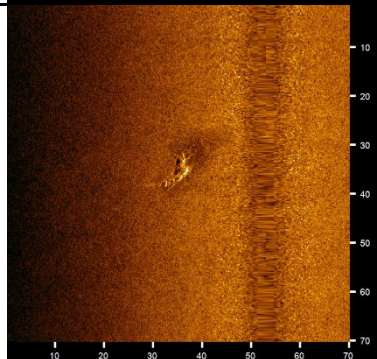
2-MR-205 Artificial Reef Zones Marine Survey

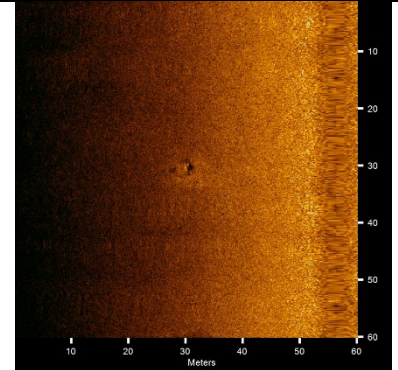
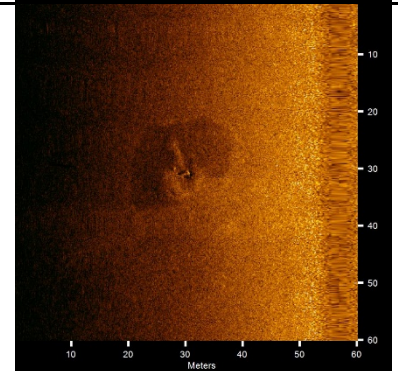
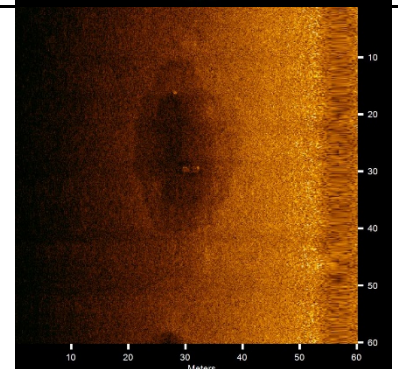
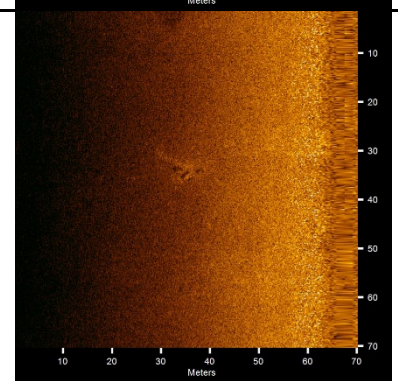
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MOB.S0087	390827	3311734	debris	0.0	0.0	0.0		M-37	VK75
MOB.S0088	384547	3310169	debris	0.0	0.0	0.0		M-38	VK74
MOB.S0089	393955	3309939	debris	0.0	0.0	0.0		M-43	VK76
MOB.S0090	393450	3309237	debris	5.4	2.1	0.7		M-43	VK76
MOB.S0091	399632	3307272	debris	0.0	0.0	0.0		M-57	VK121
MOB.S0092	399702	3307236	reefing pyramid	5.1	1.9	4.0	MOB.M550	M-57	VK121
MOB.S0093	390425	3317670	debris	3.1	2.3	0.7	MOB.M640	M-21	MO999
MOB.S0094	389612	3317664	debris	5.1	0.5	2.1	MOB.M641	M-21	MO999
MOB.S0095	392261	3317413	debris	2.5	2.1	0.4		M-22	MO1000
MOB.S0096	384863	3317292	debris	0.0	0.0	0.0		M-18	MO998
MOB.S0097	384887	3317208	debris	4.4	2.0	1.2	MOB.M642	M-18	MO998
MOB.S0098	390041	3317077	debris	2.1	1.3	0.5	MOB.M643	M-21	MO999
MOB.S0099	390613	3317069	debris	3.5	2.6	0.5	MOB.M644	M-22	MO999
MOB.S0100	390059	3317058	debris	3.1	2.3	0.4	MOB.M643	M-21	MO999
MOB.S0101	388015	3316925	debris	3.3	3.9	0.4	MOB.M680	M-20	VK31
MOB.S0102	392056	3316705	Unknown large contact	23.3	12.9	0.7	MOB.M645	M-22	VK32
MOB.S0103	389486	3316550	debris	6.0	2.5	0.4	MOB.M682	M-21	VK31
MOB.S0104	385213	3316338	linear	7.2	0.8	1.0		M-18	VK30
MOB.S0105	391468	3315635	debris	3.7	2.7	1.8		M-27	VK32
MOB.S0106	387917	3314907	Nail Wreck	40.3	26.7	0.9	MOB.M233	M-25	VK31
MOB.S0107	385702	3314620	debris	2.7	1.5	0.4	MOB.M245	M-24	VK30
MOB.S0108	391821	3314393	debris	10.4	4.9	0.0		M-27	VK32
MOB.S0109	392310	3314310	debris	7.8	2.8	1.3	MOB.M253	M-27	VK32
MOB.S0110	387462	3313007	Linear feature; possibly exposed pipeline	48.5	0.7	1.0		M-30	VK31
MOB.S0111	389523	3312803	debris	3.7	3.1	0.4	MOB.M280	M-31	VK31
MOB.S0112	390748	3312745	debris	3.6	3.1	1.8		M-32	VK31
MOB.S0113	389641	3312603	debris	4.6	3.0	1.8		M-31	VK31
MOB.S0114	391436	3312490	debris	3.6	2.2	1.6		M-32	VK32
MOB.S0115	392348	3312476	debris	2.0	2.6	0.4	MOB.M285	M-32	VK32
MOB.S0116	388442	3311859	debris	3.1	3.7	1.0	MOB.M311	M-35	VK75
MOB.S0117	390836	3311739	debris	4.8	2.8	1.8		M-37	VK75
MOB.S0118	391998	3311618	debris	3.4	1.3	0.0	MOB.M318	M-37	VK76
MOB.S0119	391246	3311307	debris	3.2	3.7	0.8	MOB.M334	M-37	VK76
MOB.S0120	391141	3310889	debris	2.9	2.3	1.6		M-37	VK76
MOB.S0121	390688	3310854	debris	3.0	3.5	0.8		M-37	VK75
MOB.S0122	390264	3310854	debris	3.2	2.7	0.6		M-36	VK75
MOB.S0123	390612	3310225	debris	2.7	2.5	0.9		M-37	VK75
MOB.S0124	393895	3309933	debris	4.6	3.2	1.7		M-43	VK76
MOB.S0125	396027	3309770	debris	2.8	2.7	2.5	MOB.M401	M-45	VK77
MOB.S0126	394470	3309767	debris	3.0	1.8	0.5	MOB.M395	M-44	VK76
MOB.S0127	393204	3309752	debris	3.5	1.7	2.2		M-43	VK76
MOB.S0128	394388	3309346	debris	7.0	3.7	0.3		M-44	VK76
MOB.S0129	393521	3309241	debris	4.4	1.9	0.9		M-43	VK76

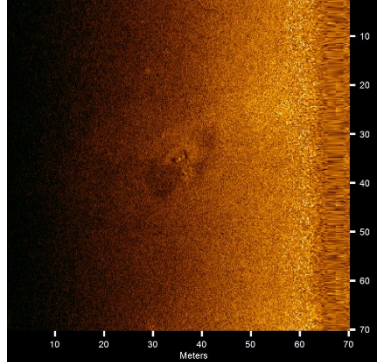
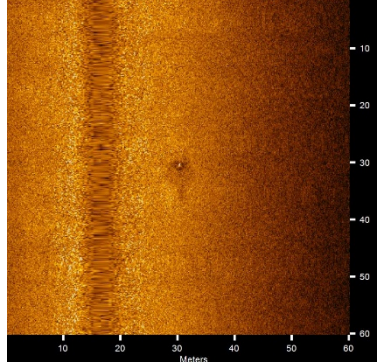
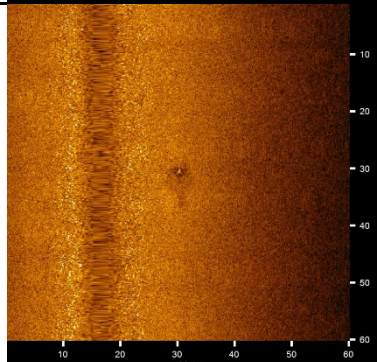
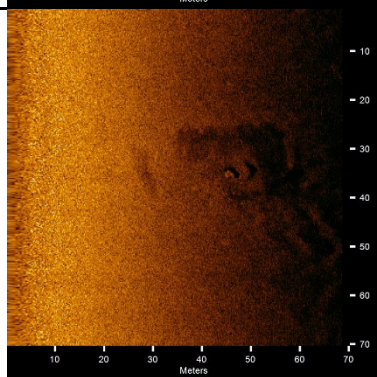
Sonar Contact	Easting	Northing	Description	Length (m)	Width (m)	Height (m)	Associations	Map	BOEM Block
MOB.S0130	399623	3308868	debris	6.0	2.4	4.6	MOB.M460	M-47	VK77
MOB.S0131	395621	3308641	Cluster of debris	30.2	3.6	0.7	MOB.M469	M-44	VK76
MOB.S0132	394530	3308613	Linear debris possibly wire rope	18.9	0.3	0.3		M-44	VK76
MOB.S0133	388163	3308587	debris	2.8	1.6	0.2		M-40	VK75
MOB.S0134	396339	3308489	debris	4.9	2.7	0.9		M-45	VK77
MOB.S0135	398783	3308041	debris	1.7	2.5	1.1	MOB.M506	M-56	VK77
MOB.S0136	394578	3308059	debris	5.5	1.7	0.9		M-54	VK76
MOB.S0137	392864	3308011	debris	4.3	2.5	0.5		M-53	VK76
MOB.S0138	398053	3307799	debris	3.8	3.2	1.2		M-56	VK77
MOB.S0139	394715	3307797	debris	3.7	2.4	2.8		M-54	VK76
MOB.S0140	398159	3307572	debris	3.4	2.4	1.8	MOB.M691	M-56	VK77
MOB.S0141	385669	3307632	debris	2.5	0.6	3.1		M-49	VK74
MOB.S0142	398771	3307351	debris	2.9	1.5	2.2		M-56	VK121
MOB.S0143	396424	3307113	debris	5.2	1.3	0.6	MOB.M554	M-55	VK121
MOB.S0144	385251	3307069	debris	4.3	3.0	0.6	MOB.M561	M-48	VK118
MOB.S0145	384654	3306967	debris	5.5	1.3	0.4		M-48	VK118
MOB.S0146	398767	3306818	Exposed section of pipeline	20.9	4.6	0.0		M-56	VK121

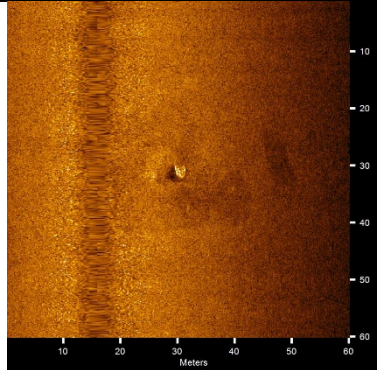
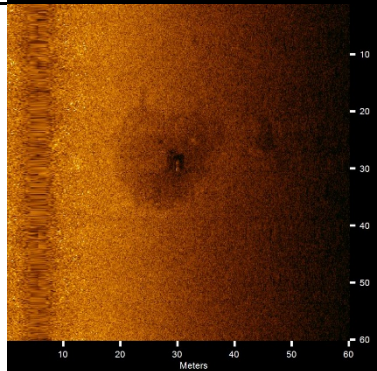
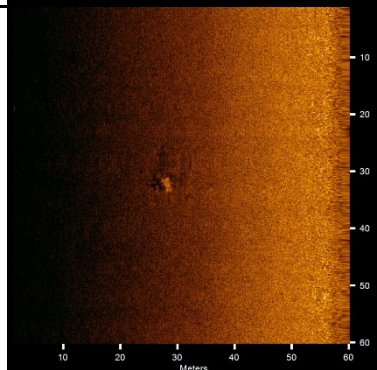
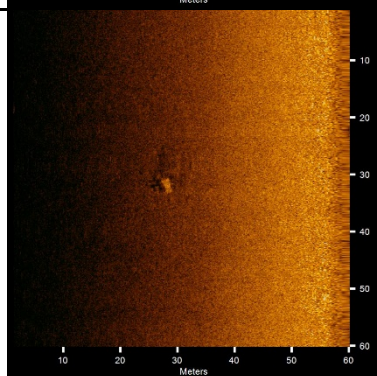
Table O-3. Acoustic Target Images recorded for the MOB Cell.

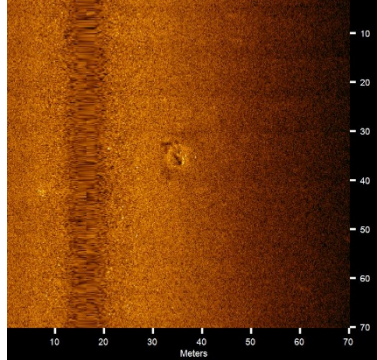
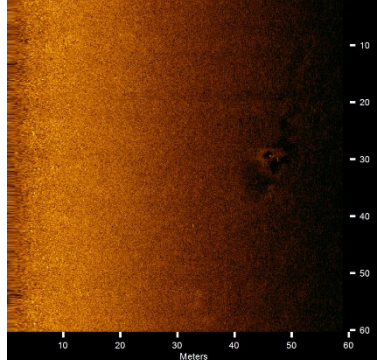
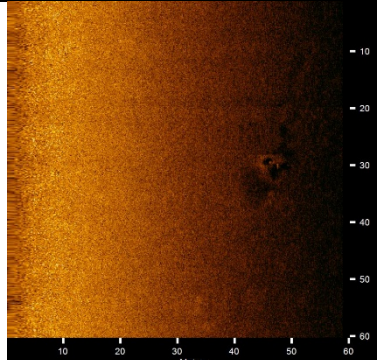
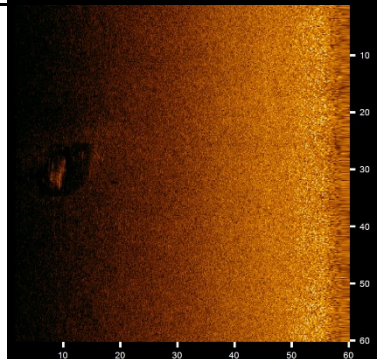
Target Image	Target Info	User Entered Info
	<p><b>MOB.S0001</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0474278820 -88.1204324217 (WGS84) (X) 391984.85 (Y) 3324569.63 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Alabama\Offshore SS\MOB\MOB_355.jsf</li> <li>Range to target: 48.78 Meters</li> <li>Line Name: MOB_355</li> <li>Heading: 304.390 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.5 Meters</li> <li>Target Height: 2.5 Meters</li> <li>Target Length: 11.6 Meters</li> <li>Target Shadow: 12.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0002</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0473708664 -88.1203990036 (WGS84) (X) 391988.01 (Y) 3324563.28 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Alabama\Offshore SS\MOB\MOB_357.jsf</li> <li>Range to target: 58.57 Meters</li> <li>Line Name: MOB_357</li> <li>Heading: 295.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.1 Meters</li> <li>Target Height: 1.0 Meters</li> <li>Target Length: 12.0 Meters</li> <li>Target Shadow: 4.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0003</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0444326573 -88.1153677956 (WGS84) (X) 392469.90 (Y) 3324232.93 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Alabama\Offshore SS\MOB\Mob_350.jsf</li> <li>Range to target: 33.04 Meters</li> <li>Line Name: Mob_350</li> <li>Heading: 308.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.1 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 3.8 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0004</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0443725823 -88.1205773634 (WGS84) (X) 391967.56 (Y) 3324231.18 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Alabama\Offshore SS\MOB\Mob_350.jsf</li> <li>Range to target: 36.22 Meters</li> <li>Line Name: Mob_350</li> <li>Heading: 306.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.4 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 9.8 Meters</li> <li>Target Shadow: 1.3 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Linear feature</li> <li>Classification2: CONF 1</li> <li>Description:</li> </ul>

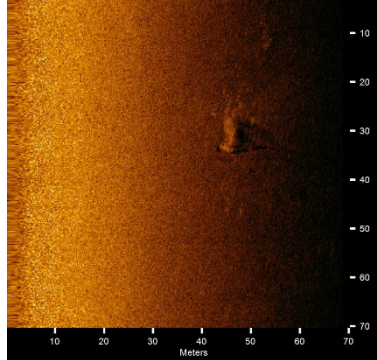
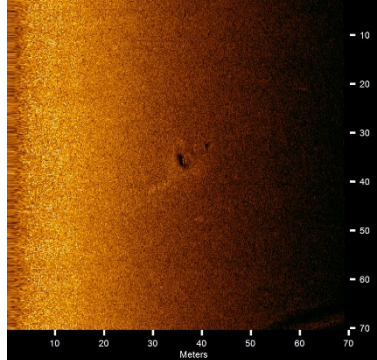
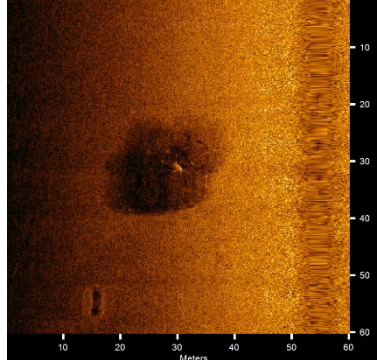
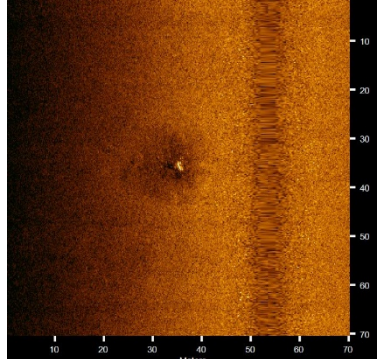
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	<p><b>MOB.S0005</b></p> <ul style="list-style-type: none"> <li>Click Position</li> <li>30.0417623115 -88.1327012788 (WGS84)</li> <li>(X) 390795.78 (Y) 3323953.42 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_343.jsf</li> <li>Range to target: 33.66 Meters</li> <li>Line Name: MOB_343</li> <li>Heading: 292.390 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0006</b></p> <ul style="list-style-type: none"> <li>Click Position</li> <li>30.0417007692 -88.1328585387 (WGS84)</li> <li>(X) 390780.55 (Y) 3323946.75 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_344.jsf</li> <li>Range to target: 17.71 Meters</li> <li>Line Name: Mob_344</li> <li>Heading: 305.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.1 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 3.8 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0007</b></p> <ul style="list-style-type: none"> <li>Click Position</li> <li>30.0410104603 -88.1157143459 (WGS84)</li> <li>(X) 392432.79 (Y) 3323854.01 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_342.jsf</li> <li>Range to target: 17.14 Meters</li> <li>Line Name: MOB_342</li> <li>Heading: 34.200 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.4 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 7.4 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0008</b></p> <ul style="list-style-type: none"> <li>Click Position</li> <li>30.0410087076 -88.1157082070 (WGS84)</li> <li>(X) 392433.38 (Y) 3323853.81 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_342.jsf</li> <li>Range to target: 17.40 Meters</li> <li>Line Name: MOB_342</li> <li>Heading: 37.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.2 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 8.9 Meters</li> <li>Target Shadow: 0.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>

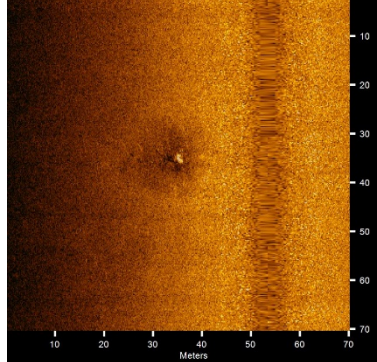
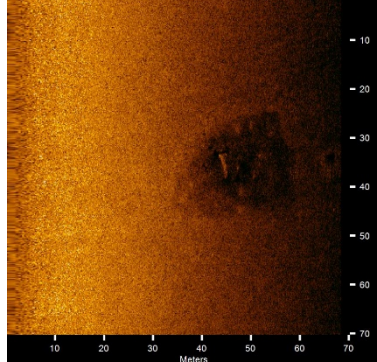
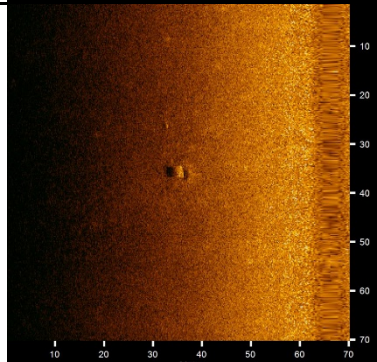
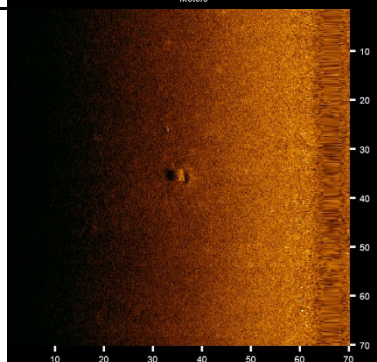
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	<p><b>MOB.S0009</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0407097893 -88.1431316655 (WGS84) (X) 389788.95 (Y) 3323846.78 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_341.jsf</li> <li>Range to target: 26.22 Meters</li> <li>Line Name: Mob_341</li> <li>Heading: 324.890 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0010</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0407075177 -88.143517563 (WGS84) (X) 389751.74 (Y) 3323846.9 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_341.jsf</li> <li>Range to target: 26.77 Meters</li> <li>Line Name: Mob_341</li> <li>Heading: 326.200 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.5 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 1.5 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0011</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0406854507 -88.1463014376 (WGS84) (X) 389483.3 (Y) 3323847.14 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_341.jsf</li> <li>Range to target: 26.77 Meters</li> <li>Line Name: Mob_341</li> <li>Heading: 324.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0012</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0405926043 -88.143314829 (WGS84) (X) 389771.16 (Y) 3323833.97 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_342.jsf</li> <li>Range to target: 32.36 Meters</li> <li>Line Name: MOB_342</li> <li>Heading: 43.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

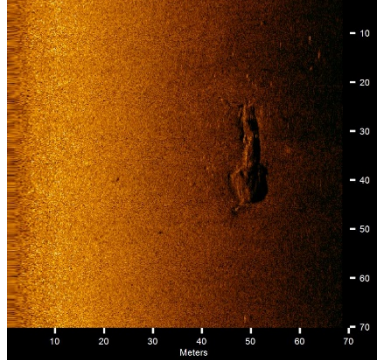
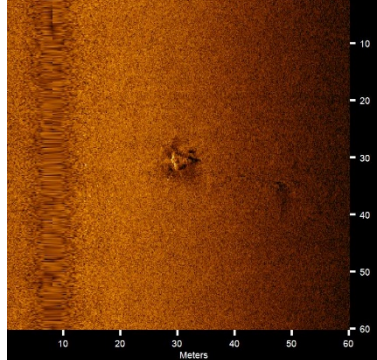
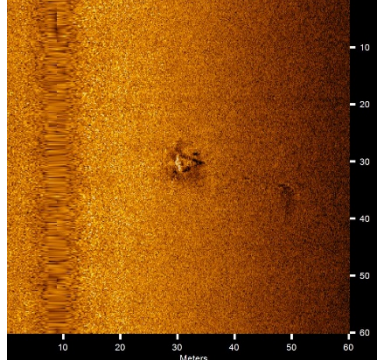
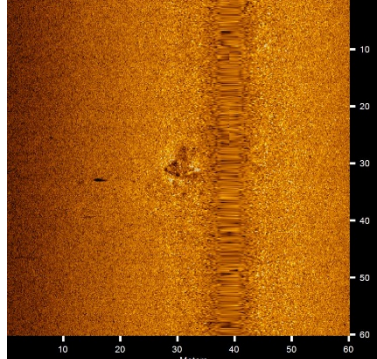
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	<p><b>MOB.S0014</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0405798827 -88.1181332478 (WGS84) (X) 392199.1 (Y) 3323808.57 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_341.001.jsf</li> <li>Range to target: 13.59 Meters</li> <li>Line Name: Mob_341.001</li> <li>Heading: 324.890 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0015</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0405785020 -88.1181364475 (WGS84) (X) 392198.79 (Y) 3323808.42 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_341.001.jsf</li> <li>Range to target: 13.74 Meters</li> <li>Line Name: Mob_341.001</li> <li>Heading: 325.100 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.5 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 1.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0016</b></p> <ul style="list-style-type: none"> <li>Click Position 30.040557318 -88.1225091616 (WGS84) (X) 391777.16 (Y) 3323810.2 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_340.jsf</li> <li>Range to target: 45.50 Meters</li> <li>Line Name: MOB_340</li> <li>Heading: 290.700 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

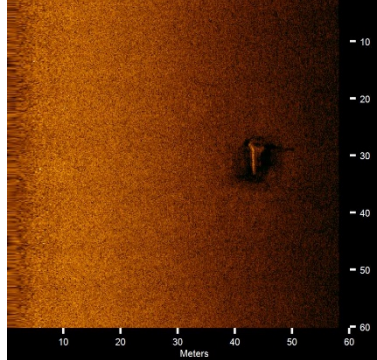
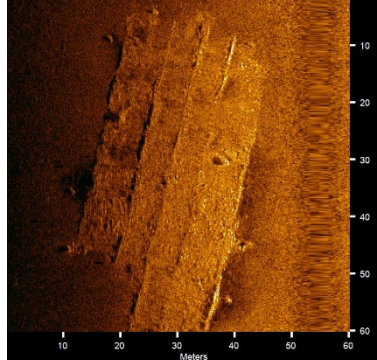
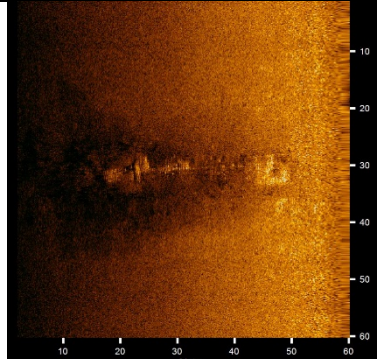
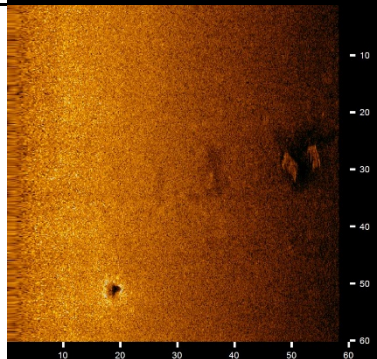
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	<p><b>MOB.S0017</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0405380802 -88.1224690143 (WGS84) (X) 391781.01 (Y) 3323808.03 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_341.jsf</li> <li>Range to target: 14.38 Meters</li> <li>Line Name: Mob_341</li> <li>Heading: 323.390 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.1 Meters</li> <li>Target Height: 1.5 Meters</li> <li>Target Length: 2.8 Meters</li> <li>Target Shadow: 2.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0018</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0404215677 -88.1249319737 (WGS84) (X) 391543.41 (Y) 3323797.45 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_341.jsf</li> <li>Range to target: 24.62 Meters</li> <li>Line Name: Mob_341</li> <li>Heading: 321.700 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.7 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 2.6 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0019</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0380645727 -88.1433419094 (WGS84) (X) 389765.75 (Y) 3323553.84 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_335.jsf</li> <li>Range to target: 32.33 Meters</li> <li>Line Name: Mob_335</li> <li>Heading: 323.700 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.1 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 2.5 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0020</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0380639836 -88.1433473994 (WGS84) (X) 389765.22 (Y) 3323553.78 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_335.jsf</li> <li>Range to target: 32.27 Meters</li> <li>Line Name: Mob_335</li> <li>Heading: 324.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

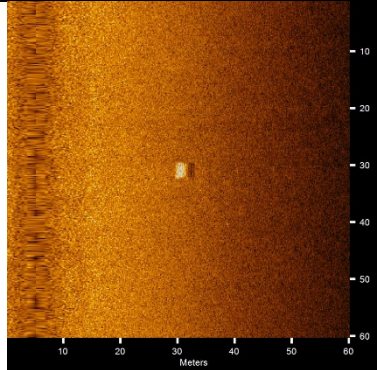
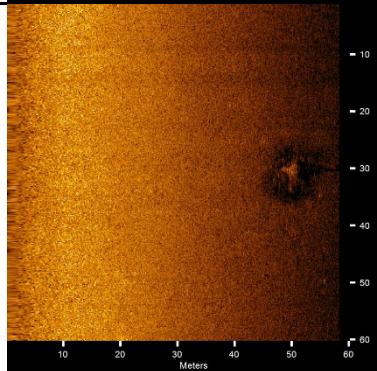
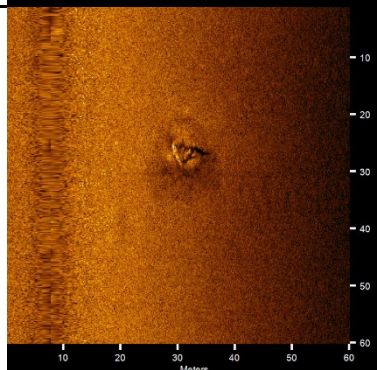
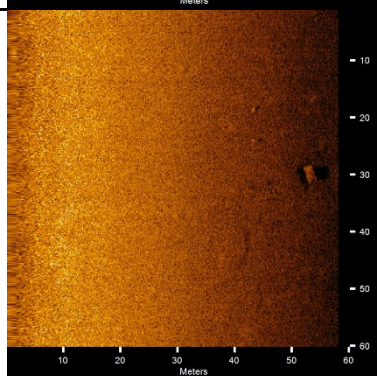
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	<p><b>MOB.S0022</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0373248482 -88.1480414023 (WGS84) (X) 389311.8 (Y) 3323476.4 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_335.jsf</li> <li>Range to target: 46.61 Meters</li> <li>Line Name: Mob_335</li> <li>Heading: 318.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.9 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 2.2 Meters</li> <li>Target Shadow: 2.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0023</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0373230418 -88.148041588975 (WGS84) (X) 389311.78 (Y) 3323476.2 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_335.jsf</li> <li>Range to target: 46.82 Meters</li> <li>Line Name: Mob_335</li> <li>Heading: 318.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0024</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0361362416 -88.1179649126 (WGS84) (X) 392210.52 (Y) 3323315.97 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_332.jsf</li> <li>Range to target: 51.35 Meters</li> <li>Line Name: Mob_332</li> <li>Heading: 304.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.7 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 5.9 Meters</li> <li>Target Shadow: 1.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

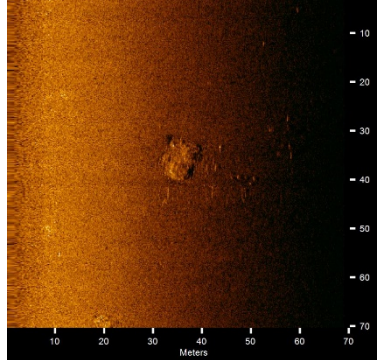
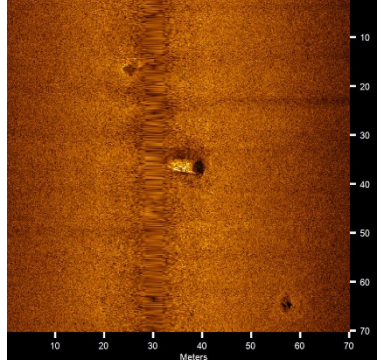
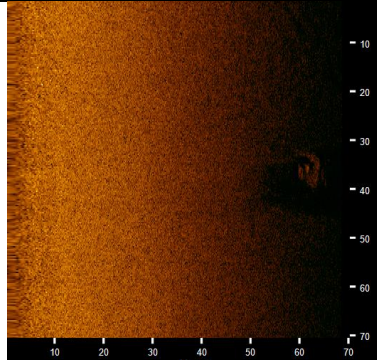
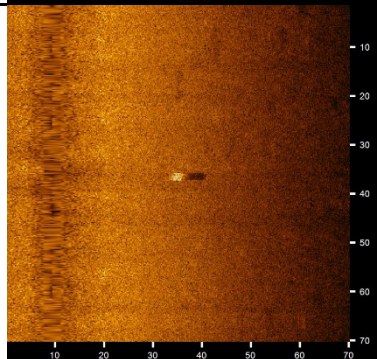
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	<p><b>MOB.S0025</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0360826359 -88.118071651 (WGS84) (X) 392200.17 (Y) 3323310.13 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_330.jsf</li> <li>Range to target: 46.01 Meters</li> <li>Line Name: MOB_330</li> <li>Heading: 304.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.0 Meters</li> <li>Target Height: 1.7 Meters</li> <li>Target Length: 5.4 Meters</li> <li>Target Shadow: 6.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0026</b></p> <ul style="list-style-type: none"> <li>Click Position 30.033722638 -88.1589767103 (WGS84) (X) 388253.36 (Y) 3323087.83 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_327.jsf</li> <li>Range to target: 36.17 Meters</li> <li>Line Name: MOB_327</li> <li>Heading: 57.790 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0027</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0324555695 -88.1570255620 (WGS84) (X) 388440.08 (Y) 3322945.51 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_323.jsf</li> <li>Range to target: 24.27 Meters</li> <li>Line Name: Mob_323</li> <li>Heading: 326.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.3 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 1.7 Meters</li> <li>Target Shadow: 0.9 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0028</b></p> <ul style="list-style-type: none"> <li>Click Position 30.03154343 -88.15026862 (WGS84) (X) 389090.61 (Y) 3322837.86 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_321.jsf</li> <li>Range to target: 18.25 Meters</li> <li>Line Name: MOB_321</li> <li>Heading: 290.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.7 Meters</li> <li>Target Height: 1.1 Meters</li> <li>Target Length: 2.1 Meters</li> <li>Target Shadow: 1.7 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>

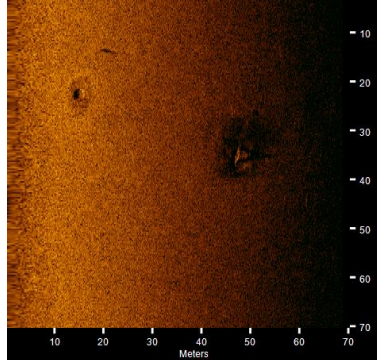
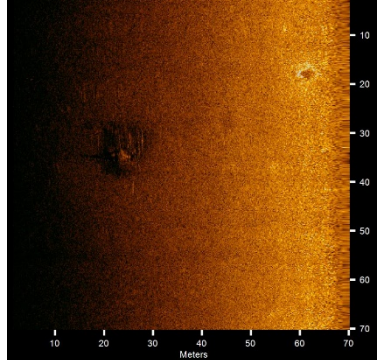
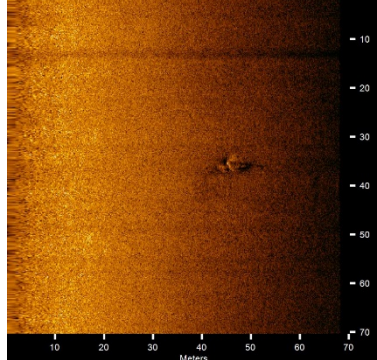
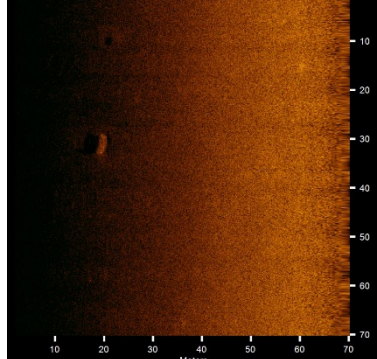
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	<p><b>MOB.S0029</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0315415849 -88.1502731603 (WGS84) (X) 389090.17 (Y) 3322837.66 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_321.jsf</li> <li>Range to target: 18.06 Meters</li> <li>Line Name: MOB_321</li> <li>Heading: 290.790 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0030</b></p> <ul style="list-style-type: none"> <li>Click Position 30.030401476 -88.1467036621 (WGS84) (X) 389433.1 (Y) 3322707.86 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_318.jsf</li> <li>Range to target: 44.22 Meters</li> <li>Line Name: MOB_318</li> <li>Heading: 42.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.1 Meters</li> <li>Target Height: 0.3 Meters</li> <li>Target Length: 4.6 Meters</li> <li>Target Shadow: 0.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0031</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0290795327 -88.1354128099 (WGS84) (X) 390520.4 (Y) 3322550.51 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_315.jsf</li> <li>Range to target: 30.83 Meters</li> <li>Line Name: MOB_315</li> <li>Heading: 77.900 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0032</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0290792433 -88.135414984 (WGS84) (X) 390520.19 (Y) 3322550.48 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_315.jsf</li> <li>Range to target: 30.80 Meters</li> <li>Line Name: MOB_315</li> <li>Heading: 78.300 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.8 Meters</li> <li>Target Height: 0.8 Meters</li> <li>Target Length: 2.5 Meters</li> <li>Target Shadow: 2.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>

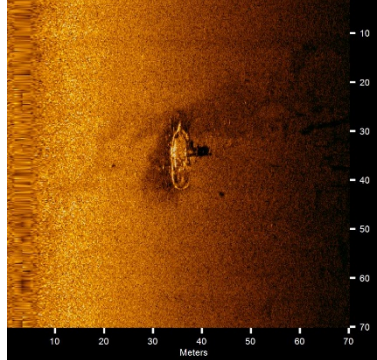
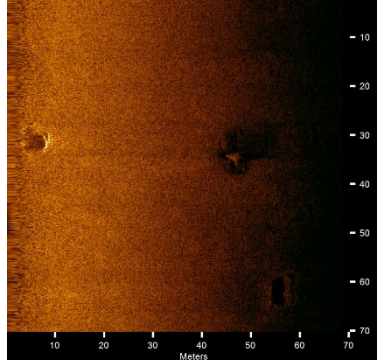
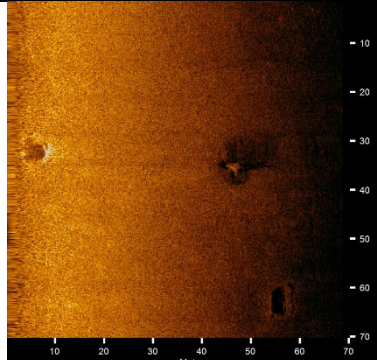
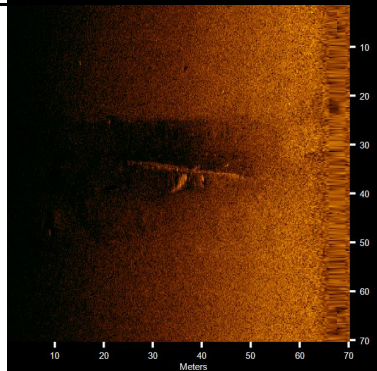
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	<p><b>MOB.S0033</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0276777035 -88.1552418810 (WGS84) (X) 388606.73 (Y) 3322414.29 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_312.jsf</li> <li>Range to target: 49.82 Meters</li> <li>Line Name: MOB_312</li> <li>Heading: 29.390 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 7.8 Meters</li> <li>Target Height: 0.7 Meters</li> <li>Target Length: 20.7 Meters</li> <li>Target Shadow: 2.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: unknown</li> <li>Classification2:</li> <li>Description: Large unknown contact</li> </ul>
	<p><b>MOB.S0034</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0254766047 -88.1717675299 (WGS84) (X) 387010.65 (Y) 3322186.56 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_308.001.jsf</li> <li>Range to target: 22.03 Meters</li> <li>Line Name: Mob_308.001</li> <li>Heading: 304.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.8 Meters</li> <li>Target Height: 0.9 Meters</li> <li>Target Length: 3.2 Meters</li> <li>Target Shadow: 1.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0035</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0254700107 -88.1717682819 (WGS84) (X) 387010.57 (Y) 3322185.83 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_308.001.jsf</li> <li>Range to target: 21.28 Meters</li> <li>Line Name: Mob_308.001</li> <li>Heading: 304.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.3 Meters</li> <li>Target Height: 2.2 Meters</li> <li>Target Length: 3.1 Meters</li> <li>Target Shadow: 3.7 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Debris</li> <li>Classification2: CONF 2</li> <li>Description:</li> </ul>
	<p><b>MOB.S0036</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0253176867 -88.1610918521 (WGS84) (X) 388039.96 (Y) 3322158.46 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_308.jsf</li> <li>Range to target: 8.27 Meters</li> <li>Line Name: Mob_308</li> <li>Heading: 304.700 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

