UNITED STATES GOVERNMENT
MEMORANDUM

November 8, 2021

To: Public Information (MS 5030)
From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

- Control # - R-07138
- Type - Revised Exploration Plan
- Lease(s) - OCS-G08876 Block - 297 Green Canyon Area
- Operator - Eni US Operating Co. Inc.
- Description - Subsea Wells Nos. 003, 003 R-1, 003 R-2, 004, 004 R-1, and 004 R-2
- Rig Type - Not Found

Attached is a copy of the subject plan.

It has been deemed submitted as of this date and is under review for approval.

Chiquita Hill
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/003	G08876/GC/297	4301 FNL, 305 FEL	G08876/GC/297
WELL/003 R-1	G08876/GC/297	4301 FNL, 955 FEL	G08876/GC/297
WELL/003 R-2	G08876/GC/297	3801 FNL, 305 FEL	G08876/GC/297
WELL/004	G08876/GC/297	4301 FNL, 455 FEL	G08876/GC/297
WELL/004 R-1	G08876/GC/297	4301 FNL, 955 FEL	G08876/GC/297
WELL/004 R-2	G08876/GC/297	3801 FNL, 305 FEL	G08876/GC/297

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September 15, 2021

Regional Supervisor
Leasing and Plans
U.S. Department of the Interior
Bureau of Ocean Energy Management
1201 Elmwood Park Boulevard
New Orleans, LA 70123-2394

RE: Revised Exploration Plan
Lease OCS-G 08876, Green Canyon Block 297
OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana

In accordance with the provisions of Title 30 CFR, Parts 250 and 550, Subpart B and further defined in Notice to Lessees (NTL) 2009-G27 and 2008-G04, clarifying the information requirements for Exploration Plans and Development Operations Coordination Documents on the OCS, Eni US Operating Co. Inc. (Eni) hereby submits for your review and approval a Revised Exploration Plan for Lease OCS-G 08876, Green Canyon Block 297, Offshore Louisiana. One (1) copy is “Proprietary Information" and one (1) copy is "Public Information".

Excluded from the Public Information copies are certain Geologic discussions, depths of well(s) and structure maps.

Pending receipt of the necessary permits, Eni anticipates commencing drilling operations by **January 01, 2022**.

Should you have any questions or require additional data please contact our regulatory specialist Brunita Flores at (713) 393-6355 or Brunita.Flores@external.eni.com.

Please forward approval letter to brian.mamelli@eni.com.

Sincerely,

Eni US Operating Co. Inc.

Brian Mamelli

Brian Mamelli
Safety, Regulatory and Emergency Response Manager

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REVISED EXPLORATION PLAN (EP)
FOR
ENI US OPERATING CO. INC.
GREEN CANYON AREA, BLOCK 297
LEASE OCS-G 08876
OFFSHORE LOUISIANA

SECTION 1 - CONTENTS OF PLAN

Eni US Operating Co. Inc. as operator of all of Block 297, Green Canyon Area, is submitting this Revised Exploration Plan (EP) to provide for the drilling and completion of two (2) proposed wells to be drilled from surface locations in Green Canyon Area, Block 297 (GC 297) Lease OCS-G 08876.

Lease OCS-G 08876 is held by unit production.

Enserch Exploration, Inc. was granted an approval for a Supplemental Unit Plan of Exploration (Control No. S-3762) for Lease OCS-G 08876 to drill three (3) proposed wells from surface locations in Lease OCS-G 08010 (GC 298) to proposed bottom hole locations in Lease OCS-G 08876 (GC 297). The proposed wells were designated A, B, and C.

Well SS001 (Location A) was drilled and sidetracked / bypassed per table below:

API	WELL NAME	SL	BHL
608115009400	SS001ST00BP00	GC298 / G08010	GC297 / G08876
608115009401	SS006ST01BP00 (name changed when TD'd in GC298	GC298 / G08010	GC298 / G08010
608115009402	SS006ST01BP01	GC298 / G08010	GC298 / G08010

Locations B and C were not drilled. Eni is proposing to revise the surface locations of B and C to be drilled and completed on Lease OCS-G 08876, Green Canyon Block 297.

If producible a Supplemental Development Operations Coordination Document (SDOCD) will be submitted to install the subsea infrastructure and produce the wells from the Allegheny Sea MTLP.

The proposed Well No. 003 (to be renamed SS003) is expected to spud on or before January 01, 2022, utilizing a drillship. Anchors will not be used during the proposed operations.

NMFS BiOp NOTE:

1. The operations proposed in this Plan do not require pile-driving.
2. There are no new pipelines proposed in this plan.
3. Vessels utilized by Eni should not use equipment that has potential for entanglement or entrapment risk during these production activities. A moonpool will be utilized for the proposed operations, for further information see Section 10 of this plan.
4. Vessel routes will not transit the Rice's Whale area.

(a) Plan Information Form

An OCS Plan Information Form (BOEM-137) confirming the location of the proposed wells surface and bottomhole locations are included as **Attachment A**.

(b) Bathymetry Map and Location Plat

A Well Location Plat showing the proposed surface and bottom-hole locations of the proposed wells is included as **Attachment B.** A Bathymetry map showing the water depths across the lease block is included in **Attachment C**.

(c) Safety and Pollution Prevention Features

Safety features on the MODU will include well control, pollution prevention, welding procedure, and blowout prevention equipment as described in Subparts of Title 30 CFR Parts 250 and 550, and corresponding NTLs.

In accordance with 30 CFR 250, Subpart O, the goal of our training program is safe and clean OCS operations. To accomplish this, ENI ensures that our employees and contractor personnel engaged in well control and production safety understand and can properly perform their duties.

Supervisory and certain designated personnel on-board the facility are to be familiar with the effluent limitations and guidelines for overboard discharges into the receiving waters, as outlined in the EPA's NPDES General Permit GMG290000. Some of these pollution prevention measures include installation of curbs, gutters, drip pans, and drains on drilling rigs and platform deck areas to collect all contaminants and debris.

All discharges related to the operations proposed in this Plan are covered under EPA Region 6's current NPDES General Permit.

(d) Storage Tanks and Production Vessels

Tanks with a capacity of 25 Bbls or more of oil as defined at 30 CFR 254.6 can be found in the table below.

Type of Storage Tank	Type of Facility	Tank Capacity (Bbl)	Number of Tanks	Total Capacity (Bbl)	Fluid Gravity (API)
Diesel Oil	Drillship	53,188	1	53,216	~35°
Base Oil	Drillship	4,676	1	4,676	~30°

(e) Service Fees

Attachment D is saved for service fees. Not required for revised exploration plans.

(f) Pollution Prevention Measures

Activities proposed in this EP do not affect the State of Florida; therefore, this information is not required.

(g) Additional Measures

ENI does not propose any additional safety, pollution prevention, and early spill detection measures beyond those required by 30 CFR Part 250 and 550. These are also addressed above in section (c) and (f).

SECTION 2 - GENERAL INFORMATION

(a) Applications and Permits

Application / Permit	Issuing Agency	Status
Application Permit to Drill	BSEE District	Pending
Supplemental DWOP	BSEE Region	Pending

(b) Drilling Fluids

Type of Drilling Fluid	Estimated Volume of Drilling Fluid to be Used per Well
Water-based (SW, FW, Barite)	50,000 Bbl
Oil-based (Diesel, Mineral Oil)	N/A
Synthetic-based (internal olefin, ester, etc.)	7,000 Bbl

(c) Peak Production Rates / Life of Reserves

Not applicable for exploration plans.

(d) Oil Characteristics

Not applicable for exploration plans.

(e) New or Unusual Technology

ENI does not propose the use of any new or unusual technology in the activities proposed under this plan.

(f) Bonding Information

The bond requirement for the activities proposed in this plan are satisfied by an area-wide bond furnished and maintained per 30 CFR Part 556, Subpart I-Bonding; and applicable NTL's, "Guideline for General Lease Surety Bonds" and additional security under 30 CFR 556.901(d).

(g) Oil Spill Financial Responsibility (OSFR)

Eni US Operating Co. Inc. (BOEM Operator No. 02782) has demonstrated oil spill financial responsibility for the activities proposed in this Exploration Plan according to 30 CFR Part 553, and NTL No. 2008-N05, "Guidelines for Oil Spill Financial Responsibility for Covered Facilities".

Please note, there are no new platforms or facilities being proposed in this Revised EP.

(h) Deepwater Well Control Statement

Eni US Operating Co. Inc., BOEM company number 02782, has the financial capability to drill a relief well and conduct other emergency well control operations.

(i) Suspensions of Production

There are no requirements for a suspension of production on this lease at this time.

(j) Blowout Scenario

Should a blow-out occur, the formation types in this area tend to bridge over of their own accord. Eni will use sub-surface BOPs with accumulator bottles attached to the BOP skid package. Enough accumulator bottles to activate the BOPs are located on the BOP skid package. The control lines are fed from the rig to the sub-surface control system which activates the BOP. Two activation systems exist to allow rig floor activation or remote activation of the BOPs.

If the BOP and wellhead remain intact but do not close upon activation from the rig, ROVs located either on the rig or a stand-by boat shall be launched to attempt to close the BOPs by pumping into the secondary intervention devices located on the BOP within twelve (12) hours, unless the area is deemed unsafe. Once the area is deemed safe to enter, ships will launch ROVs to perform the intervention actions.

The present calculated release from the wellbore is 355,325 Bbls of oil per day with an API gravity of approximately 30°. If a relief well to kill the original well was required, it would be expected to take 124 days, for a total release of 44 MMBO.

1. RELIEF WELL

Relief Rig Availability

In the event a relief well is initiated, ENI does not anticipate any delays in acquiring a DP rig to conduct the proposed operations.

Relief Rig Package Constraints

Eni foresees no restrictions for DP rigs to work in the area to perform well intervention and control. Eni would review and hire DP rigs to prevent requirements of mooring systems therefore saving time to bring the well under control. Since the original well bore would be considered un-usable; Eni would drill from some distance to prevent either oil or gas, from the damaged well, from affecting the intervention activities. Flammable meters on the intervention rigs would be supplemented with additional detectors on the rig to ensure protection of personnel and equipment. If detectors registered high levels of LELs, the rigs would be shut down during that time to protect personnel and the equipment.

Duration of Rig Timing / Relief Well Activity from Commencement

An approximate breakdown of this time with only DP rigs would include:

Time to obtain rig and move to location of blow-out:		20 days
Drill to depth		74 days
Drill to intersect point		10 days
Drill Intersection		17 days
Kill with downhole kill procedure		3 days
	TOTAL:	**124 days**

Location and Strategy of Relief Well

The closest structure is greater than six (6) miles from this location. Therefore, no platform could be used for relief well operations. Eni would use only Dynamically Positioned (DP) rigs for the relief well operations. Eni would use two (2) to possibly three (3) rigs to ensure the uncontrolled well would be brought under control even if one relief well encountered problems while drilling.

2. BLOWOUT PREVENTION AND INTERVENTION

Summary of Prevention Measures

The following measures will be taken in attempt to ensure the well(s) are kept under control at all times: ENI will incorporate Federal Register, Vol. 75, No. 198, October 14, 2010, and Vol. 77, No. 163, August 22, 2012, Final Rules for Increased Safety Measures for Energy Development on the Outer Continental Shelf into well operations and continue its ongoing safe and prudent practices, including but not limited to BOP and Pit drills as required by BSEE, ensuring rig supervisors have current well control certification, taking and recording slow pump rates each tour, function testing TIW valves each tour, posting a kill sheet on the rig floor, updating the kill sheet each tour, updating the kill sheet when mud weight is changed, maintain its policy that rig supervisors will monitor proper hole fill up on trips in the open hole, maintain circulating swages on the rig floor while running casing, and the utilization of pre-job safety meetings. Rig availability and location will be monitored in case the need arises to drill a relief well.

Reduce the Likelihood of a Blowout

Eni follows the BSEE schedule for BOP tests and expects and demands that BOPs are kept functional by the contractors. Eni will shut down operations for any repairs needed on well control devices anytime they are not considered functional and safe. Eni uses Company representatives with many years of experience for drilling operations and they constantly communicate with the OIM on the rig to ensure the safety of all personnel and equipment.

