



DIVE SUPPORT VESSEL

ANCHORING & ANCHOR MITIGATION PLAN

1.0 Overview & Summary of Work

Diving operations will be conducted onboard a dive support vessel, approximately 4000' offshore (0.66 Nautical Miles) from Moss Landing CA, in 50' of water. Specific diver functions will include:

- Locate and retrieve a 40' length x 5" diameter stainless steel drilling head, weighing approximately 4,000lbs. Underwater Burning will be required to part the drilling head from the high carbon steel drilling shank. Rigging and lift bags will be necessary to surface the drilling head, which will be secured to the dive support boat and towed to shore.
- Installation of a hi-flex coupling (5" flange, 150lb) and fittings at the terminus of the drilling shank that extends up from the ocean floor.
- Other miscellaneous work as directed by the directional drilling contractor.

All offshore activities will take place from the dive support vessel. The support vessel will be moored using a two, three or four-point anchorages depending on the sea conditions. Described below are anchoring protocols and plans that will be employed in deploying, utilizing and recovering anchors.

This procedure will also ensure that anchoring is conducted without affecting sensitive seafloor features and to minimize the anchor impact on the seafloor. This is accomplished by utilizing a mooring design which incorporates accurate coordinates for all subsea features in the vicinity of the project site, and through the mooring system deployment and recovery procedures incorporated within this document

2.0 Anchoring Requirements

Dive Support Vessel

A dive support vessel will be used to support all diving and other offshore operations. The dive support vessel will be moored over the planned work locations utilizing either a two, three or four point anchor plan.

The proposed vessel owner/operator is familiar with anchor placement and mitigation requirements, as he has over 25 years experience operating in support of offshore scientific and diving operations. Furthermore, the vessel is based at Moss Landing CA, and is very familiar with the area of work

The R/V Shana Rae will be deployed as the dive support vessel, which is described below.

R/V Shana Rae



Length:	52 feet
Beam:	16 1/2 feet
Draft:	6 1/2 feet.
Displacement:	35 tons (net), 46 tons (gross)
Fuel:	1500 gallons
Freshwater:	450 gallons
Range:	Approx. 1500 nautical miles; 10 days
Speed:	Approx. 9 knots
AC Power:	20 kilowatts, 110/220 volts, or 6 kw
DC Power:	12 and 32 volts

On Deck (340 sq ft available)

- Full shower, galley, freezers, and berthing for seven, total.
- Modern navigational electronics, including aircraft VHF, Weatherfax, 48-mile radar, and differential GPS plotter.
- Quartz deck lights aft and powerful sodium floods forward.
- Mini drylab with clean AC.
- 4-way anchor spread capability.
- Stern U-frame: 10'wide, 12'high, 5000-lb. capacity.
- Primary trawl / CTD winch, with 4000 meters 0.322" torque-balanced, galvanized UNOLS 3-conductor CTD wire.
- Starboard waist hydraulic boom, 1200-lb. capacity.
- 3 overhead deck booms with 3000-lb hoisting winches on each; full deck coverage.
- Hydraulic capacity: 1750 psi operable between 15 and 75 gallons per minute.
- Hydrographic winch with 1000 meters of 3/16" stainless steel hydrowire.
- Secondary winch with 150 meters of 1/4" stainless steel hydrowire.
- Foredeck anchor winch with 330-fathom capability.
- 40 gallon-per-minute washdown/firehose.
- Dive ladder.

The dive support vessel will be marked in accordance with the United States Code of Federal Regulations, Title 33, Chapter 34, Subchapter I, Part C and the publication titled Private Aids to Navigation.

3.0 Anchoring Procedure

Anchor Placement

The anchor(s) will be set in pre-determined location(s). Each anchor will be lowered from the vessel to the seafloor by winch and then slackened to position the other anchors. It is possible that due to the sea state, weather or work related delays that a total of 4 anchors maybe required to be placed, to position the vessel on a safe and stable mooring.