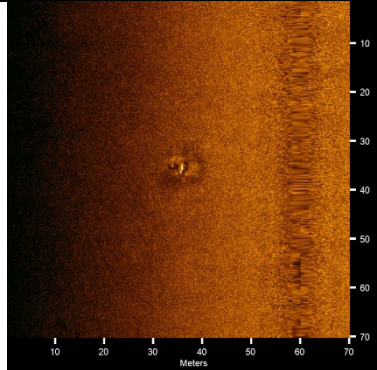
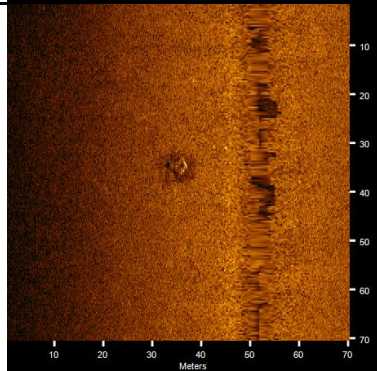
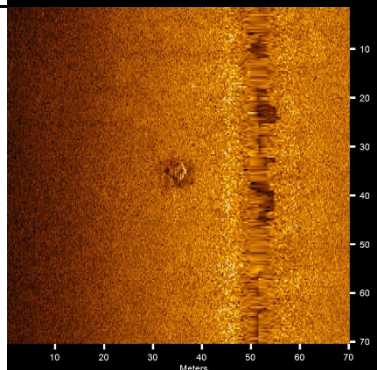
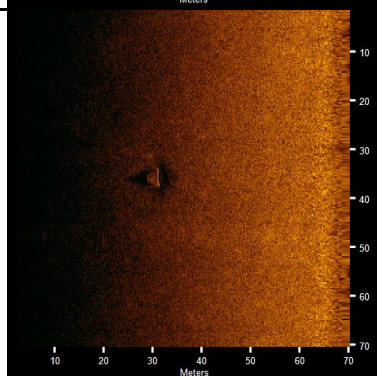
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	<p><b>MOB.S0038</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0228204608 -88.1198900339 (WGS84) (X) 392010.46 (Y) 3321842.14 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_302.jsf</li> <li>Range to target: 24.66 Meters</li> <li>Line Name: Mob_302</li> <li>Heading: 301.890 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 27.0 Meters</li> <li>Target Height: 2.5 Meters</li> <li>Target Length: 56.9 Meters</li> <li>Target Shadow: 4.9 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: wreck</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0039</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0218717946 -88.1370092923 (WGS84) (X) 390358.52 (Y) 3321753.28 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_299.001.jsf</li> <li>Range to target: 31.00 Meters</li> <li>Line Name: Mob_299.001</li> <li>Heading: 322.890 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 5.9 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 33.8 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: pipeline crossing</li> </ul>
	<p><b>MOB.S0040</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0179860695 -88.1877023678 (WGS84) (X) 385465.39 (Y) 3321372.29 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_293.jsf</li> <li>Range to target: 51.49 Meters</li> <li>Line Name: Mob_293</li> <li>Heading: 221.390 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 6.7 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 5.7 Meters</li> <li>Target Shadow: 1.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

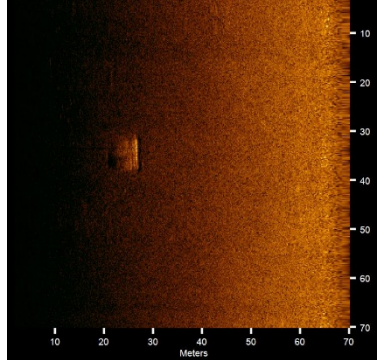
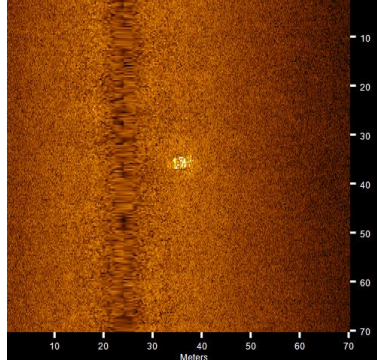
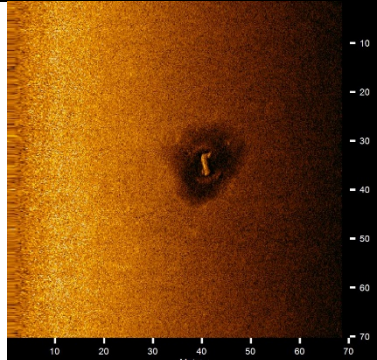
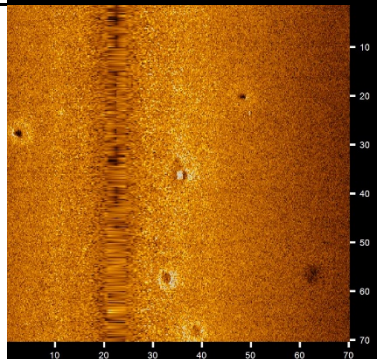
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	<p><b>MOB.S0041</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0158804442 -88.1440141015 (WGS84) (X) 389676.37 (Y) 3321096.05 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_287.001.jsf</li> <li>Range to target: 25.72 Meters</li> <li>Line Name: Mob 287.001</li> <li>Heading: 265.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.8 Meters</li> <li>Target Height: 0.7 Meters</li> <li>Target Length: 2.9 Meters</li> <li>Target Shadow: 1.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0042</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0154164982 -88.1718810811 (WGS84) (X) 386988.29 (Y) 3321071.81 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_287.jsf</li> <li>Range to target: 50.11 Meters</li> <li>Line Name: Mob_287</li> <li>Heading: 272.890 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.9 Meters</li> <li>Target Height: 1.7 Meters</li> <li>Target Length: 6.1 Meters</li> <li>Target Shadow: 6.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0043</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0151042165 -88.1215927843 (WGS84) (X) 391837.88 (Y) 3320988.64 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_284.jsf</li> <li>Range to target: 22.30 Meters</li> <li>Line Name: Mob_284</li> <li>Heading: 96.090 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.0 Meters</li> <li>Target Height: 2.5 Meters</li> <li>Target Length: 6.0 Meters</li> <li>Target Shadow: 5.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0044</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0148815852 -88.1767844025 (WGS84) (X) 386514.79 (Y) 3321017.38 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_284.001.jsf</li> <li>Range to target: 53.00 Meters</li> <li>Line Name: Mob_284.001</li> <li>Heading: 265.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.6 Meters</li> <li>Target Height: 0.7 Meters</li> <li>Target Length: 2.8 Meters</li> <li>Target Shadow: 2.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

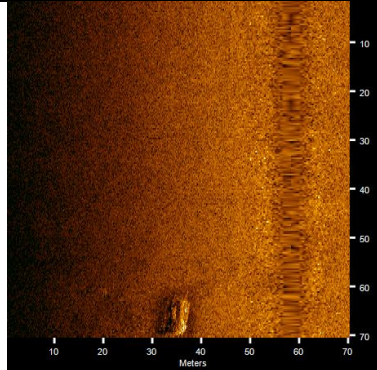
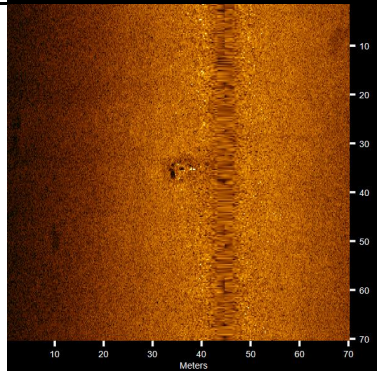
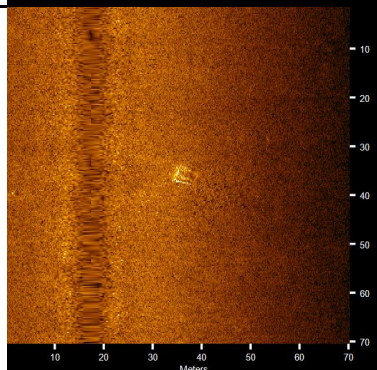
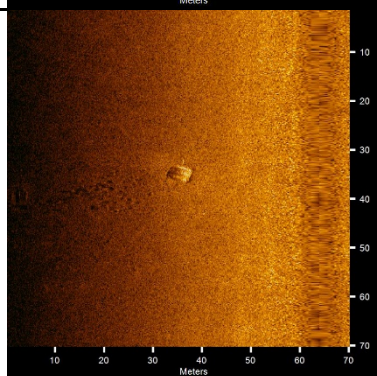
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	<p><b>MOB.S0045</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0132414869 -88.1264588969 (WGS84) (X) 391366.55 (Y) 3320786.82 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_281.001.jsf</li> <li>Range to target: 35.61 Meters</li> <li>Line Name: Mob_281.001</li> <li>Heading: 253.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 6.0 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 8.2 Meters</li> <li>Target Shadow: 1.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0046</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0093731120 -88.1376627870 (WGS84) (X) 390281.74 (Y) 3320368.81 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_272.jsf</li> <li>Range to target: 5.88 Meters</li> <li>Line Name: Mob_272</li> <li>Heading: 267.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.8 Meters</li> <li>Target Height: 4.3 Meters</li> <li>Target Length: 5.5 Meters</li> <li>Target Shadow: 2.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0047</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0082636047 -88.1155510039 (WGS84) (X) 392413.18 (Y) 3320224.88 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_268.jsf</li> <li>Range to target: 62.02 Meters</li> <li>Line Name: Mob_268</li> <li>Heading: 124.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.4 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 6.7 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Modern debris</li> </ul>
	<p><b>MOB.S0048</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0072869998 -88.1954607459 (WGS84) (X) 384704.79 (Y) 3320194.4 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_269.jsf</li> <li>Range to target: 25.52 Meters</li> <li>Line Name: Mob_269</li> <li>Heading: 232.190 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

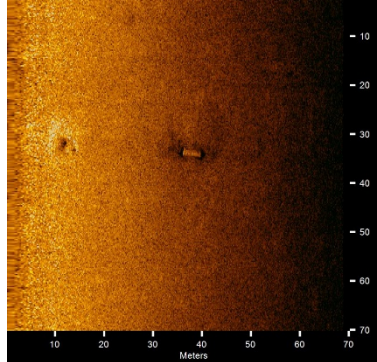
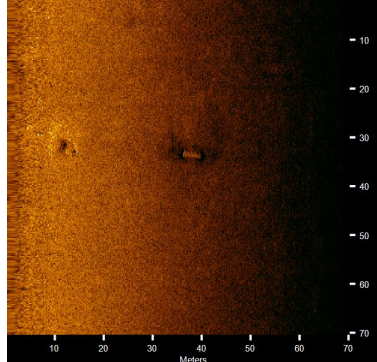
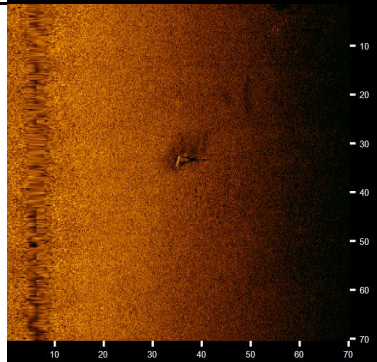
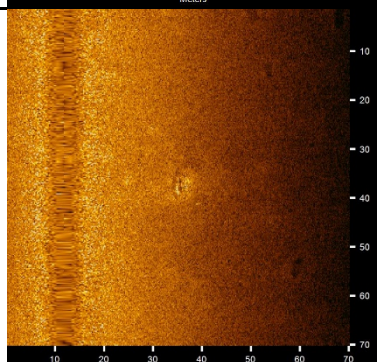
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	<p><b>MOB.S0049</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0054913449 -88.1754279705 (WGS84) (X) 386634.93 (Y) 3319975.41 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_265.jsf</li> <li>Range to target: 47.16 Meters</li> <li>Line Name: Mob 265</li> <li>Heading: 124.090 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.4 Meters</li> <li>Target Height: 1.2 Meters</li> <li>Target Length: 4.1 Meters</li> <li>Target Shadow: 4.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Modern Debris</li> </ul>
	<p><b>MOB.S0050</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0053992127 -88.1760745594 (WGS84) (X) 386572.46 (Y) 3319965.84 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_263.jsf</li> <li>Range to target: 46.61 Meters</li> <li>Line Name: Mob 263</li> <li>Heading: 154.800 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.5 Meters</li> <li>Target Height: 1.7 Meters</li> <li>Target Length: 3.1 Meters</li> <li>Target Shadow: 7.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0051</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0042589537 -88.1453697515 (WGS84) (X) 389532.75 (Y) 3319809.47 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_260.jsf</li> <li>Range to target: 45.62 Meters</li> <li>Line Name: Mob 260</li> <li>Heading: 298.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.0 Meters</li> <li>Target Height: 1.9 Meters</li> <li>Target Length: 3.1 Meters</li> <li>Target Shadow: 6.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0052</b></p> <ul style="list-style-type: none"> <li>Click Position 30.0006946085 -88.1435204355 (WGS84) (X) 389707.18 (Y) 3319412.69 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_254.jsf</li> <li>Range to target: 50.74 Meters</li> <li>Line Name: Mob 254</li> <li>Heading: 236.690 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.1 Meters</li> <li>Target Height: 0.8 Meters</li> <li>Target Length: 4.3 Meters</li> <li>Target Shadow: 2.7 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>

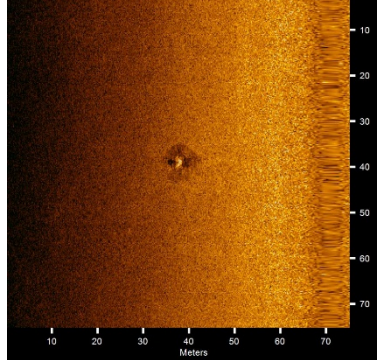
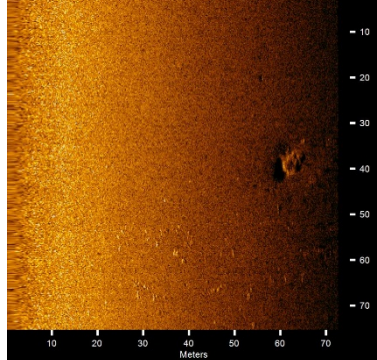
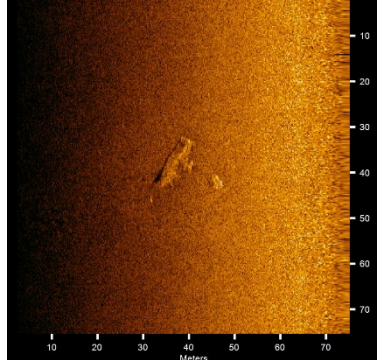
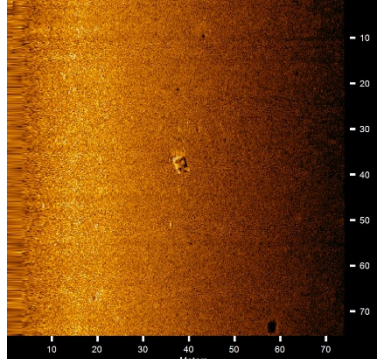
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	<p><b>MOB.S0054</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9992463932 -88.1669947081 (WGS84) (X) 387441.29 (Y) 3319275.03 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_251.jsf</li> <li>Range to target: 46.61 Meters</li> <li>Line Name: Mob_251</li> <li>Heading: 200.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.9 Meters</li> <li>Target Height: 1.5 Meters</li> <li>Target Length: 4.0 Meters</li> <li>Target Shadow: 5.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0055</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9992457304 -88.1669982252 (WGS84) (X) 387440.95 (Y) 3319274.96 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_251.jsf</li> <li>Range to target: 46.67 Meters</li> <li>Line Name: Mob_251</li> <li>Heading: 202.800 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0056</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9988176122 -88.1716040890 (WGS84) (X) 386996.19 (Y) 3319232.05 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_250.jsf</li> <li>Range to target: 32.37 Meters</li> <li>Line Name: Mob_250</li> <li>Heading: 129.300 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 5.1 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 23.6 Meters</li> <li>Target Shadow: 1.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Linear feature</li> <li>Classification2:</li> <li>Description: Modern debris at pipeline crossing</li> </ul>

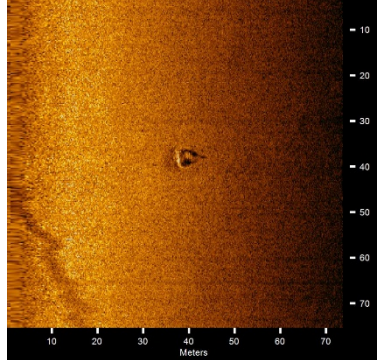
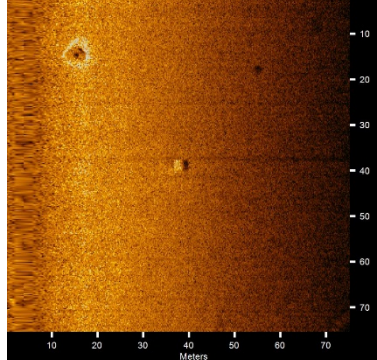
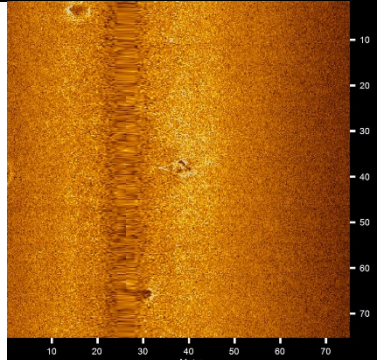
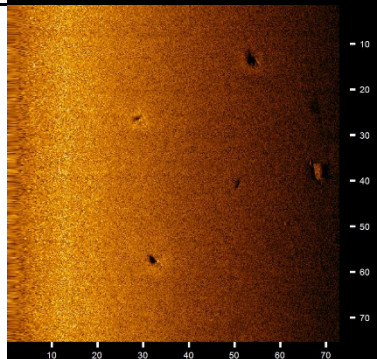
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	<p><b>MOB.S0058</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9967590336 -88.1675323620 (WGS84) (X) 387386.62 (Y) 3318999.91 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_245.jsf</li> <li>Range to target: 16.14 Meters</li> <li>Line Name: Mob_245</li> <li>Heading: 232.800 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.4 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 4.2 Meters</li> <li>Target Shadow: 0.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0059</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9967577383 -88.1675359753 (WGS84) (X) 387386.27 (Y) 3318999.77 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_245.jsf</li> <li>Range to target: 16.28 Meters</li> <li>Line Name: Mob_245</li> <li>Heading: 232.890 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
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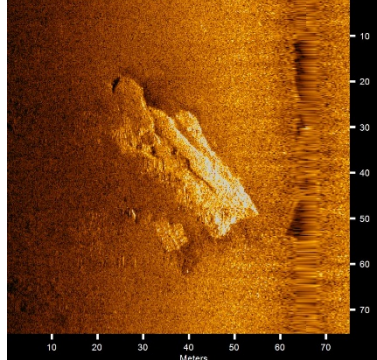
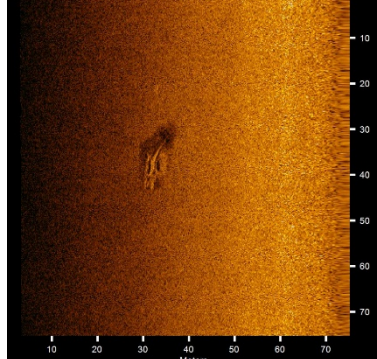
Target Image	Target Info	User Entered Info
	<p><b>MOB.S0061</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9927548877 -88.1796572814 (WGS84) (X) 386212.47 (Y) 3318568.15 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_235.jsf</li> <li>Range to target: 45.68 Meters</li> <li>Line Name: Mob 235</li> <li>Heading: 123.800 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.8 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 6.4 Meters</li> <li>Target Shadow: 1.3 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0062</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9926941862 -88.1793923228 (WGS84) (X) 386237.96 (Y) 3318561.16 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_236.jsf</li> <li>Range to target: 11.26 Meters</li> <li>Line Name: Mob_236</li> <li>Heading: 177.690 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0063</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9920732518 -88.1183309999 (WGS84) (X) 392127.54 (Y) 3318433.30 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_234.001.jsf</li> <li>Range to target: 40.21 Meters</li> <li>Line Name: Mob_234.001</li> <li>Heading: 98.800 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.9 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 4.3 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0064</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9908661540 -88.1482699819 (WGS84) (X) 389238.14 (Y) 3318328.09 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_231.jsf</li> <li>Range to target: 13.06 Meters</li> <li>Line Name: Mob 231</li> <li>Heading: 270.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>MOB.S0065</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9904105424 -88.1142752990 (WGS84) (X) 392516.98 (Y) 3318245.23 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_232.jsf</li> <li>Range to target: 23.04 Meters</li> <li>Line Name: Mob 232</li> <li>Heading: 130.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.5 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 7.7 Meters</li> <li>Target Shadow: 0.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1:</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0066</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9898883856 -88.1601843192 (WGS84) (X) 388087.71 (Y) 3318231.3 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_229.jsf</li> <li>Range to target: 9.46 Meters</li> <li>Line Name: Mob_229</li> <li>Heading: 120.800 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.5 Meters</li> <li>Target Height: 0.9 Meters</li> <li>Target Length: 3.2 Meters</li> <li>Target Shadow: 0.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0067</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9897043538 -88.1528132770 (WGS84) (X) 388798.57 (Y) 3318203.74 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_229.jsf</li> <li>Range to target: 18.17 Meters</li> <li>Line Name: Mob_229</li> <li>Heading: 129.300 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 4.6 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0068</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9896672302 -88.1534354410 (WGS84) (X) 388738.51 (Y) 3318200.23 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_228.001.jsf</li> <li>Range to target: 27.92 Meters</li> <li>Line Name: Mob_228.001</li> <li>Heading: 96.900 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.9 Meters</li> <li>Target Height: 0.3 Meters</li> <li>Target Length: 4.3 Meters</li> <li>Target Shadow: 0.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

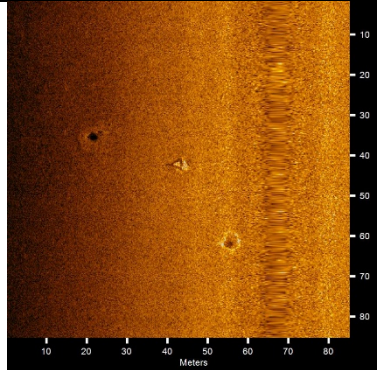
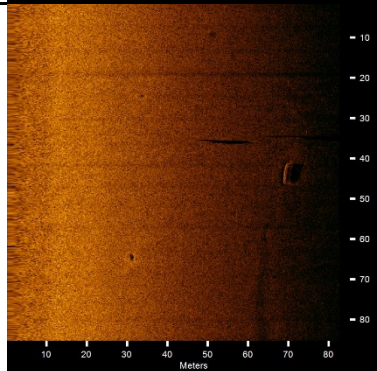
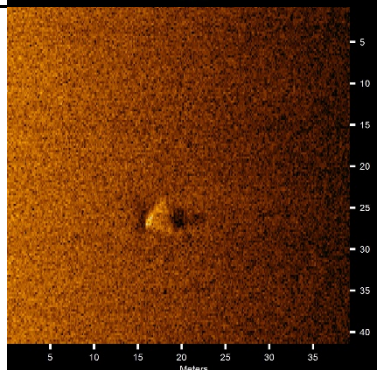
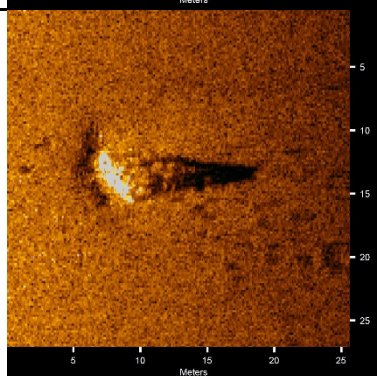
Target Image	Target Info	User Entered Info
	<p><b>MOB.S0069</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9874072614 -88.1377414743 (WGS84) (X) 390249.98 (Y) 3317934.65 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_224.jsf</li> <li>Range to target: 37.49 Meters</li> <li>Line Name: Mob_224</li> <li>Heading: 6.590 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0070</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9874030635 -88.1377469204 (WGS84) (X) 390249.45 (Y) 3317934.19 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_224.jsf</li> <li>Range to target: 37.95 Meters</li> <li>Line Name: Mob_224</li> <li>Heading: 6.900 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.2 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 3.6 Meters</li> <li>Target Shadow: 1.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0071</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9868258643 -88.1615325535 (WGS84) (X) 387954.21 (Y) 3317893.24 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_223.jsf</li> <li>Range to target: 29.08 Meters</li> <li>Line Name: Mob_223</li> <li>Heading: 225.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.5 Meters</li> <li>Target Height: 2.2 Meters</li> <li>Target Length: 2.7 Meters</li> <li>Target Shadow: 5.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0072</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9849194176 -88.1263547579 (WGS84) (X) 391345.74 (Y) 3317648.1 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_218.001.jsf</li> <li>Range to target: 23.32 Meters</li> <li>Line Name: Mob_218.001</li> <li>Heading: 359.390 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

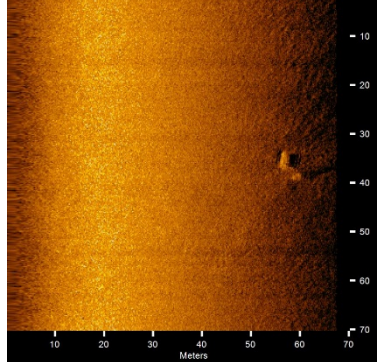
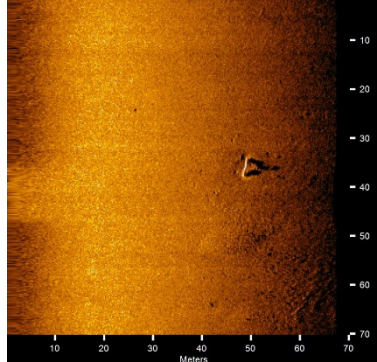
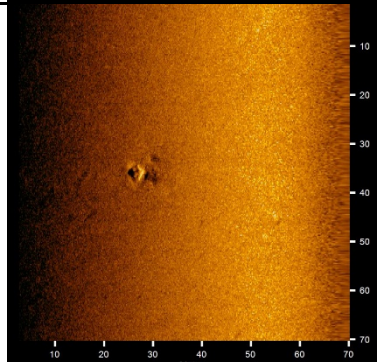
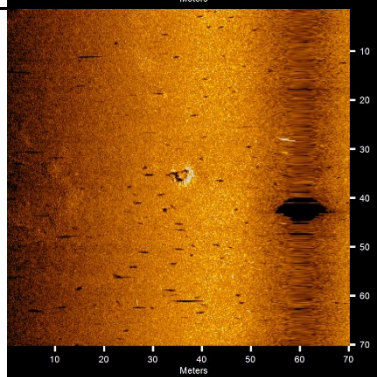
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	<p><b>MOB.S0073</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9827859906 -88.116970816 (WGS84) (X) 392248.72 (Y) 3317402.82 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_213.jsf</li> <li>Range to target: 33.21 Meters</li> <li>Line Name: Mob_213</li> <li>Heading: 274.790 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0074</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9803658465 -88.1932881843 (WGS84) (X) 384883.27 (Y) 3317208.81 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_210.jsf</li> <li>Range to target: 61.92 Meters</li> <li>Line Name: Mob_210</li> <li>Heading: 82.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.9 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 5.3 Meters</li> <li>Target Shadow: 1.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0075</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9765075282 -88.1187026986 (WGS84) (X) 392074.85 (Y) 3316708.68 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_198.001.jsf</li> <li>Range to target: 38.88 Meters</li> <li>Line Name: Mob_198.001</li> <li>Heading: 91.190 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.2 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 13.1 Meters</li> <li>Target Shadow: 1.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: unknown</li> <li>Classification2:</li> <li>Description: Unknown contact</li> </ul>
	<p><b>MOB.S0076</b></p> <ul style="list-style-type: none"> <li>Click Position 29.974863635 -88.1456522484 (WGS84) (X) 389472.94 (Y) 3316552.18 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_195.jsf</li> <li>Range to target: 36.30 Meters</li> <li>Line Name: Mob_195</li> <li>Heading: 273.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

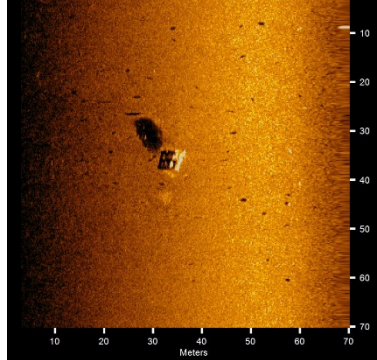
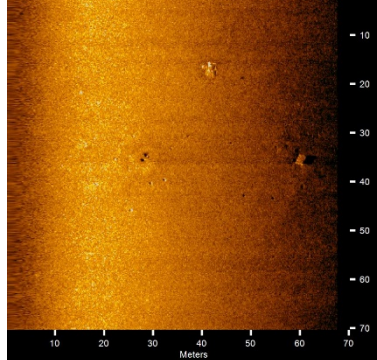
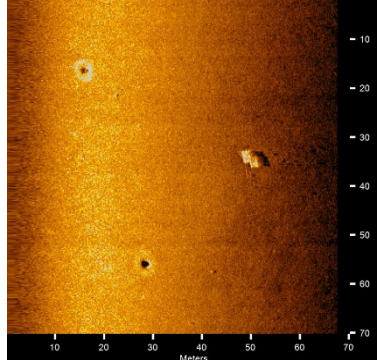
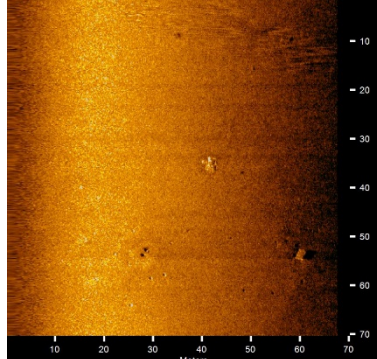
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	<p><b>MOB.S0078</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9730140335 -88.132317539 (WGS84) (X) 390757.47 (Y) 3316334.43 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_192.001.jsf</li> <li>Range to target: 34.12 Meters</li> <li>Line Name: Mob_192.001</li> <li>Heading: 97.400 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0079</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9720412204 -88.1328902288 (WGS84) (X) 390701.15 (Y) 3316227.17 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_189.jsf</li> <li>Range to target: 8.75 Meters</li> <li>Line Name: Mob_189</li> <li>Heading: 272.700 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0080</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9693956421 -88.1843761514 (WGS84) (X) 385730.52 (Y) 3315984.18 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_183.001.jsf</li> <li>Range to target: 68.29 Meters</li> <li>Line Name: Mob_183.001</li> <li>Heading: 267.200 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

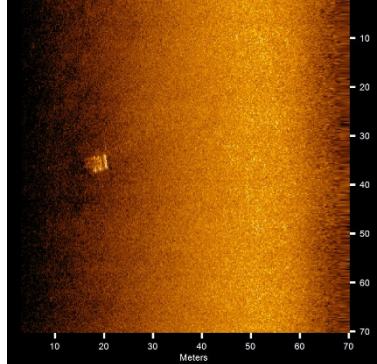
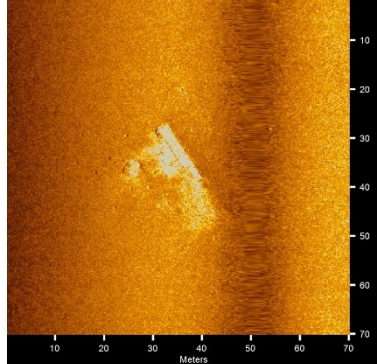
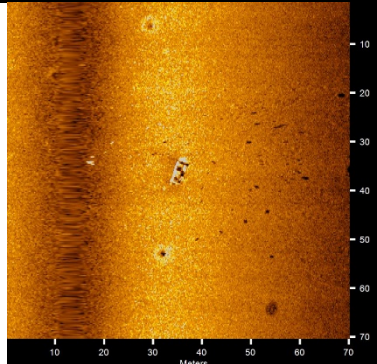
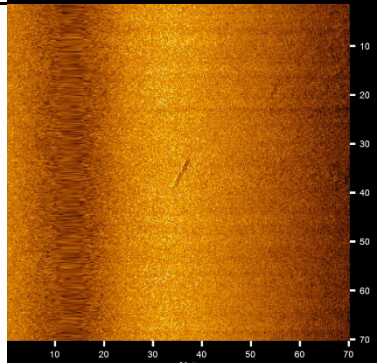
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	<p><b>MOB.S0081</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9664151969 -88.1172618097 (WGS84) (X) 392202.97 (Y) 3315588.91 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_177.jsf</li> <li>Range to target: 28.04 Meters</li> <li>Line Name: Mob_177</li> <li>Heading: 269.700 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0082</b></p> <ul style="list-style-type: none"> <li>Click Position 29.96328432 -88.1394038186 (WGS84) (X) 390063.05 (Y) 3315262.97 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_171.jsf</li> <li>Range to target: 53.90 Meters</li> <li>Line Name: Mob_171</li> <li>Heading: 269.200 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.3 Meters</li> <li>Target Height: 1.0 Meters</li> <li>Target Length: 30.3 Meters</li> <li>Target Shadow: 2.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: unknown</li> <li>Classification2:</li> <li>Description: Unknown large object</li> </ul>
	<p><b>MOB.S0083</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9597976551 -88.161535555 (WGS84) (X) 387923.58 (Y) 3314898.00 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_162.jsf</li> <li>Range to target: 27.20 Meters</li> <li>Line Name: Mob_162</li> <li>Heading: 88.690 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 23.1 Meters</li> <li>Target Height: 0.9 Meters</li> <li>Target Length: 41.5 Meters</li> <li>Target Shadow: 1.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: wreck</li> <li>Classification2: CONF 2</li> <li>Description: "Nail Wreck"</li> </ul>
	<p><b>MOB.S0084</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9554450851 -88.1212099905 (WGS84) (X) 391810.13 (Y) 3314376.94 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_153.jsf</li> <li>Range to target: 43.89 Meters</li> <li>Line Name: Mob_153</li> <li>Heading: 272.100 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.3 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 12.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>

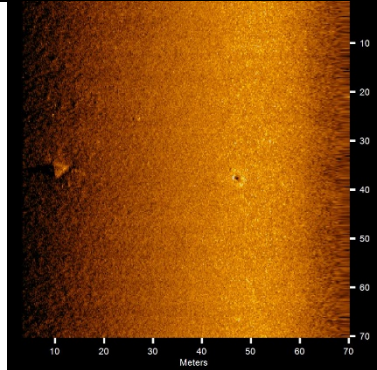
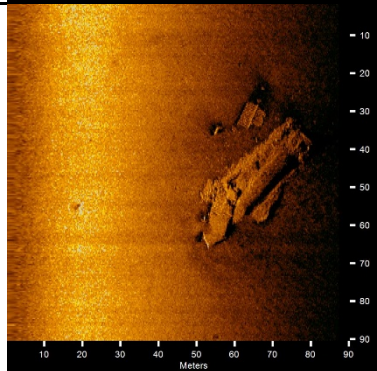
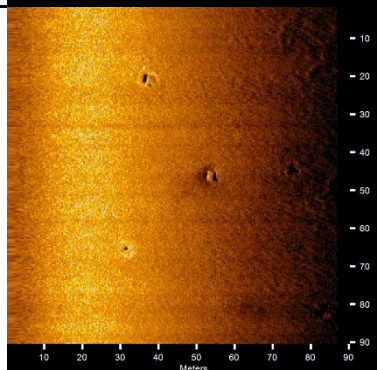
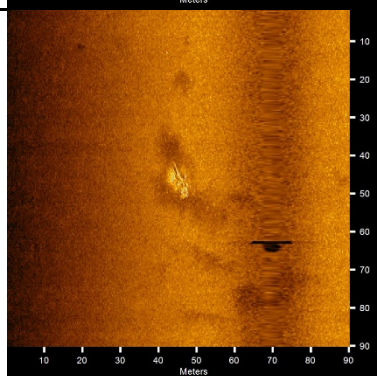
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	<p><b>MOB.S0085</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9507120344 -88.1863180336 (WGS84) (X) 385521.74 (Y) 3313915.61 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_144.jsf</li> <li>Range to target: 56.08 Meters</li> <li>Line Name: Mob_144</li> <li>Heading: 92.000 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.6 Meters</li> <li>Target Height: 1.2 Meters</li> <li>Target Length: 9.6 Meters</li> <li>Target Shadow: 3.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Unknown</li> </ul>
	<p><b>MOB.S0086</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9496111781 -88.1607199790 (WGS84) (X) 387990.86 (Y) 3313768.35 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\Mob_141.jsf</li> <li>Range to target: 51.28 Meters</li> <li>Line Name: Mob_141</li> <li>Heading: 275.290 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.3 Meters</li> <li>Target Height: 0.8 Meters</li> <li>Target Length: 4.9 Meters</li> <li>Target Shadow: 2.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0087</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9315151477 -88.1311225647 (WGS84) (X) 390827.43 (Y) 3311734.46 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_99.jsf</li> <li>Range to target: 17.34 Meters</li> <li>Line Name: MOB_99</li> <li>Heading: 267.100 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0088</b></p> <ul style="list-style-type: none"> <li>Click Position 29.916819290 -88.1960170410 (WGS84) (X) 384546.60 (Y) 3310169.36 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_67.005.jsf</li> <li>Range to target: 53.09 Meters</li> <li>Line Name: MOB_67.005</li> <li>Heading: 260.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.0 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 0.0 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

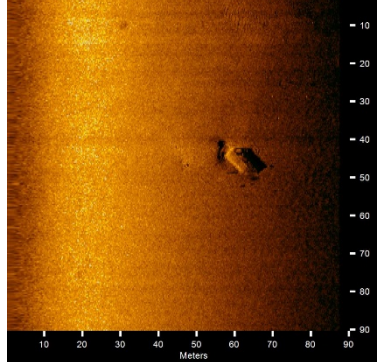
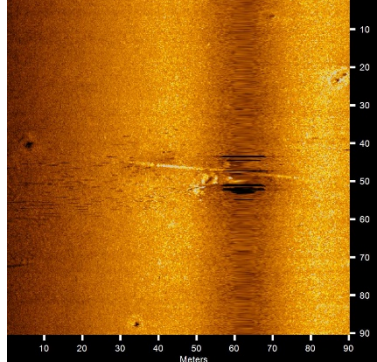
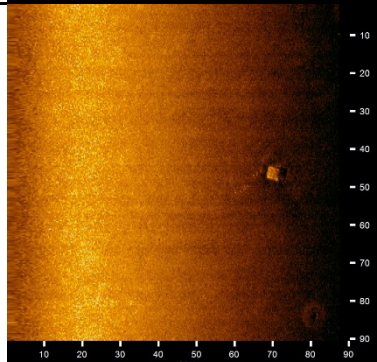
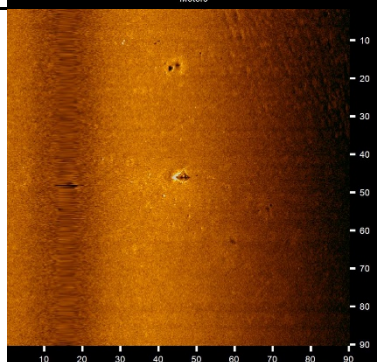
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	<p><b>MOB.S0090</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9092096896 -88.1037088909 (WGS84) (X) 393449.73 (Y) 3309236.88 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_48.001.jsf</li> <li>Range to target: 70.63 Meters</li> <li>Line Name: MOB_48.001</li> <li>Heading: 275.500 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.1 Meters</li> <li>Target Height: 0.7 Meters</li> <li>Target Length: 5.4 Meters</li> <li>Target Shadow: 2.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
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	<p><b>MOB.S0092</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8916829634 -88.0387706105 (WGS84) (X) 399701.57 (Y) 3307236.19 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: D:\Offshore Alabama\Offshore SS\MOB\MOB_10.003.jsf</li> <li>Range to target: 34.92 Meters</li> <li>Line Name: MOB_10.003</li> <li>Heading: 94.090 Degrees</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.9 Meters</li> <li>Target Height: 4.0 Meters</li> <li>Target Length: 5.1 Meters</li> <li>Target Shadow: 10.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: Debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

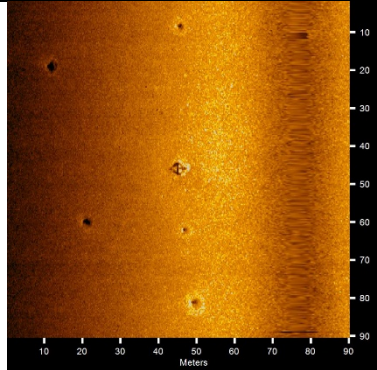
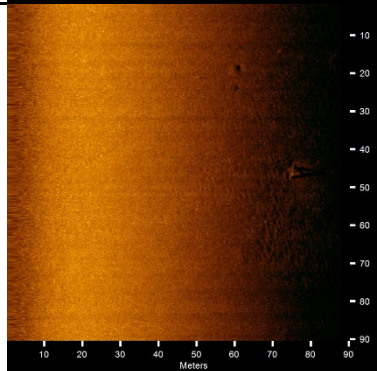
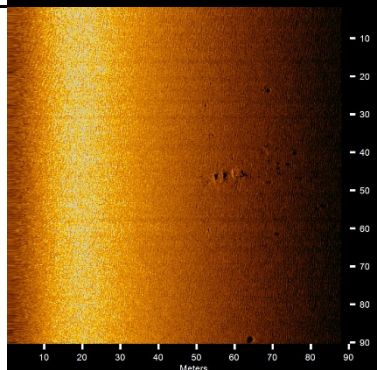
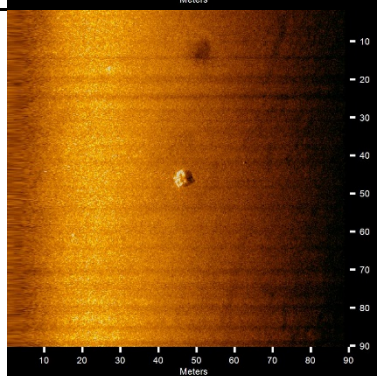
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	<p><b>MOB.S0094</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9849101208 -88.1443231121 (WGS84) (X) 389612.29 (Y) 3317664.24 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_217.jsf</li> <li>Heading: 276.800 Degrees</li> <li>Line Name: MOB_217</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.5 Meters</li> <li>Target Height: 2.1 Meters</li> <li>Target Length: 5.1 Meters</li> <li>Target Shadow: 5.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0095</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9828757838 -88.1168423562 (WGS84) (X) 392261.21 (Y) 3317412.65 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_212.003.jsf</li> <li>Heading: 75.600 Degrees</li> <li>Line Name: MOB_212.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.1 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 2.5 Meters</li> <li>Target Shadow: 0.9 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
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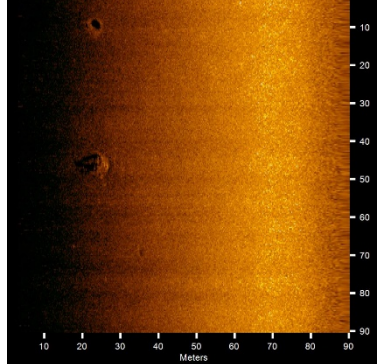
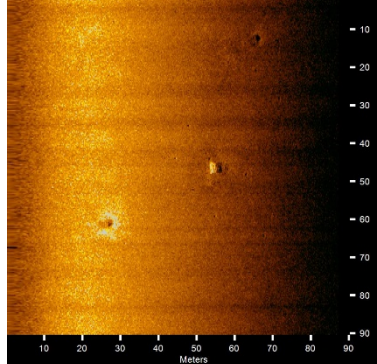
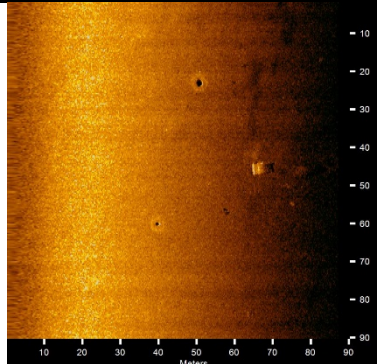
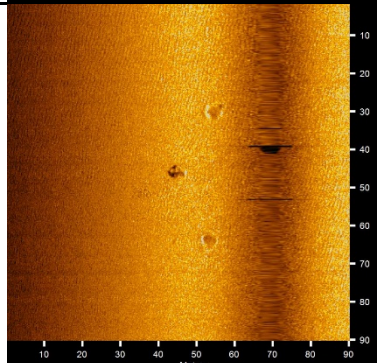
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	<p><b>MOB.S0098</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9796475385 -88.1398217140 (WGS84) (X) 390040.75 (Y) 3317076.72 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_205.001.jsf</li> <li>Heading: 278.800 Degrees</li> <li>Line Name: MOB_205.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.2 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 2.1 Meters</li> <li>Target Shadow: 1.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0099</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9796260396 -88.1338870982 (WGS84) (X) 390613.28 (Y) 3317068.66 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_205.001.jsf</li> <li>Heading: 279.500 Degrees</li> <li>Line Name: MOB_205.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.6 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 3.5 Meters</li> <li>Target Shadow: 1.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0100</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9794801964 -88.1396284623 (WGS84) (X) 390059.21 (Y) 3317057.99 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_205.001.jsf</li> <li>Heading: 279.090 Degrees</li> <li>Line Name: MOB_205.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.3 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 3.1 Meters</li> <li>Target Shadow: 0.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