Eni uses multiple liners to cover potential production zones to reduce the risk of loss of well integrity. Eni maintains additional materials on board the rig in order to “weight-up” the mud system to control any upsets or well control issues. Mud pits are monitored constantly by personnel when operations are ongoing. In addition, automatic alarms are located in the pits and will sound if pits receive abnormal amounts of return fluids to alert of possible flow control problems. Personnel on the rig floor are trained to monitor the systems and respond immediately if a problem is noted or if alarms sound and will take all necessary steps including operating the BOPs to maintain control of the well.

Likelihood for Surface Intervention to Stop the Blowout

ENI believes that the likelihood for surface intervention to stop a blowout is 50%.

Plans for Effective and Early Intervention

In the event that the BOPs are unable to actuate, resulting in a loss of well control from the surface, there is a very high probability that the well will bridge over within the first 12 hours. If the well does not bridge as expected and the rig has not caught fire and is capable of supporting well control efforts, the initial intervention would consist of top killing the well with heavy mud or replacing the BOPs with functioning equipment. If the rig is on fire or otherwise unable to support well control efforts, a rig would be mobilized to commence drilling a relief well as discussed below.

Relief Well Arrangements

ENI will have a Service Agreement in place with Wild Well Control prior to commencement of drilling the well. In the case that a relief well is necessary, Wild Well Control will be contracted to help with the design and development of the procedures in addition to the drilling and kill operations of the relief well.

Other Measures Taken

ENI only purchases new tangible equipment for use in its wells and inspects the casing and tubing as per API 5 CT. ENI also follows the guidelines established in the API RP 53 Third Edition regarding blowout preventers.

(k) Chemical Products

This information is not required for the activities proposed in this plan in the BOEM GOMR.

SECTION 3 - GEOLOGICAL AND GEOPHYSICAL INFORMATION

In accordance with 43 CFR, Part 2, those items considered proprietary have been omitted from the Public Information copy and have been referenced accordingly.

(a) Geological Description

PROPRIETARY DATA

(b) Structure Contour Maps

PROPRIETARY DATA

(c) Interpreted 2-D or 3-D Seismic Lines

PROPRIETARY DATA

(d) Geological Structure Cross-Sections

PROPRIETARY DATA

(e) Shallow Hazards Report

A shallow hazards assessment was conducted by Fugro over Green Canyon Block 297 and can be found in **Attachment H**.

(f) Site Specific Shallow Hazards and Archaeological Assessment

A shallow hazard and archaeological assessment has been prepared for the proposed surface location(s) and is included with this plan as **Attachment I.**

(g) High Resolution Seismic Lines

3-D survey information including swath bathymetry/seafloor rendering/edge detection (fault scarp trends) overlain with the seafloor amplitude prepared by Fugro can be found in **Attachment H.**

(h) Stratigraphic Column

PROPRIETARY DATA

(i) Time Versus Depth Tables

Previously provided under a separate plan.

(j) Geochemical Information

This information is not required for the activities proposed in this plan in the BOEM GOMR.

(k) Future G&G Activities

This information is not required for the activities proposed in this plan in the BOEM GOMR.

SECTION 4 - HYDROGEN SULFIDE INFORMATION

(a) Concentration

ENI does not anticipate encountering H_2S while conducting our proposed exploration activities.

(b) Classification Request

In accordance with Title 30 CFR 250.490(c), Eni requests the area of operations in GC Block 297, Lease OCS-G 08876 be classified by the BOEM as an area where the "**absence**" of Hydrogen Sulfide has been confirmed based upon the following:

PROPRIETARY DATA

(c) Contingency Plan

ENI does not anticipate encountering H_2S while conducting our proposed exploration activities therefore a contingency plan is not required at this time.

(d) Modeling Report

ENI does not anticipate encountering H_2S while conducting our proposed exploration activities therefore a modeling report is not required at this time.

SECTION 5 - MINERAL AND RESOURCE CONSERVATION INFORMATION

(a) Technology and Reservoir Engineering Practices and Procedures

Not applicable for exploration plans.

(b) Technology and Recovery Practices and Procedures

Not applicable for exploration plans.

(c) Reservoir Development

Not applicable for exploration plans.

SECTION 6 - BIOLOGICAL, PHYSICAL AND SOCIOECONOMIC INFORMATION

(a) Chemosynthetic Communities Report

Activities proposed in this plan will disturb seafloor in water depths greater than 300 meters (984 feet), therefore, a report as described in Attachment A of NTL No. 2009-G40 "Deepwater Benthic Communities" has been conducted using 3-D seismic information. All seafloor features and areas that could be disturbed by the activities proposed in this plan have been identified.

Seafloor features within the seafloor study area were analyzed using the Seafloor Rendering, Water Depth and Seafloor Features, Seafloor Gradient, and Seafloor Amplitude Charts. The Seafloor Amplitude Chart was reviewed for indications of possible seafloor fluid expulsion features, which may include surficial gas hydrates, hardgrounds, and/or deepwater benthic communities. The locations of annotated vertical sections used in this report are shown on Figure 4 of the Shallow Hazards Assessment and support the discussion of the seafloor and shallow geologic conditions.

No evidence of fluid expulsion at the seafloor was observed in the 3D data. Chemosynthetic communities are unlikely to be present within the seafloor study area. However, fluid migration from depth along the deep-seated seafloor faults is possible and these areas should be avoided by future development.

(b) Topographic Features Map

The activities proposed in this Plan do not fall within 305 meters (1000 feet) of a topographic “No Activity Zone”; therefore, no map(s) are required per NTL No. 2009-G39, " Biologically Sensitive Underwater Features and Areas."

(c) Topographic Features Statement

Since there are no topographic features located on Green Canyon Area Block 297, the statement for shunting described in NTL No. 2009-G39 “Biologically Sensitive Underwater Features and Areas” is not required.

(d) Live Bottom (Pinnacle Trend) Map

The activities proposed in this plan are not affected by a live bottom (Pinnacle Trend) stipulation attached to the lease.

(e) Live Bottom (Low Relief) Map

The activities proposed in this plan are not affected by a live bottom (low relief) stipulation attached to the lease.

(f) Potentially Sensitive Biological Features

ENI does not propose bottom-disturbing activities within 30 meters (100 feet) of potentially sensitive biological features; therefore, the map described in NTL No. 2009-G39 “Biologically Sensitive Underwater Features and Areas” is not required.

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(h) Threatened and Endangered Species Information

Congress passed the Endangered Species Act (ESA) on December 28, 1973, recognizing that the natural heritage of the United States was of "esthetic, ecological, educational, recreational, and scientific value to our Nation and its people." It was understood that, without protection, many of our nation's living resources would become extinct. The purpose of the ESA is to conserve threatened and endangered species and their ecosystems. There are more than 1,900 species listed under the ESA. A species is considered endangered if it is in danger of extinction throughout all or a significant portion of its range. A species is considered threatened if it is likely to become endangered in the future. The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) share responsibility for implementing the ESA. NMFS is responsible for 69 marine species, from whales to sea turtles and salmon to Johnson's sea grass.

The Marine Mammal Protection Act (MMPA) of 1972 was written to establish American federal responsibility to conserve marine mammals. Some species were in immediate danger of extinction while other populations were becoming severely depleted.

Attachment L is a list of endangered and threatened species and critical habitats under the jurisdiction of NOAA Fisheries Service in the Gulf of Mexico.

Eni's proposed operations are in the Gulf of Mexico west of 87.5° W longitude and will not utilize any rigs, vessels, supply boats, etc. that would transit the Rice's Whale habitat area, also see **Attachment L**.

ENI is aware of the above referenced federal acts and will ensure that all offshore personnel, including contractors and other support services-related personnel understand the need to conserve marine mammals and the conservation of their ecosystems. Several NTLs were issued to address conservation measures to be taken by offshore operators and contractors.

Further discussions on threatened and endangered species are included in Section 19 (EIA).

(i) Archaeological Report

The study area lies within an area designated as archaeologically sensitive. An archaeological report is required for any seabed-disturbing activities in GC 297. Tesla (2006) conducted an archaeological survey covering most of GC 297. Site specific archaeological assessments can be found in **Attachment I**.

(j) Air and Water Quality Information

The State of Florida is not an affected State for the activities proposed in this plan; therefore, this information is not required.

(k) Socioeconomic Information

The State of Florida is not an affected State for the activities proposed in this plan; therefore, this information is not required.

SECTION 7 - WASTE AND DISCHARGE INFORMATION

(a) Projected Generated Wastes

All projected solid and liquid wastes likely to be generated by our proposed activities are included in **Attachment M (Table 1)**. This table includes both operational wastes permitted by the appropriate NPDES permit and any other identified wastes.

ENI does not plan to treat, store or dispose of any of the above wastes down hole at this location.

(b) Projected Ocean Discharges

All projected solid and liquid wastes likely to be discharged overboard during our proposed activities are included in **Attachment M (Table 1)**. This table includes both operational wastes permitted by the appropriate NPDES permit and any other identified wastes.

(c) Modeling Report

Not required by EPA under the OCS General Permit.

(d) NPDES Permits

This information is not required for the activities proposed in this plan in the BOEM GOMR.

(e) Cooling Water Intakes

This information is not required for the activities proposed in this plan in the BOEM GOMR.

SECTION 8 - AIR EMISSIONS INFORMATION

(a) Screening Checklist

Please note that the complex total emissions are the same as the plan emissions.

Screening Questions for EP's	Yes	No
Is any calculated Complex Total (CT) Emission amount (in tons) associated with your proposed development activities more than 90% of the amounts calculated using the following formulas: CT = $3400D^{2/3}$ for CO, and CT = 33.3D for other air pollutants (where D = distance to shore in miles)?		X
Do your emission calculations include any emission reduction measures or modified emission factors?		X
Are your proposed exploration activities located east of 87.5° W longitude?		X
Do you expect to encounter H_2S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?		X
Do you propose to burn produced hydrocarbon liquids?		X

This information was calculated by:

Jeff Camp
Phone: 713-898-8708
Email: Jeff.Camp@kcampassociates.com

(b) Summary Table of Plan Emissions

COMPANY	AREA	BLOCK	LEASE	PLATFORM	WELL(s)
Eni US Operating Co. Inc.	GC	297	G08876	Drillship	003 / 004

YEAR	FACILITY EMITTED SUBSTANCE								
	TSP	PM10	PM2.5	Sox	NOx	VOC	Pb	CO	NH3
2022	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
2023	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
2024	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
Allowable	**3363.30**			**3363.30**	**3363.30**	**3363.30**		**73738.31**	

Air emissions spreadsheets are included in **Attachment N.**

SECTION 9 - OIL SPILL INFORMATION

(a) Oil Spill Response Planning

Eni US Operating Co. Inc. (Operator No. 02782) has an approved Regional Oil Spill Response Plan effective **May 09, 2019**. The last biennial update was received **May 06, 2019 and** was determined to be "in compliance" on **August 1, 2019.**

A revised OSRP was submitted on **May 28, 2021,** to reflect the proposed operations in this plan and is currently in review.

The proposed activities in this Plan will be covered by the Oil Spill Response Plan currently in review and any future revisions.

Spill Response Sites

Primary Response Equipment Location	Preplanned Staging Location(s)
Clean Gulf Associates - Venice, Louisiana	Clean Gulf Associates – Galveston, Ingleside, and Houston, Texas, Intracoastal City, Venice, Lake Charles, Leeville, Houma, and Fort Jackson, Louisiana

OSRO Information

ENI's primary equipment providers are Clean Gulf Associates (CGA)

Worst Case Scenario Determination

Category	Regional OSRP	EP
Type of Activity[1]	Drilling >10 miles from shore	Drilling >10 miles from shore
Facility Location (area/block)	GC 297	GC 297
Facility Designation[2]	MODU	MODU
Distance to Nearest Shoreline (miles)	95	95
Volume[3] Storage tanks (total) Flowlines (on facility) Lease term pipelines Uncontrolled blowout (volume per day) Total Volume	 0 0 0 355,325 bbls 355,325 bbls	 0 0 0 355,325 bbls 355,325 bbls
bblsType of Oil(s) (crude oil, condensate, diesel)	Crude Oil	Crude Oil
API Gravity(s)[4]	30°	30°

Footnotes:
1. Types of activities include pipeline, platform, caisson, subsea completion or manifold, and mobile drilling rig.
2. E.g., Well No. 2, Platform JA, Pipeline Segment No. 6373.
3. Take your regional OSRP worst-case scenario volume from the appropriate section of your regional OSRP. For EP's, the worst-case scenario volume is the daily volume possible from an uncontrolled blowout. Determine this volume using the provisions of 30 CFR 254.47(b). For DOCDs, determine the volume of your worst-case scenario using the provisions of 30 CFR 254.47(a) or (b), as appropriate.
4. Provide API gravity of all oils given under "Type of Oil(s)" above. Estimate for EPs.