After the vessel is moored and before work commences a diver will make a visual inspection of each anchor to determine if they are set in sand or in hard or rocky bottom more likely to be environmentally

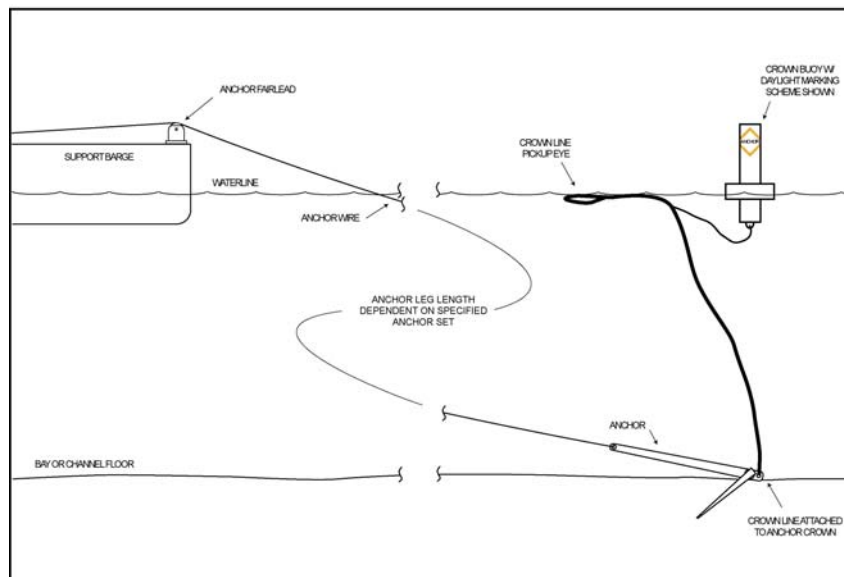
sensitive. If that is the case it will be reported to the State Lands Commission or their designated representative. It is not recommended that the diver try to reposition the anchor as this would necessitate slacking the line and allowing the vessel he is tethered to move station creating an unsafe condition. Recovering the anchor and resetting it from the surface may cause more impact than leaving it at its initial setting as it could again land in a sensitive area.

There is every reason to believe that the exit site of this bore will be in an area of sandy bottom (refer to the Sub-Bottom Profile at appendix A) therefore the anchors will be placed on sand only.

Anchor spacing and placement will be contingent on a number of factors, most important being the sea state, but also including wind speed and direction, currents and tide action. Typically a three-point moor consists of 3 anchors set at or about 120 degrees from one another with the bow of the vessel facing prevailing wind/tide/current. A four-point moor would be used in more severe conditions or for more exact positioning and would be set at or about 90 degrees from each other. The scope or distance to the anchors from vessel is also contingent on sea state. The larger the swells or waves the more scope will be needed. As the water depth at exit is approximately 50', the anchors should be set in between 65' and 40' of water. A scope of 150' to 300' should be sufficient.

Small anchors make small impact on the bottom. A certain amount of drag is anticipated before the anchor catches. This will vary according to bottom composition. In very soft or very hard bottoms anchors tend to drag longer before setting as the slack is taken out of the line. In sandy bottoms the anchors tend to set with very little drag. It is anticipated that the anchors at the drill exit will impact an area no larger than 2.5' by 8' each and possibly less. If an anchor will not set quickly or will not remain set they will not be dragged for long distances across the bottom but recovered and placed in a different location.

The anchors will anchor the support vessel through either wire or poly ropes that are connected to anchor winches fastened to the deck of the dive support vessel. A soft line will be attached to the crown (bottom end) of each anchor and connected to floating buoys to facilitate environmentally friendly recovery of the anchors. A combination of one anchor, the attaching anchor line, a crown line and a crown buoy represent one "anchor leg".