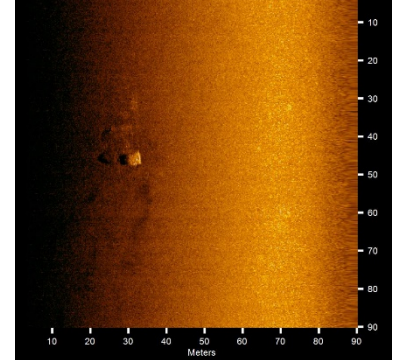
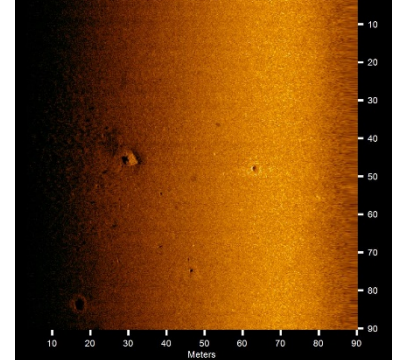
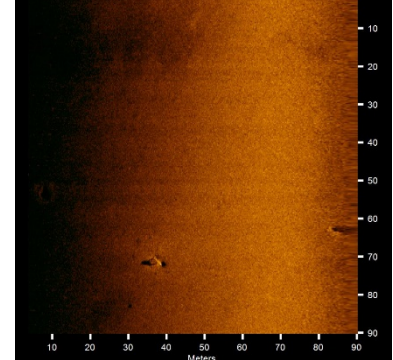
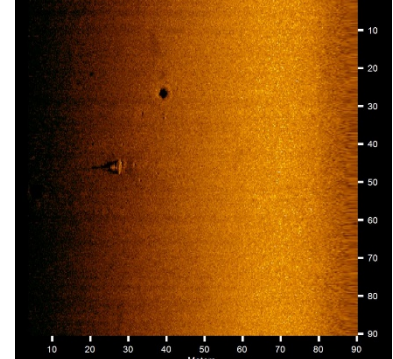
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	<p><b>MOB.S0102</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9764734169 -88.1188940665 (WGS84) (X) 392056.35 (Y) 3316705.08 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_199.jsf</li> <li>Heading: 278.300 Degrees</li> <li>Line Name: MOB_199</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 12.9 Meters</li> <li>Target Height: 0.7 Meters</li> <li>Target Length: 23.3 Meters</li> <li>Target Shadow: 0.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: unknown</li> <li>Classification2:</li> <li>Description: Unknown large contact</li> </ul>
	<p><b>MOB.S0103</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9748425184 -88.1455175764 (WGS84) (X) 389485.91 (Y) 3316549.71 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_196.002.jsf</li> <li>Heading: 73.390 Degrees</li> <li>Line Name: MOB_196.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.5 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 6.0 Meters</li> <li>Target Shadow: 0.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0104</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9725359418 -88.1897759126 (WGS84) (X) 385213.12 (Y) 3316337.58 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_191.003.jsf</li> <li>Heading: 275.400 Degrees</li> <li>Line Name: MOB_191.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.8 Meters</li> <li>Target Height: 1.0 Meters</li> <li>Target Length: 7.2 Meters</li> <li>Target Shadow: 1.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: linear</li> <li>Classification2:</li> <li>Description: unknown linear contact</li> </ul>

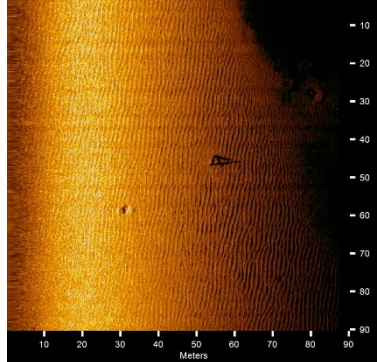
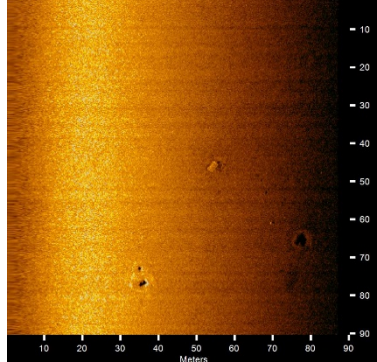
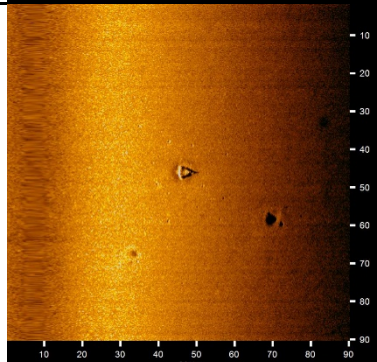
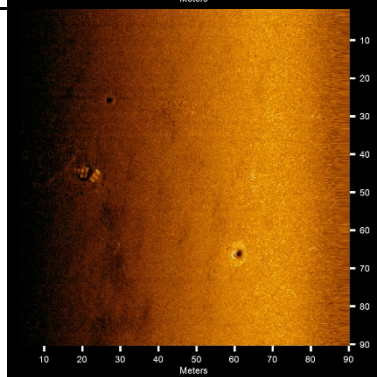
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	<p><b>MOB.S0105</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9667622813 -88.1248817838 (WGS84) (X) 391468.10 (Y) 3315634.56 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_176.003.jsf</li> <li>Heading: 76.290 Degrees</li> <li>Line Name: MOB_176.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.7 Meters</li> <li>Target Height: 1.8 Meters</li> <li>Target Length: 3.7 Meters</li> <li>Target Shadow: 5.7 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0106</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9598767945 -88.16160704 (WGS84) (X) 387916.77 (Y) 3314906.84 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_164.001.jsf</li> <li>Heading: 91.390 Degrees</li> <li>Line Name: MOB_164.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 26.7 Meters</li> <li>Target Height: 0.9 Meters</li> <li>Target Length: 40.2 Meters</li> <li>Target Shadow: 2.7 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: wreck</li> <li>Classification2:</li> <li>Description: Nail Wreck</li> </ul>
	<p><b>MOB.S0107</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9570813808 -88.1845261939 (WGS84) (X) 385701.95 (Y) 3314619.67 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_158.jsf</li> <li>Heading: 97.790 Degrees</li> <li>Line Name: MOB_158</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.5 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 2.7 Meters</li> <li>Target Shadow: 1.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0108</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9555928573 -88.1210977628 (WGS84) (X) 391821.12 (Y) 3314393.21 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_152.003.jsf</li> <li>Heading: 83.700 Degrees</li> <li>Line Name: MOB_152.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.9 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 10.4 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

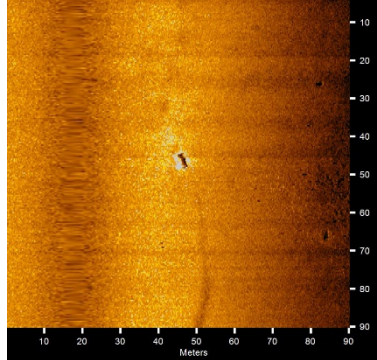
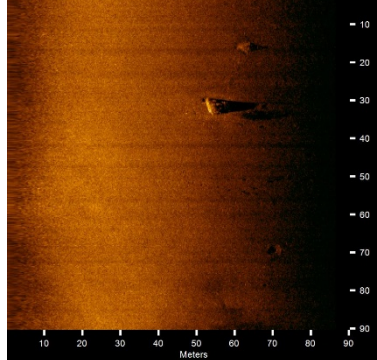
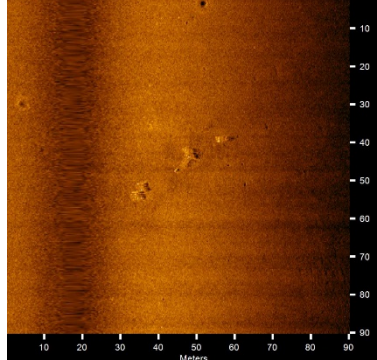
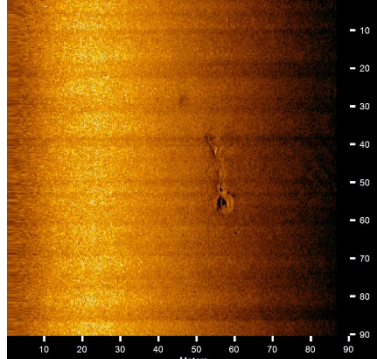
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	<p><b>MOB.S0110</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9426968832 -88.1661201807 (WGS84) (X) 387461.92 (Y) 3313007.40 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_125.002.jsf</li> <li>Heading: 274.800 Degrees</li> <li>Line Name: MOB_125.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.7 Meters</li> <li>Target Height: 1.0 Meters</li> <li>Target Length: 48.5 Meters</li> <li>Target Shadow: 0.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: linear</li> <li>Classification2:</li> <li>Description: Linear feature, pipeline?</li> </ul>
	<p><b>MOB.S0111</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9410360302 -88.1447458960 (WGS84) (X) 389522.98 (Y) 3312802.58 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_122.002.jsf</li> <li>Heading: 81.790 Degrees</li> <li>Line Name: MOB_122.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.1 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 3.7 Meters</li> <li>Target Shadow: 1.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0112</b></p> <ul style="list-style-type: none"> <li>Click Position 29.940629972 -88.1320514660 (WGS84) (X) 390747.73 (Y) 3312745.43 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_119.jsf</li> <li>Heading: 275.500 Degrees</li> <li>Line Name: MOB_119</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.1 Meters</li> <li>Target Height: 1.8 Meters</li> <li>Target Length: 3.6 Meters</li> <li>Target Shadow: 3.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

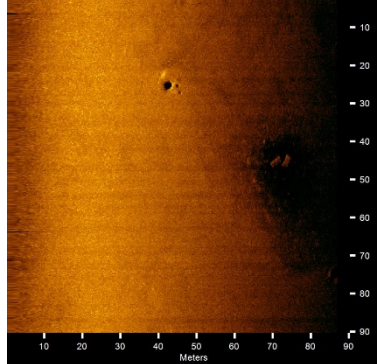
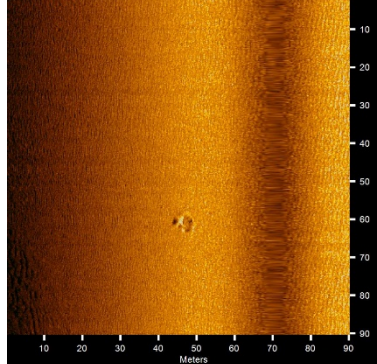
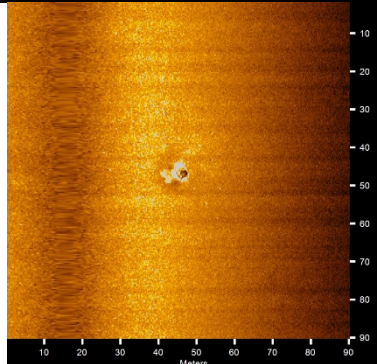
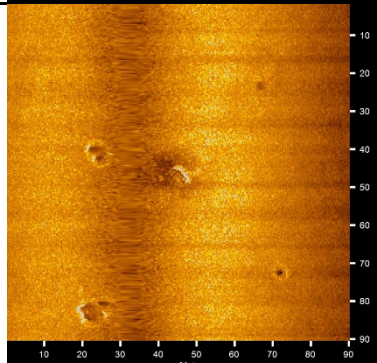
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	<p><b>MOB.S0114</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9383852884 -88.1248968137 (WGS84) (X) 391435.82 (Y) 3312489.89 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_113.jsf</li> <li>Heading: 274.300 Degrees</li> <li>Line Name: MOB_113</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.2 Meters</li> <li>Target Height: 1.6 Meters</li> <li>Target Length: 3.6 Meters</li> <li>Target Shadow: 6.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0115</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9383423297 -88.1154479017 (WGS84) (X) 392347.75 (Y) 3312476.23 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_113.jsf</li> <li>Heading: 275.300 Degrees</li> <li>Line Name: MOB_113</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.6 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 2.0 Meters</li> <li>Target Shadow: 1.3 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0116</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9324201825 -88.1558442968 (WGS84) (X) 388442.21 (Y) 3311858.52 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_101.002.jsf</li> <li>Heading: 273.500 Degrees</li> <li>Line Name: MOB_101.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.7 Meters</li> <li>Target Height: 1.0 Meters</li> <li>Target Length: 3.1 Meters</li> <li>Target Shadow: 2.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

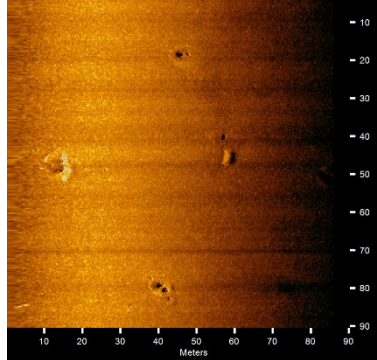
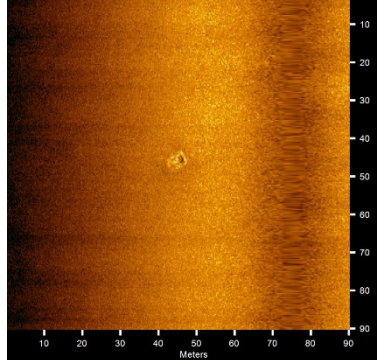
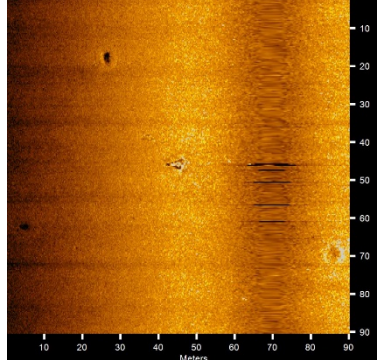
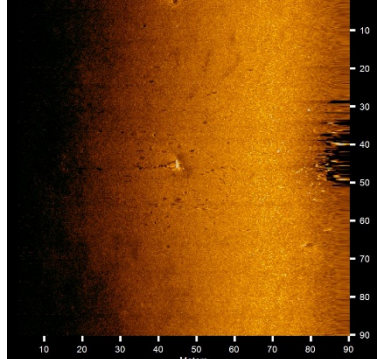
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	<p><b>MOB.S0118</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9305676479 -88.1189846261 (WGS84) (X) 391998.00 (Y) 3311617.98 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_98.003.jsf</li> <li>Heading: 81.500 Degrees</li> <li>Line Name: MOB_98.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.3 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 3.4 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
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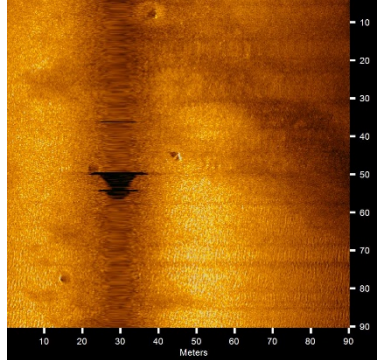
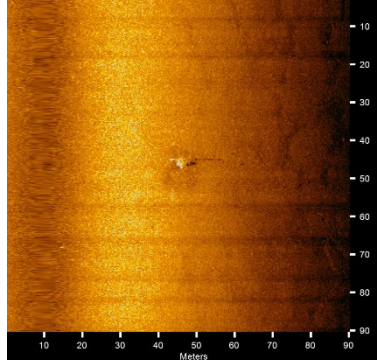
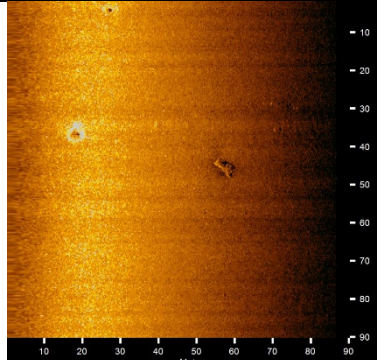
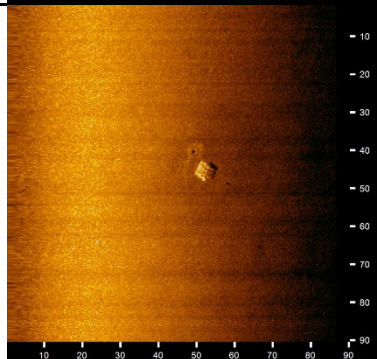
Target Image	Target Info	User Entered Info
	<p><b>MOB.S0121</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9235609436 -88.1324758810 (WGS84) (X) 390688.11 (Y) 3310854.28 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_83.001.jsf</li> <li>Heading: 275.090 Degrees</li> <li>Line Name: MOB_83.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.5 Meters</li> <li>Target Height: 0.8 Meters</li> <li>Target Length: 3.0 Meters</li> <li>Target Shadow: 2.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0122</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9235209261 -88.1368739053 (WGS84) (X) 390263.52 (Y) 3310854.04 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_83.001.jsf</li> <li>Heading: 276.090 Degrees</li> <li>Line Name: MOB_83.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.7 Meters</li> <li>Target Height: 0.6 Meters</li> <li>Target Length: 3.2 Meters</li> <li>Target Shadow: 1.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0123</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9178772585 -88.1332037861 (WGS84) (X) 390611.63 (Y) 3310225.12 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_68.002.jsf</li> <li>Heading: 70.390 Degrees</li> <li>Line Name: MOB_68.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.5 Meters</li> <li>Target Height: 0.9 Meters</li> <li>Target Length: 2.7 Meters</li> <li>Target Shadow: 2.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0124</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9155329787 -88.0991627377 (WGS84) (X) 393895.34 (Y) 3309933.40 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_62.004.jsf</li> <li>Heading: 79.500 Degrees</li> <li>Line Name: MOB_62.004</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.2 Meters</li> <li>Target Height: 1.7 Meters</li> <li>Target Length: 4.6 Meters</li> <li>Target Shadow: 5.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

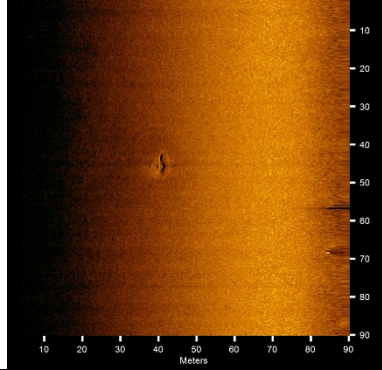
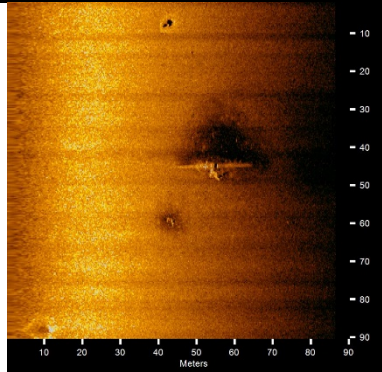
Target Image	Target Info	User Entered Info
	<p><b>MOB.S0125</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9142390946 -88.0770663326 (WGS84) (X) 396027.14 (Y) 3309769.81 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_59.002.jsf</li> <li>Heading: 275.900 Degrees</li> <li>Line Name: MOB_59.002</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.7 Meters</li> <li>Target Height: 2.5 Meters</li> <li>Target Length: 2.8 Meters</li> <li>Target Shadow: 7.3 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0126</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9140765743 -88.0931970590 (WGS84) (X) 394469.72 (Y) 3309766.51 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_59.003.jsf</li> <li>Heading: 275.590 Degrees</li> <li>Line Name: MOB_59.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.8 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 3.0 Meters</li> <li>Target Shadow: 1.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0127</b></p> <ul style="list-style-type: none"> <li>Click Position 29.913838148 -88.1063018849 (WGS84) (X) 393204.33 (Y) 3309752.20 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_59.003.jsf</li> <li>Heading: 274.190 Degrees</li> <li>Line Name: MOB_59.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.7 Meters</li> <li>Target Height: 2.2 Meters</li> <li>Target Length: 3.5 Meters</li> <li>Target Shadow: 4.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0128</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9102781148 -88.0940058624 (WGS84) (X) 394387.63 (Y) 3309346.32 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_53.003.jsf</li> <li>Heading: 275.900 Degrees</li> <li>Line Name: MOB_53.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.7 Meters</li> <li>Target Height: 0.3 Meters</li> <li>Target Length: 7.0 Meters</li> <li>Target Shadow: 1.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>MOB.S0129</b></p> <ul style="list-style-type: none"> <li>Click Position 29.909250586 -88.1029732038 (WGS84) (X) 393520.80 (Y) 3309240.73 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_50.003.jsf</li> <li>Heading: 76.700 Degrees</li> <li>Line Name: MOB_50.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.9 Meters</li> <li>Target Height: 0.9 Meters</li> <li>Target Length: 4.4 Meters</li> <li>Target Shadow: 1.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0130</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9063985110 -88.0397409125 (WGS84) (X) 399622.63 (Y) 3308867.75 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_41.jsf</li> <li>Heading: 277.590 Degrees</li> <li>Line Name: MOB_41</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.4 Meters</li> <li>Target Height: 4.6 Meters</li> <li>Target Length: 6.0 Meters</li> <li>Target Shadow: 12.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0131</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9040206170 -88.0811646084 (WGS84) (X) 395620.84 (Y) 3308641.15 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_38.005.jsf</li> <li>Heading: 66.100 Degrees</li> <li>Line Name: MOB_38.005</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.6 Meters</li> <li>Target Height: 0.7 Meters</li> <li>Target Length: 30.2 Meters</li> <li>Target Shadow: 0.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description: Cluster of debris</li> </ul>
	<p><b>MOB.S0132</b></p> <ul style="list-style-type: none"> <li>Click Position 29.903671698 -88.0924617797 (WGS84) (X) 394529.74 (Y) 3308612.80 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_38.004.jsf</li> <li>Heading: 76.500 Degrees</li> <li>Line Name: MOB_38.004</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.3 Meters</li> <li>Target Height: 0.3 Meters</li> <li>Target Length: 18.9 Meters</li> <li>Target Shadow: 0.6 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: linear</li> <li>Classification2:</li> <li>Description: Linear debris, possibly wire rope</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>MOB.S0133</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9028802708 -88.1583928710 (WGS84) (X) 388163.20 (Y) 3308587.44 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_35.007.jsf</li> <li>Heading: 272.800 Degrees</li> <li>Line Name: MOB_35.007</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.6 Meters</li> <li>Target Height: 0.2 Meters</li> <li>Target Length: 2.8 Meters</li> <li>Target Shadow: 0.8 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0134</b></p> <ul style="list-style-type: none"> <li>Click Position 29.9027061389 -88.0737144953 (WGS84) (X) 396338.78 (Y) 3308488.74 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_35.001.jsf</li> <li>Heading: 276.090 Degrees</li> <li>Line Name: MOB_35.001</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.7 Meters</li> <li>Target Height: 0.8 Meters</li> <li>Target Length: 4.9 Meters</li> <li>Target Shadow: 1.1 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0135</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8988732371 -88.0483584704 (WGS84) (X) 398783.03 (Y) 3308041.39 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_26.006.jsf</li> <li>Heading: 83.100 Degrees</li> <li>Line Name: MOB_26.006</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.5 Meters</li> <li>Target Height: 1.1 Meters</li> <li>Target Length: 1.7 Meters</li> <li>Target Shadow: 1.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0136</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8986827171 -88.0919083547 (WGS84) (X) 394577.92 (Y) 3308059.43 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_26.004.jsf</li> <li>Heading: 87.790 Degrees</li> <li>Line Name: MOB_26.004</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.7 Meters</li> <li>Target Height: 0.9 Meters</li> <li>Target Length: 5.5 Meters</li> <li>Target Shadow: 0.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>MOB.S0137</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8980984979 -88.1096544384 (WGS84) (X) 392863.83 (Y) 3308011.10 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_26.003.jsf</li> <li>Heading: 83.390 Degrees</li> <li>Line Name: MOB_26.003</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.4 Meters</li> <li>Target Height: 0.5 Meters</li> <li>Target Length: 4.3 Meters</li> <li>Target Shadow: 1.2 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0138</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8966250167 -88.055891709 (WGS84) (X) 398053.38 (Y) 3307798.91 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_20.006.jsf</li> <li>Heading: 72.890 Degrees</li> <li>Line Name: MOB_20.006</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.2 Meters</li> <li>Target Height: 1.2 Meters</li> <li>Target Length: 3.8 Meters</li> <li>Target Shadow: 1.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0139</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8963296295 -88.0904586636 (WGS84) (X) 394715.42 (Y) 3307797.34 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_20.004.jsf</li> <li>Heading: 84.890 Degrees</li> <li>Line Name: MOB_20.004</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.4 Meters</li> <li>Target Height: 2.8 Meters</li> <li>Target Length: 3.6 Meters</li> <li>Target Shadow: 3.3 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0140</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8945828931 -88.0547746698 (WGS84) (X) 398159.16 (Y) 3307571.62 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_17.jsf</li> <li>Heading: 275.090 Degrees</li> <li>Line Name: MOB_17</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 2.4 Meters</li> <li>Target Height: 1.8 Meters</li> <li>Target Length: 3.4 Meters</li> <li>Target Shadow: 3.9 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>MOB.S0141</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8940339491 -88.1841168091 (WGS84) (X) 385669.41 (Y) 3307632.42 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_17.008.jsf</li> <li>Heading: 272.300 Degrees</li> <li>Line Name: MOB_17.008</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 0.6 Meters</li> <li>Target Height: 3.1 Meters</li> <li>Target Length: 2.4 Meters</li> <li>Target Shadow: 2.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0142</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8926404533 -88.0484159512 (WGS84) (X) 398771.18 (Y) 3307350.75 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_11.jsf</li> <li>Heading: 276.590 Degrees</li> <li>Line Name: MOB_11</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.5 Meters</li> <li>Target Height: 2.2 Meters</li> <li>Target Length: 2.9 Meters</li> <li>Target Shadow: 4.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0143</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8902996028 -88.0726999842 (WGS84) (X) 396423.90 (Y) 3307112.98 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_08.005.jsf</li> <li>Heading: 71.390 Degrees</li> <li>Line Name: MOB_08.005</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.3 Meters</li> <li>Target Height: 0.6 Meters</li> <li>Target Length: 5.2 Meters</li> <li>Target Shadow: 1.5 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0144</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8889149308 -88.1883928377 (WGS84) (X) 385250.65 (Y) 3307069.40 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_05.008.jsf</li> <li>Heading: 271.590 Degrees</li> <li>Line Name: MOB_05.008</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 3.0 Meters</li> <li>Target Height: 0.6 Meters</li> <li>Target Length: 4.3 Meters</li> <li>Target Shadow: 1.4 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>

Target Image	Target Info	User Entered Info
	<p><b>MOB.S0145</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8879342426 -88.1945561225 (WGS84) (X) 384654.36 (Y) 3306966.89 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_05.009.jsf</li> <li>Heading: 270.500 Degrees</li> <li>Line Name: MOB_05.009</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 1.3 Meters</li> <li>Target Height: 0.4 Meters</li> <li>Target Length: 5.5 Meters</li> <li>Target Shadow: 0.9 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: debris</li> <li>Classification2:</li> <li>Description:</li> </ul>
	<p><b>MOB.S0146</b></p> <ul style="list-style-type: none"> <li>Click Position 29.8878285822 -88.0484053576 (WGS84) (X) 398767.34 (Y) 3306817.51 (Projected Coordinates)</li> <li>Map Projection: UTM84-16N</li> <li>Acoustic Source File: E:\MOB remain\JSF\MOB_02.006.jsf</li> <li>Heading: 78.000 Degrees</li> <li>Line Name: MOB_02.006</li> </ul>	<p><b>Dimensions and attributes</b></p> <ul style="list-style-type: none"> <li>Target Width: 4.6 Meters</li> <li>Target Height: 0.0 Meters</li> <li>Target Length: 20.9 Meters</li> <li>Target Shadow: 0.0 Meters</li> <li>Mag Anomaly:</li> <li>Avoidance Area:</li> <li>Classification1: pipeline</li> <li>Classification2:</li> <li>Description: Exposed section of pipeline</li> </ul>

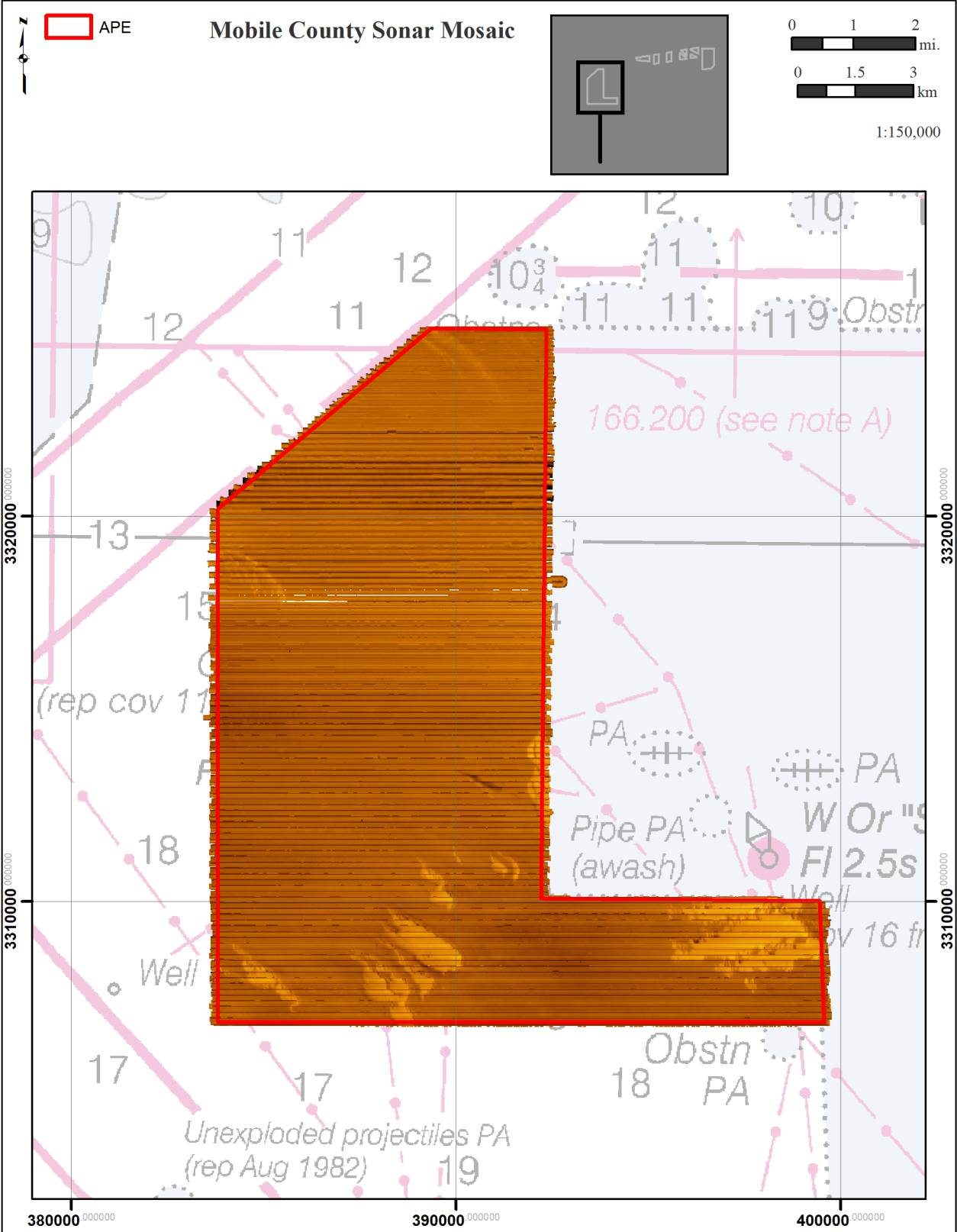


Figure O-1. Sonar Mosaic showing coverage for the MOB Cell (SAM-2018-01036-GAC).

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## **APPENDIX P: MOB MAGNETIC CONTOUR MAPS**

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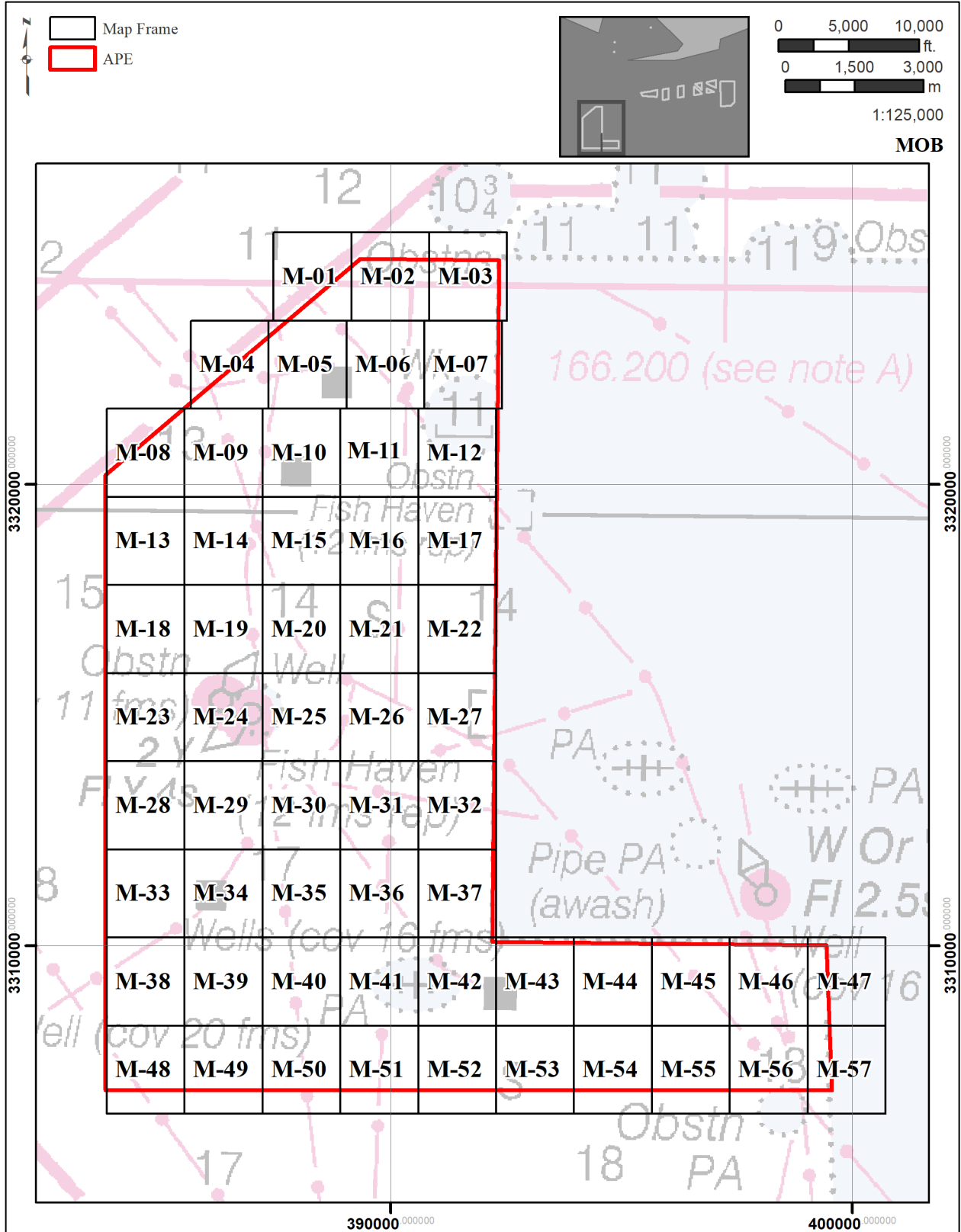


Figure P-01. Magnetic Contour Map Key for MOB (SAM-2014-00487-DEM).

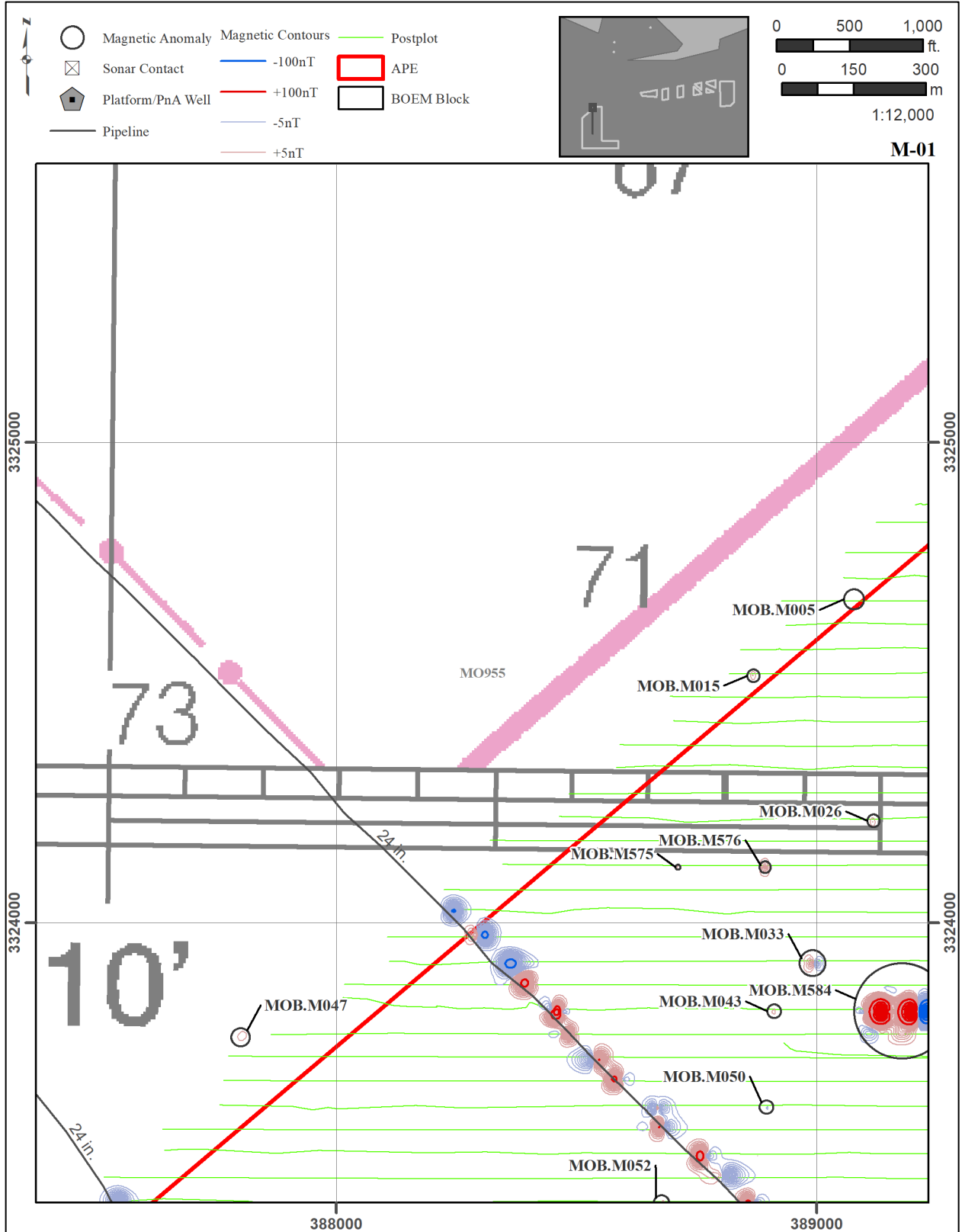


Figure P-02. MOB Map 1.