*ENI has the capability to respond to the appropriate worst-case spill scenario included in its regional OSRP approved on **May 09, 2019,** and I hereby certify that ENI has the capability to respond, to the maximum extent practicable, to a WCD, or a substantial threat of such a discharge, resulting from the activities proposed in our EP.*

NTL 2010-N06 – WCD Calculations Overview

For Green Canyon Block 297, the WCD (daily discharge rate in absolute open flow at atmospheric/surface pressure) is Well No. 003 and was calculated to be 355,325 BOPD with an expected oil gravity of 30° API.

The WCD calculations and assumptions have been included in **Attachment O** for BOEM review.

(b) Oil Spill Response Discussion / NEPA Analysis

For the purpose of NEPA and Coastal Zone Management Act analysis, the largest spill volume originating from the proposed activity during production operations is estimated to be 355,325 BOPD with an API gravity of 30°.

ENI's detailed spill response discussion is included as **Attachment P**.

(c) Modeling Report

A modeling report for a potential oil or hazardous substance spill is not required for the activities proposed in this plan. In the event ENI proposes to prepare such a report, we would contact the Regional Supervisor of the BOEM GOMR for guidance in preparing the report and the BOEM GOMR would be provided with two copies.

SECTION 10 - ENVIRONMENTAL MONITORING INFORMATION

(a) Monitoring Systems

Eni will utilize the drillship Samsung Santorini, which has a moonpool located near the middle of the rig. The moonpool measures approximately 84 ft. x 41 ft. The moonpool's purpose will be used for deployment of drill string, casing, marine risers and subsea equipment. The moonpool will not be used to deploy ROVs. There is no closing mechanism for the moonpool as it is always open to the sea. In normal operating mode, the draft of the vessel is approximately 39 ft. and in transit, the draft is approximately 28 ft.

Eni estimates a duration of approximately 120 days per well where equipment is lowered or raised through the moonpool; with an extremely low potential for contact or injury to protected species. In the extremely rare instance that an ESA-Listed species would get entrapped or entangled by equipment in the moonpool, or by any other equipment on the rig, Eni will contact NMFS at nmfs.psoreview@noaa.gov and BSEE at 985-722-7902 and protectedspecies@bsee.gov for additional guidance on any operation restrictions, continued monitoring requirements, recovery assistance needs (if required), and incidental report information.

Below are mitigations that Eni will put in place to protect marine life in case of an incident:

1. Any time equipment is moved in/out of the moonpool area, crews will continuously monitor the moonpool for endangered marine life. Any signs of endangered marine life will be documented on the daily drilling report.

2. During operations where the moonpool is being utilized, an inspection of the moonpool area will be conducted at a minimum of 1 time per day and recorded on the daily drilling report. Additionally, at all times, the moonpool area will be monitored with cameras.

3. If endangered marine life is detected in the moonpool area, appropriate MODU personnel will be notified by the control room before operations will be allowed to continue.

(b) Incidental Takes

ENI does not believe that protected species may be incidentally taken during the exploration activities proposed in this plan.

(c) Flower Garden Banks National Marine Sanctuary

ENI's activity under this Plan is not located within the Protective Zones of the Flower Garden Banks or Stetson Bank and therefore is not required to monitor the impacts of an oil spill.

Addendum - National Marine Fisheries Service (NMFS)

Eni is aware of the NMFS 2020 Biological Opinion (BiOp) on BOEM's Gulf of Mexico Oil and Gas Program, and the protocols being implemented by BOEM and BSEE in complying with the ESA and the requirements found in Appendices **A, B, C and J.**

Eni and its personnel and subcontractors, while undertaking activities authorized under this lease, must implement and comply with the most current measures, including but not limited to new or updated versions of the NTLs identified below, to protect any species listed in the Endangered Species Act (ESA):

- Appendices A, B, C and J to the NMFS 2020 Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico issued on March 13, 2020.

Vessels utilized by Eni should not use equipment that has potential for entanglement or entrapment risk during these proposed activities. A moonpool will be utilized for the proposed operations, for further information see Section 10 of this plan.

SECTION 11 - LEASE STIPULATIONS INFORMATION

The Federal Endangered Species Act (16 U.S.C. 1531 *et seq.)* and the Marine Mammal Protection Act (MMPA) (16 U.S.C. 1361 *et seq.)* are designed to protect threatened and endangered species and marine mammals and apply to activities on the Outer Continental Shelf (OCS). The Congressional Declaration Policy included in the OCS Lands Act (43 U.S.C. 1331 *et seq.)* provides that it is the policy of the United States that the OCS should be made available for expeditious and orderly development subject to environmental safeguards, in a manner which is consistent with the maintenance of competition and other national needs (see 43 U.S.C. 1332). Both the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) comply with these laws on the OCS.

Oil and gas exploration and development activities on the OCS are subject to stipulations developed before the lease sale and would be attached to the lease instrument, as necessary, in the form of mitigating measures.

ENI is aware that the exploration activities are subject to the following stipulations attached to the surface lease OCS-G 08876, Green Canyon Block 297:

Military Warning Area (MWA)

Green Canyon Block 297 is located within designated MWA-92. The Naval Air Station, Air Operations Department will be contacted in order to coordinate and control the electromagnetic emissions during the proposed operations.

Marine Protected Species

Lease Stipulation No. 4 is meant to reduce the potential taking of marine protected species. ENI will operate in accordance with the current NTL's, to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species, and the prevention of intentional and/or accidental introduction of debris into the marine environment.

BOEM and BSEE issue Notices to Lessees (NTLs) that more fully describe measures implemented in support of the above-mentioned implementing statutes and regulations, as well as measures identified by the U.S. Fish and Wildlife Service and NMFS arising from, among others, conservation recommendations, rulemakings pursuant to the MMPA, or consultation. The lessee and its operators, personnel, contractors, and subcontractors, while undertaking activities authorized under this lease, must implement and comply with the specific mitigation measures outlined in BOEM NTL No. 2016-G01 (Vessel Strike Avoidance and Injured/Dead Protected Species Reporting), BOEM NTL No. 2016-G02 (Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program), and BSEE NTL No. 2015-G03 (Marine Trash and Debris Awareness and Elimination).

The lessee and its operators, personnel, contractors, and subcontractors will be required to comply with the mitigation measures (identified in the above referenced NTLs) and additional measures in the conditions of approvals for their plans or permits.

SECTION 12 - ENVIRONMENTAL MITIGATION MEASURES INFORMATION

(a) Impacts to Marine and Coastal Environments and Habitats, Biota, and Threatened and Endangered Species

The State of Florida is **not** an affected State for the activities proposed in this plan; therefore, this information is not required.

(b) Incidental Takes

ENI does not believe that any of the endangered species or marine mammals as listed in the ESA will be taken during the exploration activities proposed in this plan.

ENI understands that the use of explosives or seismic devices may affect marine life in the vicinity. There are no operations proposed in this plan that will be using explosives or seismic instruments.

Addendum - National Marine Fisheries Service (NMFS)

Eni is aware of the NMFS 2020 Biological Opinion (BiOp) on BOEM's Gulf of Mexico Oil and Gas Program, and the protocols being implemented by BOEM and BSEE in complying with the ESA and the requirements found in Appendices **A, B, C and J.**

Eni and its personnel and subcontractors, while undertaking activities authorized under this lease, must implement and comply with the most current measures, including but not limited to new or updated versions of the NTLs identified below, to protect any species listed in the Endangered Species Act (ESA):

- Appendices A, B, C and J to the NMFS 2020 Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico issued on March 13, 2020.

Vessels utilized by Eni should not use equipment that has potential for entanglement or entrapment risk during these proposed activities. A moonpool will be utilized for the proposed operations, for further information see Section 10 of this plan.

SECTION 13 - DECOMMISSIONING INFORMATION

This information is not required for plans submitted in the BOEM GOMR.

SECTION 14 - RELATED FACILITIES AND OPERATIONS INFORMATION

(a) Related OCS Facilities and Operations

Not applicable for exploration plans.

(b) Transportation System

Not applicable for exploration plans.

(c) Produced Liquid Hydrocarbons Transportation Vessels

Not applicable for exploration plans.

SECTION 15 - SUPPORT VESSELS AND AIRCRAFT INFORMATION

(a) General

The following list provides information regarding the vessels and aircraft ENI will use to support our proposed activities.

Type of Vessel	Maximum Fuel Tank Storage Capacity	Maximum No. in Area at Any Time	Trip Frequency or Duration during Production
Supply boat(s)	2500 Bbl	2	2x / week
Crew boat(s)	1500 Bbl	1	1x / week
Helicopter	286 gals	1	1x / day

(b) Diesel Oil Supply Vessels

Size of Fuel Supply Vessel	Capacity of Fuel Supply Vessel	Frequency of Fuel Transfers	Route Fuel Supply Vessel Will Take
240 Foot	2500 Barrels	3 per month	Port Fourchon to GC 297

(c) Drilling Fluids Transportation

The proposed exploration activities do not affect the State of Florida; therefore, information on the projected drilling fluids transportation is not required at this time.

(d) Solid and Liquid Wastes Transportation

All projected solid and liquid wastes likely to be transported during our proposed activities are included in **Attachment M (Table 2).**

(e) Vicinity Map

The surface location in Green Canyon Block 297 is located approximately 95 statute miles from the nearest Louisiana shoreline, approximately 134 statute miles to the heliport in Houma, Louisiana and approximately 99 statute miles from the onshore support base located in Port Fourchon, Louisiana.

A Vicinity Plat showing the location of the proposed activities relative to the shoreline and the primary route of the vessels and aircraft utilized with traveling from Port Fourchon, Louisiana to the offshore platform and facility are included as **Attachment Q**.

SECTION 16 - ONSHORE SUPPORT FACILITIES INFORMATION

(a) General

ENI proposes to utilize the following existing onshore base for vessel and production support:

Name	Location	Existing, New or Modified
Fourchon, LA – C-Terminal Dock	300 AT Gisclair Road Fourchon, LA 70357	Existing
PHI Heliport	Houma, LA	Existing

(1) Support Base Construction or Expansion

The proposed operations do not mandate any immediate measures for land acquisition or expansion of the existing onshore base facilities.

(2) Support Base Construction or Expansion Timetable

The proposed operations do not mandate any immediate measures for land acquisition or expansion of the existing onshore base facilities; therefore, a timetable is not required.

(b) Air Emissions

Information regarding air emissions generated by onshore support facilities is not required to accompany plans submitted in the BOEM GOMR.

(c) Unusual Solid and Liquid Wastes

Information regarding unusual solid and liquid wastes generated by onshore support facilities is not required to accompany plans submitted in the BOEM GOMR.

(d) Waste Disposal

All projected solid and liquid wastes likely to be disposed of during and after our proposed activities are included in **Attachment M (Table 2).**

SECTION 17 - SULPHUR OPERATIONS INFORMATION

ENI is not proposing to conduct sulphur operations in this plan.

SECTION 18 - COASTAL ZONE MANAGEMENT ACT (CZMA) INFORMATION

The States of Texas, Louisiana, Mississippi, Alabama and Florida have federally approved coastal zone management programs (CZMP). Applicants for an OCS plan submitted to the BOEM must provide a certification with necessary data and information for the affected State to determine that the proposed activity(s) complies with the enforceable policies of each States' approved program, and that such activity will be conducted in a manner consistent with the program.

(a) Consistency Certification

A Coastal Zone Management Consistency Certification for the State of Louisiana is not required for the revised exploration activities proposed in this plan.

(b) Other Information

None

SECTION 19 - ENVIRONMENTAL IMPACT ANALYSIS (EIA)

(a) and (b) Impact Producing Factors (IPFs) from the Proposed Activities

ENI has placed an "X" in each IPF category that we believe (by using good engineering judgment) would be impacted by the activity proposed in this plan.