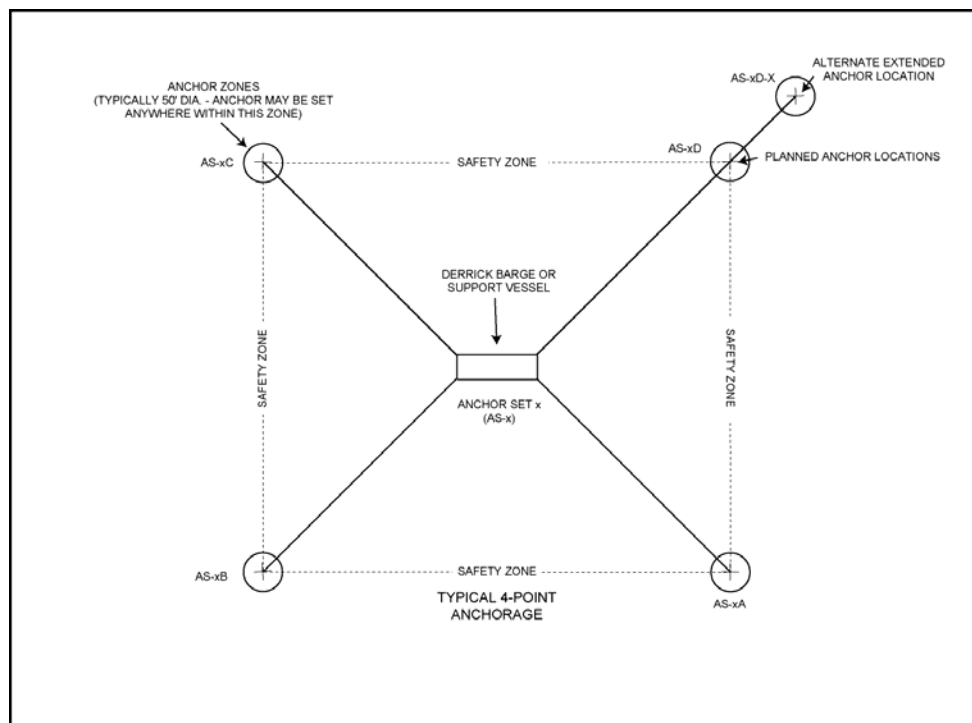
Typical Anchor Leg Diagram

Crown Buoy Placement

Crown lines with floating buoys will be attached to the anchor crowns to facilitate placement and recovery of the anchor, and to provide a visual reference of the safety zone established around the work site. The crown buoys shall consist of a self-righting, polyethylene spar type buoy, spherical metal buoys or small metal can type buoys that will sit upright.

Safety Zone

A safety zone will be located around the anchor spread. This safety zone will be defined as an imaginary boundary drawn between each anchor crown buoy of the anchor spread. The purpose of this safety zone is to provide a boundary around the marine work site that helps commercial and recreational vessels in identifying the marine work site and remaining outside of the work areas. The safety zone will be physically discernable at the work sites by visually sighting between the crown buoys of the anchor spread as shown in the figure below.



Example of a Four Point Mooring Plan with Security Zone

Anchor Repositioning and/or Recovery

If weather conditions change it may be necessary to reposition an anchor. This will involve the support vessel's captain allowing slack to all other anchors, then positioning the vessel adjacent to the crown line buoy connected to the anchor that is required to be repositioned.