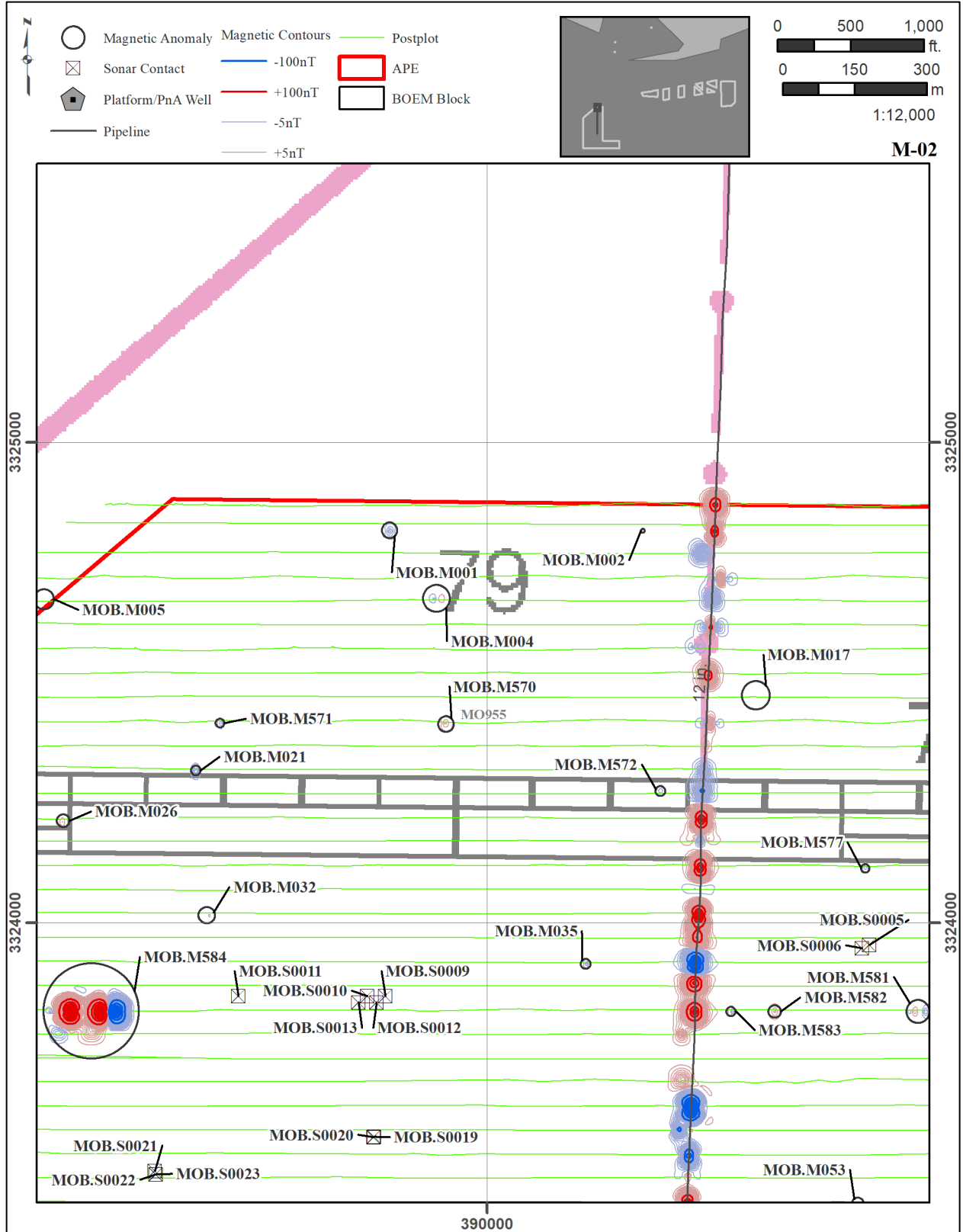


Figure P-03. MOB Map 2.

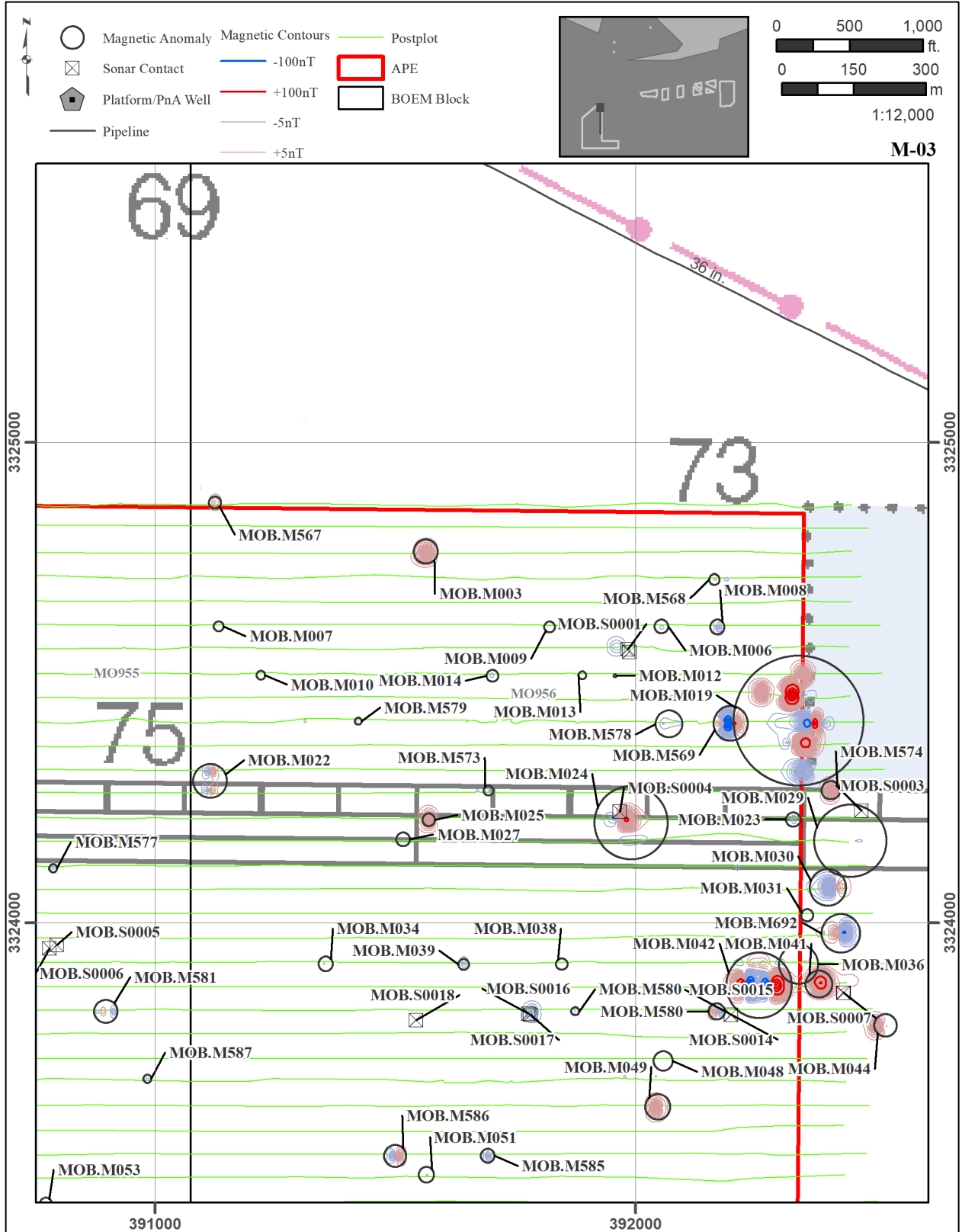


Figure P-04. MOB Map 3.

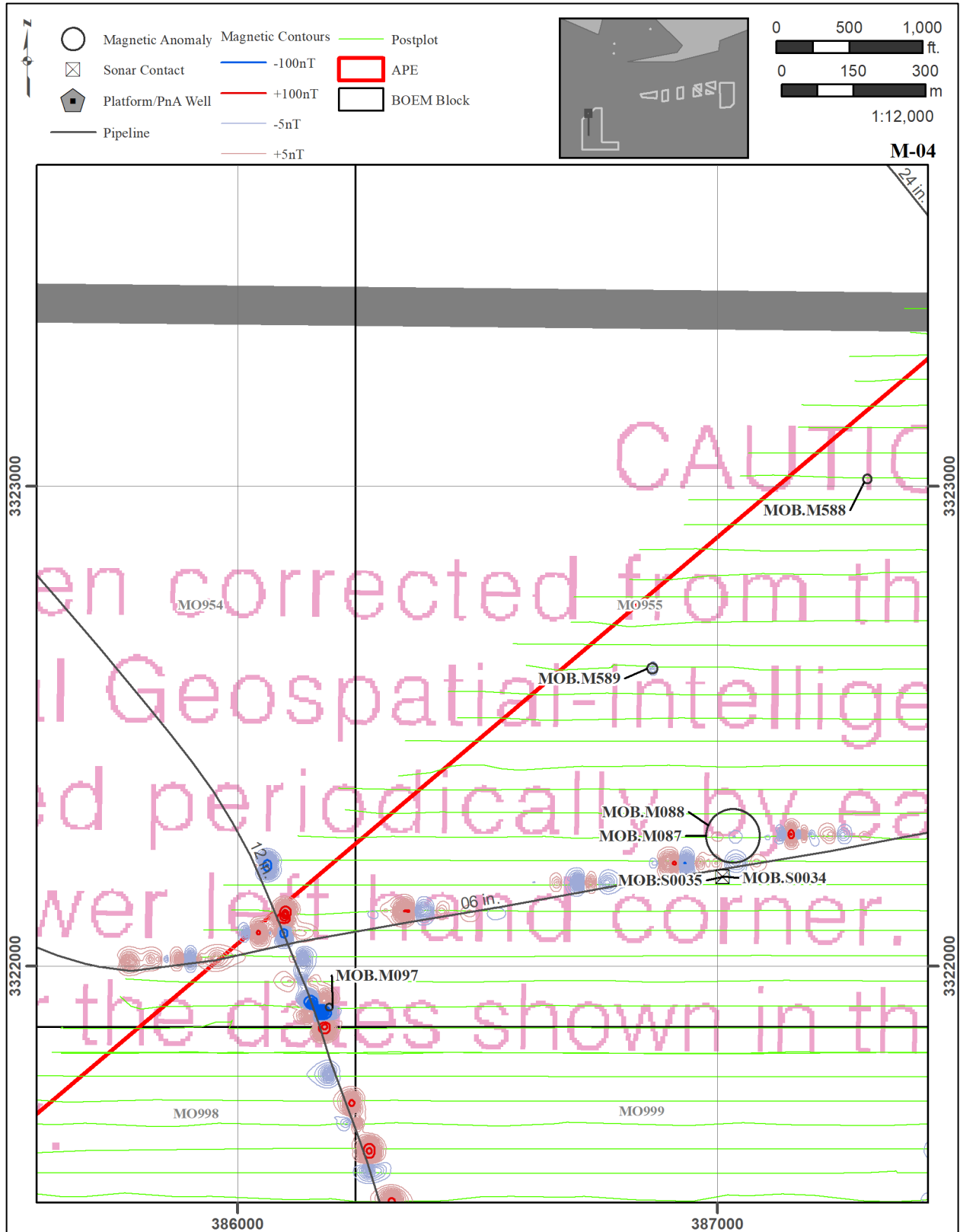


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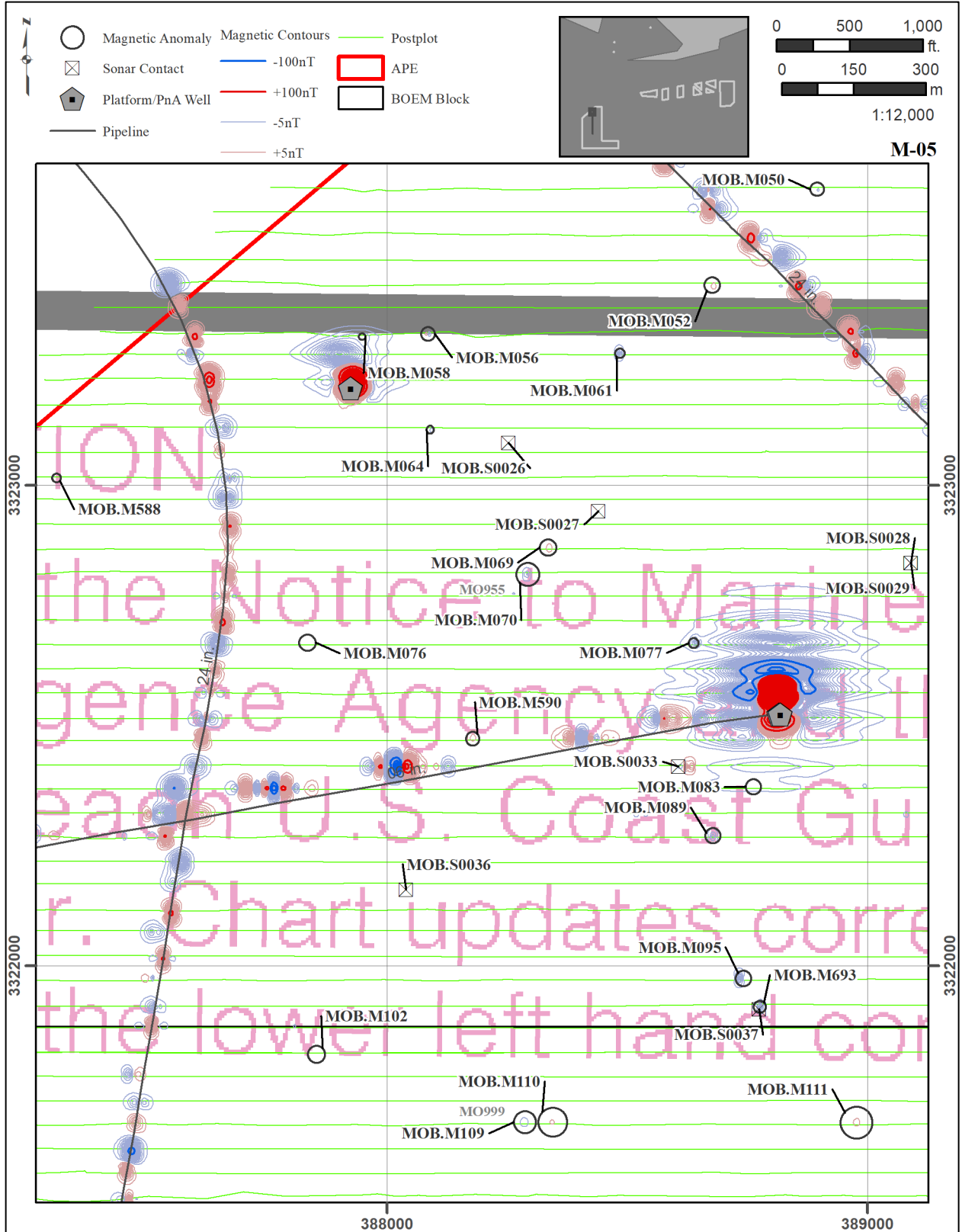


Figure P-06. MOB Map 5.

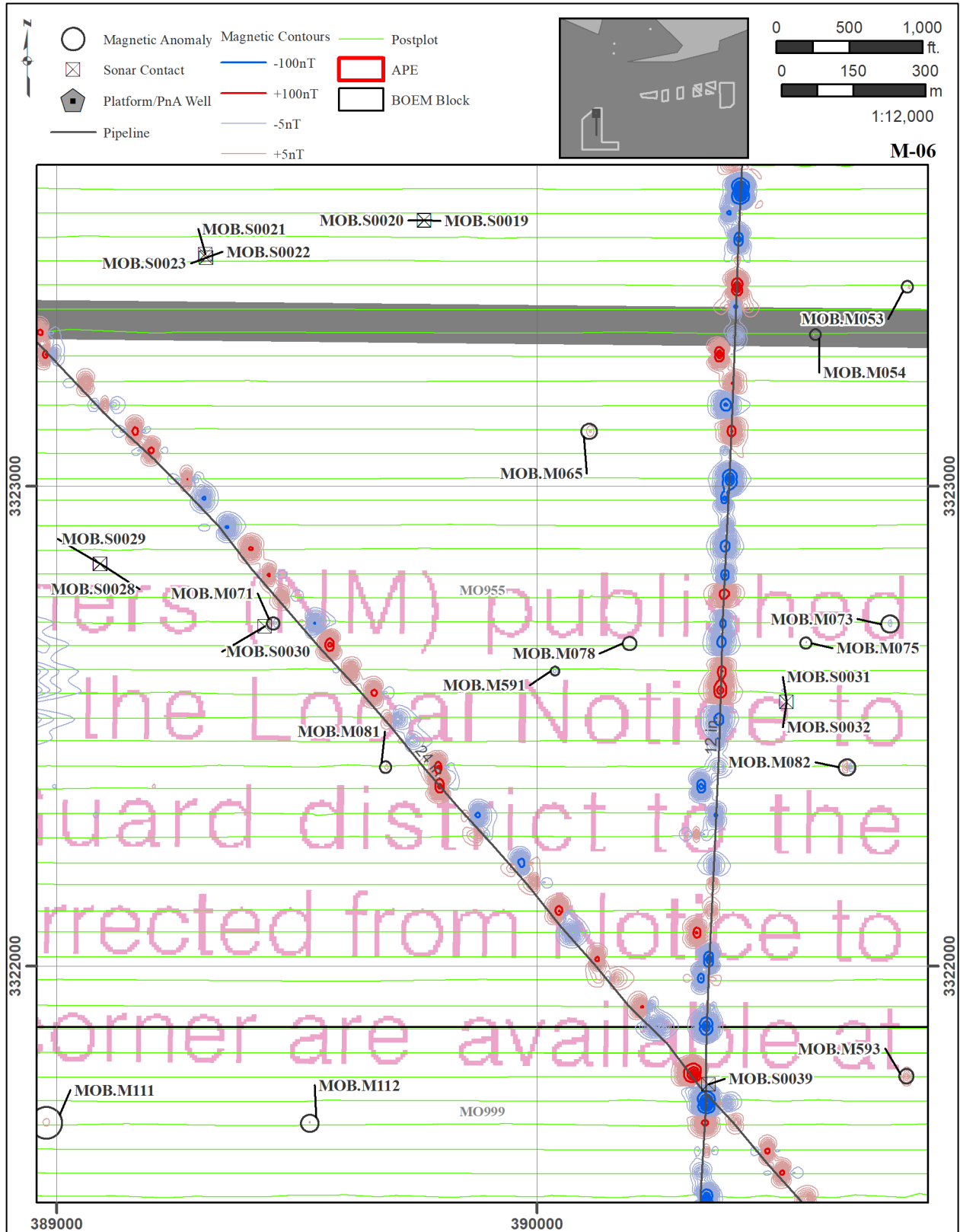


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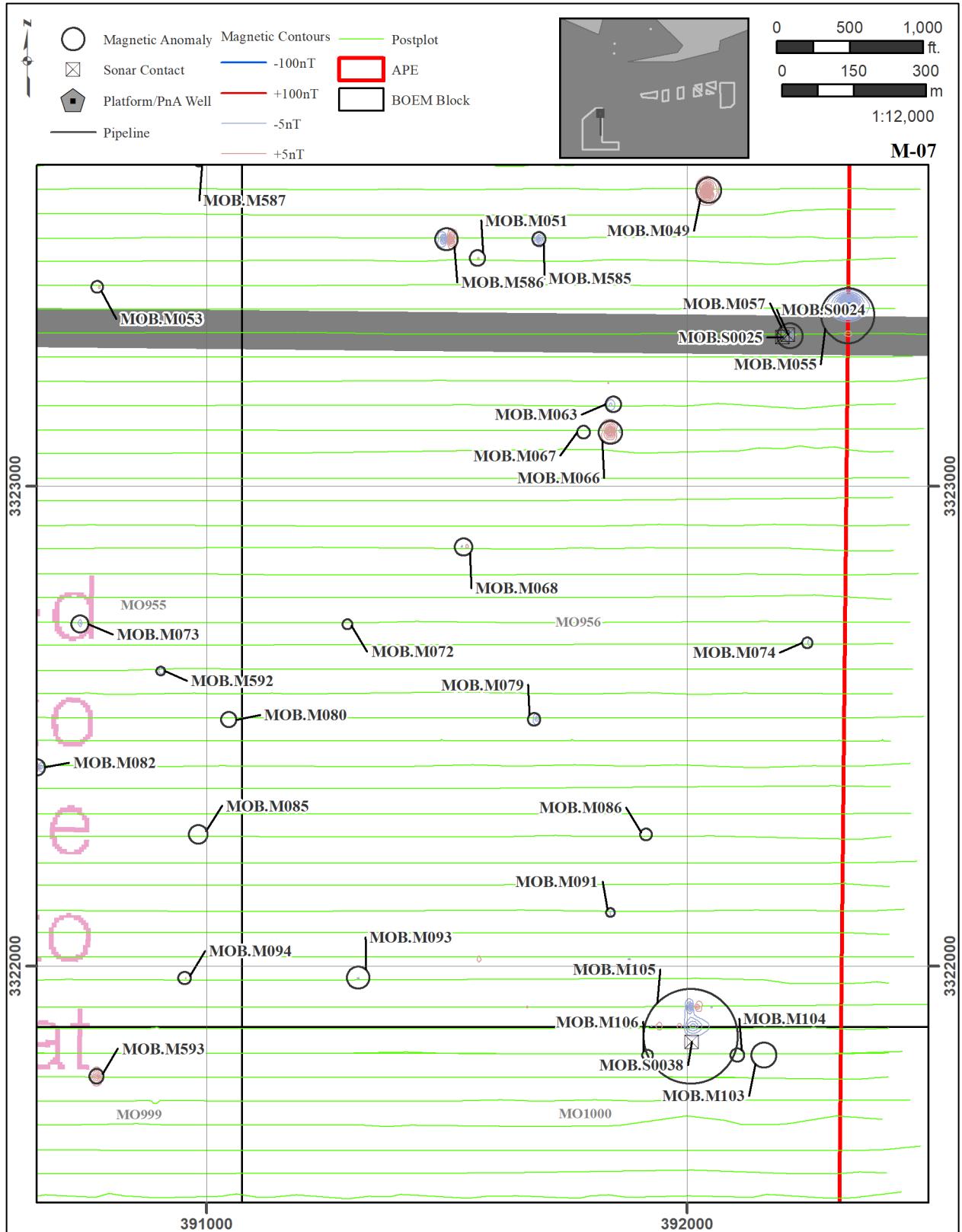


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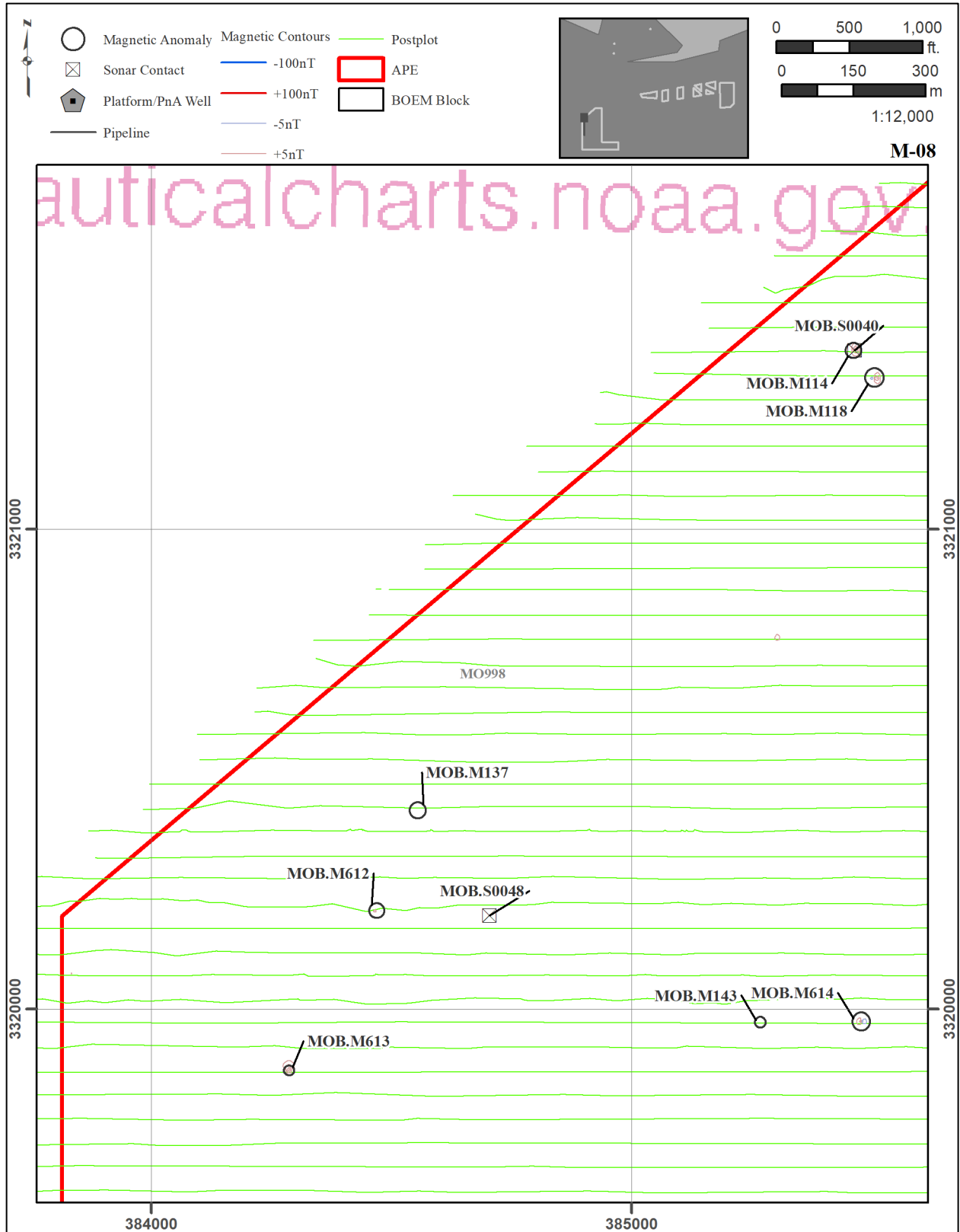


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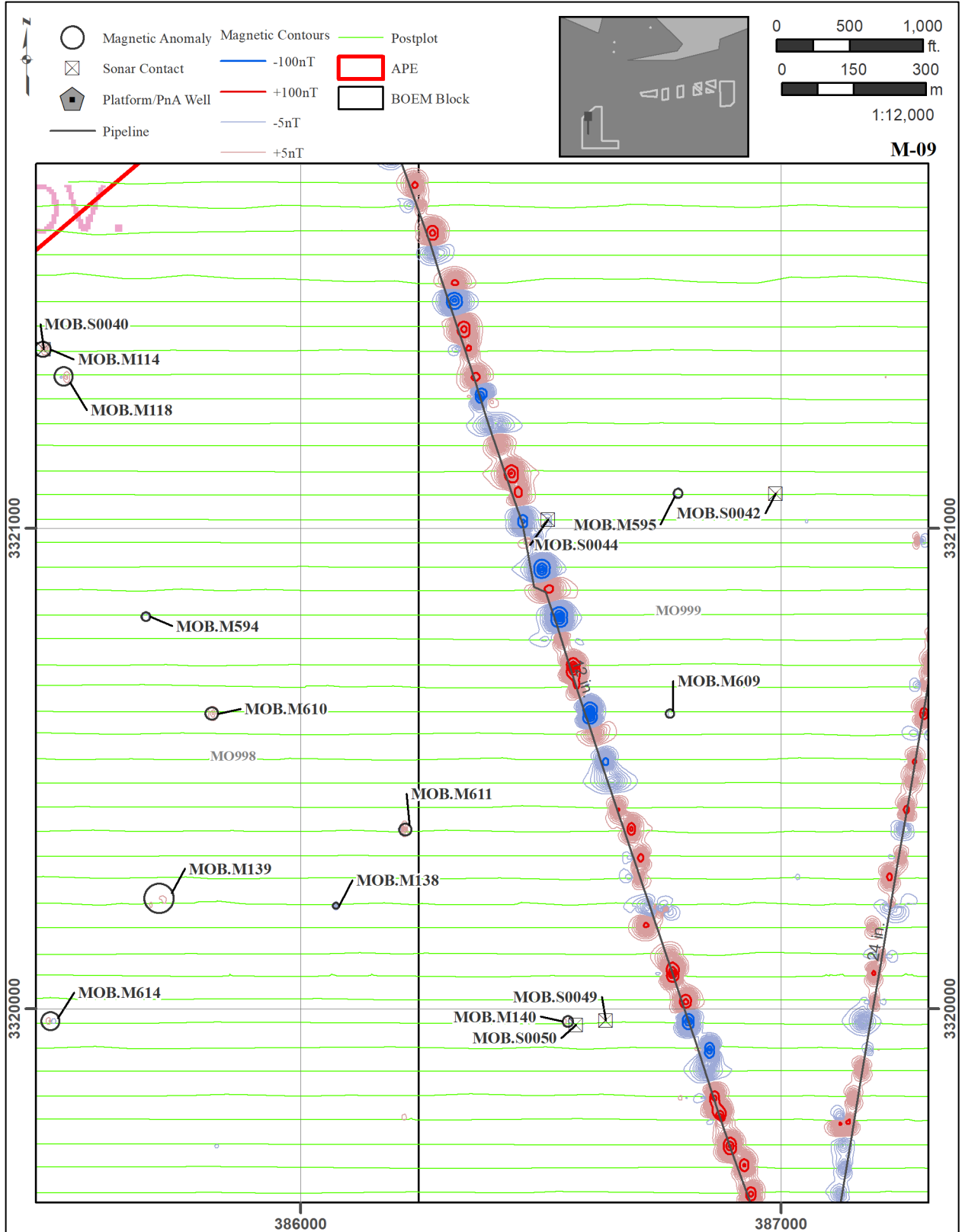


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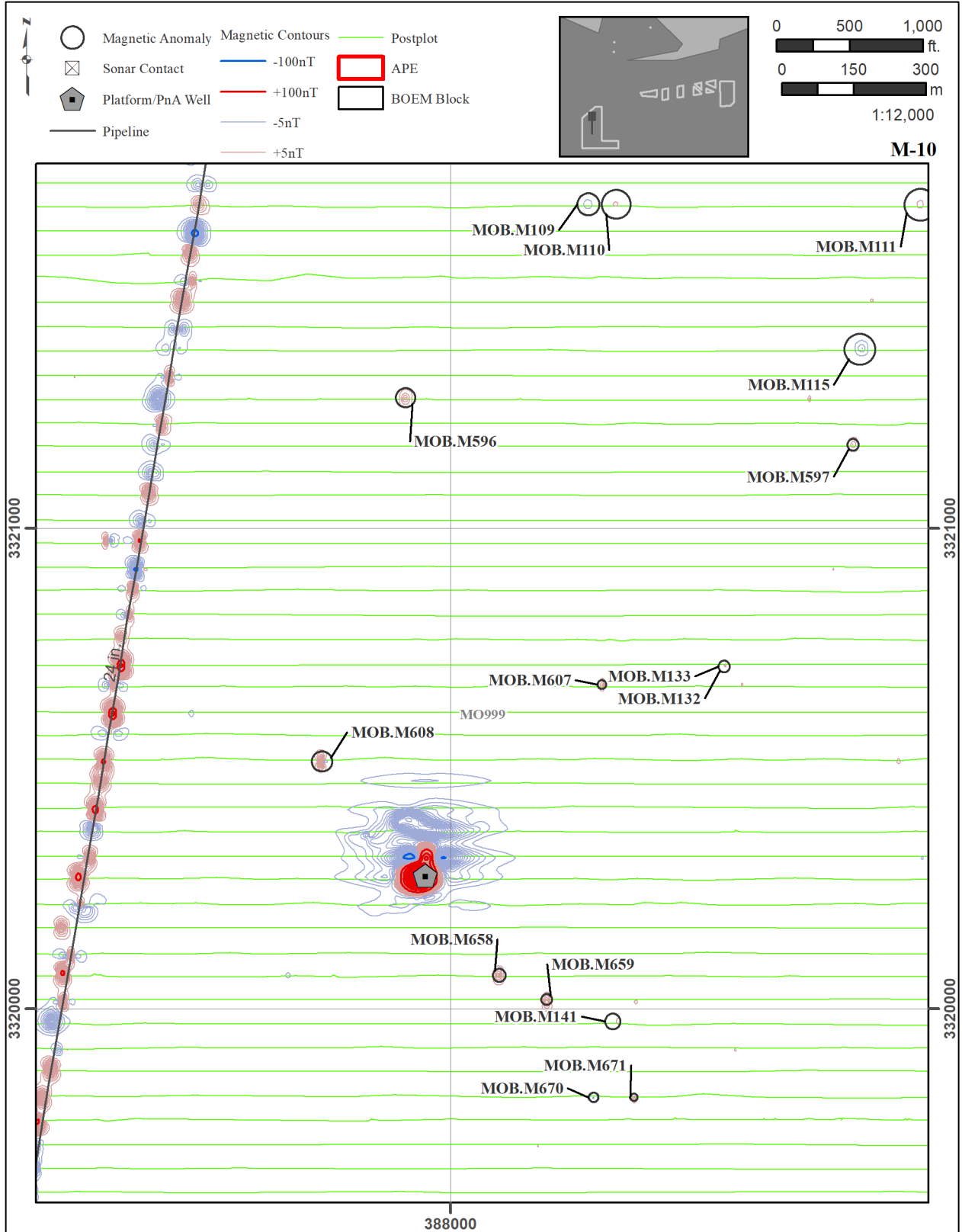


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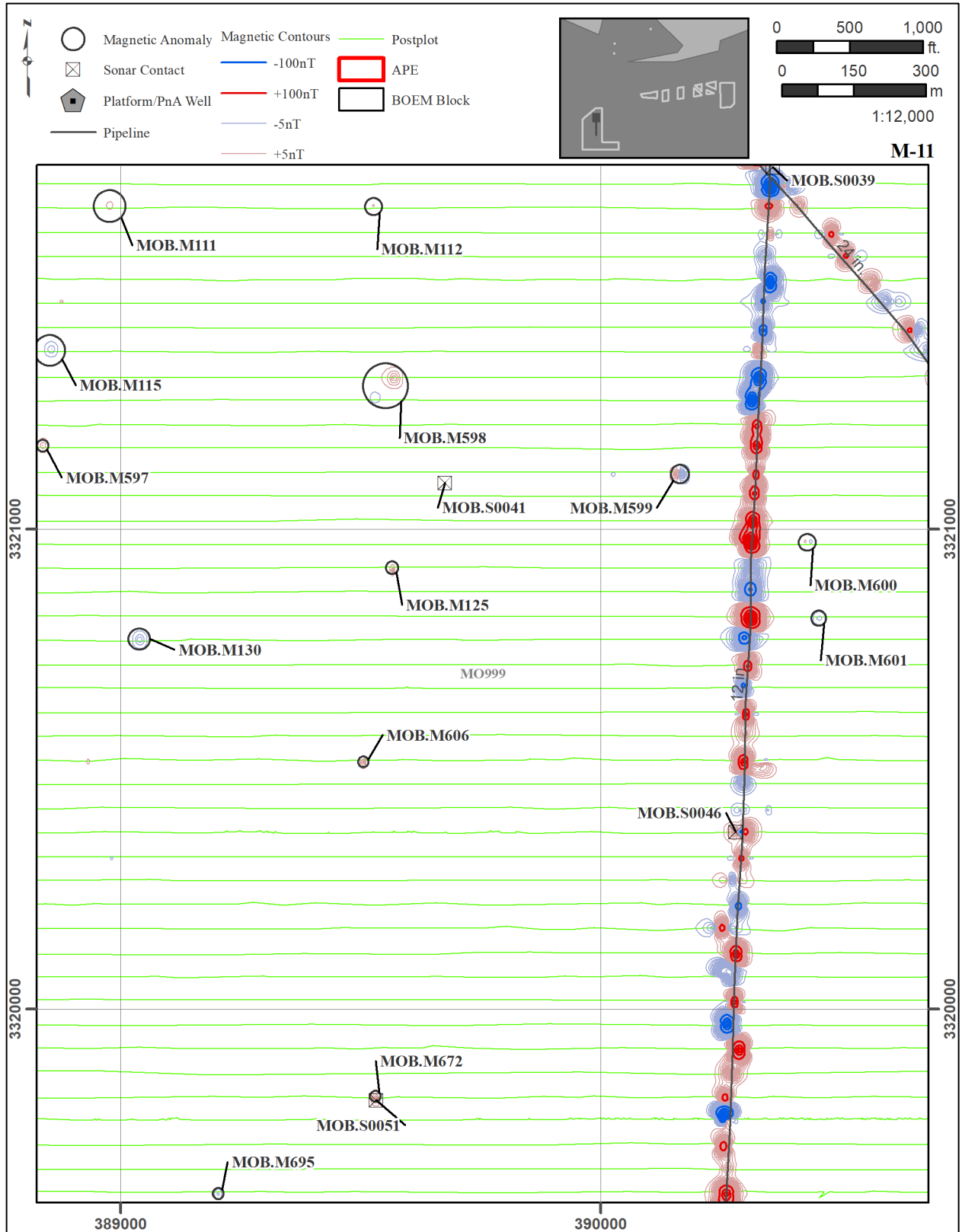


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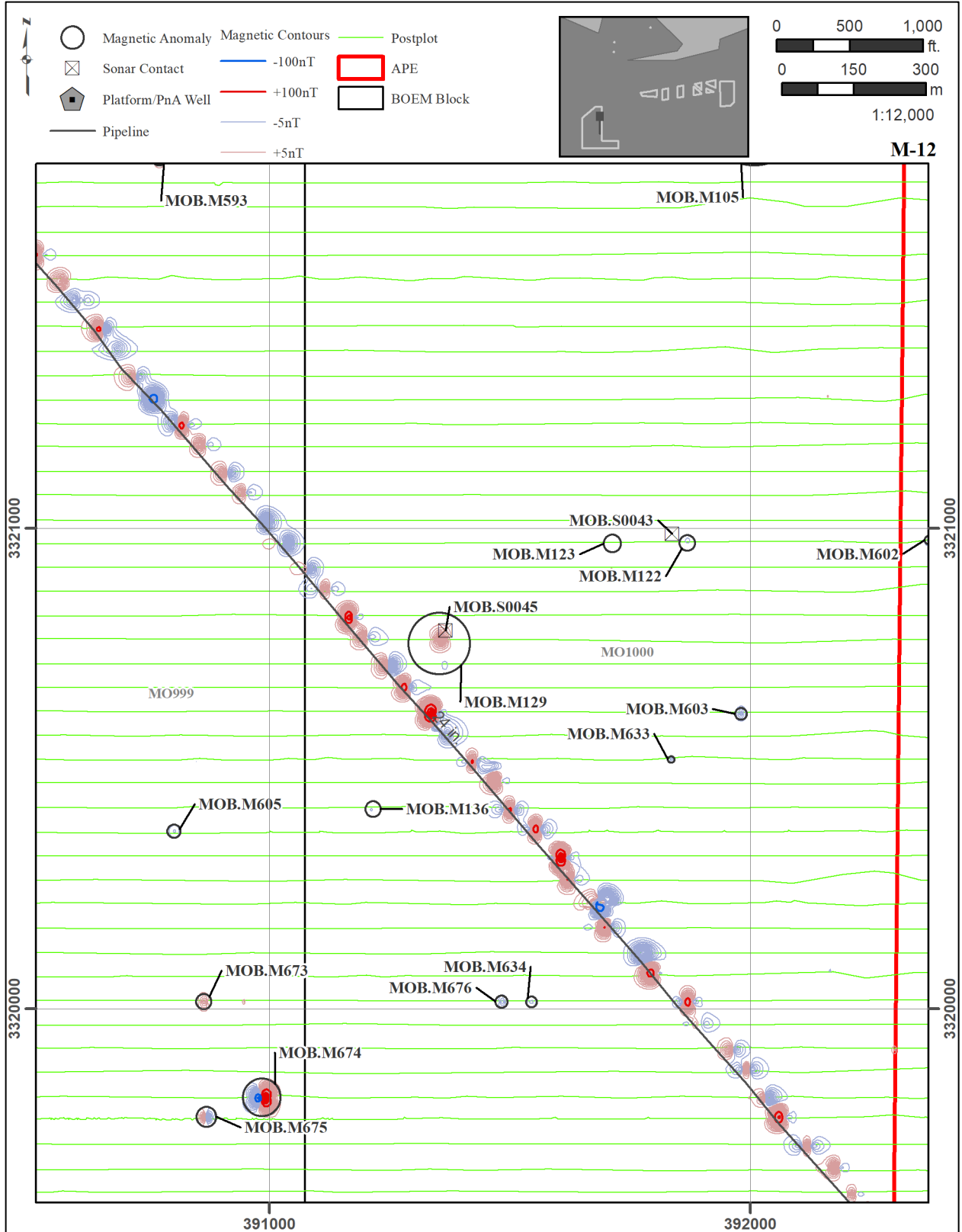


Figure P-13. MOB Map 12.