Environmental Resources	Impact Producing Factors (IPFs) Categories and Examples					
	Emissions (air, noise, light, etc.)	**Effluents (muds, cuttings, other discharges to the water column or seafloor)**	**Physical disturbances to the seafloor (rig or anchor emplacements, etc.)**	**Wastes sent to shore for treatment or disposal**	**Accidents (e.g., oil spills, chemical spills, H_2S releases)**	**Other IPFs you identify**
Site-specific at Offshore Location						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Chemosynthetic communities			(4)			
Water quality		X	X	X	X	
Fisheries		X	X		X	
Marine mammals	(8) X	X			(8) X	X
Sea turtles	(8) X	X			(8) X	X
Air quality	(9) X					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			(7) X			
Vicinity of Offshore Location						
Essential fish habitat		X	X		(6) X	
Marine and pelagic birds	X				X	X
Public health and safety					(5)	
Coastal and Onshore						
Beaches					(6) X	X
Wetlands					(6) X	
Shore birds and coastal nesting birds	X				(6) X	X
Coastal wildlife refuges					X	
Wilderness areas					X	
Other Resources You Identify						
None						

Footnotes for Environmental Impact Analysis Matrix

1. Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
   (a) 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank,
   (b) 1000-m, 1-mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an OCS lease;
   (c) Essential Fish Habitat (EFH) criteria of 500 ft from any no-activity zone; or
   (d) Proximity of any submarine bank (500 ft buffer zone) with relief greater than 2 meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
2. Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
3. Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.

4. Activities on blocks designated by the BOEM as being in water depths 400 meters or greater.
5. Exploration or production activities where H_2S concentrations greater than 500 ppm might be encountered.
6. All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you judge would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
7. All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the BOEM as having high-probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
8. All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
9. Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

(c) ANALYSIS

Site-specific at Offshore Location – **Green Canyon Block 297**

1. Designated Topographic Features

The topographic features of the Central Gulf provide habitat for coral reef community organisms. Since 1973 stipulations have been made a part of leases on or near these biotic communities so that impacts from nearby oil and gas activities were mitigated to the greatest extent possible. This stipulation does not prevent the recovery of oil and gas resources but serves to protect valuable and sensitive biological resources.

There are no IPFs (including effluents, physical disturbances to the seafloor, and accidents) from the proposed activities in Green Canyon Block 297 that could cause impacts to topographic features.

The activities proposed in this plan will be covered by our Regional OSRP.

2. Pinnacle Trend Area Live Bottoms

A small portion of the Central Planning Area and the Eastern Gulf of Mexico OCS planning areas include portions of approximately 70 lease blocks that have been classified as being within the “pinnacle trend” area. The Department of the Interior, Bureau of Ocean Energy Management is the agency with jurisdiction over these leases.

The term “live bottom” is used to refer to the biological assemblages attached to hard substrates found interspersed between sand and mud bottoms of the continental shelf. These assemblages often consist of colorful sponges, corals, sea whips and sea fans rising from the benthic environment. Some of these features have extensive vertical relief rising far into the water column and serving as a reefal habitat for numerous commercially and recreationally important fish species.

A special “Live Bottom (Pinnacle Trend) Stipulation” is assigned to leases in those blocks intended to protect the pinnacle trend and associated hard-bottom communities from damage and, at the same time, provide for recovery of potential oil and gas resources. This stipulation was not invoked with the issuance of these leases.

The activities proposed in this plan will be covered by our Regional OSRP.

3. Eastern Gulf Live Bottoms

A small portion of the Central Planning Area and the Eastern Gulf of Mexico OCS planning areas include portions of approximately 70 lease blocks that have been classified as being within the “pinnacle trend” area. The Department of the Interior, Bureau of Ocean Energy Management is the agency with jurisdiction over these leases.

The term “live bottom” is used to refer to the biological assemblages attached to hard substrates found interspersed between sand and mud bottoms of the continental shelf. These assemblages often consist of colorful sponges, corals, sea whips and sea fans rising from the benthic environment. Some of these features have extensive vertical relief rising far into the water column and serving as a reefal habitat for numerous commercially and recreationally important fish species.

A special “Live Bottom (Pinnacle Trend) Stipulation” is assigned to leases in those blocks intended to protect the pinnacle trend and associated hard-bottom communities from damage and, at the same time, provide for recovery of potential oil and gas resources. This stipulation was not invoked with the issuance of these leases.

There are no IPFs (including effluents, physical disturbances to the seafloor, and accidents) from the proposed activities in Green Canyon Block 297 that could cause impacts to Eastern Gulf live bottoms. The site-specific offshore location of the proposed activity is over 100 miles from the eastern gulf live bottoms.

The activities proposed in this plan will be covered by our Regional OSRP.

4. Chemosynthetic Communities

There are no IPFs (including effluents, physical disturbances to the seafloor, and accidents) from the proposed activities in Green Canyon Block 297 that could cause impacts to Chemosynthetic Communities.

The water depth at the surface location of the proposed well is approximately 3,308 feet. A well site clearance assessment conducted by Fugro USA Marine, Inc. shows no geophysical evidence of hardgrounds, hydrocarbon seepage sites, or areas that could potentially support high-density benthic communities within the seafloor study area.

The activities proposed in this plan will be covered by our Regional OSRP.

5. Water Quality

Effluents, physical disturbances to the seafloor and accidents from the proposed activities in Green Canyon Block 297 could potentially cause impacts to water quality. Routine impact-producing factors that could result in water quality degradation from offshore OCS oil and gas operations include rig / anchor emplacement, platform and pipeline installation and removal, and the discharge of operational wastes.

The National Marine Fisheries Service Endangered Species Act (ESA) Section 7 Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico (NMFS, 2020) provides guidance and assists the operators in preventing intentional and / or accidental introduction of trash and debris into the marine environment. With this assistance and with laws such as MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the U.S. Coast Guard and the U.S. Environmental Protection Agency, our employees will ensure that all offshore personnel, including contractors and other support services-related personnel have complete understanding of the requirement that Operators be proactive in avoiding accidental loss of solid waste items on the OCS.

The major discharges from offshore oil and gas exploration and production activities include produced water, drilling fluids and cuttings, ballast water, and uncontaminated seawater. Minor discharges from the offshore oil and gas industry include drilling-waste chemicals, fracturing and acidifying fluids, and well completion and workover fluids; and from production operations, deck drainage, and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges. Since all discharges will be made in accordance with a general National Pollutant Discharge Elimination System (NPDES) permit issued by U.S. Environmental Protection Agency (USEPA), operational discharges are not expected to cause significant adverse impacts to water quality.

Offshore accidents, such as blowouts and spills could also occur and have the potential to alter offshore water quality. Sediment disturbance is expected to result in minor, localized, temporary increases in water-column turbidity in offshore waters. Given the low frequency of blowouts, minimum impacts on water quality due to re-suspension of sediments are expected.

Oil spills related to the proposed action are assumed to be mostly very small events (and for spills greater than 50 bbl) to occur very infrequently. It is unlikely that an accidental oil spill would occur from the proposed activities. If a spill were to occur, the dissolved components and small oil droplets would temporarily affect the water quality of marine waters. Dispersion by currents and microbial degradation would remove the oil from the water column or dilute the constituents to background levels.

The activities proposed in this plan will be covered by our Regional OSRP.

6. Fisheries

Effects on commercial fisheries from activities associated with this plan could come from emplacement of production platform(s), underwater OCS obstructions, oil spills, subsurface blowouts, pipeline installation and offshore discharges of drilling mud and produced waters (See Section 5, Water Quality above).

An accidental oil spill that may occur as a result of the proposed action has the potential to cause some detrimental effects to fisheries. However, it is unlikely that an accidental surface or subsurface oil spill would occur from the proposed activities. If a spill were to occur in open waters of the OCS proximate to mobile adult finfish or shellfish, the effects would likely be sublethal and the extent of damage would be reduced to the capability of adult fish and shellfish to avoid a spill, to metabolize Hydrocarbons, and to excrete both metabolites and parent compounds. The effect of oil spills on fisheries is expected to cause less than 1 percent decrease in commercial populations or in commercial fishing. At the expected level of effect, the resultant influence on Central Gulf fisheries is negligible and will be indistinguishable from natural population variations.

Drilling mud discharges contain chemicals toxic to marine fishes; however, this is only at concentrations 4 or 5 orders of magnitude higher than those found more than a few meters from the discharge point. Offshore discharges of drilling muds will dilute to background levels within 1000 meters of the discharge point and have a negligible effect on Central Gulf fisheries.

The activities proposed in this plan will be covered by our Regional OSRP.

7. Marine Mammals

Marine mammals may be adversely impacted by several IPFs (including vessel traffic, noise, accidental oil spills, and loss of trash and debris), all of which could occur due to the proposed action in Green Canyon Block 297. Chronic and sporadic sublethal effects could occur that may stress and / or weaken individuals of a local group or population and make them more susceptible to infection from natural or anthropogenic sources. Few lethal effects are expected from oil spills, chance collisions with service vessels and ingestion of plastic material. Oil spills of any size are estimated to be periodic events that may contact cetaceans. Disturbance (e.g., noise) may stress animals, weaken their immune systems, and make them more vulnerable to parasites and diseases that normally would not be fatal.

The net result of any disturbance would depend on the size and percentage of the population affected, ecological importance of the disturbed area, environmental and biological parameters that influence an animal's sensitivity to disturbance and stress, and the accommodation time in response to prolonged disturbance (Geraci and St. Aubin, 1980). Collisions between cetaceans and ships could cause serious injury or death (Laist et al., 2001). Sperm whales are one of 11 whale species that are hit commonly by ships (Laist et al., 2001). Collisions between OCS vessels and cetaceans within the project area are expected to be unusual events.

Eni will ensure that our contract vessel operators are aware of their requirement to report sightings of any injured or dead protected species immediately to the BOEM and BSEE at protectedspecies@boem.gov and protectedspecies@bsee.gov. Under the NMFS 2020 BiOp, Appendix C, protocols have been implemented by the Bureau of Ocean Energy Management (BOEM), the Bureau of Safety and Environmental Enforcement (BSEE) and provide guidelines to operators in complying with the Endangered Species Act (ESA; 16 U.S.C. §§ 1531-1544) and Marine Mammal Protection Act (MMPA; 16 U.S.C. §§1361- 1423h).

NMFS, 2020, Appendix B, provides guidance and assist the operators in preventing intentional and / or accidental introduction of trash and debris into the marine environment. With this assistance and with laws such as MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the U.S. Coast Guard and the U.S. Environmental Protection Agency, our employees will ensure that all offshore personnel, including contractors and other support services-related personnel have complete understanding of the requirement that Operators be proactive in avoiding accidental loss of solid waste items on the OCS.

The activities proposed in this plan will be covered by our Regional OSRP.

8. Sea Turtles

IPFs that could impact sea turtles include vessel traffic, noise, trash and debris, and accidental oil spills. Small numbers of turtles could be killed or injured by chance collision with service vessels or by eating indigestible trash, particularly plastic items, accidentally lost from drill rigs, production facilities, and service vessels. Drilling rigs and project vessels produce noise that could disrupt normal behavior patterns and create some stress potentially making sea turtles more susceptible to disease. Oil spills and oil-spill-response activities are potential threats that could have lethal effects on turtles. Contact with oil, consumption of oil particles, and oil-contaminated prey could seriously affect individual sea turtles. Oil-spill-response planning and the habitat protection requirements of the Oil Pollution Act of 1990 should mitigate these threats.

Most OCS-related impacts on sea turtles are expected to be sublethal. Chronic sublethal effects (e.g., stress) resulting in persistent physiological or behavioral changes and / or avoidance of affected areas could cause declines in survival or productivity, resulting in gradual population declines.

Eni will ensure that our contract vessel operators are aware of their requirement to report sightings of any injured or dead protected species immediately to the BOEM and BSEE at protectedspecies@boem.gov and protectedspecies@bsee.gov. Under the NMFS 2020 BiOp, Appendix C, protocols have been implemented by the Bureau of Ocean Energy Management (BOEM), the Bureau of Safety and Environmental Enforcement (BSEE) and provide guidelines to operators in complying with the Endangered Species Act (ESA; 16 U.S.C. §§ 1531-1544) and Marine Mammal Protection Act (MMPA; 16 U.S.C. §§1361- 1423h).