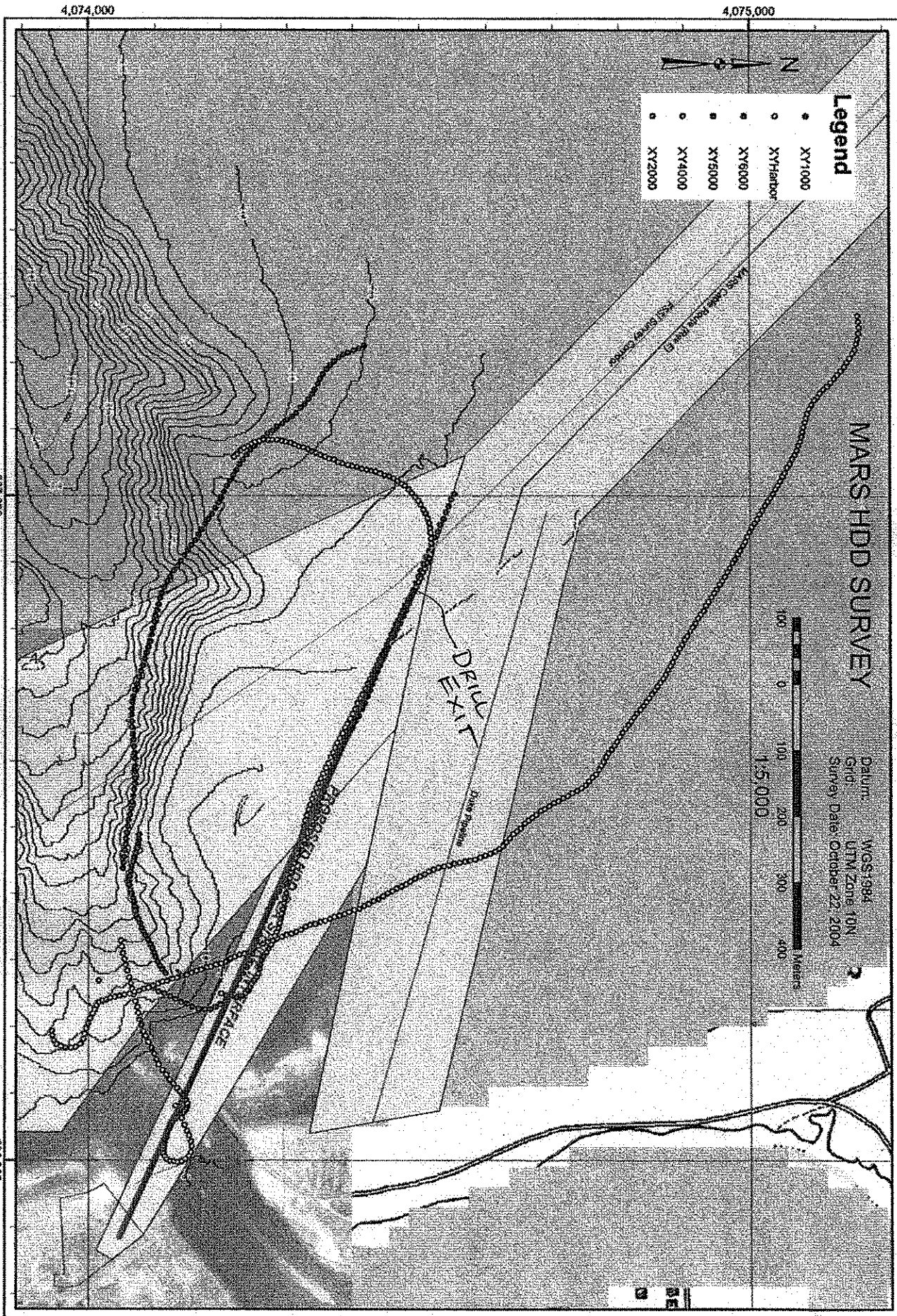
Utilizing a boat hook the crown line and crown line buoy is retrieved to the deck and connected to the vessel's winch. The winch allows for the anchor line to be secured to the vessel and the captain is able to tow the anchor to its new position.

Anchors are recovered by following the steps shown above and the winch lifting the anchor onboard the vessel. Recovering anchors by utilizing crown lines generally disturbs the sea floor less than weighing the anchor vertically with the anchor line or chain.

Local Notice to Mariners

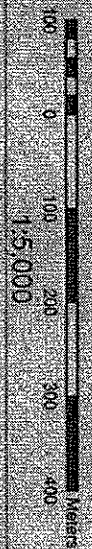
Underwater Resources Inc will file a Local Notice to Mariners with the U.S. Coast Guard no less than 15 days prior to the start of work. This notice will inform local boaters of the potential navigational hazards at the Moss Landing marine work site temporarily created by the marine operations. This notice shall state the following:

Appendix A – Sub Bottom Profile Location Map



MARS HDD SURVEY

Datum: WGS1984
Grid: UTM Zone 10N
Survey Date: October 22, 2004



- Legend
- XY1000
 - XY10000
 - XY6000
 - XY5000
 - XY4000
 - XY2000

Water Cade Road (New E)
Dewey Road

DEWY EXIT

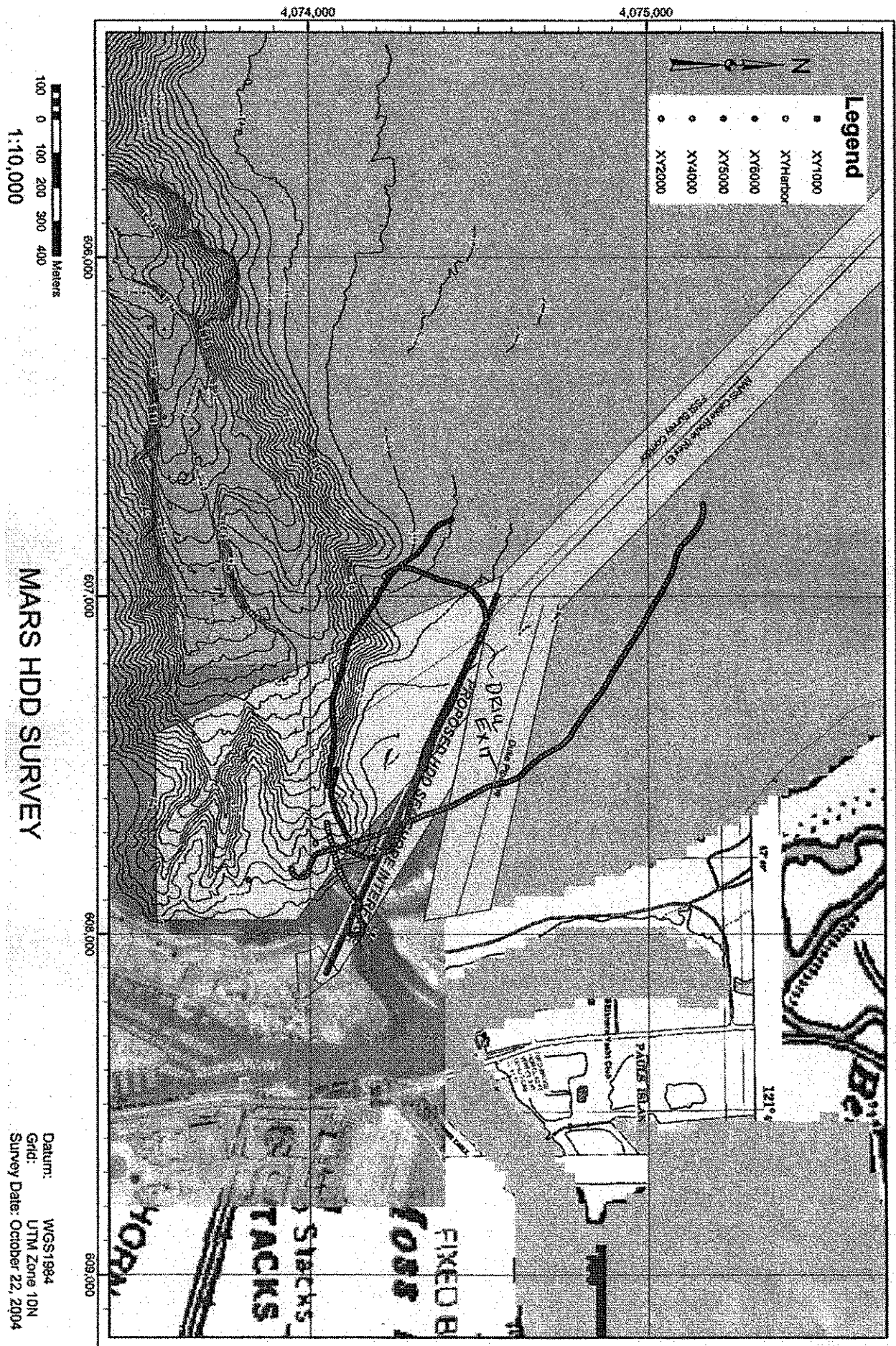
WATER CADE ROAD

4,074,000

4,075,000

807,000

808,000



Datum: WGS1984
 Grid: UTM Zone 10N
 Survey Date: October 22, 2004