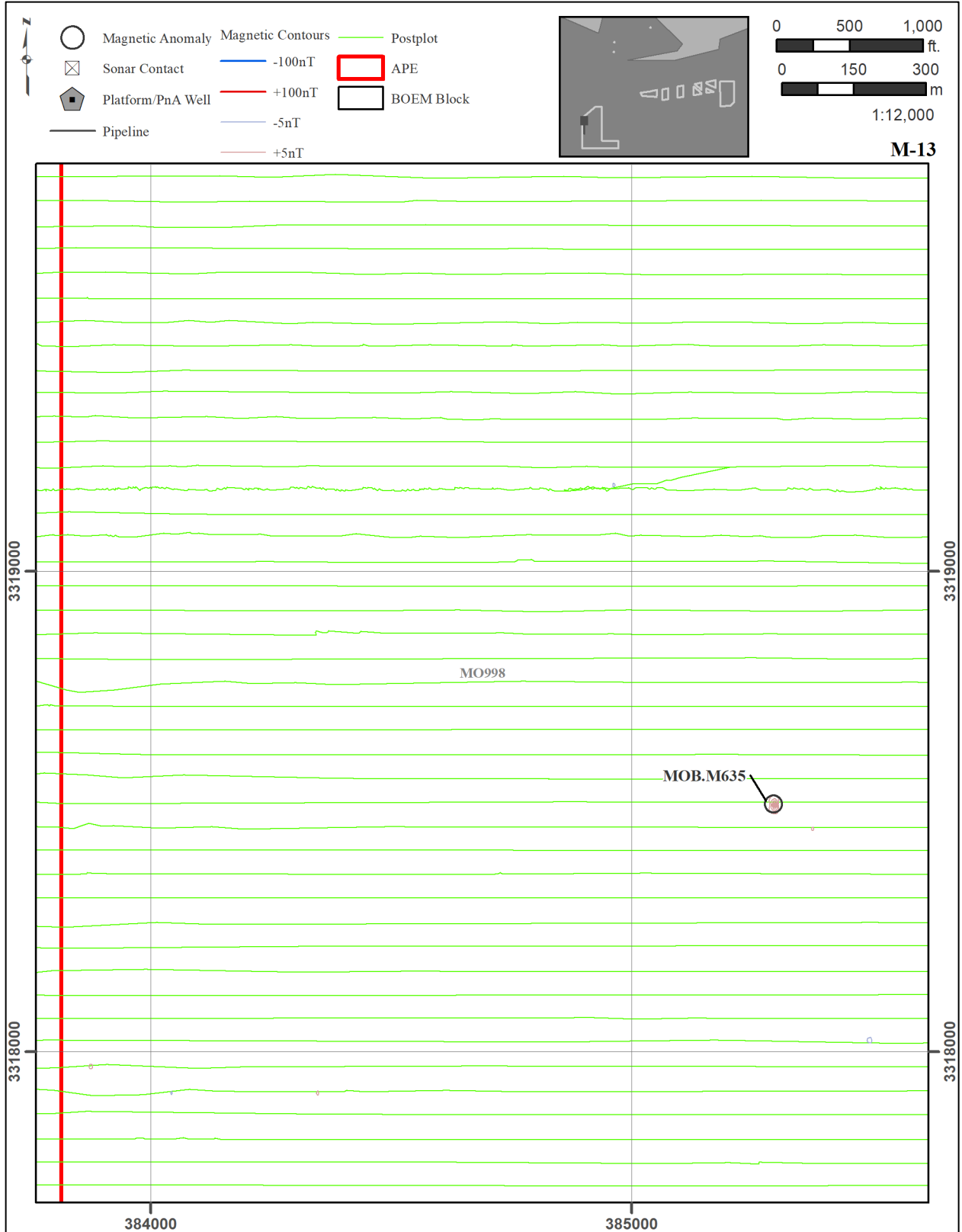


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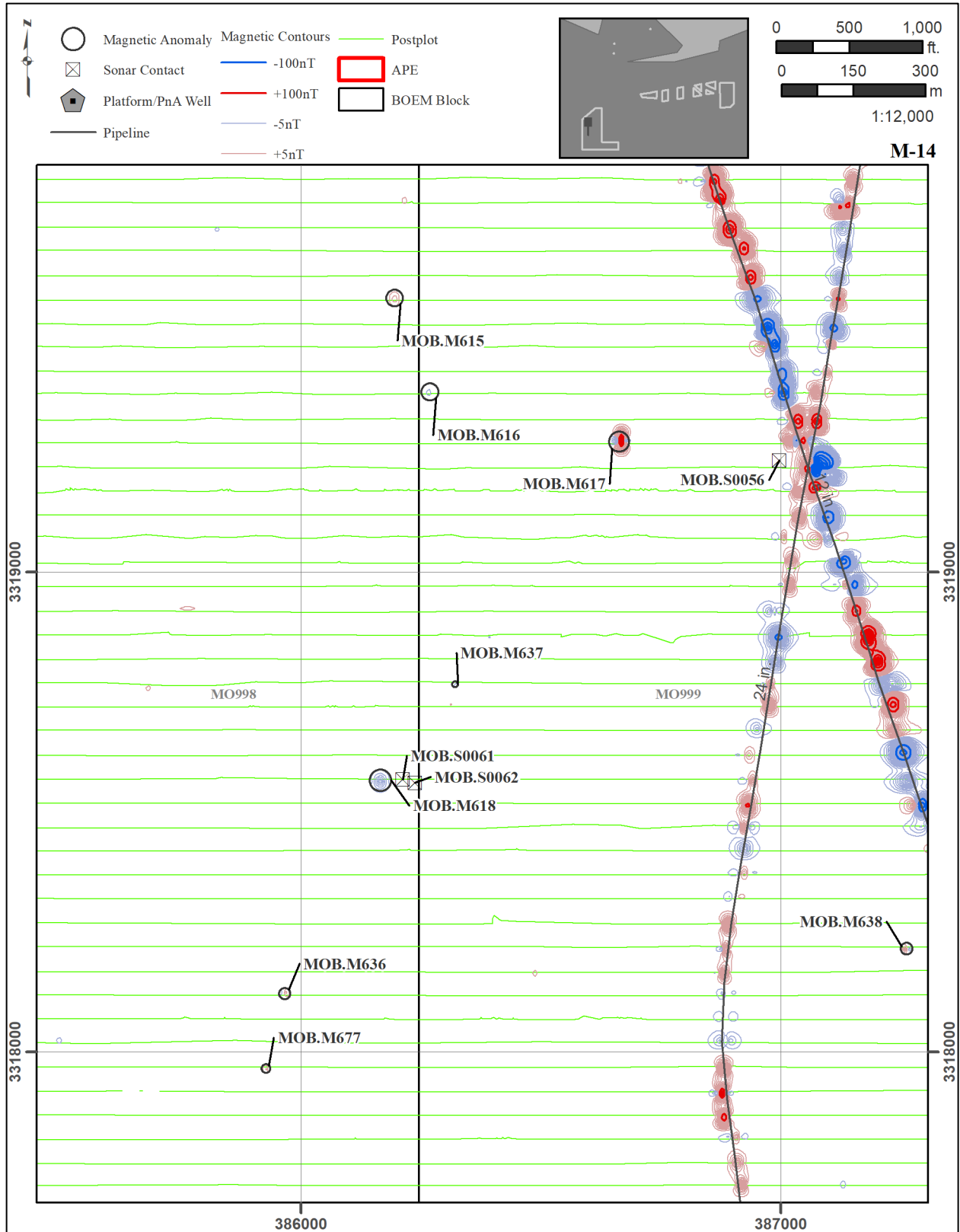


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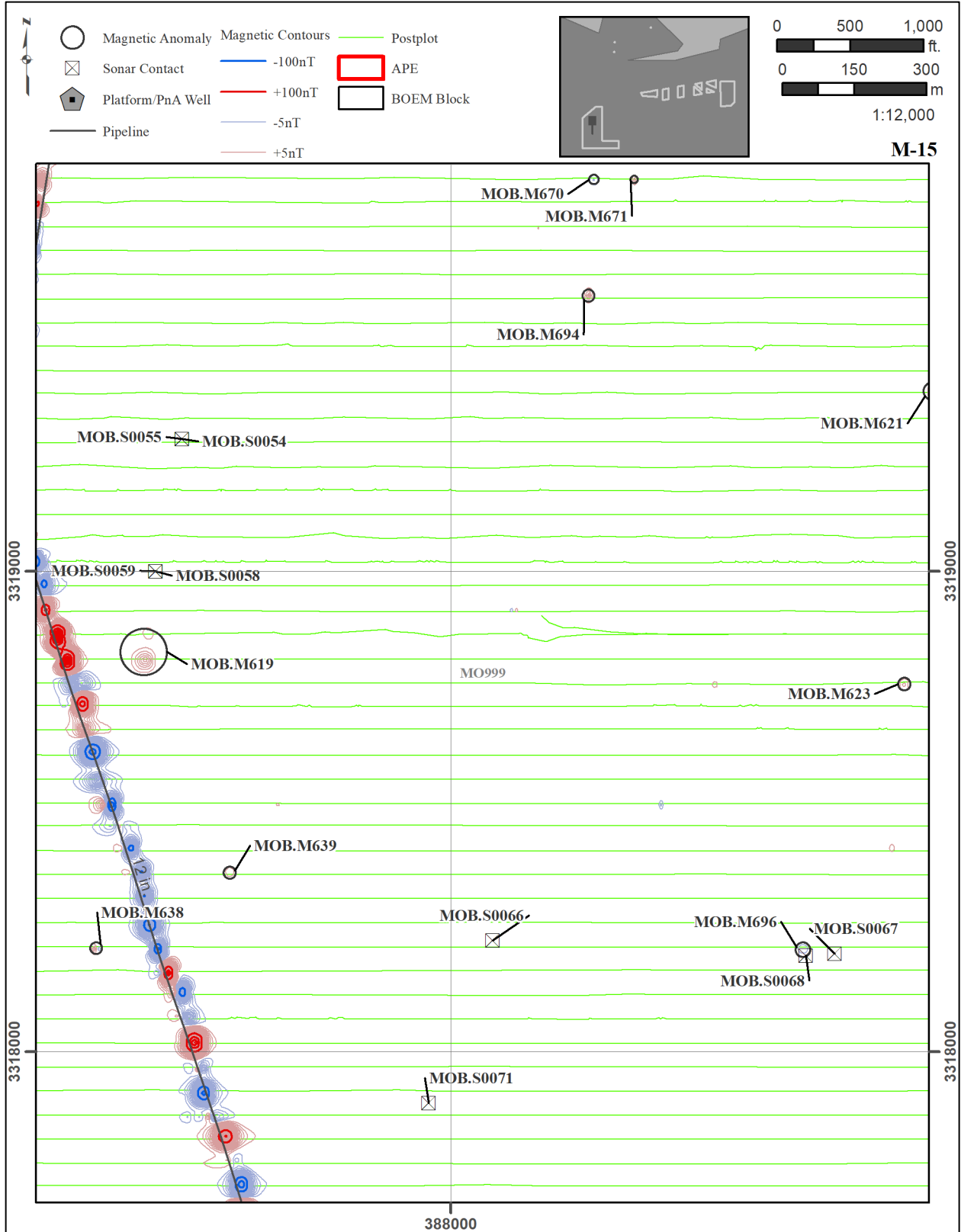


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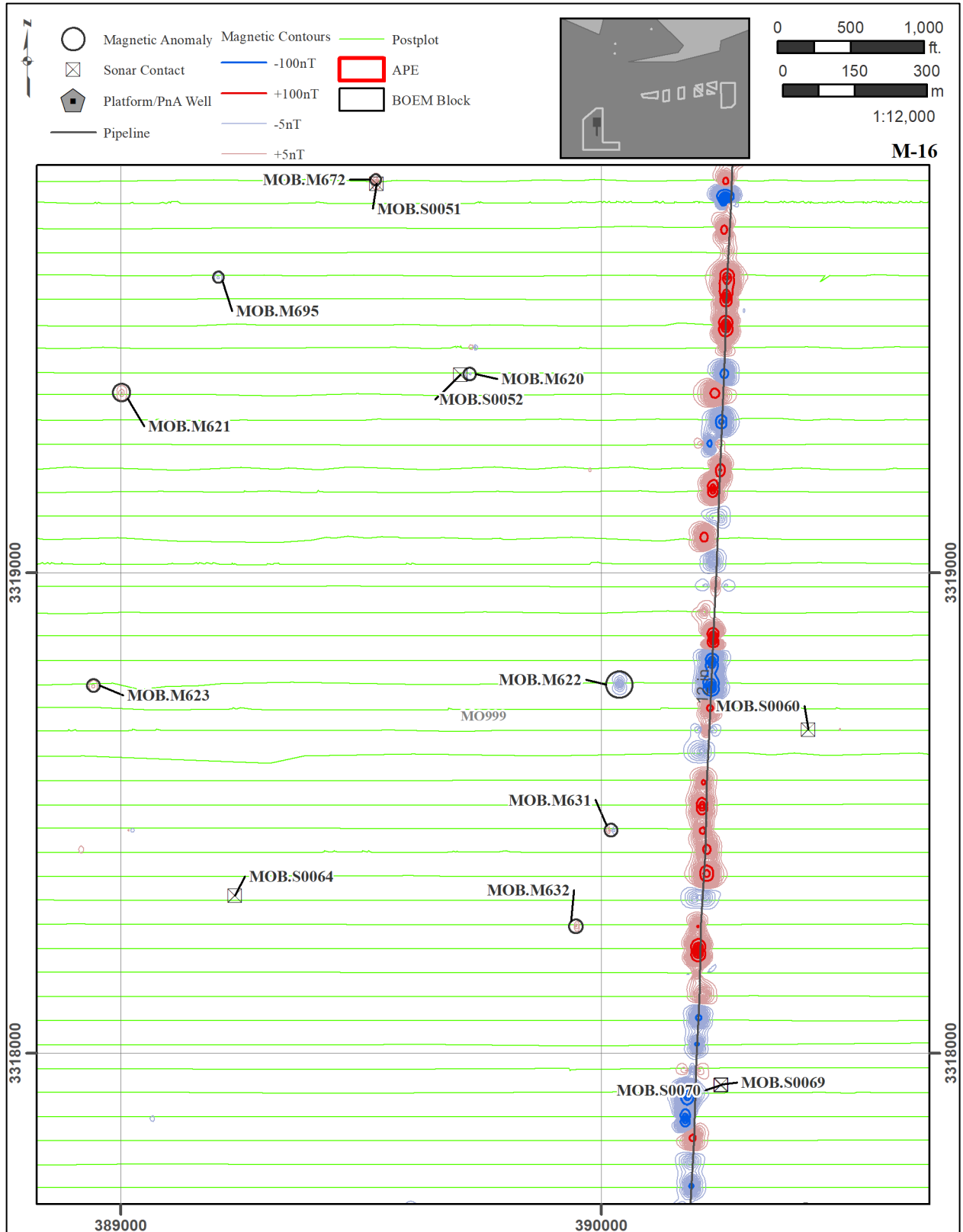


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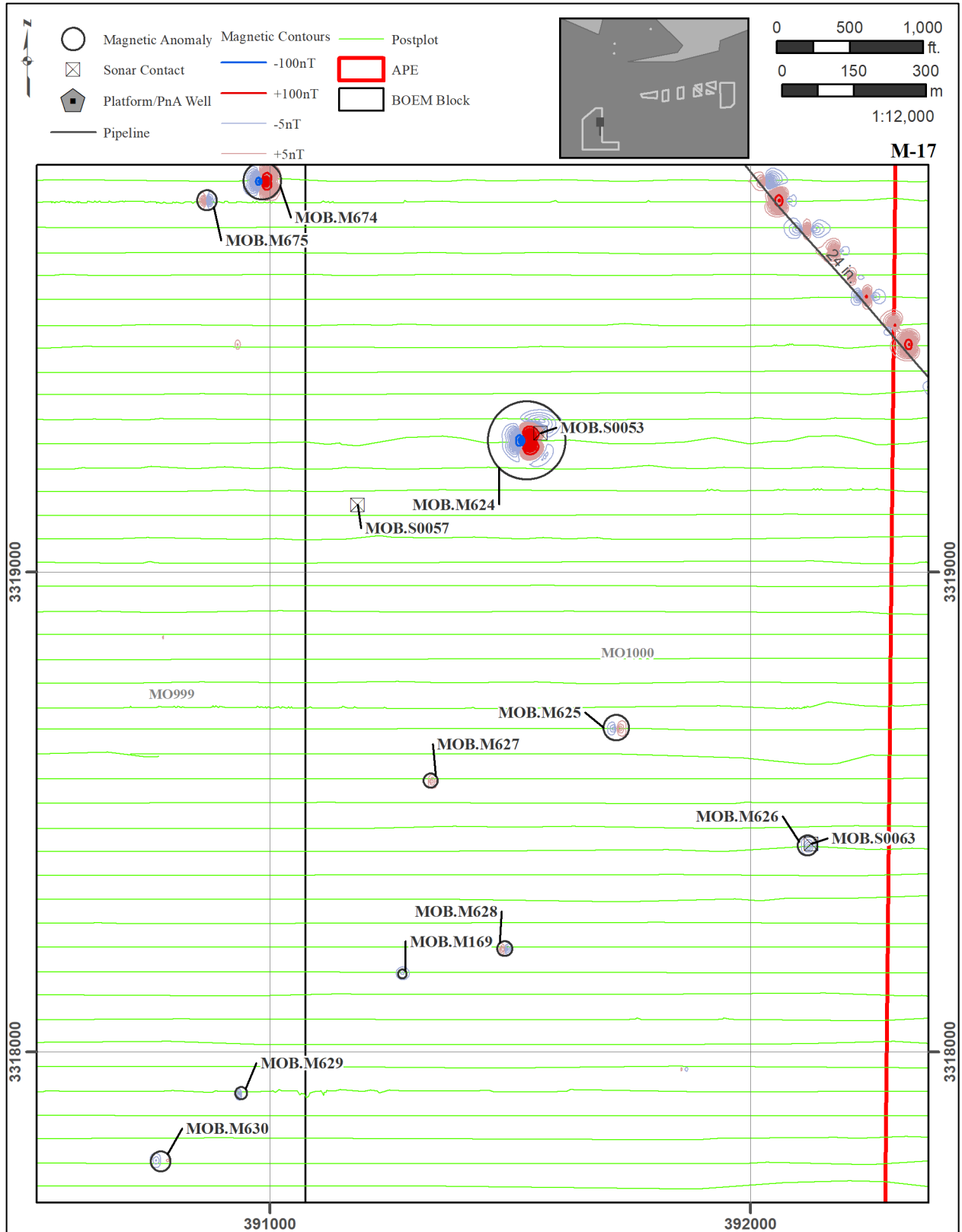


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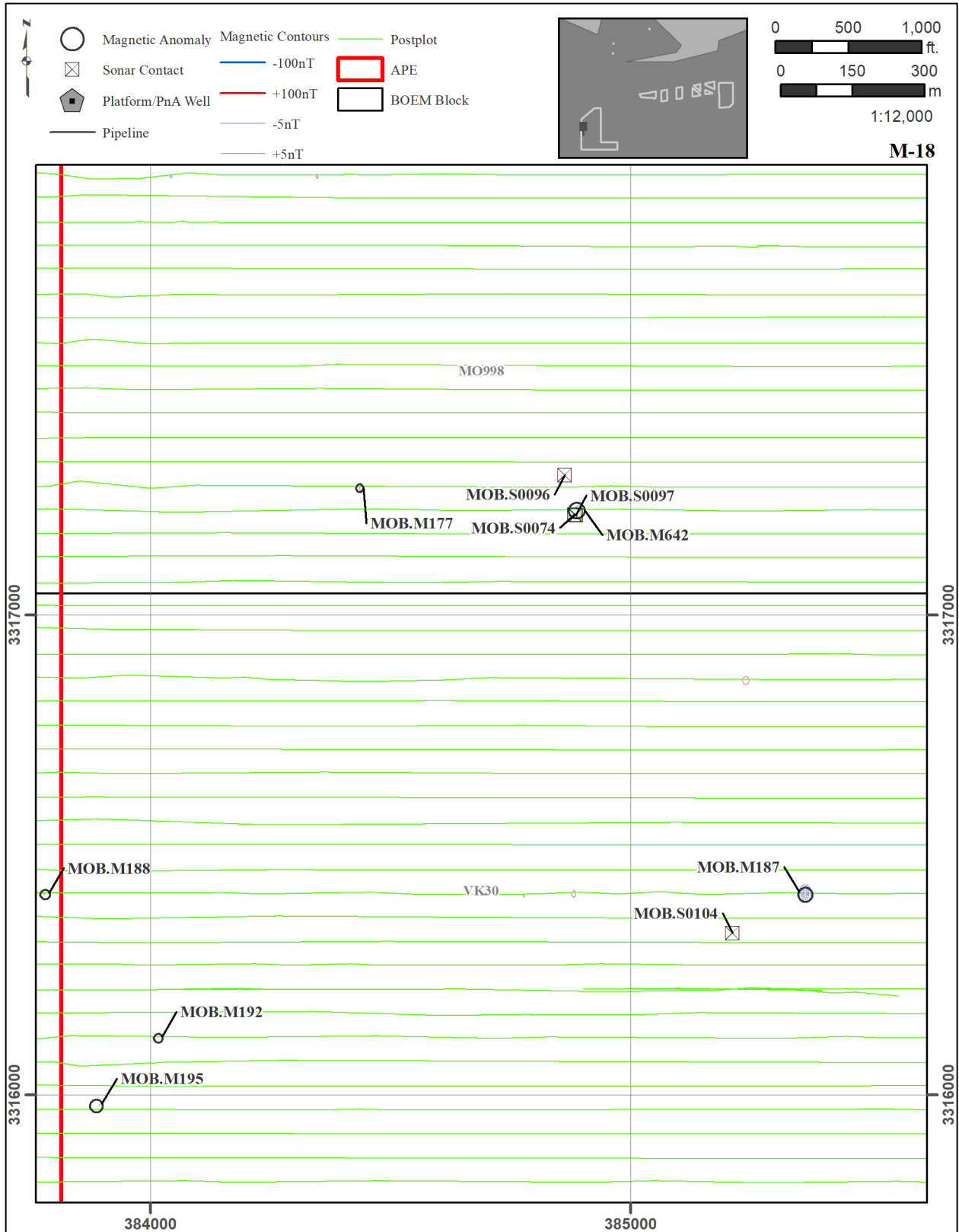


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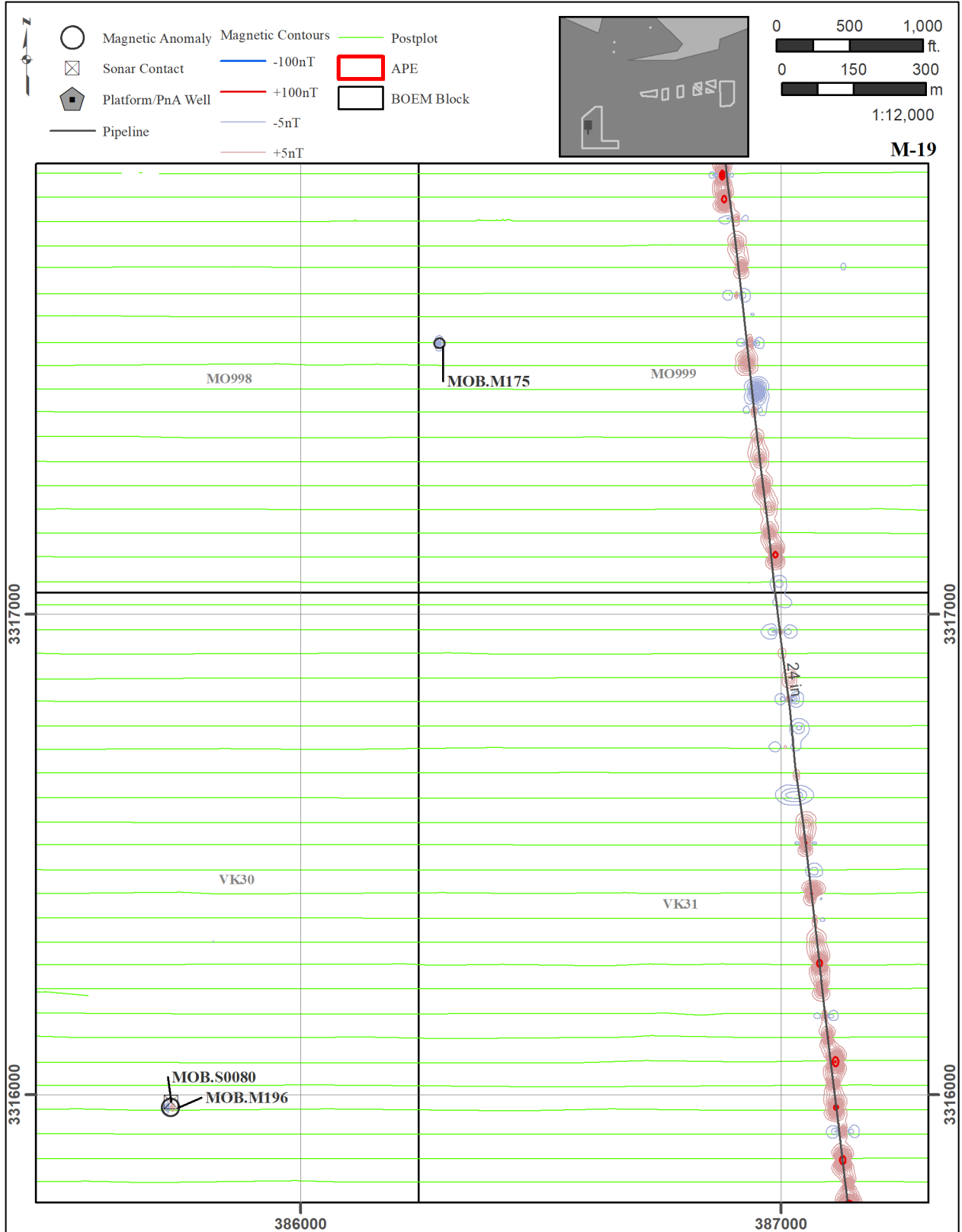


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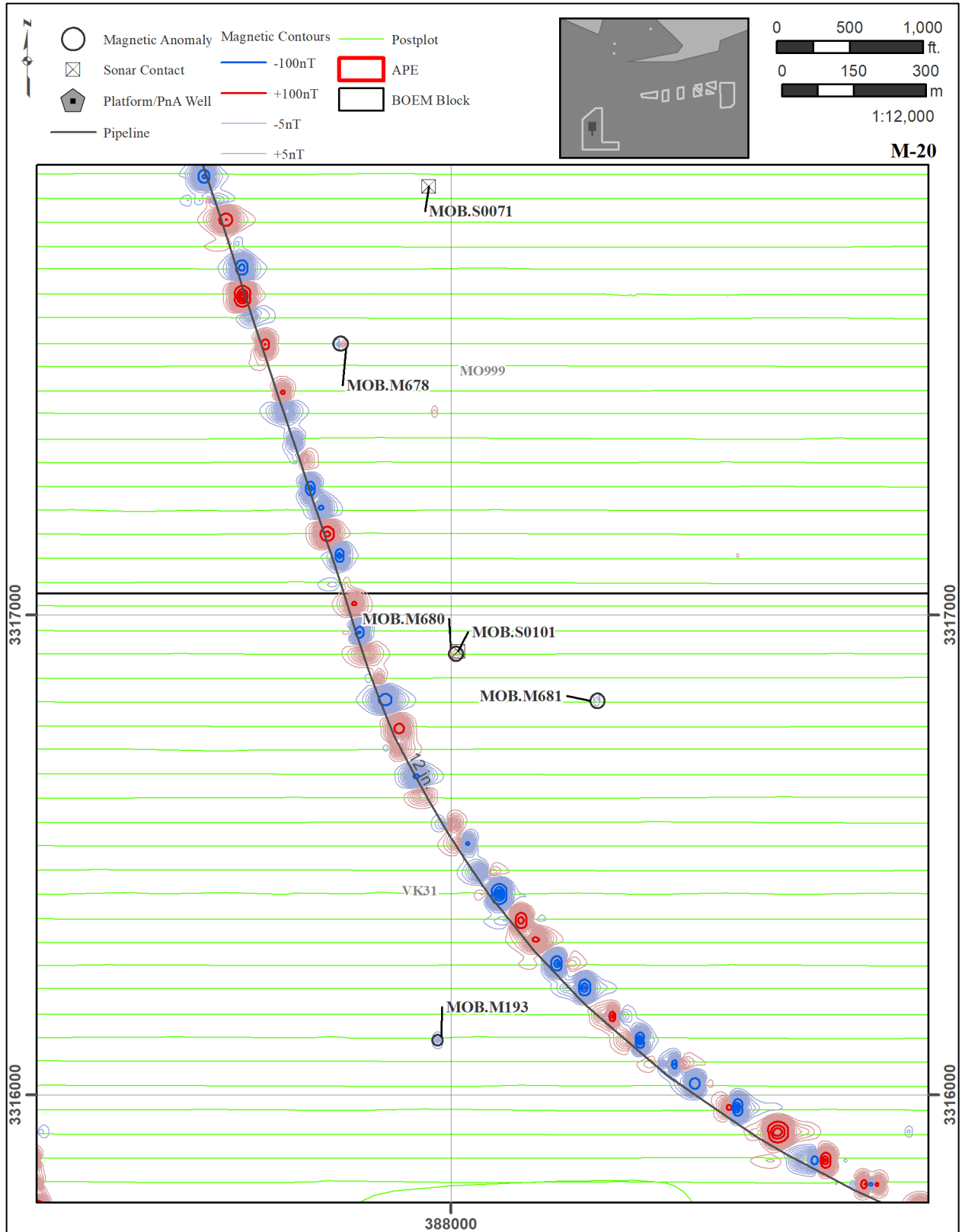


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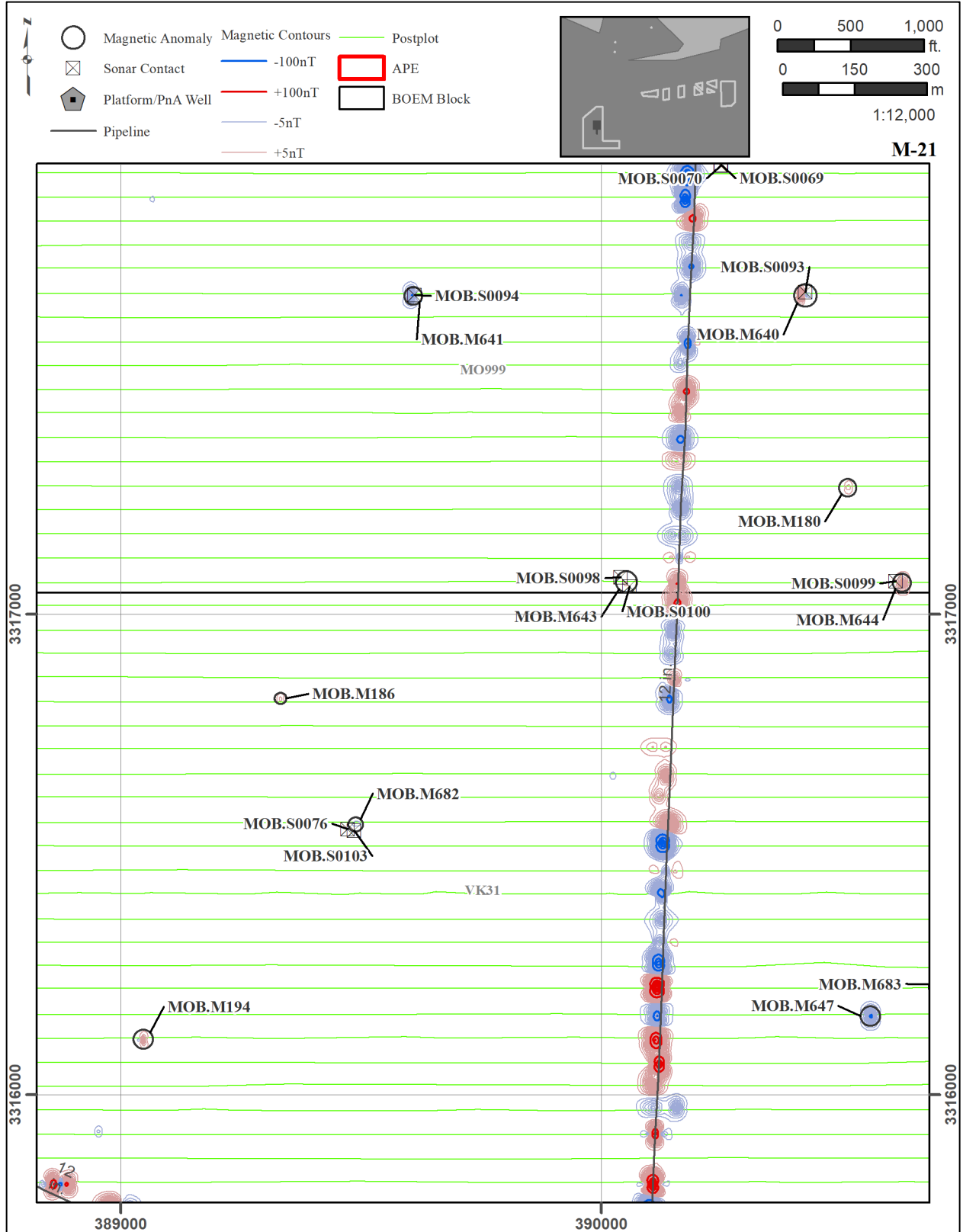
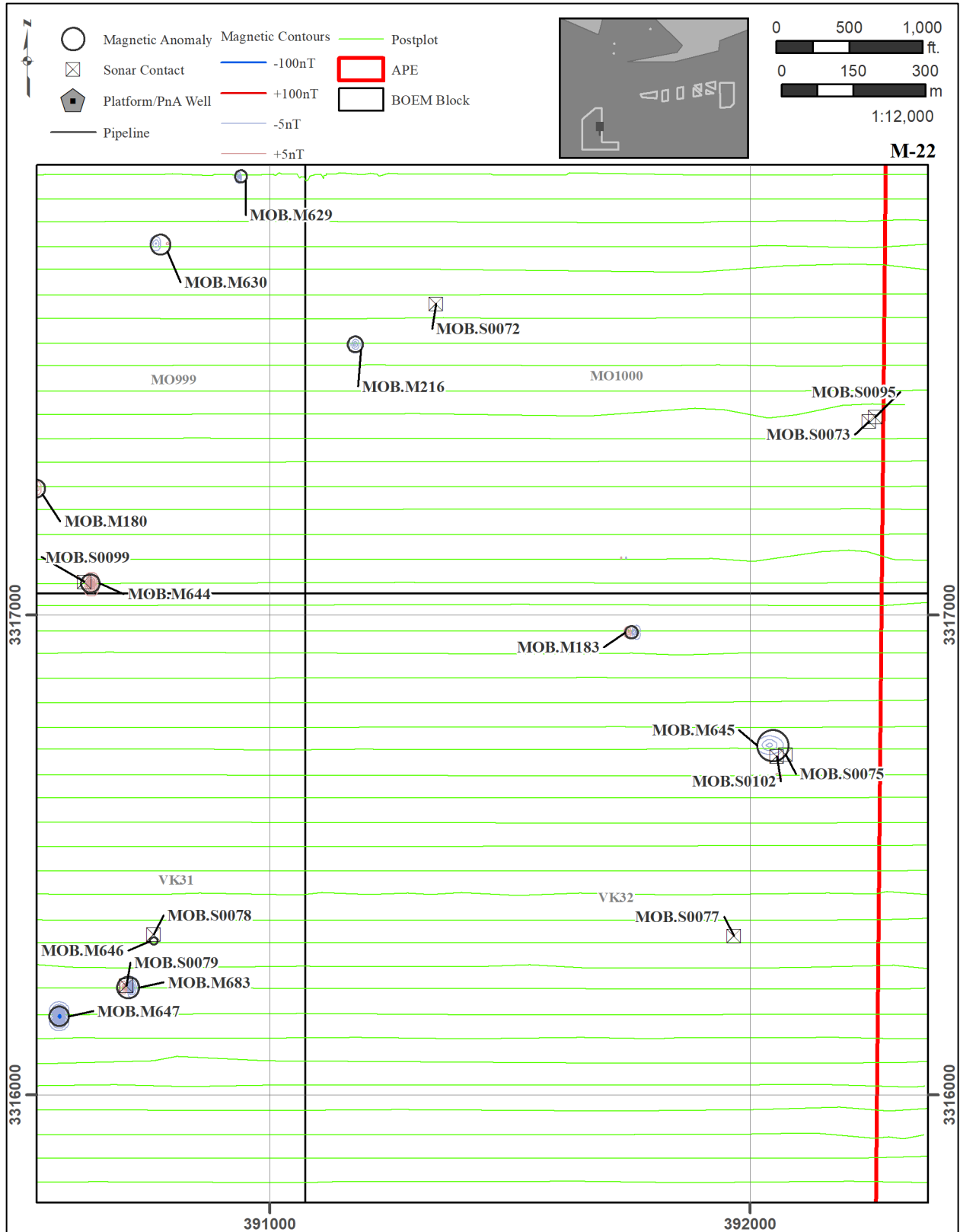


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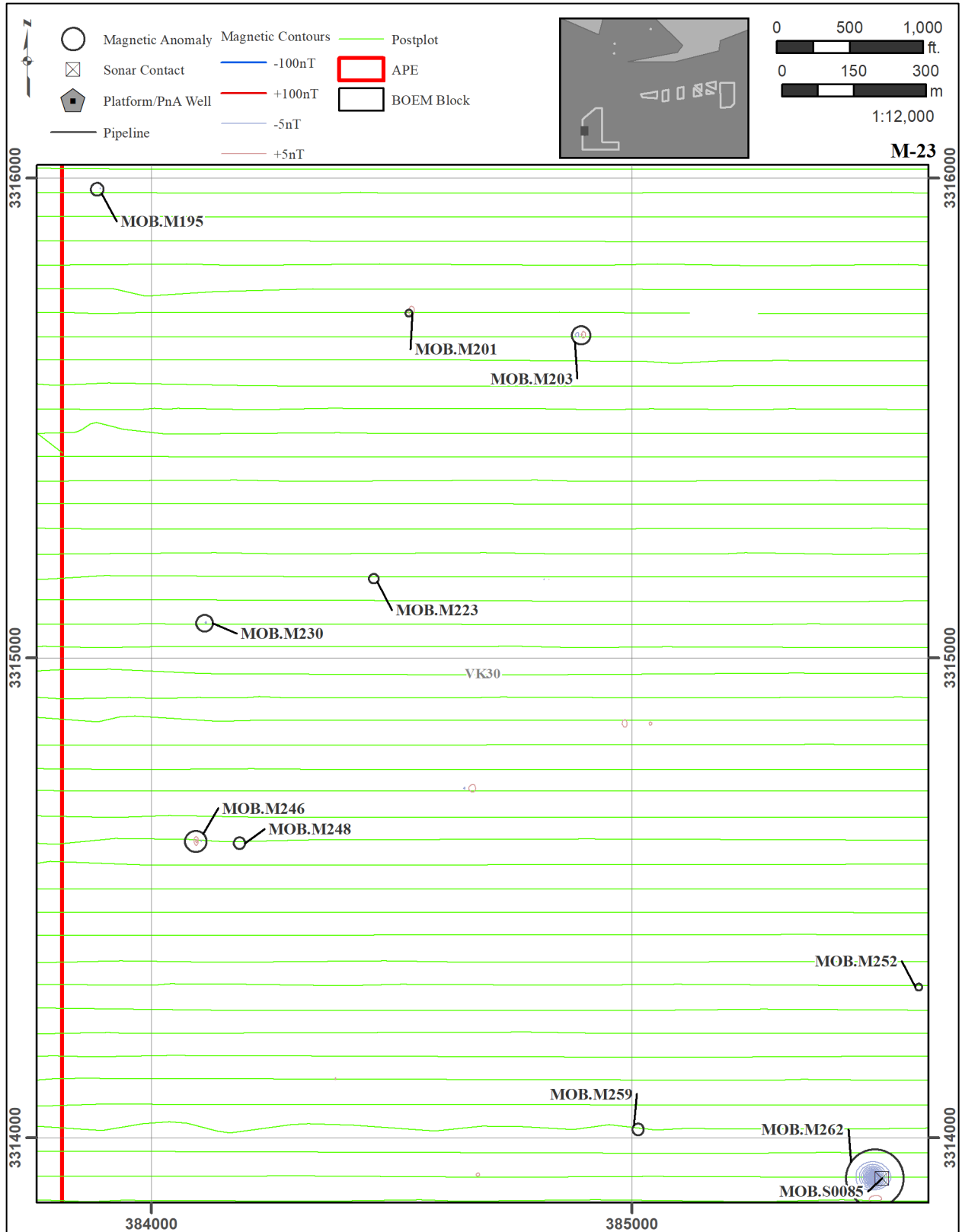