NMFS, 2020, Appendix B, provides guidance and assist the operators in preventing intentional and / or accidental introduction of trash and debris into the marine environment. With this assistance and with laws such as MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the U.S. Coast Guard and the U.S. Environmental Protection Agency, our employees will ensure that all offshore personnel, including contractors and other support services-related personnel have complete understanding of the requirement that Operators be proactive in avoiding accidental loss of solid waste items on the OCS.

The activities proposed in this plan will be covered by our Regional OSRP.

9. Air Quality

The proposed drilling activities are located approximately 95 miles from the nearest Louisiana shoreline. Although the proposed operations are temporary in nature, there would be a limited degree of air quality degradation in the immediate vicinity. Emissions from drilling activities consist mainly of NOx and CO. Emissions of pollutants into the atmosphere from the drilling operations proposed are not expected to have significant impacts on onshore air quality because of the prevailing atmospheric conditions, emission heights, emission rates, and the distance of these emissions from the coastline.

There are no other IPF's from the proposed activities that could impact air quality.

10. Shipwreck Sites (Known or Potential)

IPFs that could cause impacts to known or potential shipwreck sites from the proposed activities in Green Canyon Block 297 include physical disturbances to the seafloor. After review of IPF's proposed in this plan, there will be no adverse impacts to known or potential shipwreck sites.

However, in the event items of significant cultural resource potential are discovered during the proposed operations, ENI will immediately halt all operations and notify the appropriate department at the BOEM for further evaluation and assistance.

11. Prehistoric Archaeological Sites

IPFs that could cause impacts to known or potential prehistoric archaeological sites from the proposed activities include physical disturbances to the seafloor. GC 297 is in an area of high-probability for prehistoric and archaeological sites as identified in NTLs 2005-G07 and 2011-Joint-G01. Fugro USA Marine, Inc. conducted a high resolution geophysical shallow hazard analysis in June 2021 and Tesla Offshore LLC conducted an archaeological assessment in 2005 (Tesla, 2006). Sub-bottom data did not record any instances of preserved channel features that are associated with high probability areas for the occurrence and preservations of prehistoric archaeological sites.

However, in the event items of significant cultural resource potential are discovered during the proposed operations, ENI will immediately halt all operations and notify the appropriate department at the BOEM for further evaluation and assistance.

Vicinity of Offshore Location:

1. Essential Fish Habitat

IPFs that could impact essential fish habitats as a result of the proposed operations in Green Canyon Block 297 include effluents and accidents. The major effluent discharges from offshore oil and gas exploration and production activities include produced water, drilling fluids and cuttings, ballast water, and uncontaminated seawater (see Section 5, Water Quality, above). Minor discharges from the offshore oil and gas industry include drilling-waste chemicals, fracturing and acidifying fluids, and well completion and workover fluids; and from production operations, deck drainage, and miscellaneous well fluids (cement, BOP fluid); and other sanitary and domestic wastes, gas and oil processing wastes, and miscellaneous discharges.

The activities proposed in this plan will be covered by our Regional OSRP.

2. Marine and Pelagic Birds

IPFs that could impact marine and pelagic birds as a result of the proposed operations in Green Canyon Block 297 include air emissions, accidents and discarded trash and debris. Emissions of pollutant into the atmosphere from the activities associated with the proposed operations in this plan are not projected to have significant impacts on air quality that could harm marine and pelagic birds because of the prevailing atmospheric conditions, emission heights, emission rates and pollutant concentrations.

An accidental oil spill that may occur as a result of the proposed action has the potential to cause some detrimental effects on marine and pelagic birds. Some physical oiling could occur during dives, as well as secondary toxic effects through the uptake of prey. However, it is unlikely that an accidental surface or subsurface oil spill would occur from the proposed activities. The activities proposed in this plan will be covered by our regional OSRP.

NMFS, 2020, Appendix B, provides guidance and assist the operators in preventing intentional and / or accidental introduction of trash and debris into the marine environment. With this assistance and with laws such as MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the U.S. Coast Guard and the U.S. Environmental Protection Agency, our employees will ensure that all offshore personnel, including contractors and other support services-related personnel have complete understanding of the requirement that Operators be proactive in avoiding accidental loss of solid waste items on the OCS.

3. Public Health and Safety Due to Accidents

There are no IPFs (including an accidental H_2S releases) from the proposed activities that could cause impacts to public health and safety.

Further, in accordance with 30 CFR 250.490(c) and NTL's 2009-G27 and 2008-G04 we have submitted sufficient information to justify our request that the area of our proposed activities be classified by BOEM as H_2S absent.

Coastal and Onshore:

1. Beaches

Primary IPFs associated with offshore oil and gas exploration and development, and most widely recognized as major threats to the enjoyment and use of recreational beaches, are oil spills (accidents) and marine trash and debris. GC 297 is located approximately 95 miles from the nearest Louisiana shoreline. The operations proposed in this plan are not projected to have significant impacts on coastal beaches.

An accidental oil spill that may occur as a result of the proposed action has the potential to cause some detrimental effects to beaches, however, it is unlikely that an accidental surface or subsurface oil spill would occur from the proposed development activities in Green Canyon Block 297. The level of response to a spill will be based on volume, weather, and the characteristics of the product spilled. ENI's objectives for spill response are to ensure the safety of citizens and response personnel; control the source of the spill, have a coordinated response effort; maximize the protection of environmental sensitive areas; contain, recover and remove as much of the spill product as possible; recover and rehabilitate injured wildlife; minimize economic impacts; and keep the general public informed of the response activities.

NMFS, 2020, Appendix B, provides guidance and assist the operators in preventing intentional and / or accidental introduction of trash and debris into the marine environment. With this assistance and with laws such as MARPOL-Annex V, the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the U.S. Coast Guard and the U.S. Environmental Protection Agency, our employees will ensure that all offshore personnel, including contractors and other support services-related personnel have complete understanding of the requirement that Operators be proactive in avoiding accidental loss of solid waste items on the OCS.

The activities proposed in this plan will be covered by our Regional OSRP.

2. Wetlands

According to the U.S. Department of the Interior ((Dahl, 1990); Henfer et al., 1994), during the mid-1980's, 4.4 percent of Texas (3,083,860 ha) (Henfer et al., 1994), 28 percent of Louisiana (3,557,520 ha), 14 percent of Mississippi (17,678,730 ha) and 8 percent of Alabama (1,073,655 ha) were considered wetlands. More recent information indicates recent land change as a result of Hurricanes Katrina and Rita. The most notable was the 217-mi² of Louisiana's coastal lands that were transformed to water after Hurricanes Katrina and Rita (Barras, 2006). The primary IPF associated with offshore oil and gas exploration and development, and most widely recognized as major threats to the wetlands are oil spills (accidents). GC 297 is located approximately 95 miles from the nearest Louisiana shoreline. The operations proposed in this plan are not projected to have significant impacts on wetlands.

The activities proposed in this plan will be covered by our Regional OSRP.

3. Shore Birds and Coastal Nesting Birds

The primary IPF associated with offshore oil and gas exploration and development, and most widely recognized as a major threat to the shore birds and coastal nesting birds is oil spills (accidents). GC 297 is located approximately 95 miles from the nearest Louisiana shoreline. The operations proposed in this plan are not projected to have significant impacts on shore birds and coastal nesting birds.

An accidental oil spill that may occur as a result of the proposed action has the potential to cause some detrimental effects to shore birds and coastal nesting birds, however, it is unlikely that an accidental surface or subsurface oil spill would occur from the proposed activities Green Canyon Block 297. The level of response to a spill will be based on volume, weather, and the characteristics of the product spilled. ENI's objectives for spill response are to ensure the safety of citizens and response personnel; control the source of the spill, have a coordinated response effort; maximize the protection of environmental sensitive areas; contain, recover and remove as much of the spill product as possible; recover and rehabilitate injured wildlife; minimize economic impacts; and keep the general public informed of the response activities.

The activities proposed in this plan will be covered by our Regional OSRP.

4. Coastal Wildlife Refuges

The primary IPF associated with offshore oil and gas exploration and development, and most widely recognized as a major threat to the coastal wildlife refuges is oil spills (accidents). GC 297 is located approximately 95 miles from the nearest Louisiana shoreline. The operations proposed in this plan are not projected to have significant impacts on coastal wildlife refuges.

The activities proposed in this plan will be covered by our Regional OSRP.

5. Wilderness Areas

The primary IPF associated with offshore oil and gas exploration and development, and most widely recognized as a major threat to wilderness areas is oil spills (accidents). GC 297 is located approximately 95 miles from the nearest Louisiana shoreline. The operations proposed in this plan are not projected to have significant impacts on wilderness areas.

The activities proposed in this plan will be covered by our Regional OSRP.

Other Environmental Resources Identified: None

(d) Environmental Hazards

The site-specific environmental conditions have been taken into account for the proposed activities under this plan. Being located in the Gulf of Mexico, all oil and gas exploratory and development operations may at some time experience hurricane force winds, tropical storm activity and unusual surge and sea currents.

In accordance with requirements set forth in Title 33 CFR 146.140, an Emergency Evacuation Plan (EEP) is prepared and submitted to the appropriate USCG Marine Safety Office or Unit for review and ultimate approval. This plan provides descriptions to help define the type of storm based on the winds associated with it (i.e., major gulf storm, squall, tropical depression, tropical storm, gale warning, storm warning, hurricane, etc). Major hurricanes (storm having wind speeds in excess of 74 mph) in the Gulf normally form in the southern Gulf or Caribbean Sea. Tropical disturbances (storms having wind speeds greater than 40 mph but less than 74 mph) that originate near the facility do not provide much warning, but usually pass the rig or facility prior to attaining hurricane status.

Each tropical disturbance will be evaluated on its own merit and the operations modified accordingly. No impacts are expected on the proposed activities from site-specific environmental conditions.

(e) Alternatives

There are no alternatives other than those required by regulation to be considered to reduce the environmental impacts of the activities proposed in this plan.

(f) Mitigation Measures

No mitigation measures other than those required by regulation will be considered to avoid, lessen or eliminate potential impacts on environmental resources.

(g) Consultation

There were no outside agencies or persons consulted regarding the potential environmental impacts associated with the activities proposed under this EP.

(h) Preparer(s)

Jeff Camp
K. Camp & Associates
Phone: 713.898.8708
Email: Jeff.Camp@kcampassociates.com

(i) References

BOEM NTL No. 2016-G01 effective August 30, 2016 for Vessel Strike Avoidance and Injured / Dead Protected Species Reporting

BOEM NTL No. 2016-G02, effective September 30, 2016 (Implementation of Seismic Survey Mitigation Measures and Protected Species Observer Program)

BSEE NTL No. 2015-G03 effective December 17, 2015 for Marine Trash and Debris Awareness and Elimination

BOEM NTL 2015-N01 effective January 14, 2015 for Information Requirements for Exploration Plans, Development and Production Plans, and Development Operations Coordination Documents on the OCS for Worst Case Discharge and Blowout Scenarios

Federal Register, Vol. 77, No. 163, August 22, 2012, *Final Rule for Increased Safety Measures for Energy Development on the Outer Continental Shelf*

Federal Register, Vol. 75, No. 198, October 14, 2010, Final Rule for Increased Safety Measures for Energy Development on the Outer Continental Shelf

Federal Register, Vol. 84, No. 94, May 15, 2019, *Final Rule for Oil and Gas and Sulfur Operations in the Outer Continental Shelf – Blowout Preventer Systems and Well Control Revisions*

National Marine Fisheries Service (NMFS) Endangered Species Act (ESA) Section 7 Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico (NMFS, 2020)

NTL 2009-G40 effective January 27, 2010 for Deepwater Benthic Communities

NTL 2009-G39 effective January 27, 2010 for Biologically-Sensitive Underwater Features and Areas

NTL 2009-G27 effective September 9, 2009 for Submitting Exploration Plans and Development Operations Coordination Documents

NTL 2008-G05 effective May 01, 2008 for "Guidelines for Oil Spill Financial Responsibility for Covered Facilities".