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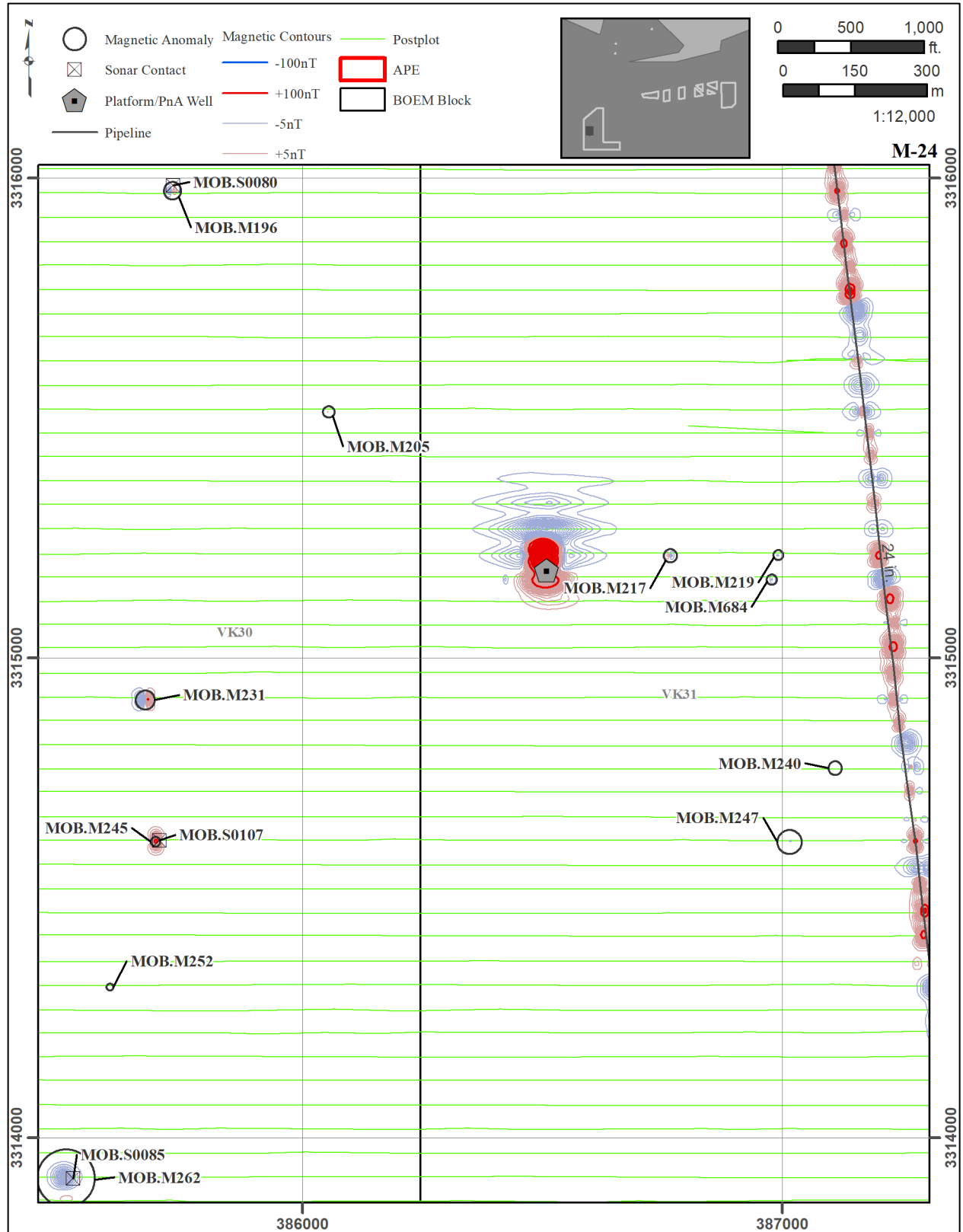


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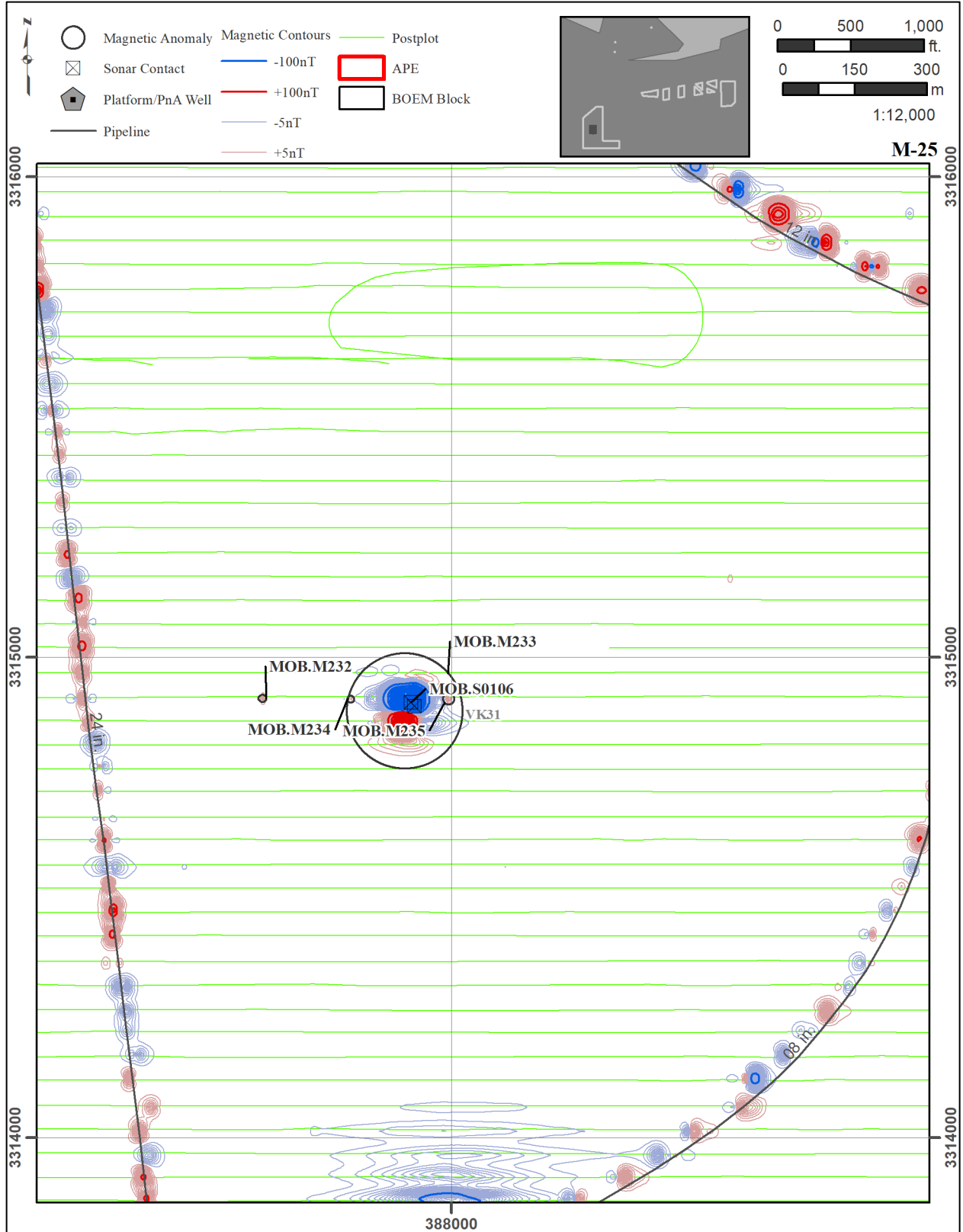


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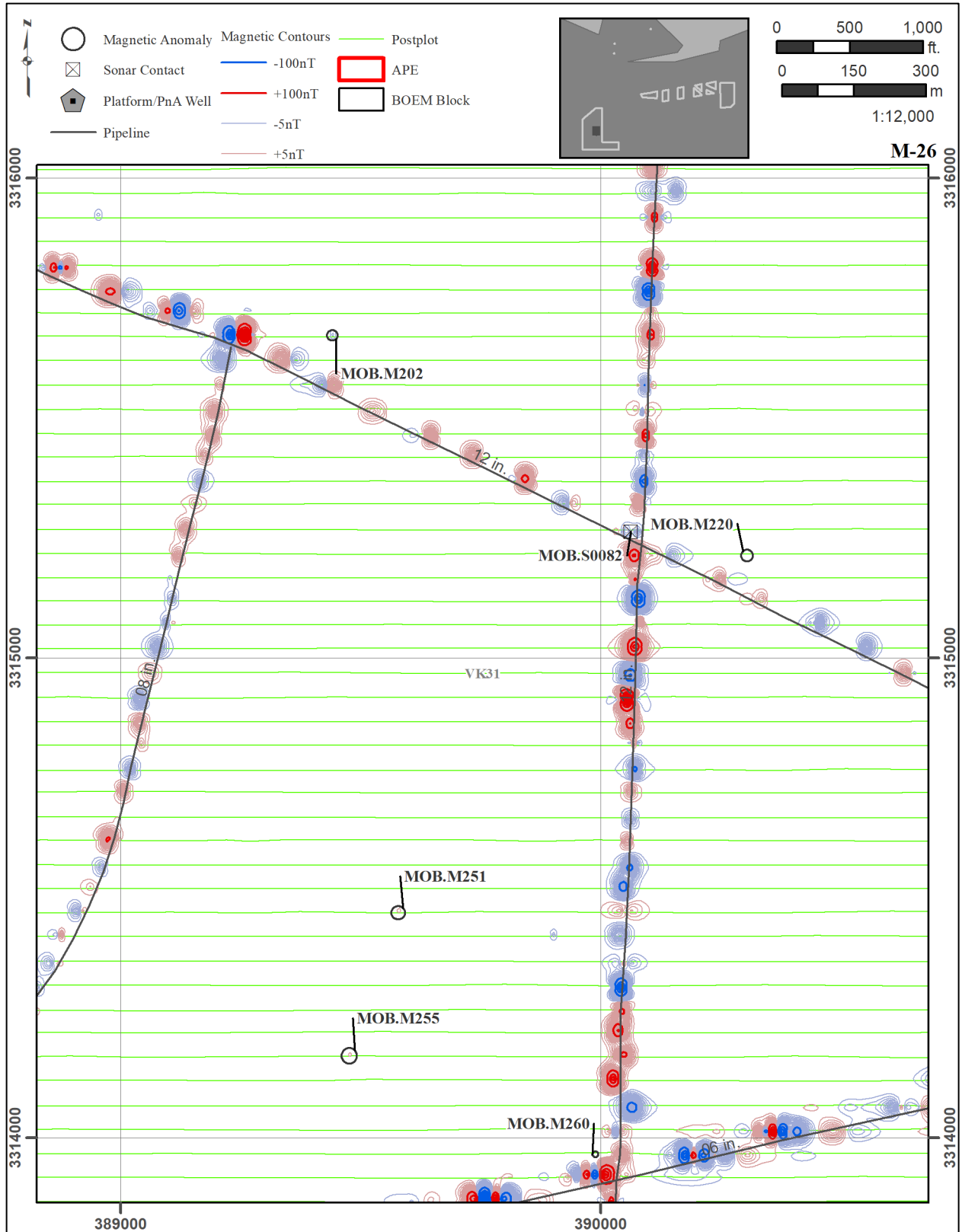


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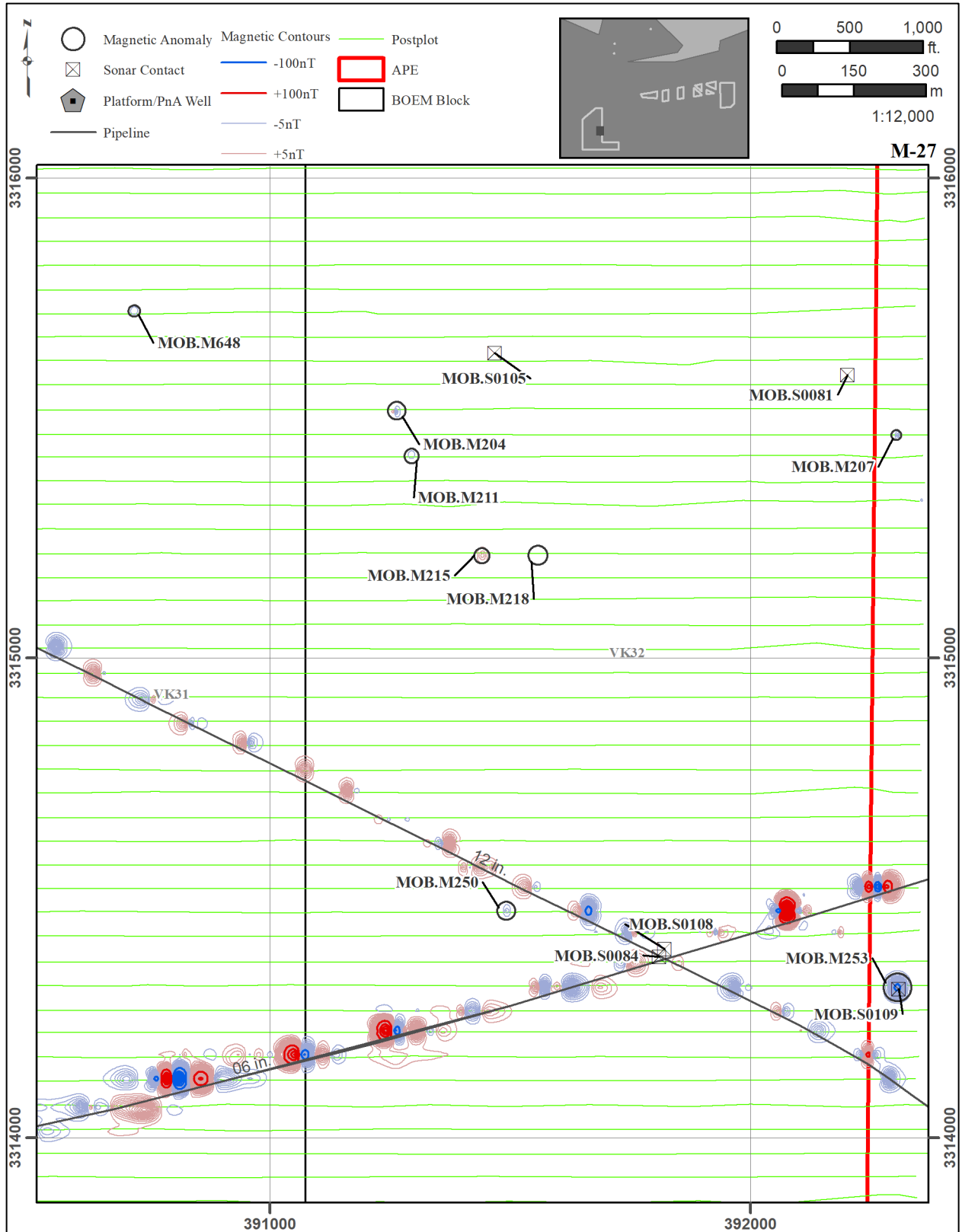


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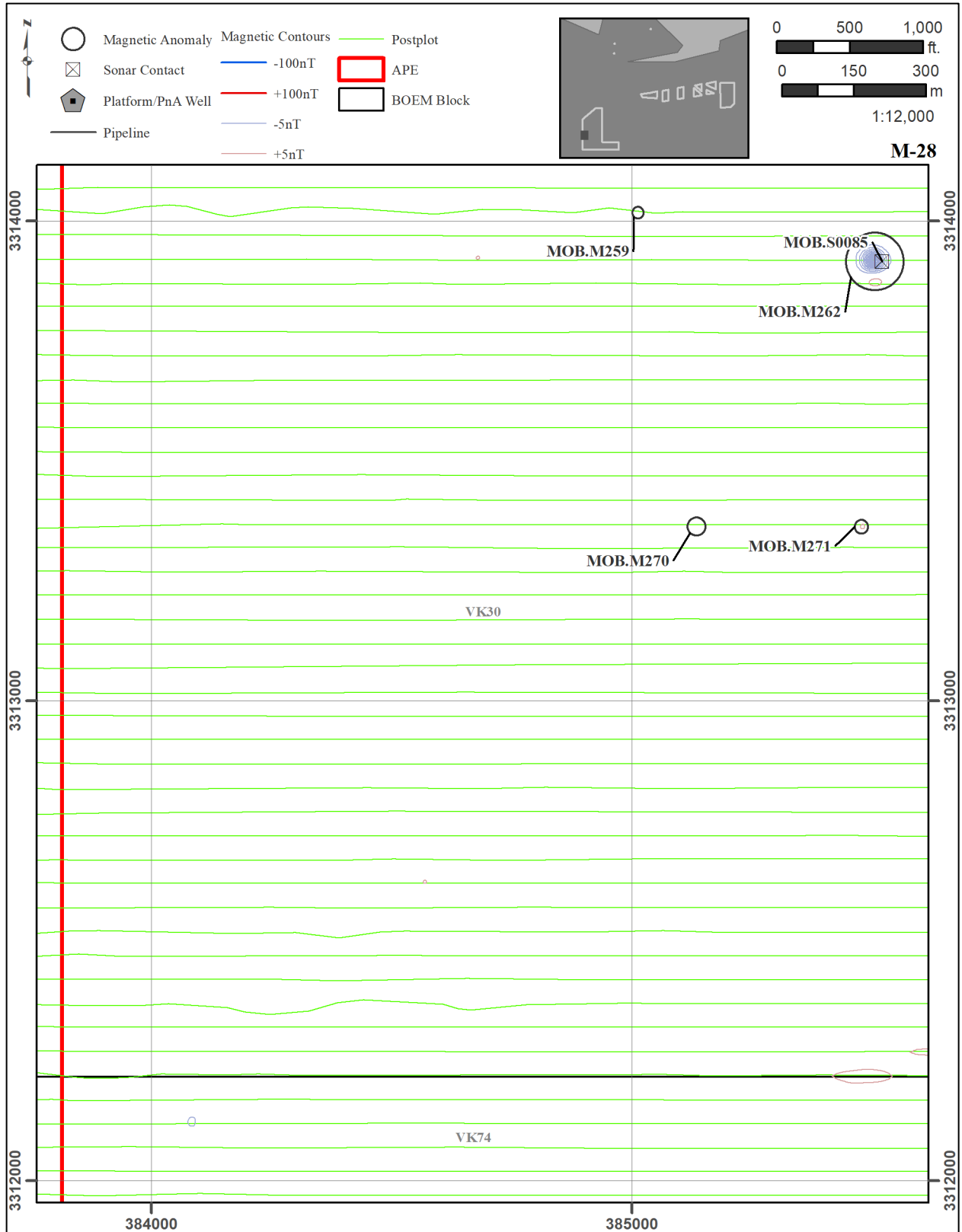


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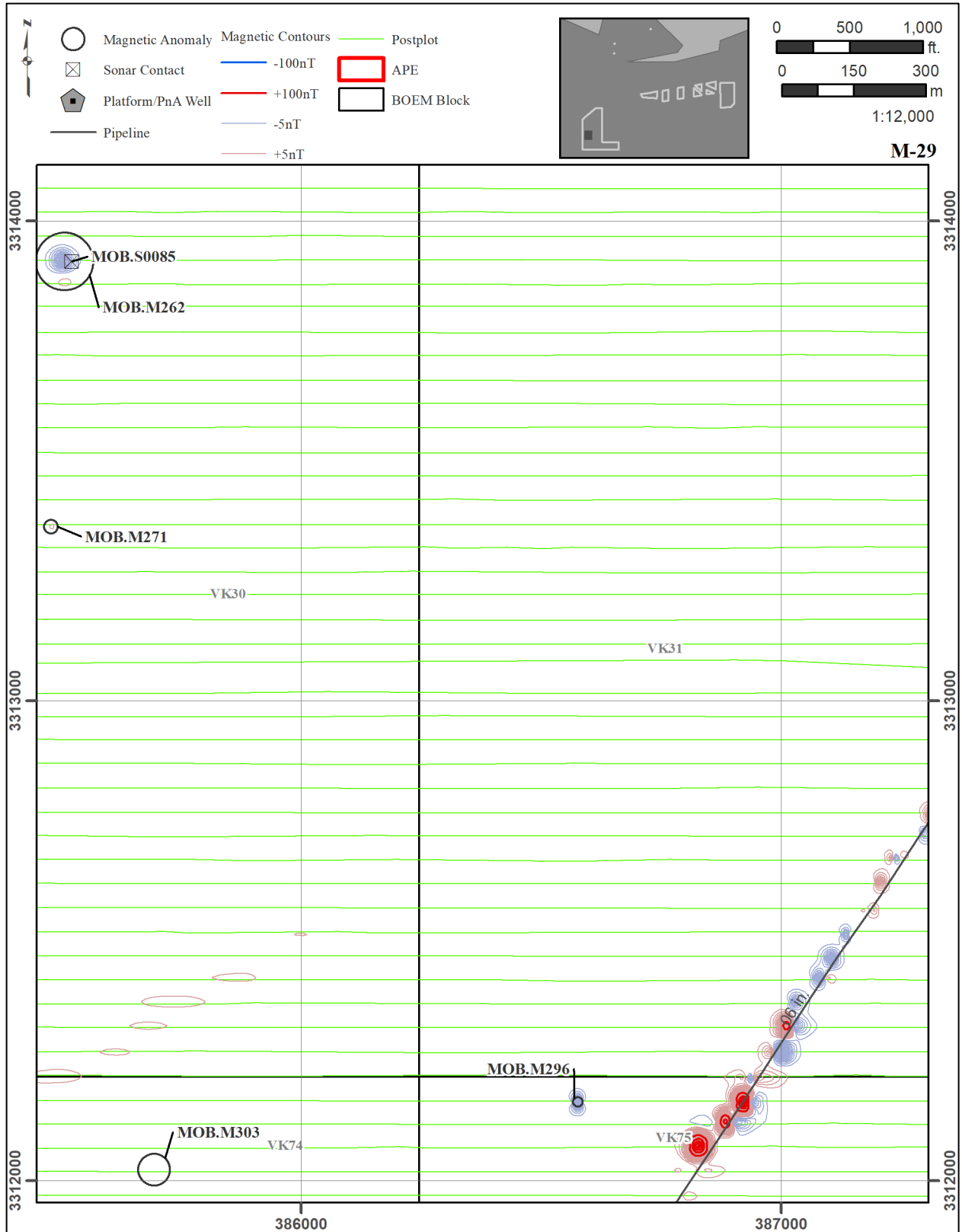


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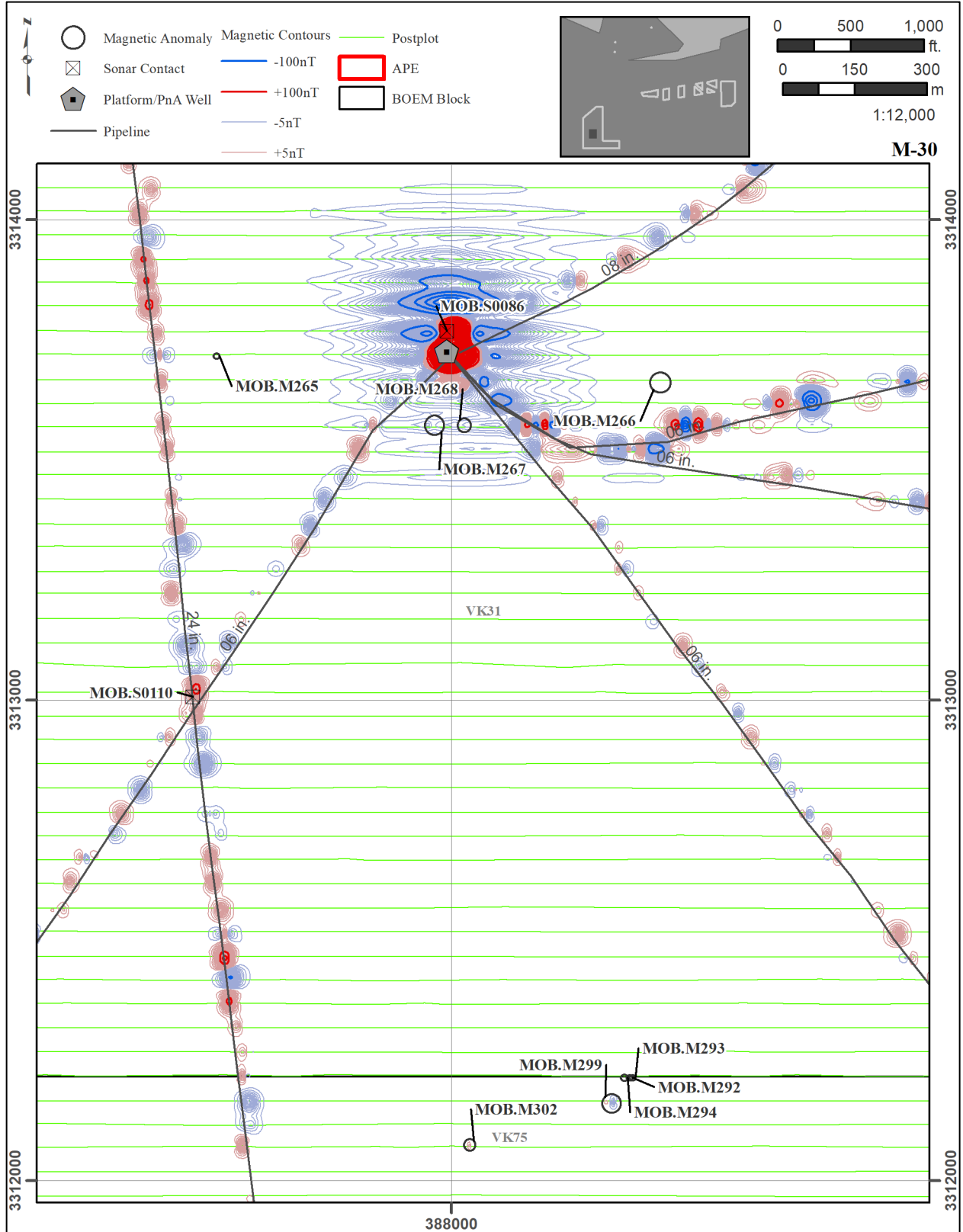


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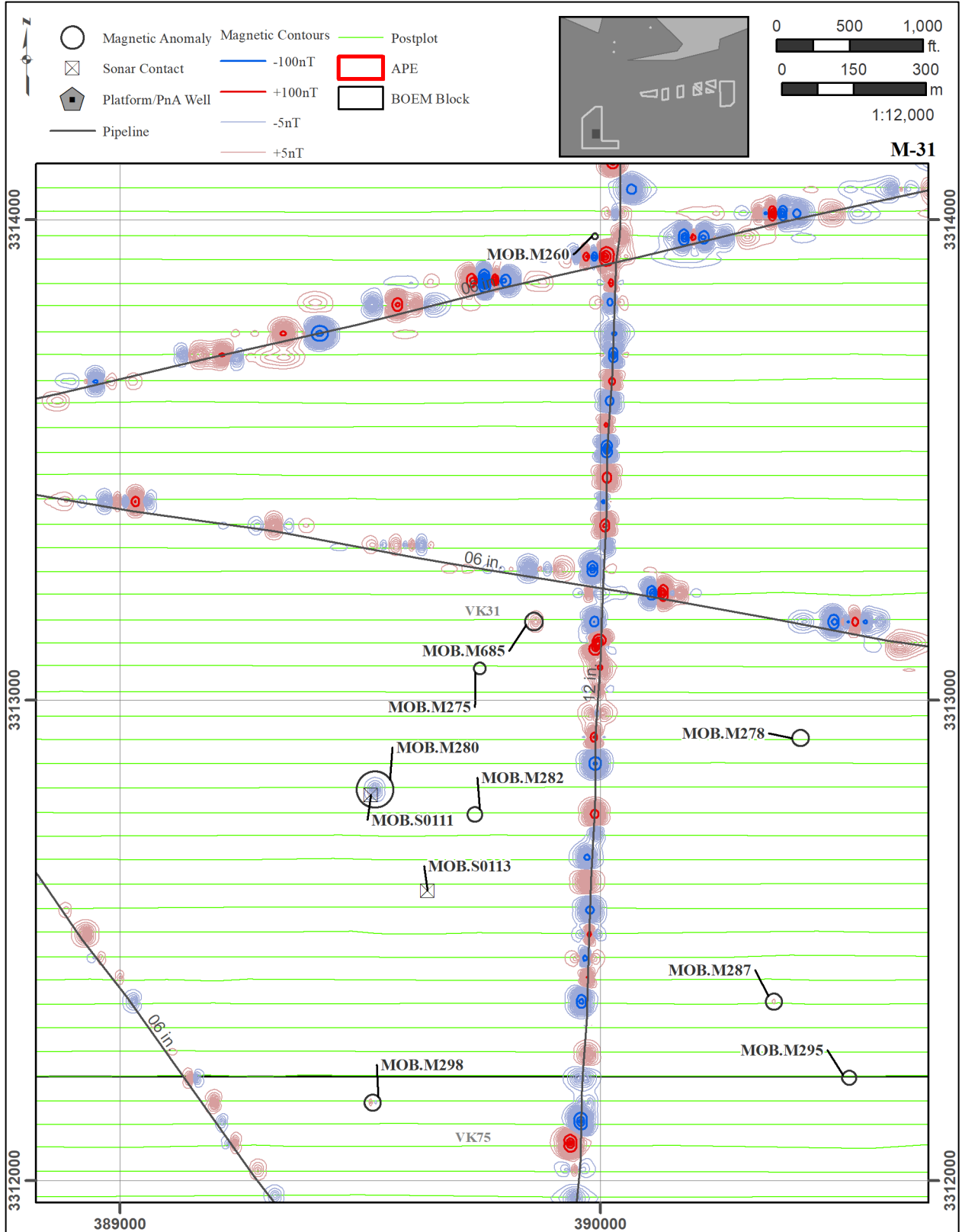


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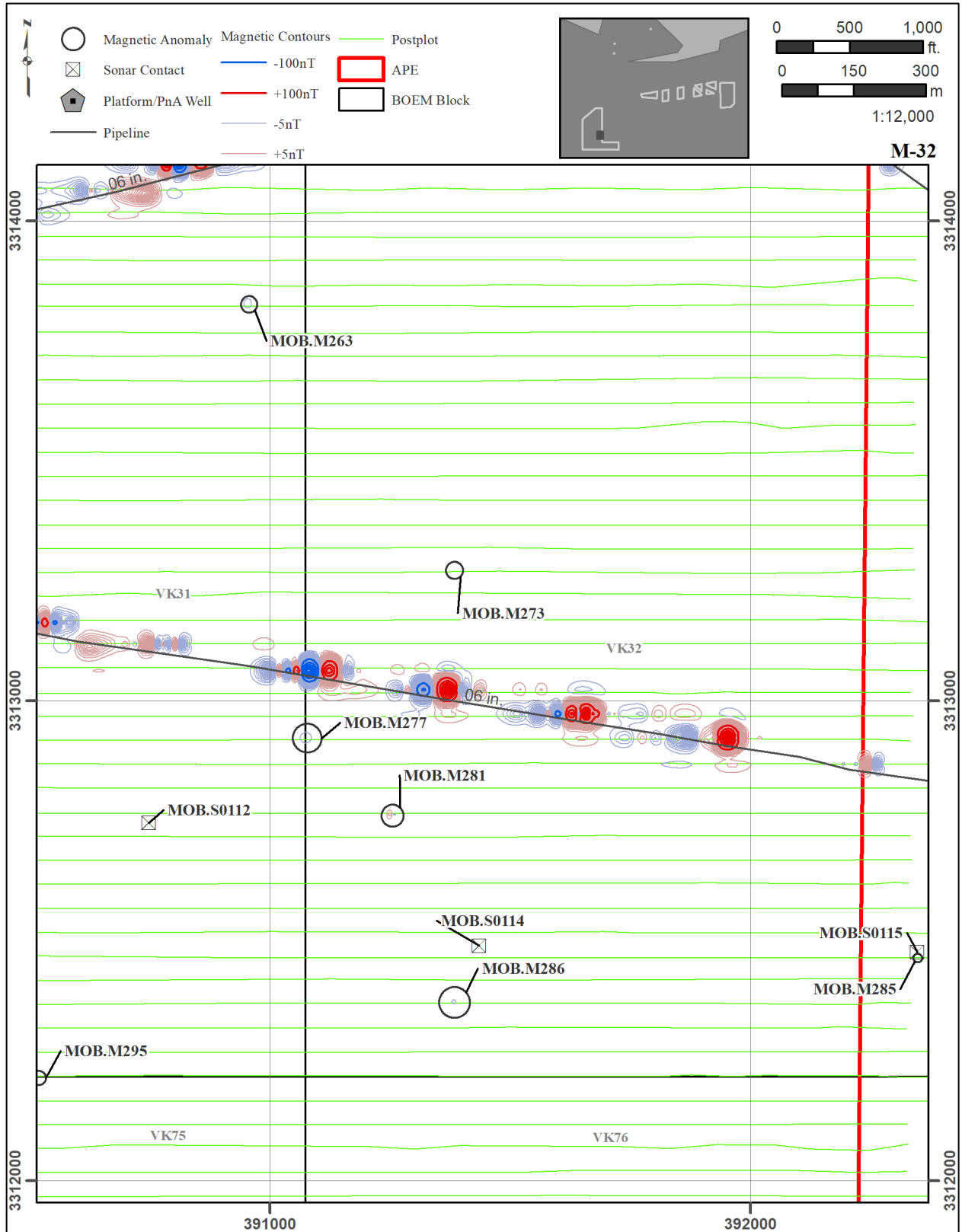


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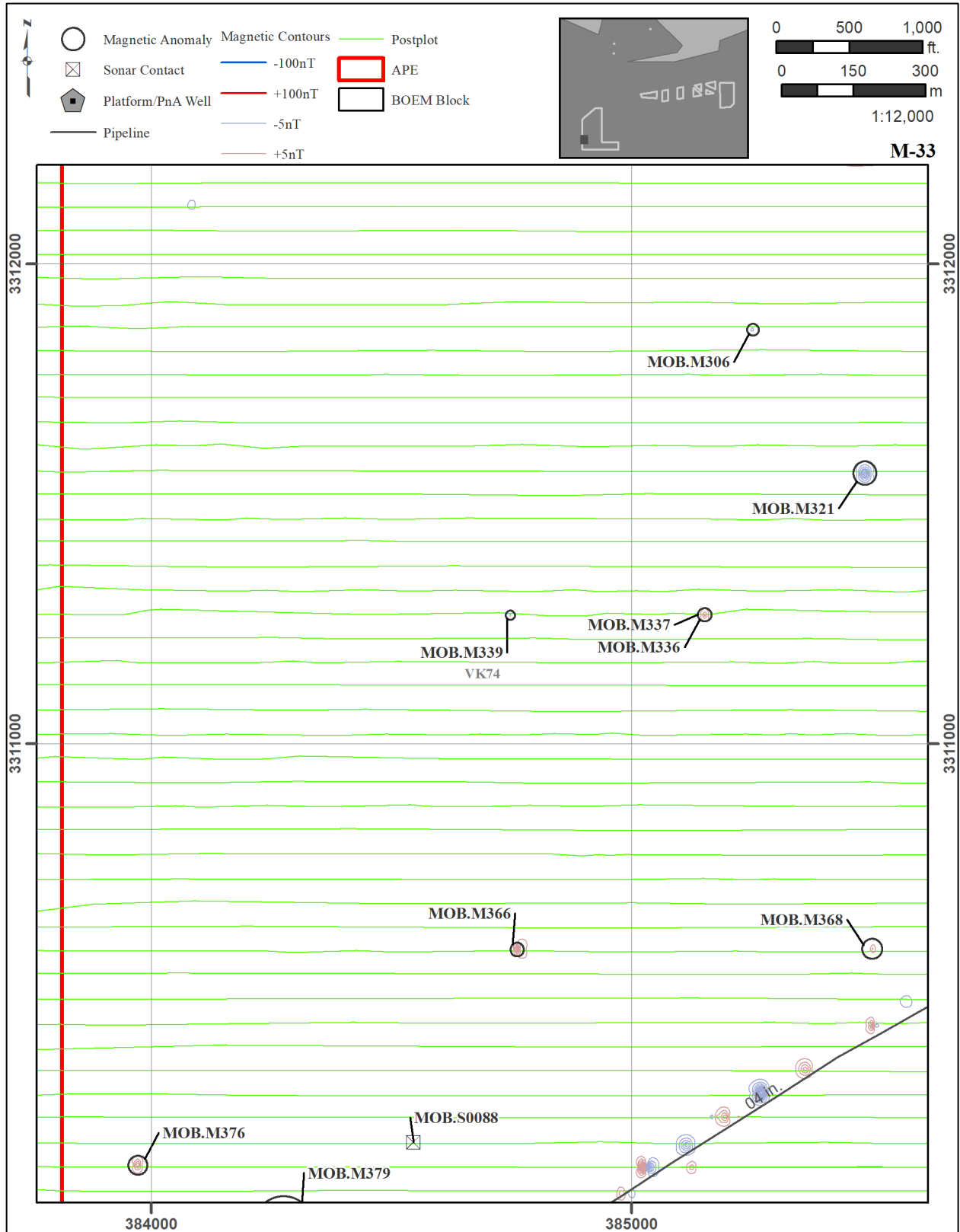


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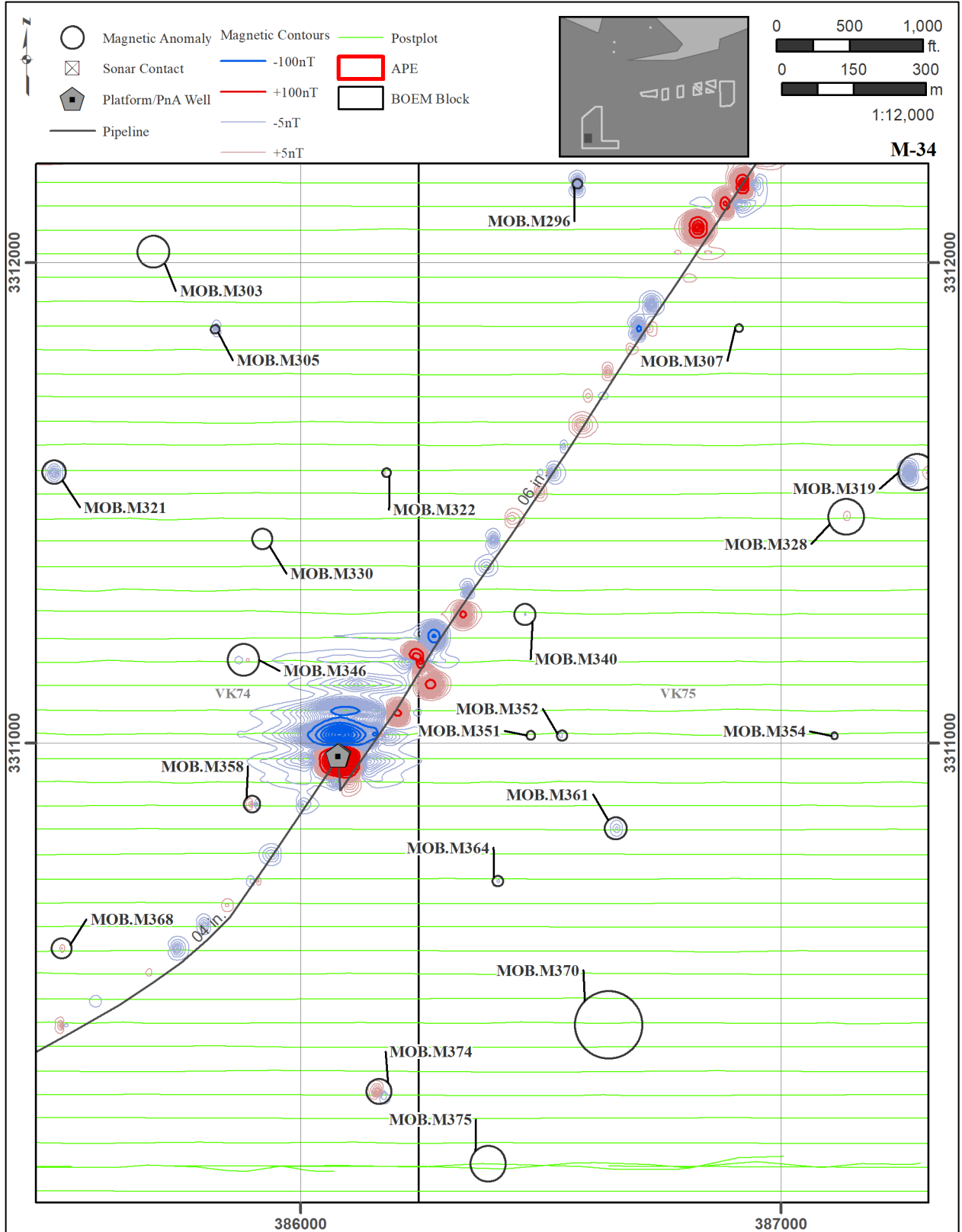


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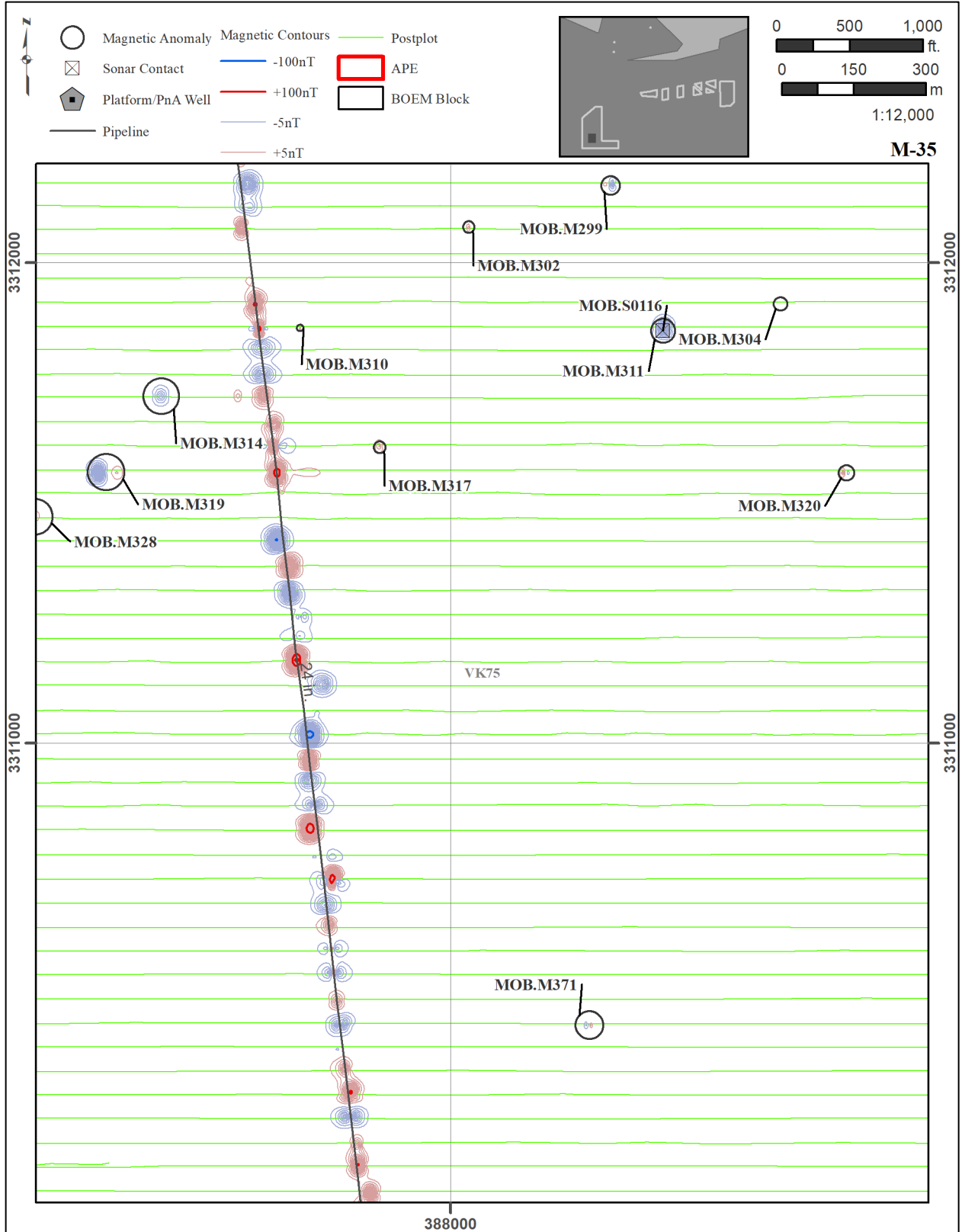