NTL 2008-G04 effective May 1, 2008 for Information Requirements for Exploration Plans and Development Operations Coordination Documents

Federal Register, Tuesday, August 30, 2005, 30 CFR Parts 250 and 170, Oil and Gas Sulphur Operations in the Outer Continental Shelf – Plans and Information; Final Rule effective September 29, 2005

Marine Mammal Protection Act of 1972 (MMPA)

Endangered Species Act of 1973 (ESA)

Gulf of Mexico's Fisheries NOAA Website: https://www.fisheries.noaa.gov/topic/endangered-speciesconservation

NOAA Fisheries – Biological Opinion on the Federally Regulated Oil and Gas Program Activities in the Gulf of Mexico Website - https://www.fisheries.noaa.gov/resource/document/biological-opinion-federallyregulated-oil-and-gas-program-activities-gulf-mexico

NOAA Fisheries Species Directory

- https://www.fisheries.noaa.gov/species/gulf-mexico-brydes-whale
- https://www.fisheries.noaa.gov/species/gulf-sturgeon
- https://www.fisheries.noaa.gov/species/giant-manta-ray
- https://www.fisheries.noaa.gov/species/smalltooth-sawfish
- https://www.fisheries.noaa.gov/species/nassau-grouper

SECTION 20 - ADMINISTRATIVE INFORMATION

(a) Exempted Information Description (Public Information Copies Only)

In accordance with 43 CFR Part 2, the following information is exempt from disclosure and has been omitted from the Public Information copy of this plan:

- The geologic objectives, BHL, TVD, and MD information on form BOEM-137 (OCS Plan Information Form) in Attachment A
- All items under Geological and Geophysical Information, except for the non-proprietary version of shallow hazards assessment
- Correlative well information used to justify H_2S classification request under Hydrogen Sulfide Information
- Worst Case Discharge Calculations
- Mineral Resource Conservation

(b) Bibliography

Enserch Exploration, Inc. approved Supplemental Unit Plan of Exploration (Control No. S-3762).

Fugro USA Marine Inc. - Shallow Hazards Assessment of Block 297 in Green Canyon Area 02.21010027-01 01 – June 14, 2021

U.S. Department of the Interior
Bureau of Ocean Energy Management

OMB Control Number: 1010-0151
OMB Approval Expires: 6/30/2021

OCS PLAN INFORMATION FORM

General Information

Type of OCS Plan:	X	Exploration Plan (EP)		Development Operations Coordination Document (DOCD)	
Company Name: Eni US Operating Co., Inc				BOEM Operator Number: 02782	
Address: 1200 Smith Street, Suite 1700				Contact Person: Brunita Flores	
Houston, Texas 77002				Phone Number: 713-393-6355	
				E-Mail Address: Brunita.Flores@external.eni.com	
If a service fee is required under 30 CFR 550.125(a), provide the			Amount paid	NA	Receipt No. / Pay.Gov ID:

Project and Worst Case Discharge (WCD) Information

Lease(s): G08876			Area: GC		Block(s): 297		Project Name (If Applicable): ATTIC / BLOCK		
Objective(s)	X	Oil	X	Gas		Sulphur		Salt	Onshore Support Base(s): Port Fourchon, LA
Platform/**Well Name**: 003			Total Volume of WCD: 44 MMBO						API Gravity: 30°
Distance to Closest Land (Miles): 95			Volume from uncontrolled blowout: 355,325 STB/Day						

Have you previously provided information to verify the calculations and assumptions for your WCD?		Yes	X	No
If so, provide the Control Number of the EP or DOCD with which this information was provided				
Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose to use a vessel with anchors to install or modify a structure?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?		Yes	X	No

Description of Proposed Activities and Tentative Schedule (Mark all that apply)

Proposed Activity	Start Date	End Date	No. of Days
Exploration Drill and Complete 003	01/01/2022	05/01/2022	120
Exploration Drill and Complete 004	01/01/2023	05/01/2023	120

Description of Drilling Rig

	Jackup	X	Drillship
	Gorilla Jackup		Platform rig
	Semisubmersible		Submersible
	DP Semisubmersible		Other (Attach Description)
Drilling Rig Name (If Known): Samsung Santorini			

Description of Structure

	Caisson		Tension leg platform
	Fixed platform		Compliant tower
	Spar		Guyed tower
	Floating production system		Other (Attach Description)

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (Inches)	Length (Feet)
NA			

ATTACHMENT A

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): 003					Previously reviewed under an approved EP or DOCD?		Yes	X	No
Is this an existing well or structure?		Yes	X	No	If this is an existing well or structure, list the Complex ID or API No.				
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?						X	Yes		No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day): 355,325	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid	30°

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS-G 08876		
Area Name	GC		
Block No.	297		
Blockline Departures (in feet)	N/S Departure: 4,301.90’ FNL		
	E/W Departure: 305.70’ FEL		
Lambert X- Y coordinates	X: 2,518,254.30’		
	Y: 10,054,098.10’		
Latitude/ Longitude	Latitude: 27º 40’ 46.9146” N		
	Longitude: -90º 17’ 14.3107” W		

Water Depth (Feet): 3257’	MD (Feet):	TVD (Feet):	MD (Feet): MD (Feet): MD (Feet):	TVD (Feet): TVD (Feet): TVD (Feet):
Anchor Radius (if applicable) in feet: NA				

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): 003 R-1					Previously reviewed under an approved EP or DOCD?		Yes	X	No
Is this an existing well or structure?		Yes	X	No	If this is an existing well or structure, list the Complex ID or API No.				
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?						X	Yes		No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day):	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid	
	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**	
Lease No.	OCS-G 08876			
Area Name	GC			
Block No.	297			
Blockline Departures (in feet)	N/S Departure: 4,301.90’ FNL			
	E/W Departure: 955.70’ FEL			
Lambert X- Y coordinates	X: 2,517,604.30’			
	Y: 10,054,098.10’			
Latitude/ Longitude	Latitude: 27º 40’ 47.0561” N			
	Longitude: -90º 17’ 21.5352” W			

Water Depth (Feet): 3257’	MD (Feet):	TVD (Feet):	MD (Feet): MD (Feet): MD (Feet):	TVD (Feet): TVD (Feet): TVD (Feet):
Anchor Radius (if applicable) in feet: NA				

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): 003 R-2					Previously reviewed under an approved EP or DOCD?		Yes	X	No
Is this an existing well or structure?		Yes	X	No	If this is an existing well or structure, list the Complex ID or API No.				
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?						X	Yes		No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day):	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid	

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS-G 08876		
Area Name	GC		
Block No.	297		
Blockline Departures (in feet)	N/S Departure: 3,801.90’ FNL		
	E/W Departure: 305.70’ FEL		
Lambert X- Y coordinates	X: 2,518,254.30’		
	Y: 10,054,598.10’		
Latitude/ Longitude	Latitude: 27º 40’ 51.8622” N		
	Longitude: -90º 17’ 14.1884” W		

Water Depth (Feet): 3257’	MD (Feet):	TVD (Feet):	MD (Feet): MD (Feet): MD (Feet):	TVD (Feet): TVD (Feet): TVD (Feet):
Anchor Radius (if applicable) in feet: NA				

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): 004					Previously reviewed under an approved EP or DOCD?		Yes	X	No	
Is this an existing well or structure?		Yes	X	No	If this is an existing well or structure, list the Complex ID or API No.					
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?						X	Yes		No	

WCD info	For wells, volume of uncontrolled blowout (Bbls/day):	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS-G 08876		
Area Name	GC		
Block No.	297		
Blockline Departures (in feet)	N/S Departure: 4,301.90’ FNL		
	E/W Departure: 455.70’ FEL		
Lambert X- Y coordinates	X: 2,518,104.30’		
	Y: 10,054,098.10’		
Latitude/ Longitude	Latitude: 27º 40’ 46.9473” N		
	Longitude: -90º 17’ 15.9779” W		

Water Depth (Feet): 3257’	MD (Feet):	TVD (Feet):	MD (Feet): MD (Feet): MD (Feet):	TVD (Feet): TVD (Feet): TVD (Feet):
Anchor Radius (if applicable) in feet: NA				

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): 004 R-1					Previously reviewed under an approved EP or DOCD?		Yes	X	No
Is this an existing well or structure?		Yes	X	No	If this is an existing well or structure, list the Complex ID or API No.				
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?						X	Yes		No

WCD info	For wells, volume of uncontrolled blowout (Bbls/day):	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS-G 08876		
Area Name	GC		
Block No.	297		
Blockline Departures (in feet)	N/S Departure: 4,301.90’ FNL		
	E/W Departure: 955.70’ FEL		
Lambert X- Y coordinates	X: 2,517,604.30’		
	Y: 10,054,098.10’		
Latitude/ Longitude	Latitude: 27º 40’ 47.0561” N		
	Longitude: -90º 17’ 21.5352” W		

Water Depth (Feet): 3257’	MD (Feet):	TVD (Feet):	MD (Feet): MD (Feet): MD (Feet):	TVD (Feet): TVD (Feet): TVD (Feet):
Anchor Radius (if applicable) in feet: NA				

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location

Well or Structure Name/Number (If renaming well or structure, reference previous name): 004 R-2					Previously reviewed under an approved EP or DOCD?		Yes	X	No	
Is this an existing well or structure?		Yes	X	No	If this is an existing well or structure, list the Complex ID or API No.					
Do you plan to use a subsea BOP or a surface BOP on a floating facility to conduct your proposed activities?						X	Yes		No	

WCD info	For wells, volume of uncontrolled blowout (Bbls/day):	For structures, volume of all storage and pipelines (Bbls):	API Gravity of fluid

	Surface Location	**Bottom-Hole Location (For Wells)**	**Completion (For multiple completions, enter separate lines)**
Lease No.	OCS-G 08876		
Area Name	GC		
Block No.	297		
Blockline Departures (in feet)	N/S Departure: 3,801.90’ FNL		
	E/W Departure: 305.70’ FEL		
Lambert X- Y coordinates	X: 2,518,254.30’		
	Y: 10,054,598.10’		
Latitude/ Longitude	Latitude: 27º 40’ 51.8622” N		
	Longitude: -90º 17’ 14.1884” W		

Water Depth (Feet): 3257’	MD (Feet):	TVD (Feet:	MD (Feet): MD (Feet): MD (Feet):	TVD (Feet): TVD (Feet): TVD (Feet):
Anchor Radius (if applicable) in feet: NA				

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
			X =	Y =	

2

3 R-2
4 R-2

4 R-1
3 R-1

4 3

GC297
OCS-G-08876
ENI

PROPOSED LOCATION NAD27 LOUISIANA SOUTH							
LOCATION	CALLNS	CALLEW	X COORDINATE	Y COORDINATE	LATITUDE	LONGITUDE	WD
Well 003 Surf	4,301.90' FNL	305.70' FEL	2,518,254.30'	10,054,098.10'	27°40'46.9146"N	90°17'14.3107"W	3,308'
Well 003 R-1 Surf	4,301.90' FNL	955.70' FEL	2,517,604.30'	10,054,098.10'	27°40'47.0561"N	90°17'21.5352"W	3,308'
Well 003 R-2 Surf	3,801.90' FNL	305.70' FEL	2,518,254.30'	10,054,598.10'	27°40'51.8622"N	90°17'14.1884"W	3,308'
Well 004 Surf	4,301.90' FNL	455.70' FEL	2,518,104.30'	10,054,098.10'	27°40'46.9473"N	90°17'15.9779"W	3,308'
Well 004 R-1 Surf	4,301.90' FNL	955.70' FEL	2,517,604.30'	10,054,098.10'	27°40'47.0561"N	90°17'21.5352"W	3,308'
Well 004 R-2 Surf	3,801.90' FNL	305.70' FEL	2,518,254.30'	10,054,598.10'	27°40'51.8622"N	90°17'14.1884"W	3,308'

ATTACHMENT B

PUBLIC INFORMATION

Eni Petroleum

EXPLORATION PLAN
OCS-G-08876
BLOCK 297
GREEN CANYON AREA
GULF OF MEXICO

Geodetic Datum: NAD27
Projection: BLM 15 (NORTH)
Grid Units: US SURVEY FEET

SCALE 1:24000
0 2000
FEET

FUGRO USA MARINE, INC.
6100 Hillcroft Ave.
Houston, Texas 77081
(713) 346-3700

Job No.: 21010027 | Date: 8/3/2021 | Drwn: EA | Chart: 1 Of: 1

DWG File: 21010027_GC297_EP_3_4_R1-2_G08876 REV.1

8/03/2021

ATTACHMENT C

LEGEND

GENERAL

- Seafloor Study Area
- 35500 3D Seismic Survey Line Number

BACKGROUND

FUGRO DATABASE

- Reported Location of Existing Pipeline or Pipeline Segment as of May 2021
- Reported Location of Abandoned Pipeline or Pipeline Segment as of May 2021
- Platform
- Well
- Obstruction
- Identified Shipwreck (Tesla, 2006)
- Reported Shipwreck (BOEM)
- Salvaged Well
- Compatt
- OCS Block with Lease Information

BATHYMETRY CONTOURS

- Major Contour - 50 ft Interval
- Minor Contour - 10 ft Interval

BATHYMETRY

[ft. below MSL]

- - 3,091 ft
- - 3,399 ft

SEAFLOOR FEATURES

- Side Scan Sonar Contact and Number
- Seafloor Fault. Symbol Shows Direction of Fault Dip
- Seafloor Gully. Arrow Indicates Direction of Flow
- Area of Data Artifacts

NOTES

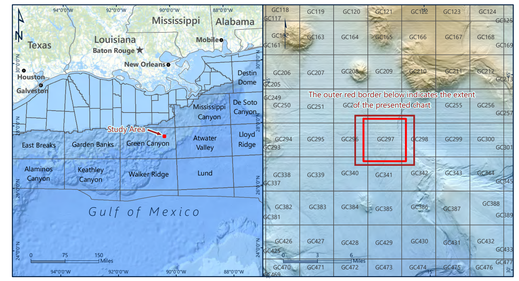
1) See chart 1 for navigation and infrastructure information.

2) Time-to-depth conversions for the water depths are based on a synthetic harmonic mean velocity function by Advocate & Hood (1993). water depths were calibrated against depth data provided by Eni.

3) Archaeological information is from a deep-tow survey conducted by Tesla (Tesla, 2006) and provided to Fugro by Eni.

GEODETIC PARAMETERS

COORDINATE SYSTEM	NAD 1927 BLM Zone 15N	UNITS	U.S. Survey Feet
PROJECTION	TRANSVERSE MERCATOR	EPSG CODE	32065
DATUM	NAD 1927	VERTICAL DATUM	MEAN SEA LEVEL (MSL)



FUGRO USA MARINE, INC.

6100 HILLCROFT HOUSTON, TEXAS 77081
TEL: +1 713 369 5600
WWW.FUGRO.COM

WATER DEPTH AND SEAFLOOR FEATURES

SHALLOW HAZARDS ASSESSMENT
BLOCK 297
GREEN CANYON, GULF OF MEXICO
ALLEGHENY PROSPECT

Scale 1 : 12,000 at original 24"x 36" page size

0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 Feet

Issue No:	Date:	Description:	Interpr:	Drawn:	Chkd:	Appr:
00	6/9/2021	Provisional Issue	J.T.	R.G.	J.T.	Y.S.
01	6/14/2021	Final Issue	J.T.	R.G.	J.T.	Y.S.

Vessel:	Survey Date:	Project Ref:

Project File:	Chart No:	Project No:
0027_ENI_GC_297_CHART_03_WDSF	3 of 8	02.21010027

Shallow Hazards Assessment

Block 297, Green Canyon Protraction Area, Gulf of Mexico, Offshore U.S. |

02.21010027-01 01 | June 14, 2021

Final

Eni US Operating

ATTACHMENT H

Document Control

Document Information

Project Title	Block 297, Green Canyon Protraction Area, Gulf of Mexico, Offshore U.S.
Document Title	Shallow Hazards Assessment
Fugro Project No.	02.21010027
Fugro Document No.	02.21010027-01
Issue Number	01
Issue Status	Final
Fugro Legal Entity	Fugro USA Marine, Inc.
Issuing Office Address	226 Wall St., Lafayette, LA 70506

Client Information

Client	Eni US Operating
Client Address	1200 Smith St, Ste 1700, Houston, TX, 77002
Client Contact	Deanne Prusak
Client Document No.	

Document History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
00	09 June 2021	For Review	Awaiting client comments	JT	YS	YS
01	14 June 2021	Final		JT	JT	JT

Project Team

Initials	Name	Role
JT	Juli Thompson	Consultant Geoscientist
CB	Colby Boutte	Geoscientist
RG	Rick Garza	GIS Analyst
YS	Yosmel Sanchez	Project Manager

ATTACHMENT H

FUGRO
Fugro USA Marine, Inc.
226 Wall Street
Lafayette, LA 70506
USA

Ms. Deanne Prusak
ENI US Operating
1200 Smith St, Ste. 1700
Houston, TX 77002
USA

June 14, 2021

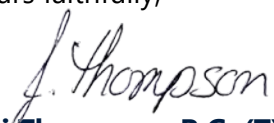
Dear Ms. Prusak,

We are pleased to present this report of our shallow hazards assessment for Block 297 in the Green Canyon Protraction Area, Gulf of Mexico. The report describes seafloor and shallow subsurface conditions that may influence exploratory well drilling within the study area.

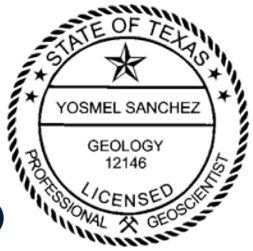
The findings submitted in this report are based on integrated interpretation of 3D exploration seismic data and offset well data. The report complies with the latest GOM Bureau of Ocean Energy Management specifications for shallow hazard assessments detailed in publications NTL 2008-G05 and 2009-G40 for shallow drilling hazards and deepwater benthic communities assessment (MMS, 2008 and 2009, respectively). The study area falls within an area designated as having a high probability of containing cultural resources as specified in NTLs 2005-G07 and 2011-Joint-G20 (MMS, 2005 and BOEM and BSEE, 2011), and requires an archaeological assessment. An archaeological survey over the area was conducted by Tesla and is submitted under separate cover.

We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. Please contact Juli Thompson (jthompson2@fugro.com) or Yosmel Sanchez (ysanchez@fugro.com) if we can be of further assistance.

Yours faithfully,



Juli Thompson, P.G. (TX, LA)
Consultant Geoscientist



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ATTACHMENT H

Executive Summary

This report describes seafloor and shallow subsurface conditions in Block 297, Green Canyon, Gulf of Mexico. Interpretations are based on 3D exploration seismic data.

Seafloor Conditions

The seafloor morphology is relatively smooth with few features. Seafloor faults are present in the eastern part of the study area and should be considered to be active. A network of gullies crosses the study area. These gullies are likely preferred sediment transport pathways.

Water Depth and Seafloor Gradient

Water depths range between 3091 ft to 3399 ft below sea surface (BSS) in the study area. The shallowest point lies along the northern edge of the seafloor study area, and the deepest point is in the southwestern corner of the seafloor study area. Seafloor gradients in the seafloor study area are generally less than 2.0°. Slightly higher slopes, up to about 4°, mark the edges of seafloor gullies. Steeper slopes, reaching 52°, are found along the seafloor fault scarps in the eastern part of the seafloor study area.

Anthropogenic Features

A shipwreck was identified in the northwestern part of the study area. This location should be avoided by at least 1000 ft. Ten additional sonar contacts located within the study area were assigned avoidance zones of 200 ft. According to Fugro's database, three active pipelines, four abandoned pipelines, and one salvaged well are present within the seafloor study area. No other known offshore dumping or disposal sites are reportedly located within the study area, but it is possible that there are anthropogenic features in the area that are not listed in Fugro's database.

Shallow Geologic Conditions

Seven subsurface horizons were mapped within the study area (Horizons 10, 20, 30, 40, 50, 60, and 70) to divide the shallow stratigraphy into eight sequences of distinct lithology and seismic characteristics (Sequences 1 through 8) in the 3D seismic dataset. Shallow sediments are interpreted to consist of mostly fine-grained deposits, predominately clays and silts, with the presence of sand increasing with depth.

Shallow Gas

High-amplitude anomalies indicative of shallow gas are interpreted in most stratigraphic sequences. Some high-amplitude anomalies are interpreted to be lithologic in origin. Due to the complexity of the relationship between lithologic and gas-related anomalies, particularly in Sequences 5 and 7, amplitude anomalies within 245 ft of any proposed well should be scrutinized individually and accounted for in well planning.

Shallow Water Flow

Based on regional analysis, the study area lies in a region of high potential for shallow water flow (SWF). Sand-prone sequences were identified in the study area below Horizon 40 (910 ft to 1621 ft BML). Two nearby reported SWF events correlate to Sequence 5 in the study area. SWF should be further assessed at proposed wellsite locations.

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ATTACHMENT H

1. Introduction

1.1 Purpose and Scope of Work

Fugro USA Marine, Inc. (Fugro) was contracted by Eni US Operating Company, Inc. (Eni) to perform a shallow hazards assessment of Block 297 in the Green Canyon (GC) protraction area of the Gulf of Mexico, offshore U.S., based on interpretation of conventional 3D exploration seismic data and offset well data. The project area is centered approximately 157 miles south of New Orleans, Louisiana (Figure 1), and encompasses all of Green Canyon Block 297 and the westernmost 200 ft of Block GC 298 (Chart 1). The seafloor assessment includes a 2000-ft buffer around Block GC 297. The depth limit of this investigation is defined as approximately 5,000 ft below mud line (BML), or about 1.61 seconds two-way travel time (TWTT) below the seafloor.

This report complies with the latest guidelines established by the Bureau of Ocean Energy Management (BOEM), formerly known as the Minerals Management Service (MMS), in Notices to Lessees (NTLs) 2008-G05 and 2009-G40 for shallow drilling hazards and deepwater benthic communities (MMS, 2008 and 2009, respectively). It should be noted that NTL 2008-G05 has been extended indefinitely, per NTL 2015-G02 (BOEM, 2015). The study area lies within an area designated as archaeologically sensitive according to NTLs 2005-G07 and 2011-Joint-G20 (MMS, 2005 and BOEM and BSEE, 2011).

1.2 Datasets and Limitations

1.2.1 3D Seismic Data

Two 3D exploration seismic data volumes were provided by Eni, one in the time domain and one in depth. Interpretation was conducted using a PC-based workstation running the IHS Kingdom Suite (Kingdom), version 2017 software.

Primary interpretation was conducted on the 3D seismic time cube "Full Stack Allegheny," which contains 2-ms sample rate data to a loaded record length of 6.0 seconds TWTT below sea surface (BSS). The 3D survey area encompasses about 57 square miles covering all of Green Canyon Blocks 253, 254, 297, 298, and portions of GC 252, 255, 296, 299, 341, and 342. The "Full Stack Allegheny" dataset is a subset of the ENI-Pegasus-Allegheny-Clipper PSTM dataset, shot by CGG Veritas in September 2012. Inlines are oriented southwest-northeast, have a numerical increment of five, and exhibit a line spacing of approximately 41.01 ft (12.5 m). Crosslines are oriented northwest-southeast, have a numerical increment of five, and exhibit a line spacing of approximately 41.01 ft (12.5 m).

The 3D seismic data follow the North American polarity convention and demonstrate a balanced, approximately zero-phase wavelet, based on analysis of the seafloor reflector, top of salt

reflector, and low-impedance, high-amplitude anomalies indicative of possible gas sands. The frequency bandwidth of the data between the seafloor and about 1 second BML is approximately 20.4 Hz to 51.5 Hz at 50% power for the data volume, and the dominant frequency is 32.7 Hz (Figure 2). This corresponds to a limit of separability of about 42 ft, assuming an average velocity of 5500 ft/sec in the shallow section. The limit of separability, which is a function of vertical resolution, is defined as the minimum bed thickness for which the top and bottom surface can be fully resolved in the seismic data, and is based on the one-quarter acoustic wavelength approximation. Individual strata with thicknesses below this limit may be detected but not fully resolved in thickness or true lateral extent. Exact water depths and details of subtle seafloor topography or any seafloor obstructions (such as shipwrecks and other debris) generally cannot be resolved with the 3D seismic data alone.

Three bands of prominent southwest-northeast trending lineations are visible in seafloor and shallow amplitude imagery generated from the 3D seismic data and are interpreted as a survey acquisition or processing artifact not uncommon to exploration 3D seismic data (Charts 2 through 5). These artifacts do not detract from the overall interpretation of the data. Overall, the 3D seismic data used in this study are judged to be of sufficient quality and resolution to assess the geologic conditions and potential hazards that may constrain exploratory drilling operations within the study area.