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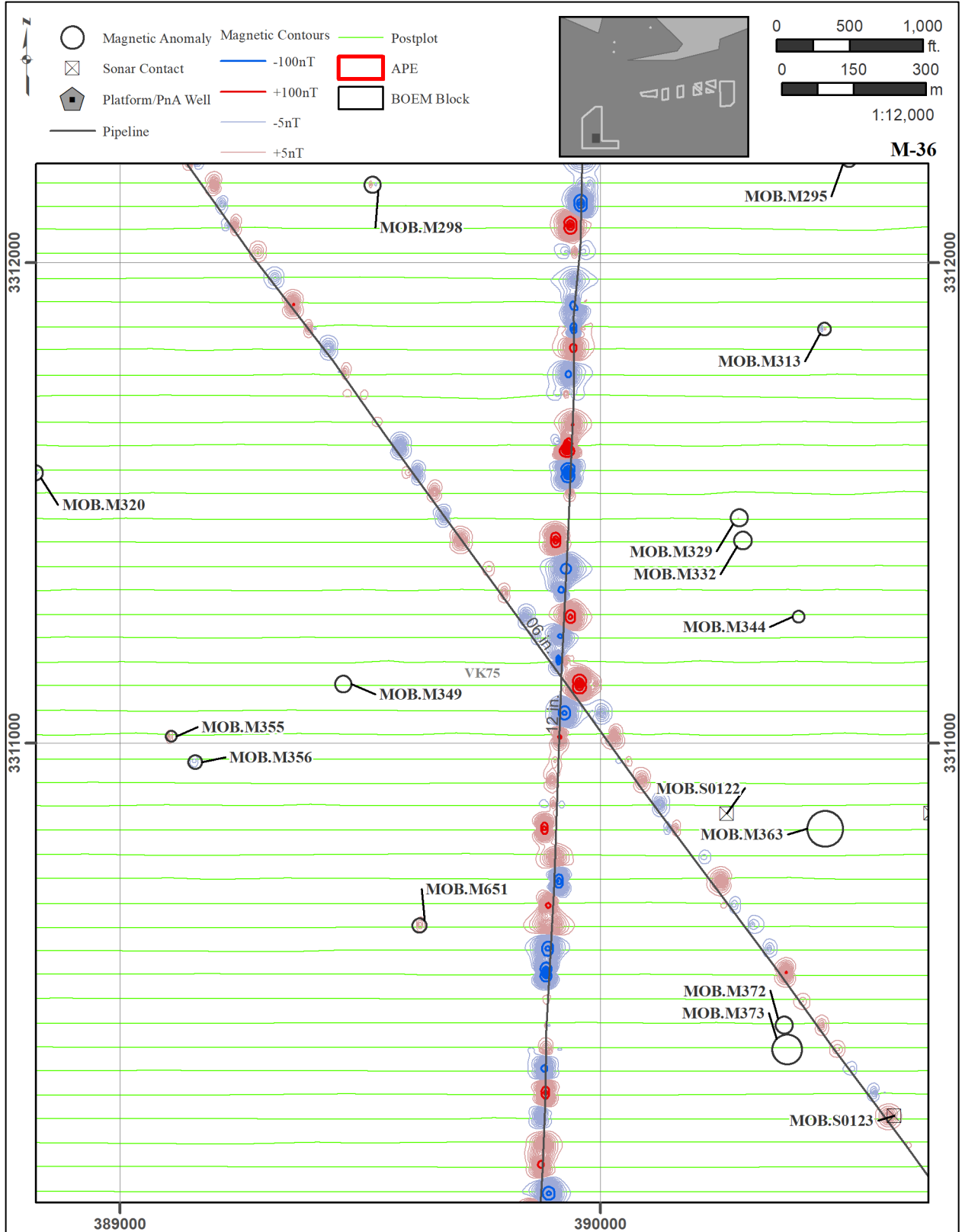


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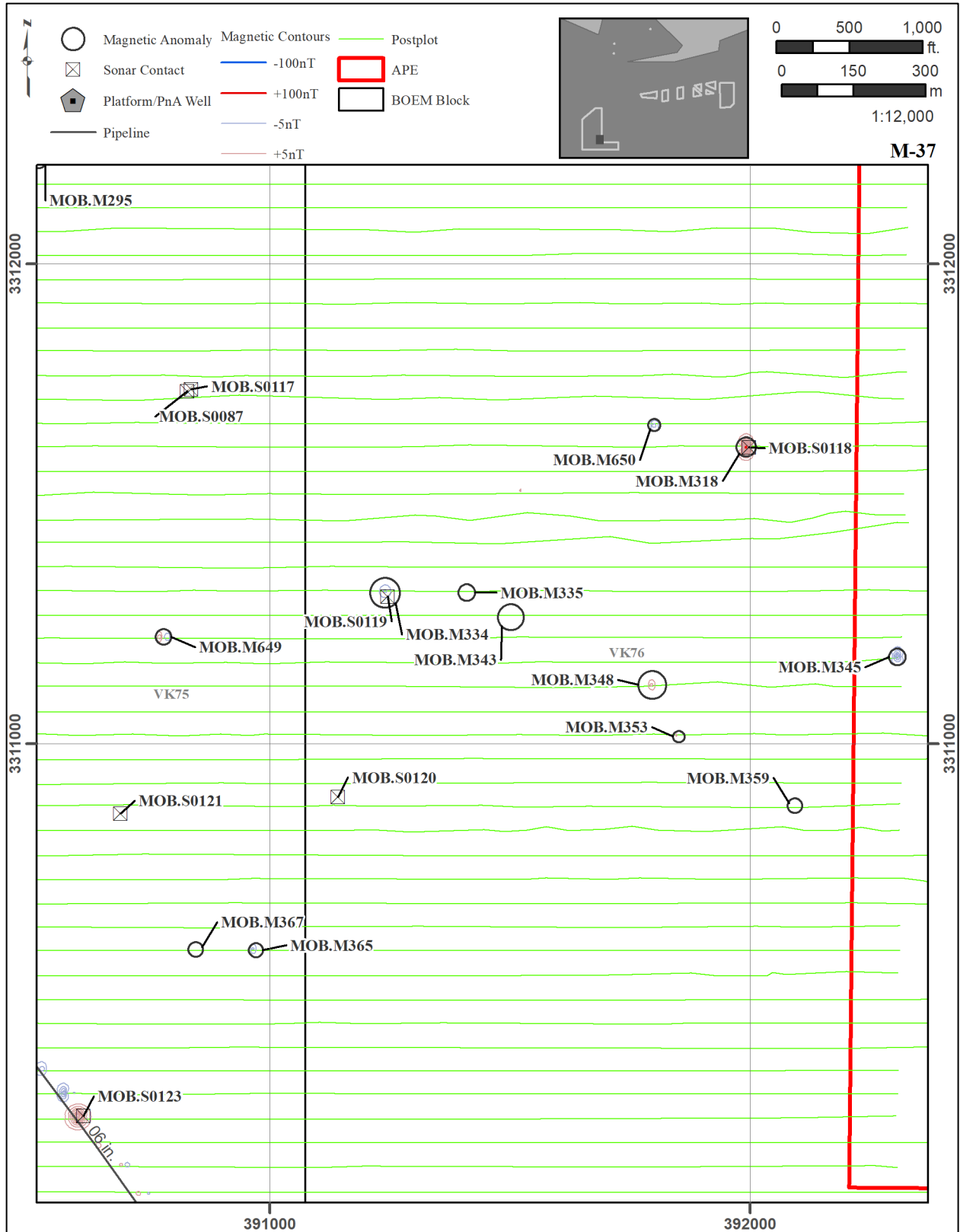


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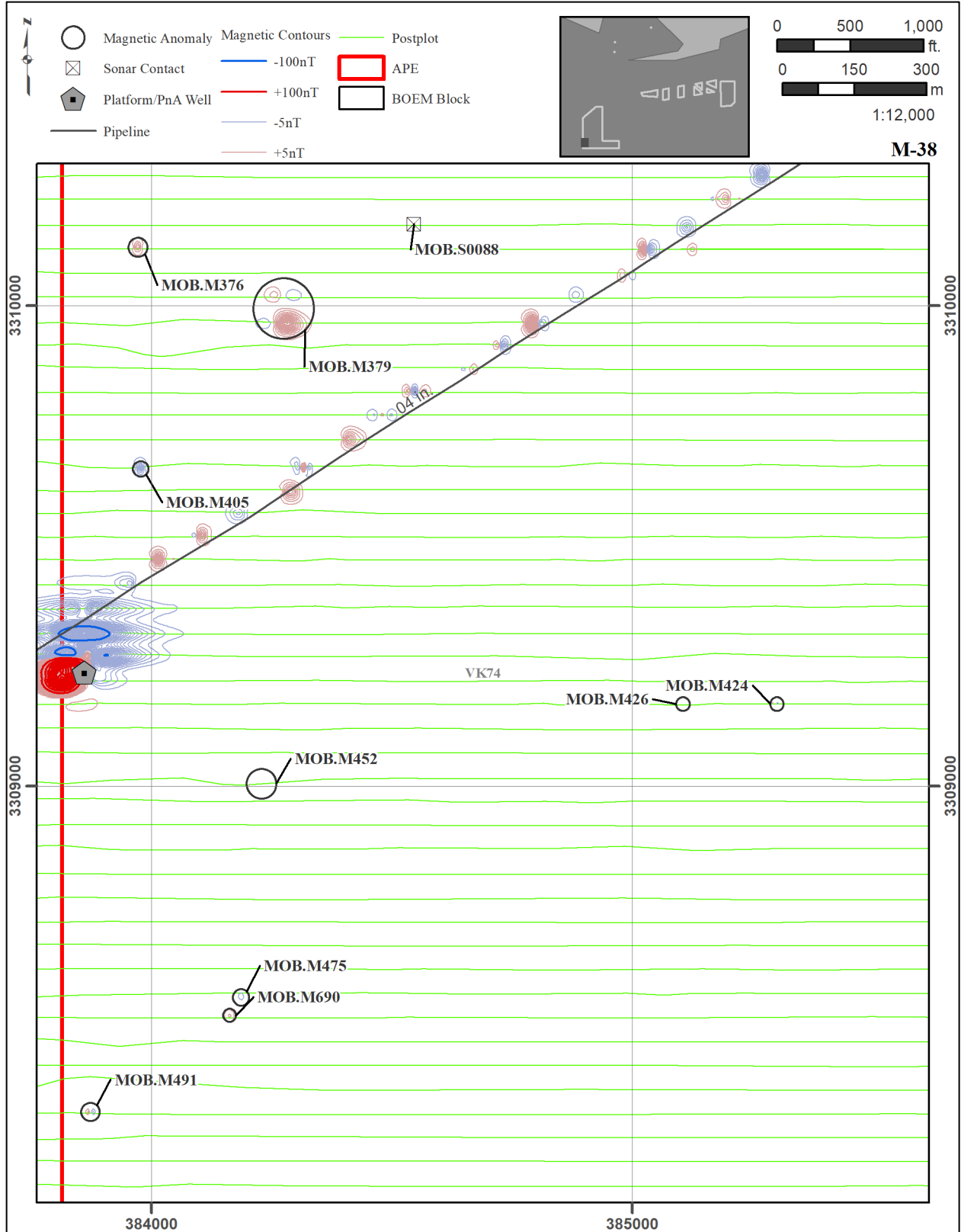


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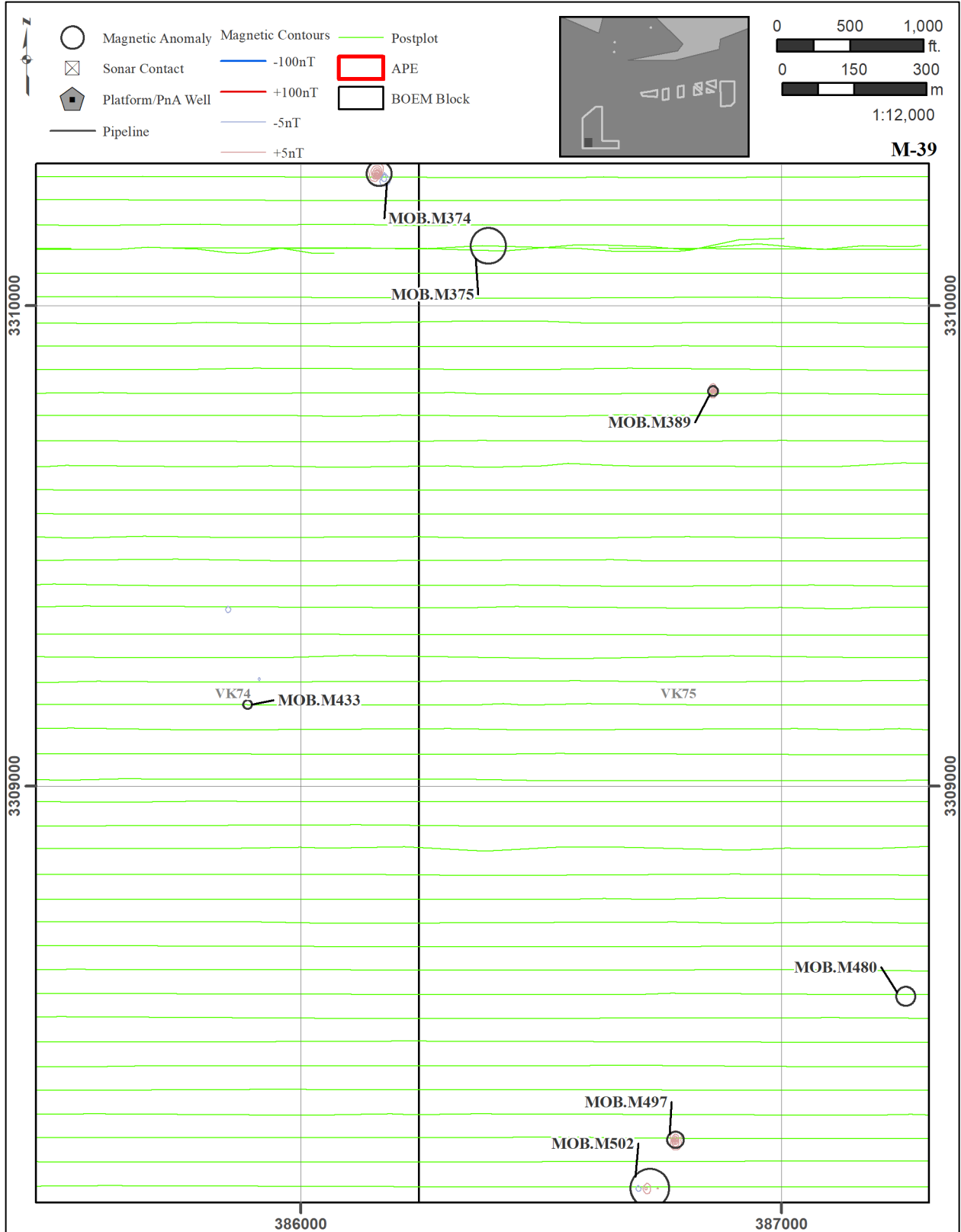


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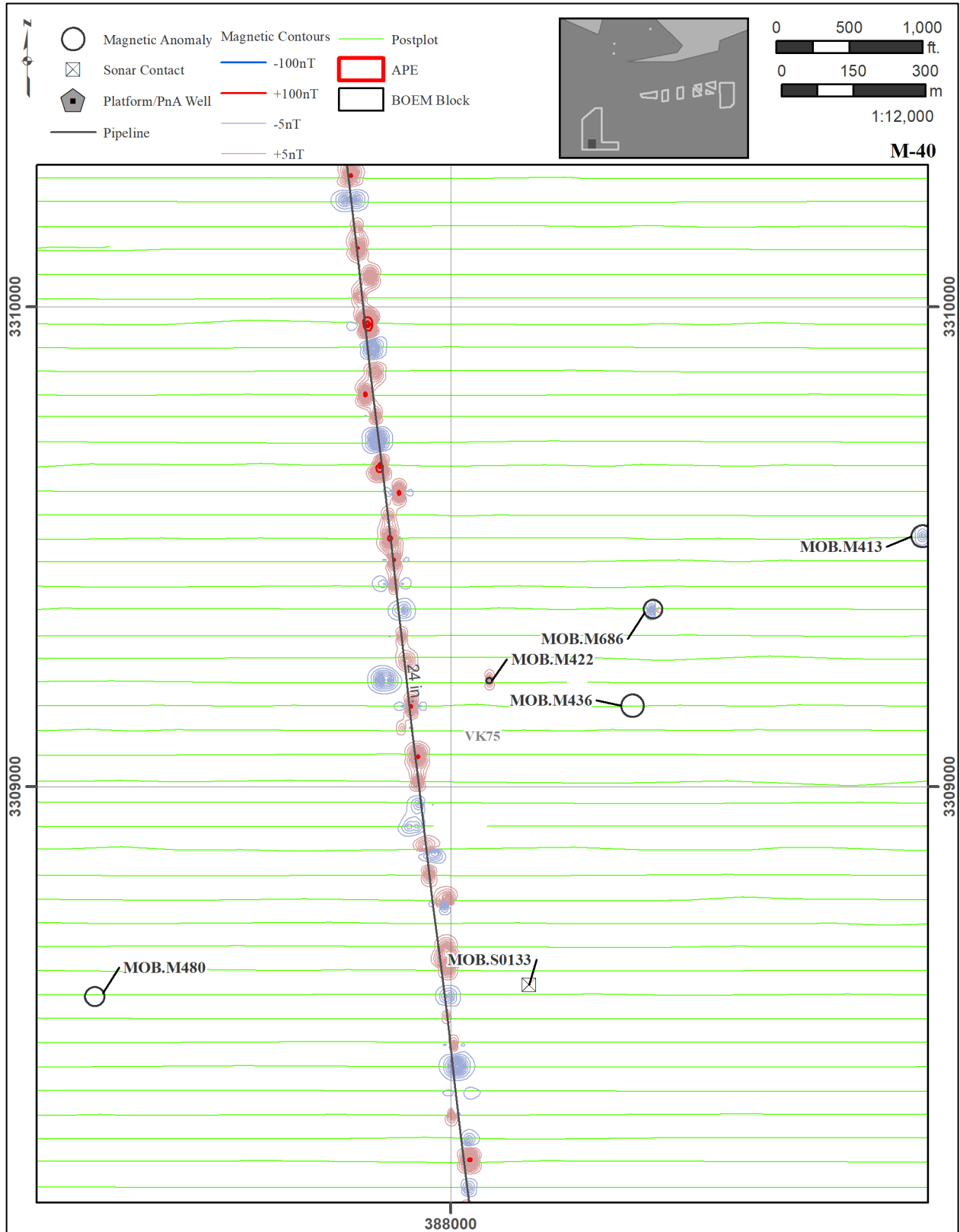


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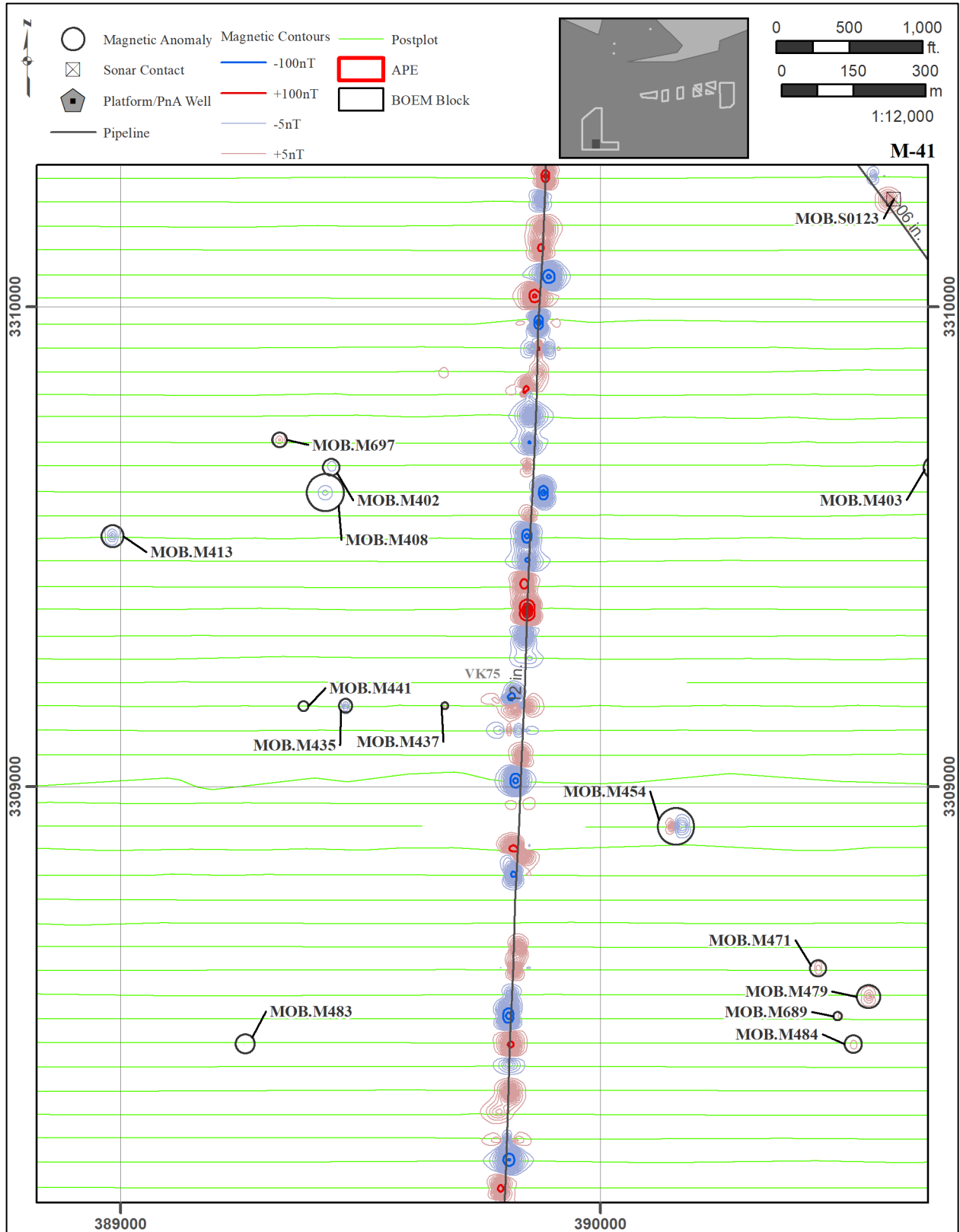


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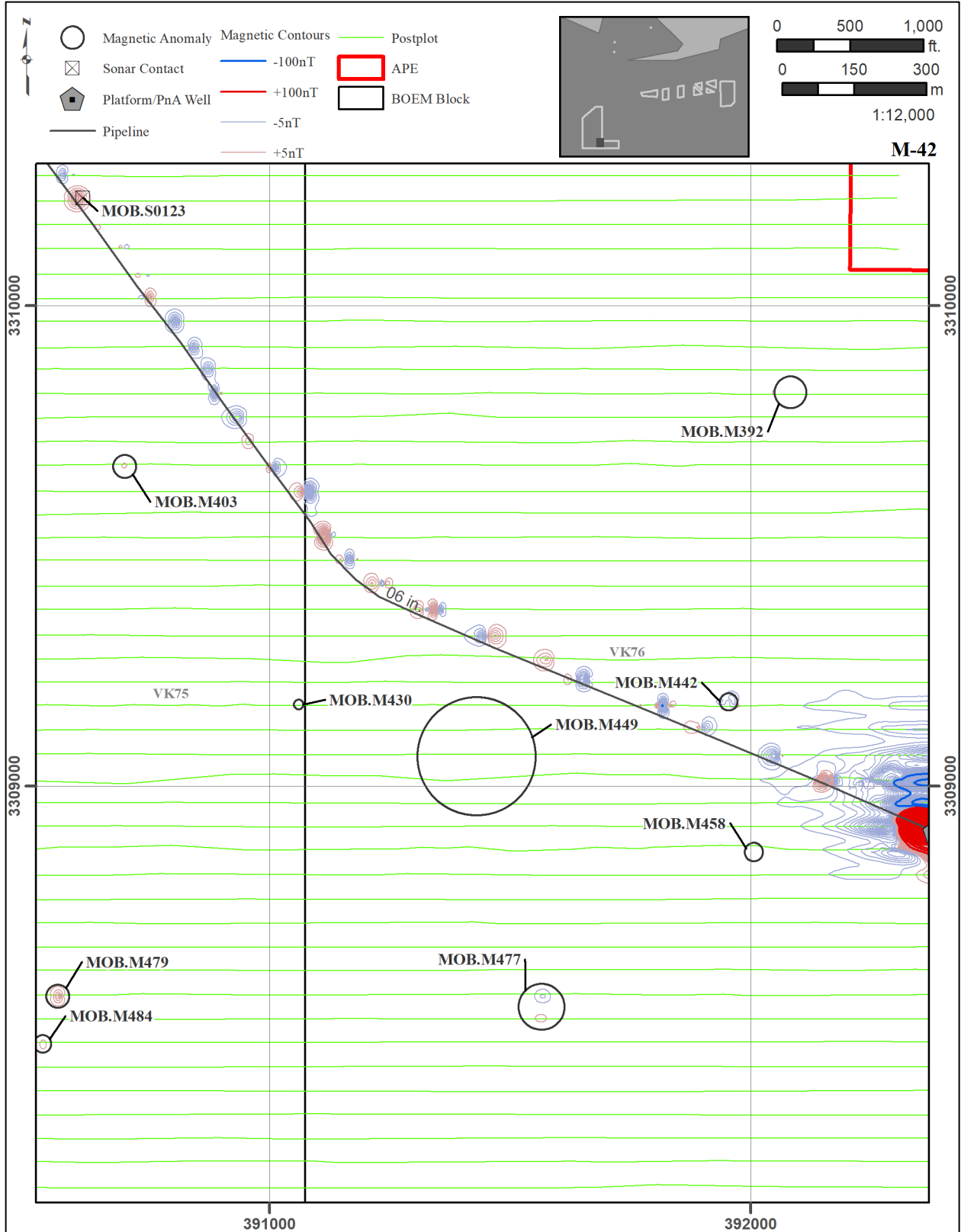


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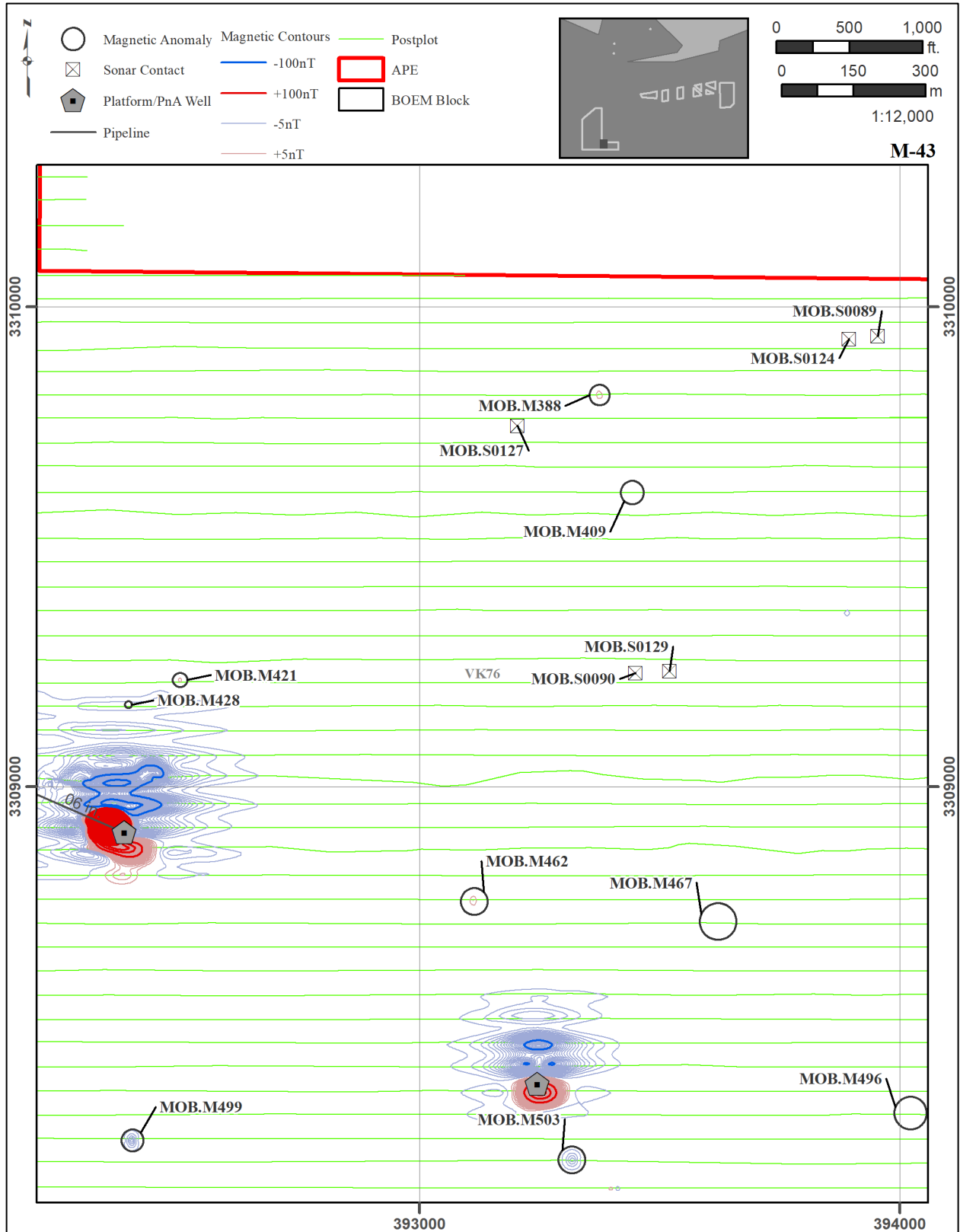


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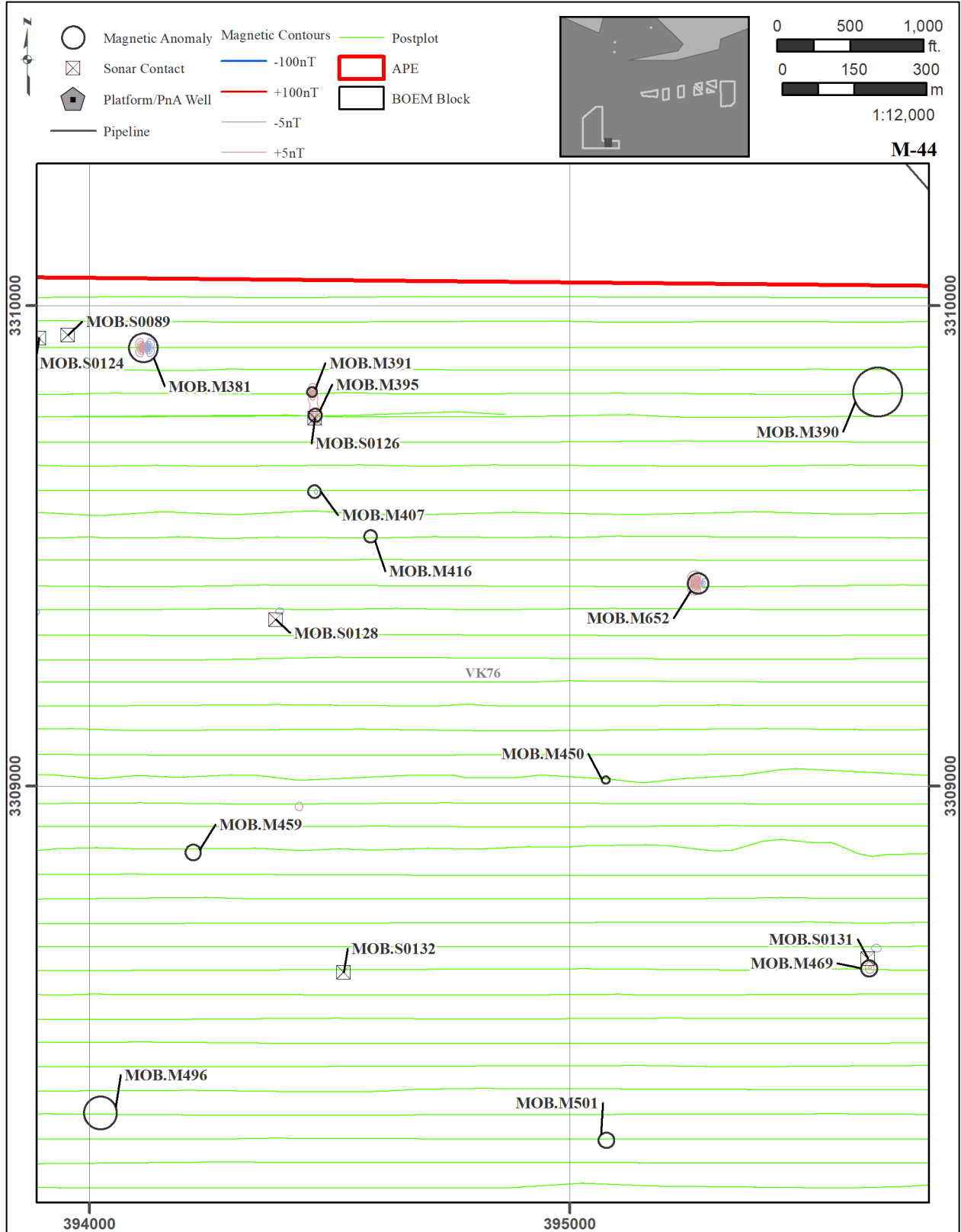


Figure P-45. MOB 2 Map 44.

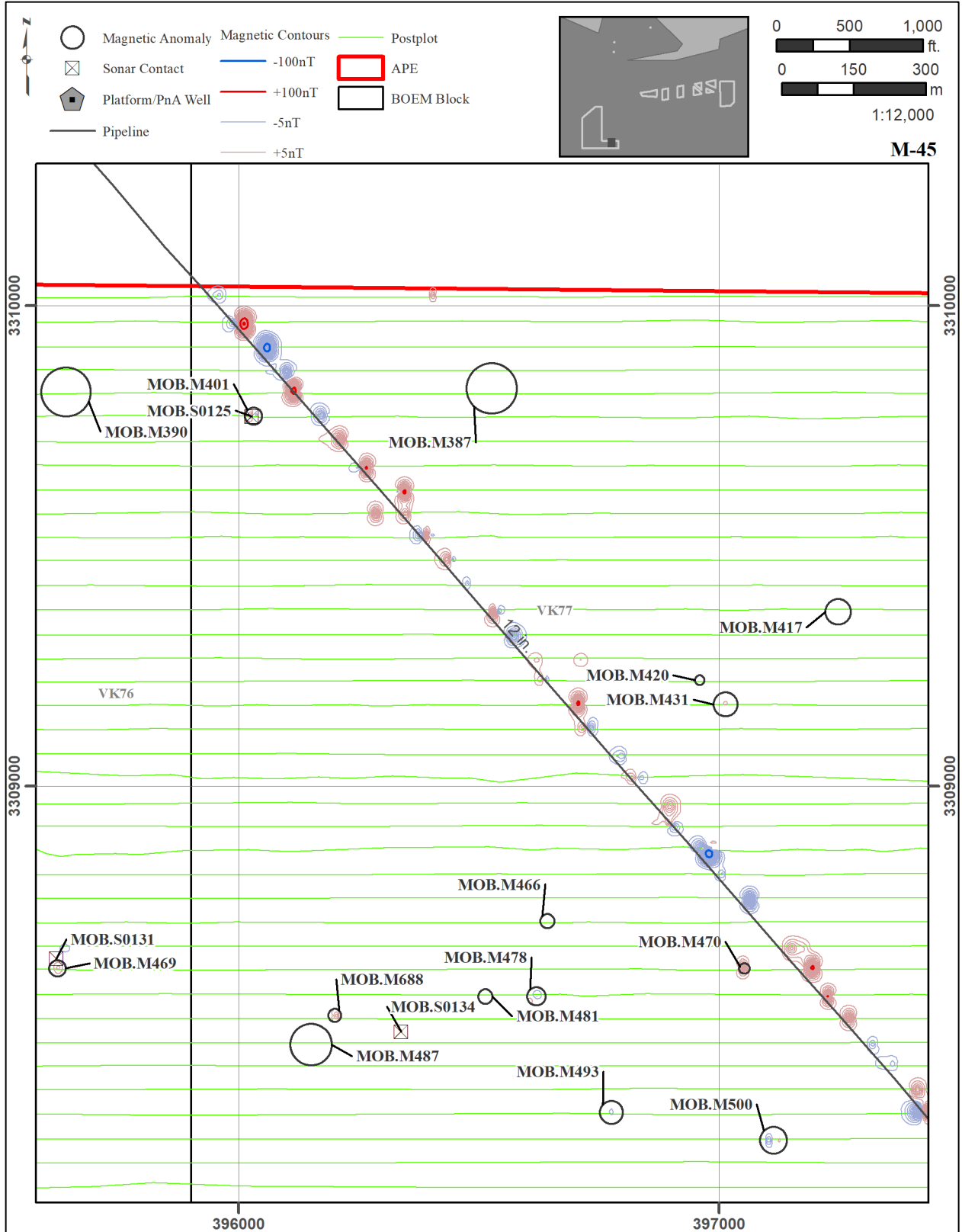


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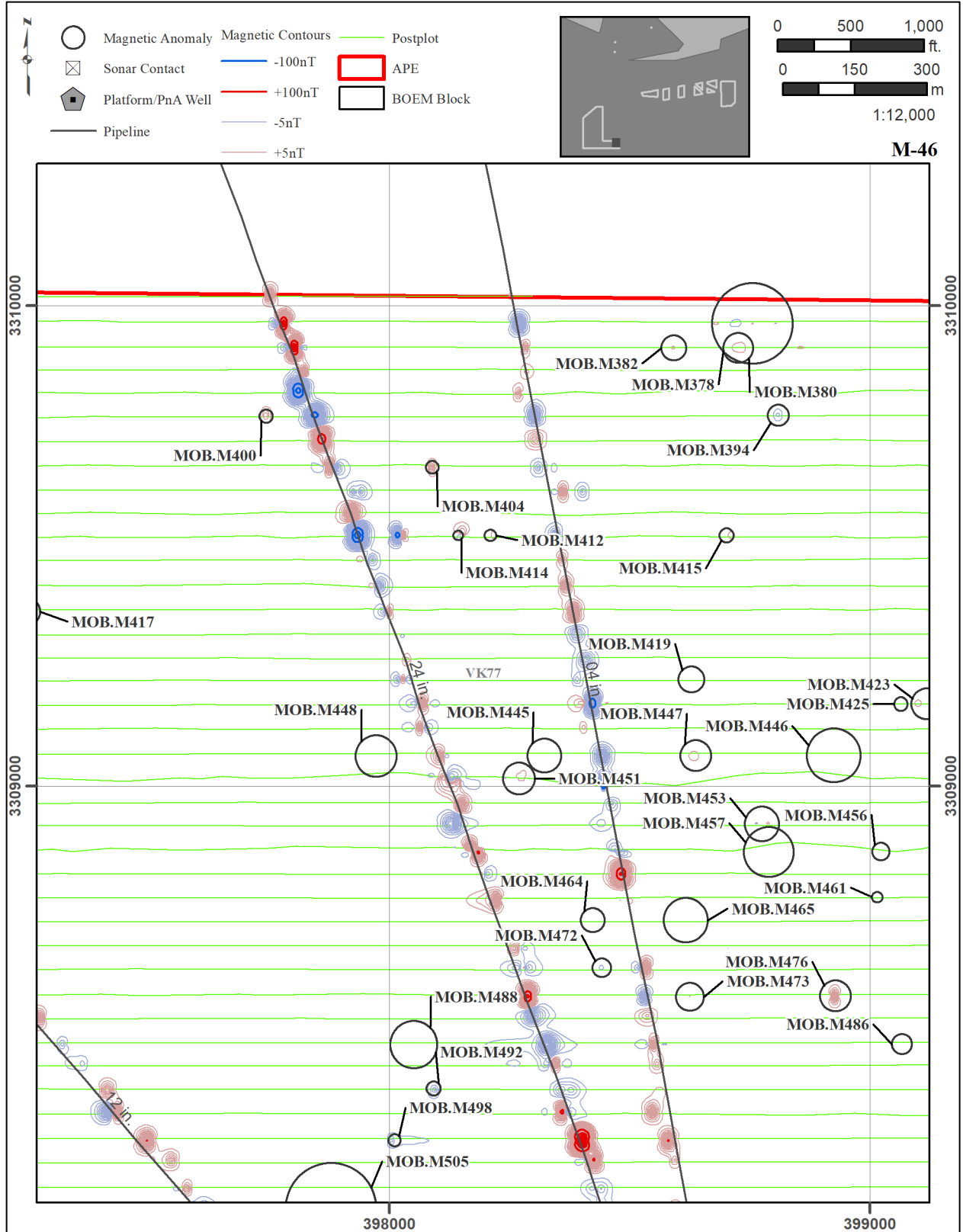


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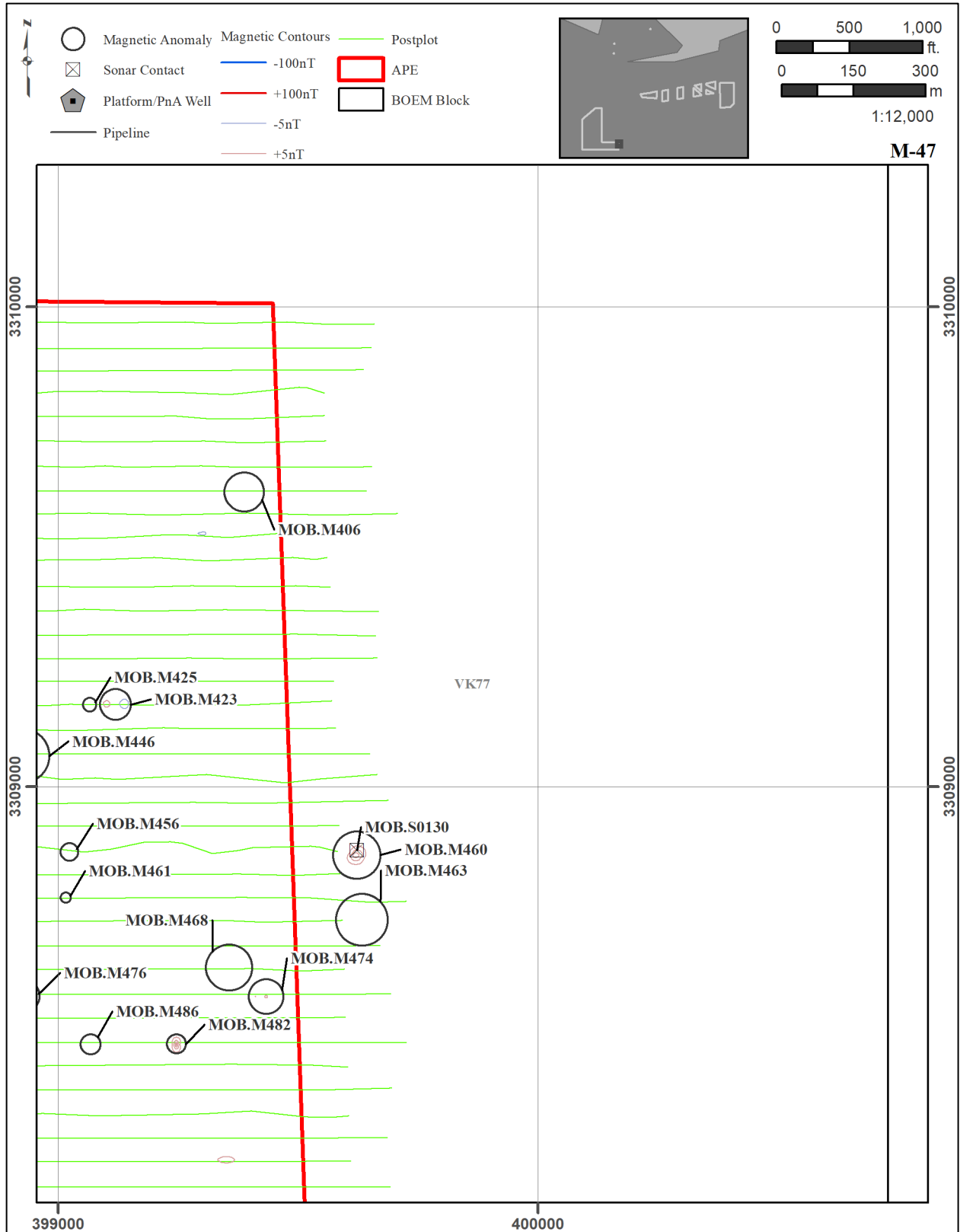


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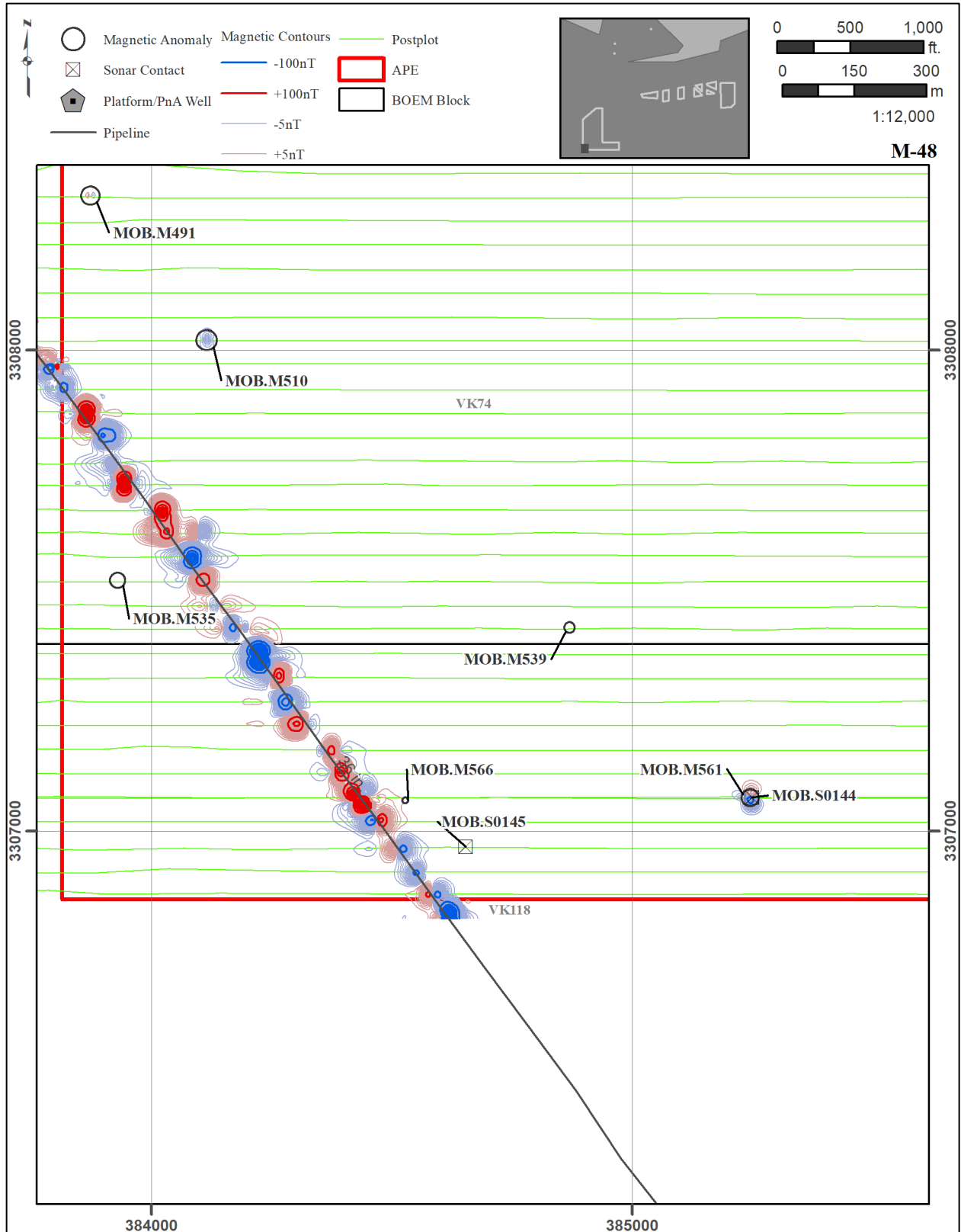


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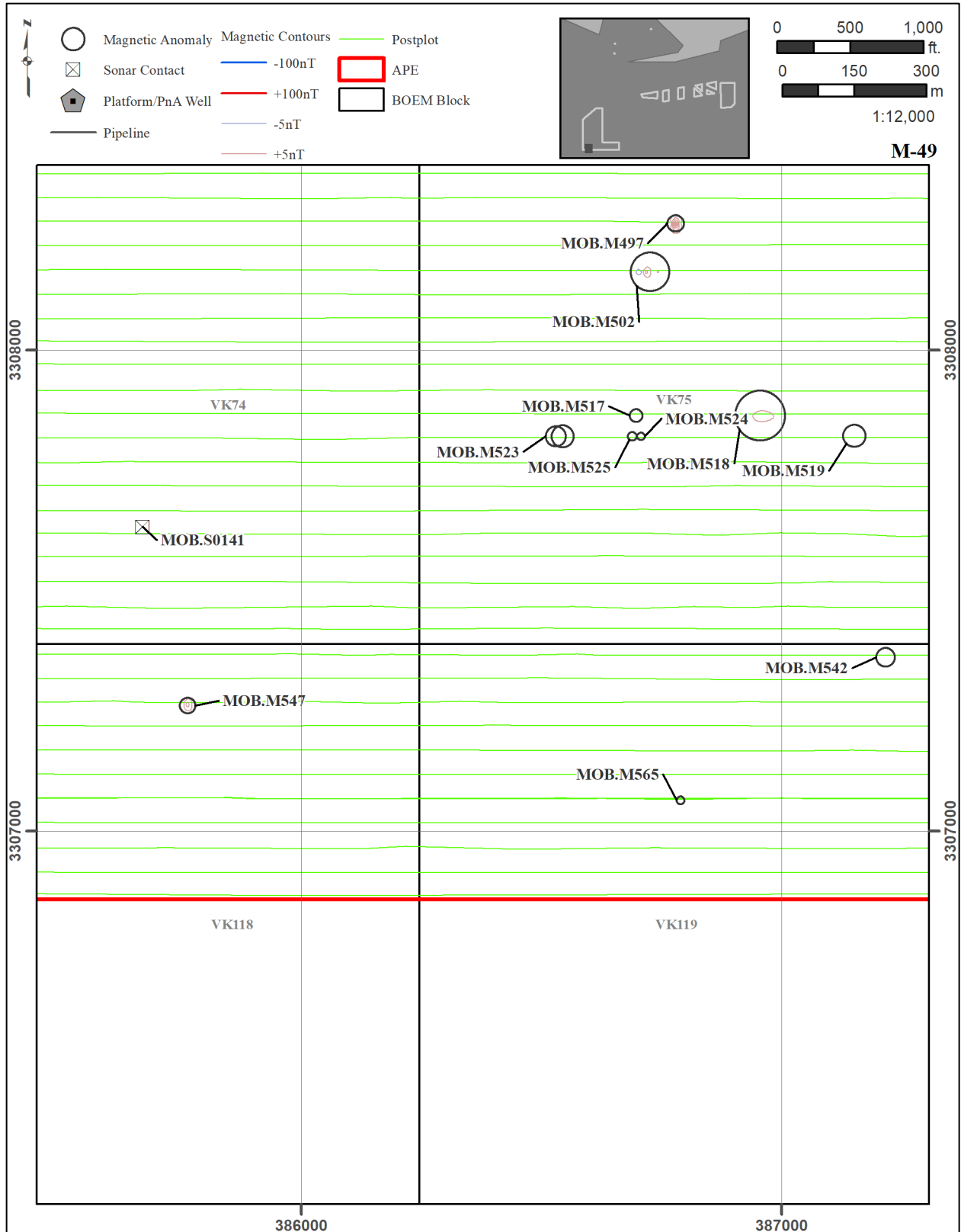


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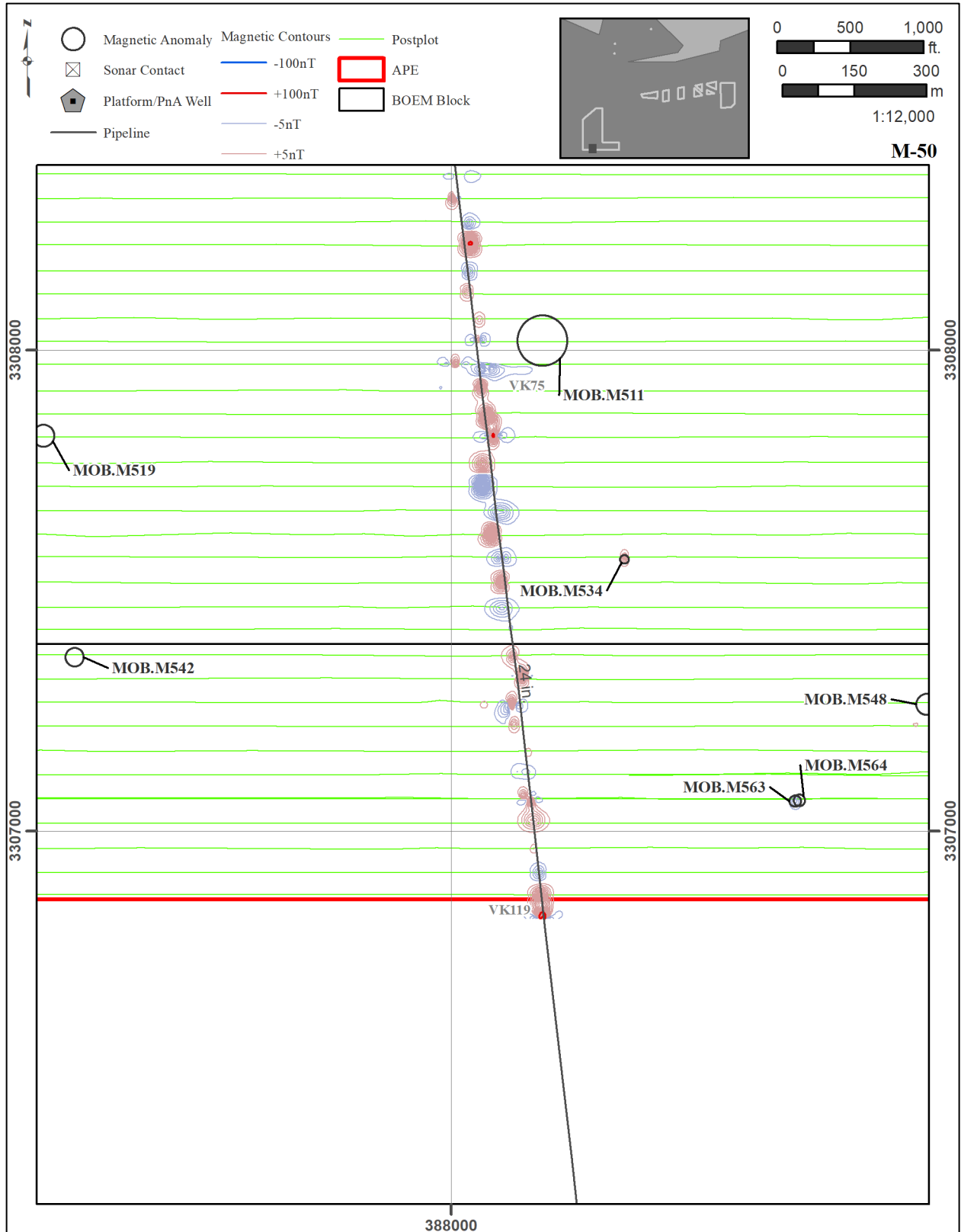


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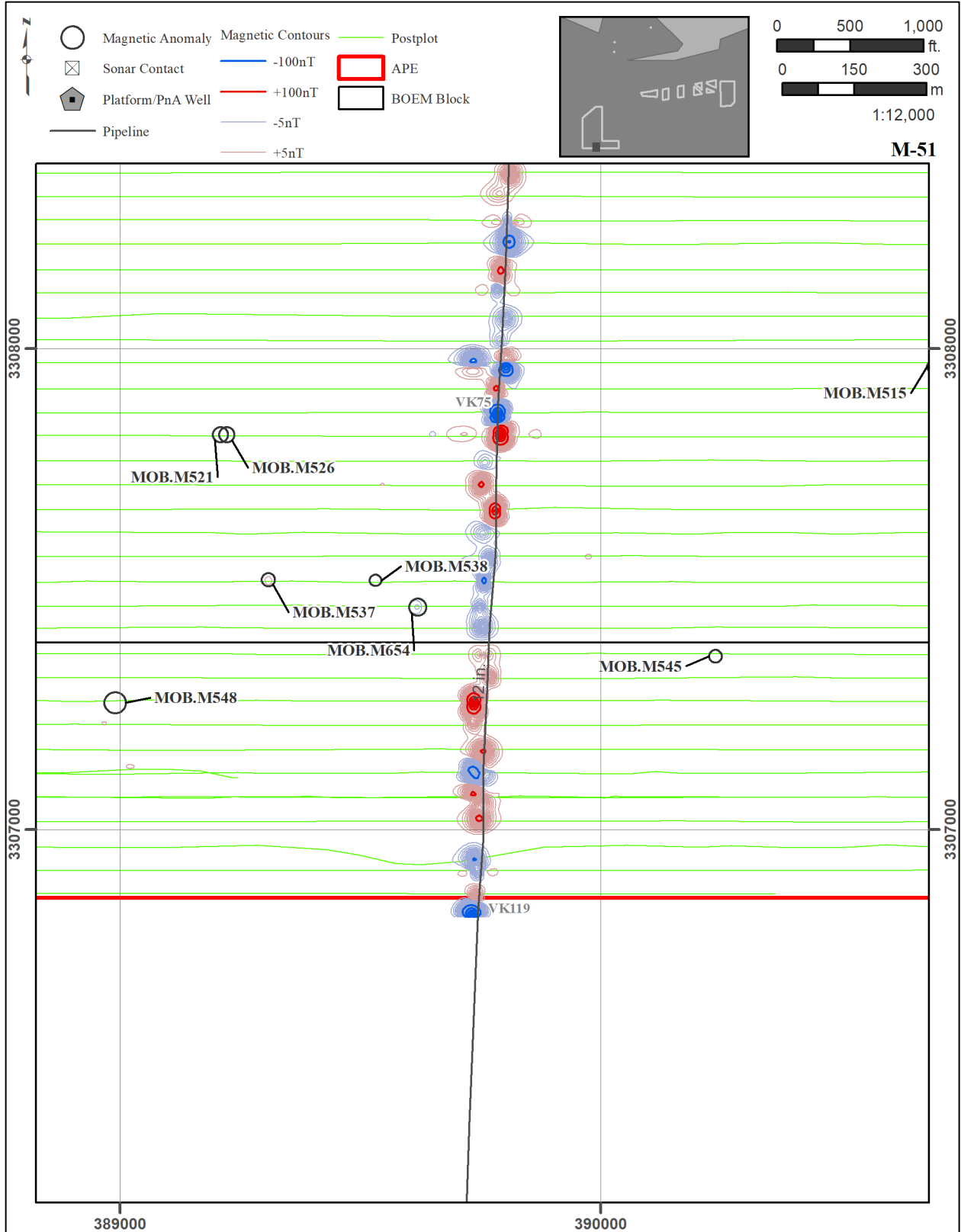


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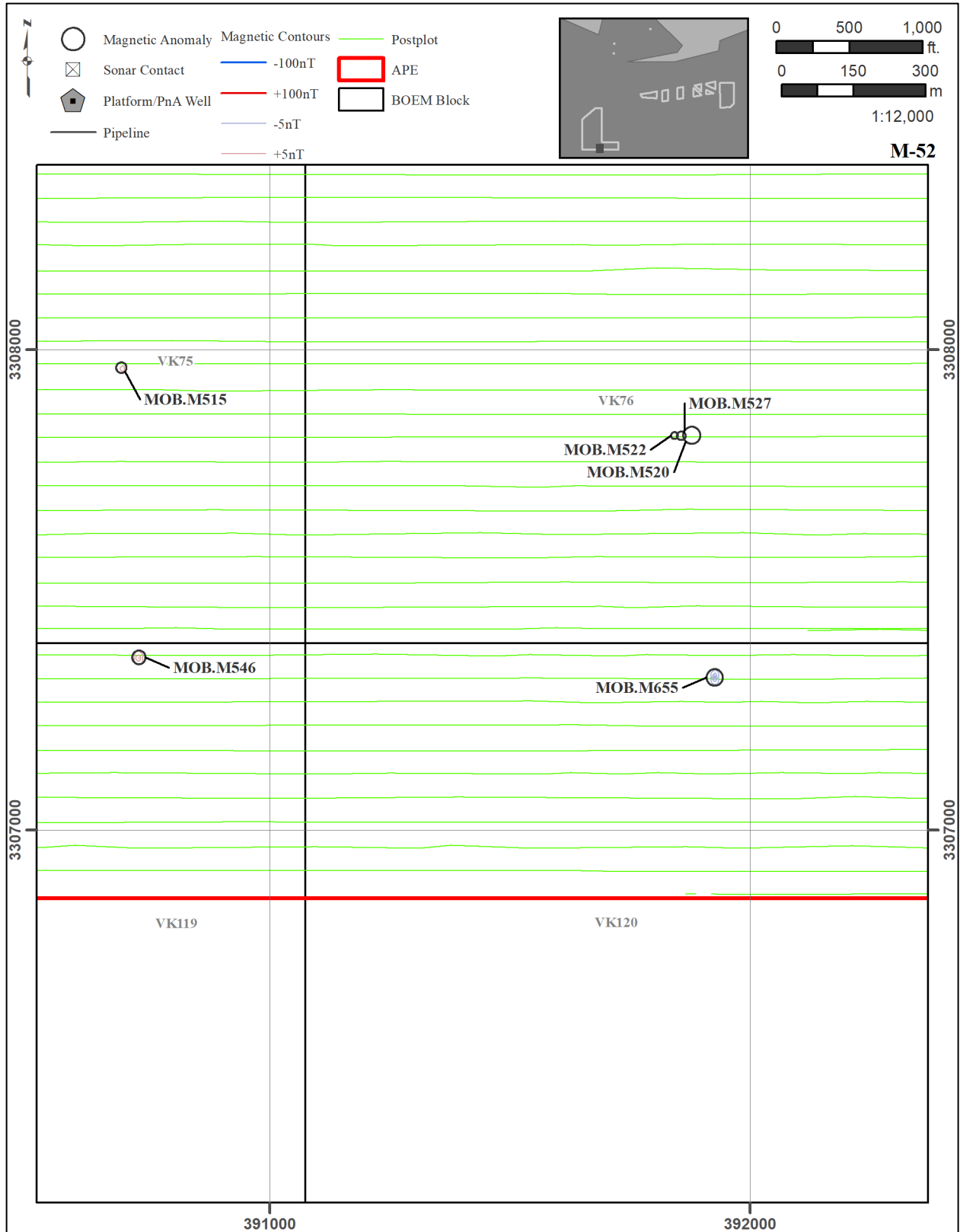


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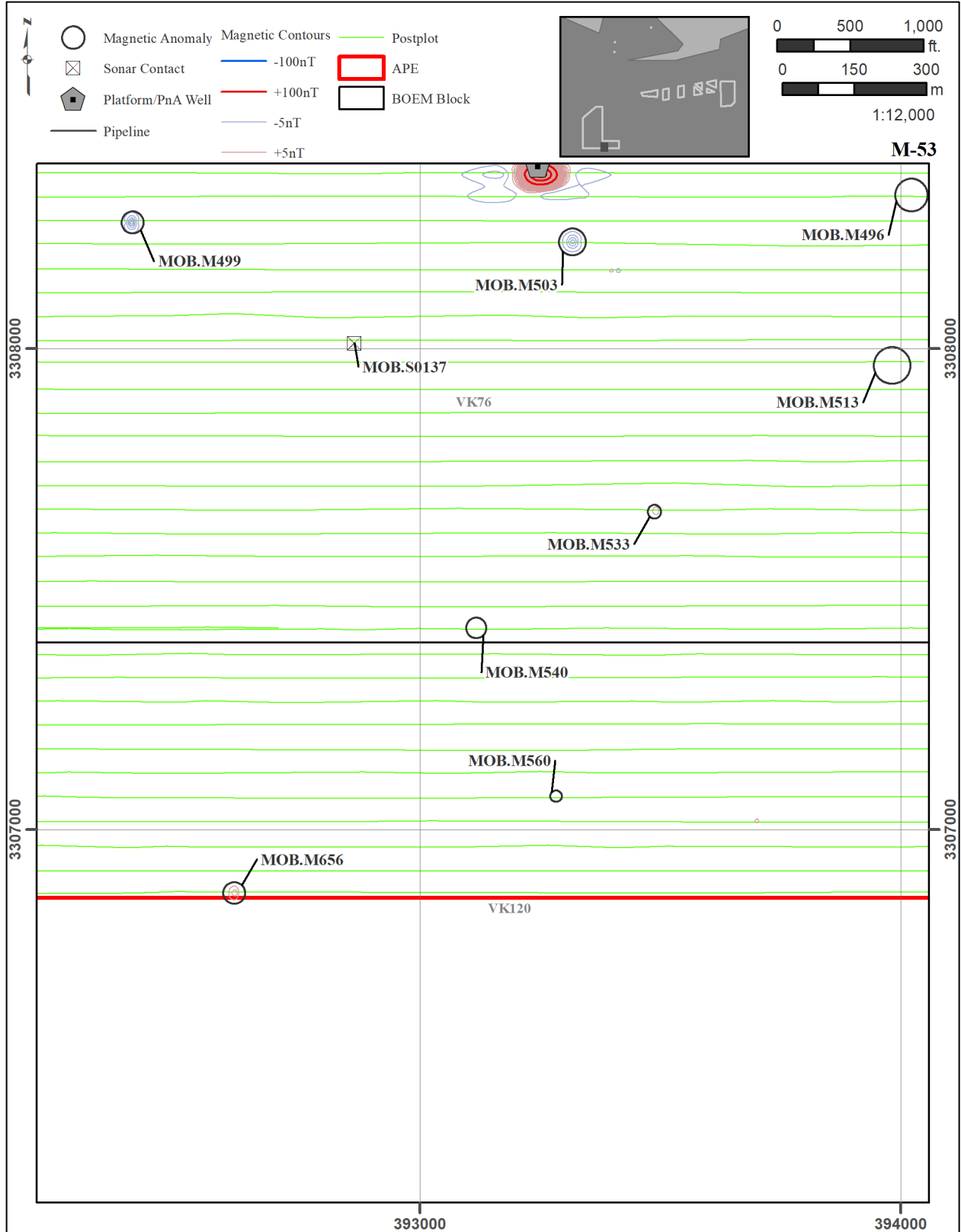


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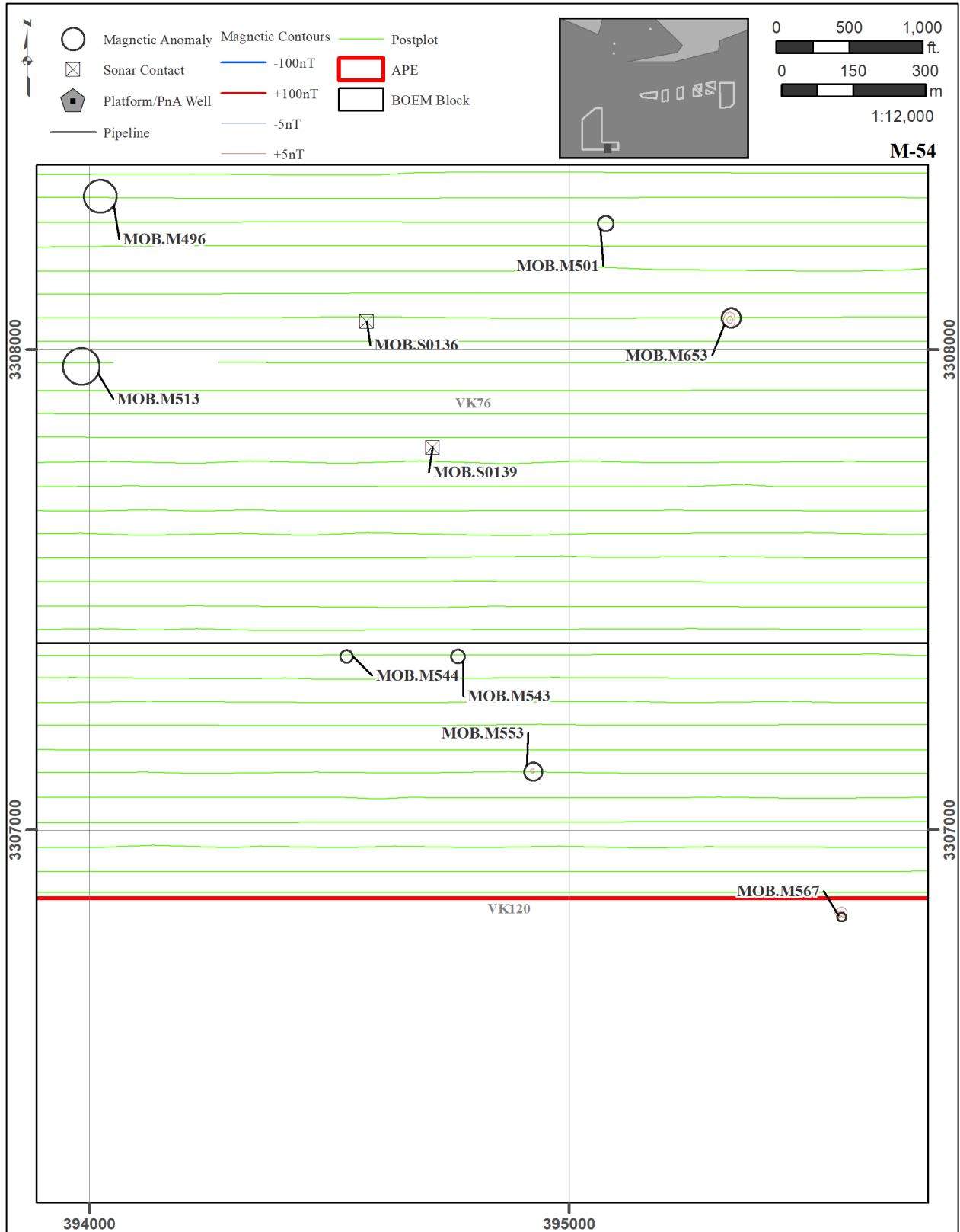


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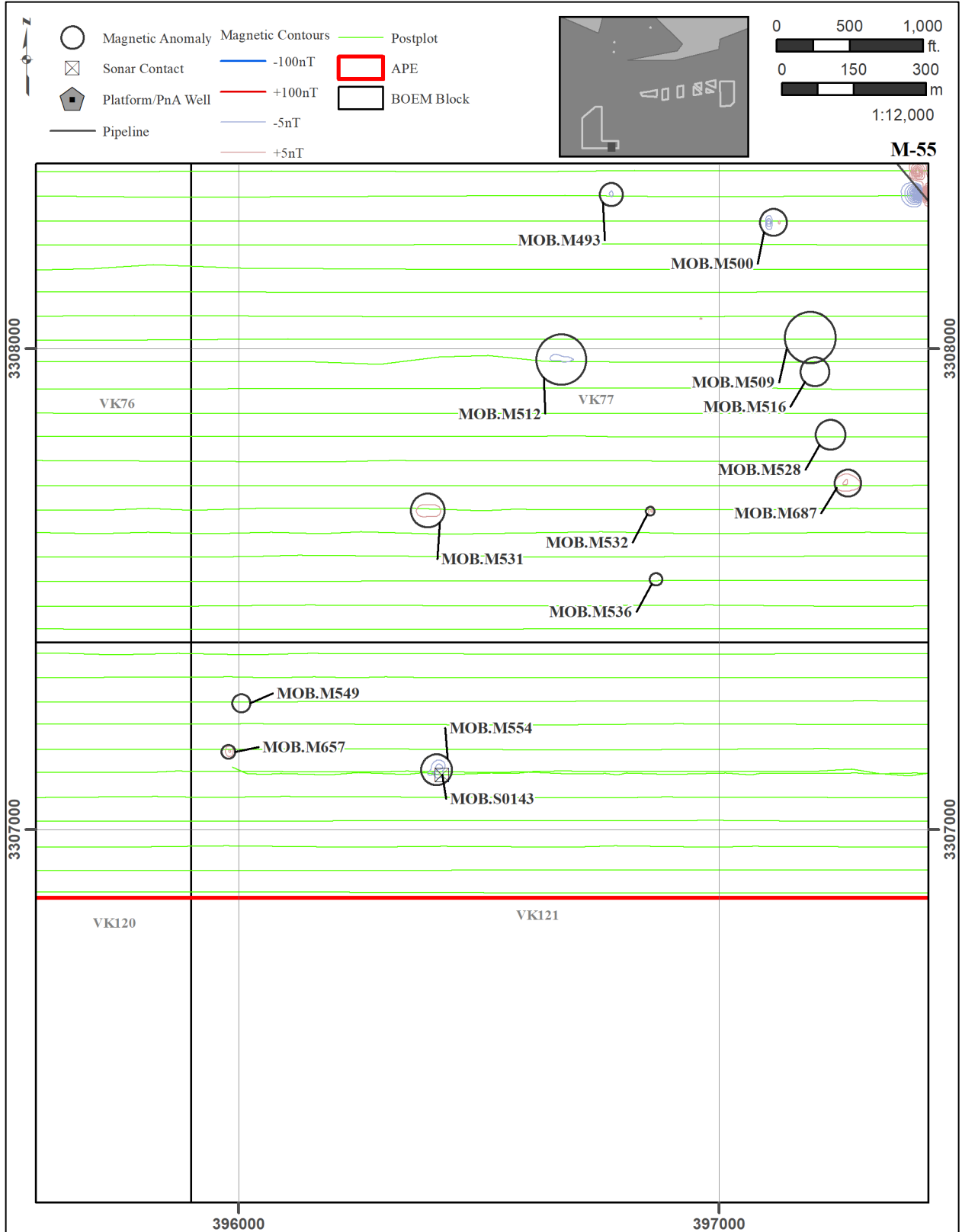


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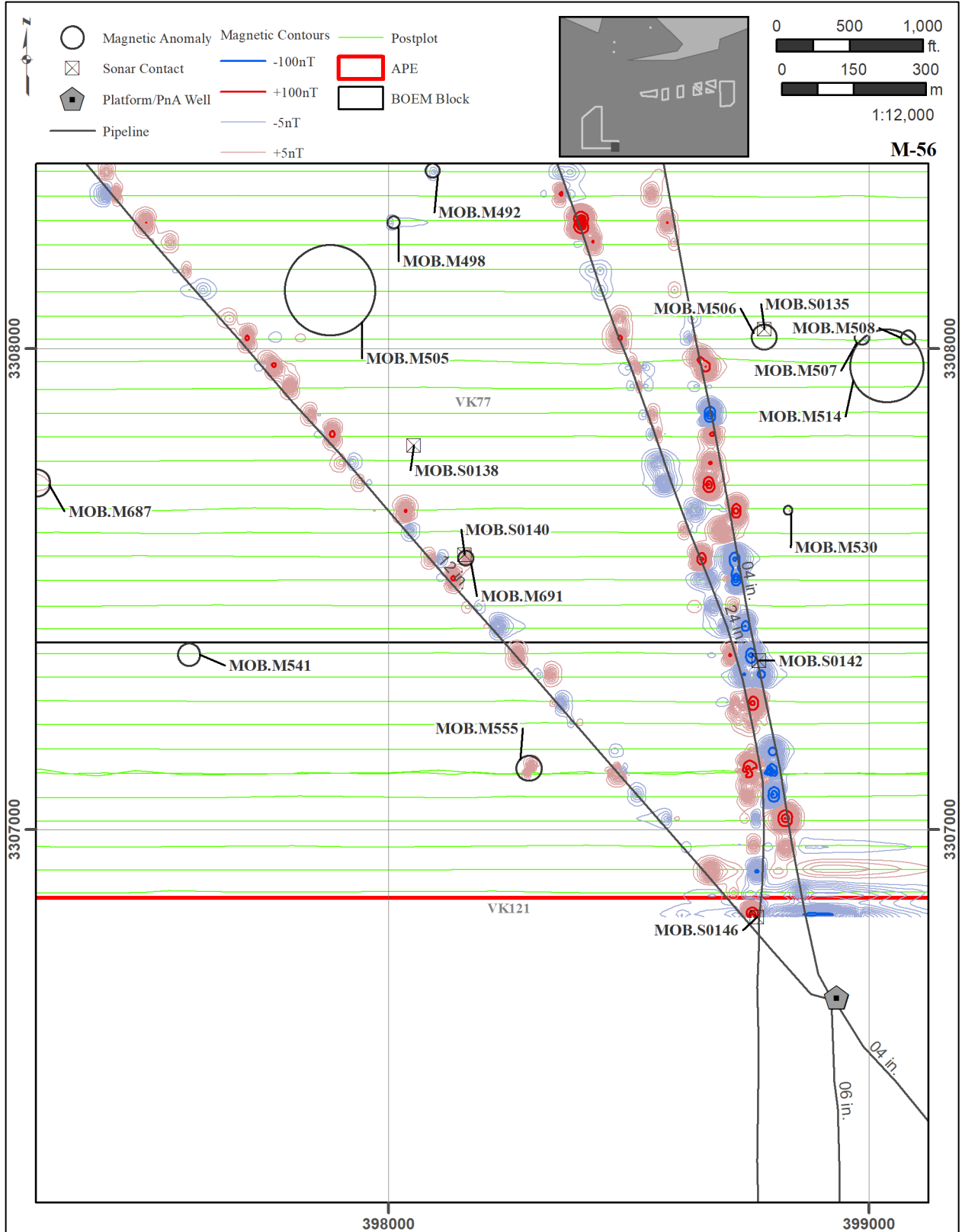


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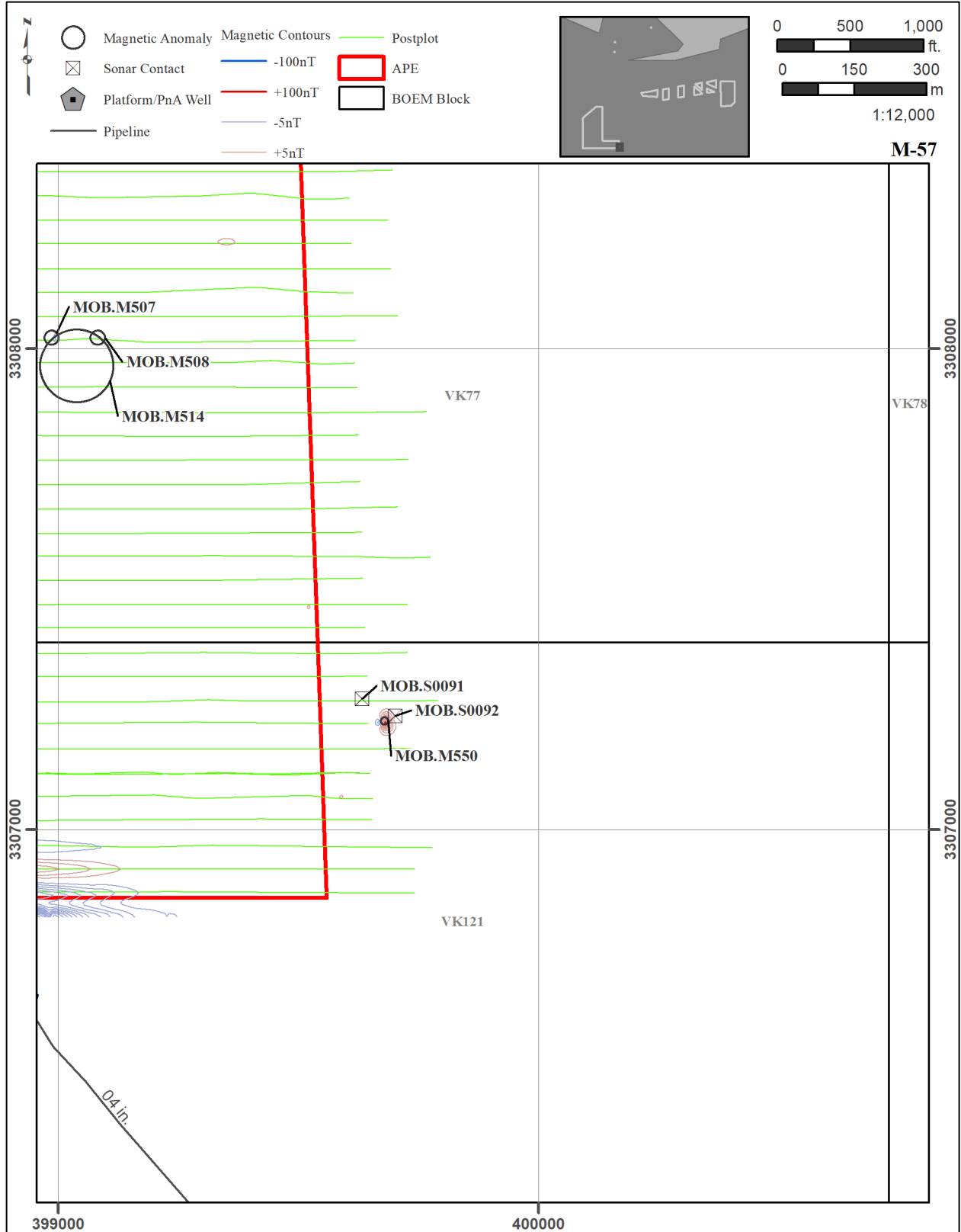


Figure P-58. MOB Map 57.

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