The provided depth dataset was derived from the "Full Stack Allegheny" time data, and was used to calibrate and confirm the time-depth conversion equation used in the sediment column.

1.2.2 Offset Well Data

In 2004, Eni provided offset well data for a wellsite assessment at the GC 298 #5 location (Fugro Geoservices, Inc., 2004). The data included well logs and daily drilling reports from several offset wells (British Borneo GC 254 #2 and #3, Agip GC 297 #1, and British Borneo GC 298 #1), which were used to calibrate lithologic interpretations, the assessment of geohazard potential, and a general understanding of the area. Public data regarding shallow water flow (SWF) events were also used to assist in the assessment of SWF potential (Section 4.5)

1.2.3 Previous Reports

Fugro GeoConsulting, Inc., conducted a shallow hazards assessment for adjacent Block GC 298 in 2014 (Fugro, 2014) utilizing the same 3D seismic time dataset described above. Seafloor and subsurface interpretations from the 2014 SHA were used as the basis for interpretation in GC 297; however, differences in the structural and depositional settings between the two study areas have resulted in slightly differing interpretations and recommendations.

An archaeological report covering most of GC 297 was conducted by Tesla (2006) and will be submitted under separate cover. General findings from the report are included in Section 3.3 of this report.

1.3 Project Organization

Fugro was contracted by ENI to provide geophysical and geological interpretations, mapping, and report preparation for the GC 297 assessment. Ms. Juli Thompson, Consultant Geoscientist, conducted the data interpretation and reporting. Mr. Colby Boutte, Field Geoscientist, assisted with the horizon mapping. GIS Analyst Mr. Rick Garza drafted the large-format charts. Mr. Yosmel Sanchez, Deputy Geoscience Department Manager, provided project administration and conducted the final report review.

1.4 Report Format

Sections describing the regional geologic setting and seafloor and subsurface geologic conditions follow this introductory section. Conclusions, references, page-size illustrations, and large-format charts follow the main text. Large-format charts accompanying this report are presented at a scale of 1:12,000 and include a Navigation Post-Plot (Chart 1), a Seafloor Rendering (Chart 2), Water Depth and Seafloor Features Chart (Chart 3), Seafloor Gradient (Chart 4), Seafloor Amplitude Rendering (Chart 5), an Isopach from the Seafloor to Horizon 10 (Chart 6), a Structure Chart for Horizon 50 (Chart 7), and a Subsurface Geologic Features Chart (Chart 8). All charts presented in this report show the location of every 50th inline and crossline resulting in a displayed line spacing of approximately 2051 ft by 2051 ft (Charts 1 through 8). Large-format seafloor charts also show the locations of all known wells, pipelines, or seafloor obstructions within the seafloor study area at the time this report was published. The map coordinate system is referenced to the NAD27 Datum, UTM Zone 15N, Clarke 1866 Spheroid, 87° W central meridian.

2. Regional Geologic Setting

The study area lies south of the continental shelf on the upper Louisiana continental slope where seafloor morphology and near-surface geology are dominated by tectonic movement of large diapiric masses of Jurassic salt (Martin, 1976). The growth of these structures and the development of large valleys on the slopes between them create complex, varied, high-relief topography. Pleistocene sedimentary units were deposited from shelf and upper slope progradation during periods of lowered sea level. Diapiric salt movements, faulting, and canyon formation have significantly influenced the stratigraphic and structural character of these sediments.

Large, deep-seated faults related to basinal subsidence are present within the greater Green Canyon area. These faults exhibit displacement that increases with depth. Continual salt movement may generate slow or episodic movement along faults within the shallow stratigraphy and at the seafloor. In places where deep-seated faults are present, they can provide conduits for gas and other fluids to migrate upward into the shallow section. Biogenic methane gas can also accumulate within shallow sediments, although often in lower concentrations than thermogenic gas sourced from deeper reservoirs.

In the northern Gulf of Mexico, gas hydrates have only been found in water depths exceeding about 440 m (~1440 ft; Milkov and Sassen, 2000; Brooks and others, 1984). The occurrence of gas hydrates in deep ocean sediments is controlled by a combination of local temperature, pressure, and gas composition. Gas hydrates and authigenic carbonates may form on the seafloor where venting gasses react with interstitial near-surface pore water (Roberts and others, 1990). These formations may be recognized or inferred by subtle mounding of the seafloor surrounding the vent (Neurauter and Bryant, 1989; Brooks and Bryant, 1985). Chemosynthetic and deepwater benthic communities in the Gulf of Mexico may be present where gas vents to the seafloor, and can be associated with gas hydrate accumulations, and/or outcrops of authigenic carbonate. The communities typically contain tubeworms, clams, mussels, and/or bacterial mats that appear to use the hydrocarbons as an energy source as wells as deepwater coral communities, all of which are protected from disturbance (MMS, 2009).

Shallow water flow (SWF) has been defined as water flowing within and around the outside of the structural well casing to the seafloor (Alberty and others, 1997). SWF often occurs where fluids within highly permeable, typically uncemented sands contain pressures greater than hydrostatic. The majority of the SWF occurrences in the Gulf of Mexico can be attributed to sand-bearing intraslope fans informally designated the Red, Blue, and Orange units (Ostermeier and others, 2000; Winker and Booth, 2000; Sawyer and others, 2007). GC 297 is located within the interpreted bounds of the Red unit (Figure 3).

3. Seafloor Conditions

Seafloor features within the seafloor study area were analyzed using the Seafloor Rendering, Water Depth and Seafloor Features, Seafloor Gradient, and Seafloor Amplitude Charts (Charts 2 through 5). The Seafloor Amplitude Chart was reviewed for indications of possible seafloor fluid expulsion features, which may include surficial gas hydrates, hardgrounds, and/or deepwater benthic communities. The locations of annotated vertical sections used in this report are shown on Figure 4 and support the discussion of the seafloor and shallow geologic conditions.

3.1 Water Depth and Seafloor Morphology

Water depths in the seafloor study area range from 3091 ft to 3399 ft BSS (Charts 2 and 3). The shallowest point lies along the northern edge of the seafloor study area, and the deepest point is in the southwestern corner. The seafloor is relatively smooth with few features. Two prominent seafloor faults with associated near-surface faults and a series of very shallow gullies cross the seafloor study area. Three bands of prominent southwest-northeast trending lineations are visible in the seafloor bathymetry and are interpreted as a survey acquisition or processing artifact.

Seafloor amplitudes are low across the study area (Chart 4). Very low amplitudes are noted along the seafloor scarps in the eastern part of the seafloor study area. This is likely due to decreased seismic returns caused by steeper slope geometry across faults. In addition, bands of very low amplitude are associated with the data artifact zones. These artifacts do not significantly affect the interpretation of the dataset.

Seafloor gradients in the study area are generally less than 2.0° (Chart 5). Slightly higher slopes, up to about 4°, mark the edges of seafloor gullies. Steeper slopes, reaching 52°, are found along the seafloor fault scarps in the eastern part of the seafloor study area. Two prominent data artifacts are visible on the Seafloor Gradient Chart. One is a subtle banding effect generally following the bathymetric contours. The other is a series of apparent steep slopes crossing the seafloor study area within the data artifact zones. These artifacts do not significantly affect the interpretation of the dataset.

3.2 Seafloor Features

3.2.1 Seafloor and Near-Surface Faults

Two prominent seafloor faults are located in the eastern part of the seafloor study area (Figure 5; Chart 3). These faults are slightly arcuate, strike roughly north-south, and are downthrown to the east. These are deep-seated faults rooted in the top of a salt peak located in GC 298 and below the DLI. Smaller faults east of the two prominent faults have less than 10 ft of offset at the

seafloor and most do not extend to depth. Seafloor faults should be avoided by 245 ft during future development.

3.2.2 Gullies

A dendritic pattern of gullies crosses the seafloor study area west of the seafloor faults (Chart 3). Most of the gullies trend roughly north-south and flow to the south. Gullies likely act as preferential pathways for the downslope transportation of sediment. The gullies are generally less than 10 ft deep and are not apparent on vertical seismic sections. No seafloor amplitude changes are associated with the gullies, suggesting that they are not currently active and are covered by a thin layer of drape sediment.

3.2.3 Fluid Expulsion Features and Chemosynthetic Communities

No evidence of fluid expulsion at the seafloor was observed in the 3D data. Chemosynthetic communities are unlikely to be present within the seafloor study area. However, fluid migration from depth along the deep-seated seafloor faults is possible and these areas should be avoided by future development.

3.3 Anthropogenic Features

The study area lies within an area designated as archaeologically sensitive according to NTLs 2005-G07 and 2011-Joint-G20 (MMS, 2005 and BOEM, 2011). An archaeological report is required for any seabed-disturbing activities in GC 297. Tesla (2006) conducted an archaeological survey covering most of GC 297. The archaeological report will be submitted under separate cover.

3.3.1 Infrastructure

A database search conducted in May 2021 indicates that there are three active pipelines in the seafloor study area. A 20-inch and a 14-inch oil pipeline cross the western half of the seafloor study area from northwest to southeast (Chart 1). A seven-inch bulk oil pipeline crosses the eastern edge of the seafloor study area from north to south. In addition, four bulk gas pipelines are reported as abandoned in the southeastern corner of the seafloor study area.

One salvaged well is reported in the northwestern quadrant of the seafloor study area (Chart 1). The GC 297 #2 wellhead is apparent in the 3D bathymetry (Chart 2) and in the vertical 3D section (Figure 6), suggesting that material from the well is still present. This well location should be avoided during future development.

3.3.2 Shipwrecks

One shipwreck, *M/V Holly Ann Visier*, was reported in the northwestern part of the seafloor study area, in eastern GC 296 (Chart 1). An archaeological survey conducted by Tesla (2006) identified a

shipwreck in northwestern GC 297, approximately 3700 ft southeast of the reported location of *M/V Holly Ann Visier* (Chart 3). Tesla interpreted the shipwreck to be *M/V Holly Ann Visier*. No debris from this shipwreck is apparent in the 3D seismic data. This shipwreck's reported and observed locations are presented in Table 3.1 and should be avoided by at least 1000 ft during future development per NTL 2005-G07 (MMS, 2005).

Table 3.1: Reported and Observed Locations of *M/V Holly Ann Visier*

Projection	Reported Location		Observed Location (Tesla, 2006)	
	X (ft)/Longitude	Y (ft)/Latitude	X (ft)/Longitude	Y (ft)/Latitude
NAD 27 UTM Z15N	2,501,168	10,055,048	2,504,245	10,053,014
WGS84 Lat/Long	90° 20' 24.1897" W	27° 41' 00.9519" N	90° 19' 50.4757" W	27° 40' 40.1666" N

3.3.3 Anthropogenic Debris

No other indications of anthropogenic debris were identified in the 3D seismic data; however, such debris is often below the spatial resolution limits of 3D exploration data. Tesla (2006) reported 10 sonar contacts that lie within the GC 297 seafloor study area (Chart 3). All were assigned an avoidance zone of 200 ft (Tesla, 2006). To verify that seafloor conditions have not changed since the acquisition of archaeological data, inspection of the seafloor at and in the vicinity of proposed wellsites by a remotely operated vehicle (ROV) immediately prior to spud-in is recommended.

4. Subsurface Conditions

This section of the report includes a discussion of the geologic conditions that could potentially affect drilling operations within the subsurface study area (GC 297) to a depth limit of approximately 5000 ft (1.61 sec TWTT) below mudline (BML). Geologic conditions and stratigraphy are inferred based on the available 3D seismic dataset, offset well data in adjacent blocks, and previous studies conducted in the area (Fugro, 2014).

Subsurface depths in this report were calculated using a second-order polynomial velocity function, based on information provided by Eni. The average acoustic velocity BML is calculated as follows:

$$V_{avg}(BML) = -61.01500(T2) + 792.29664(T) + 5113.15496$$

Where Vavg is the average sediment column velocity (ft/sec) BML and T is two-way travel time (sec) BML. Subsurface depths are calculated as follows:

$$Depth\ (BML) = V_{avg} * (T/2).$$

Depths calculated from the time data were compared to equivalent interpretation on the provided depth dataset. Depth differences between the two datasets were determined to be less than the limit of separability of the time dataset, and therefore statistically insignificant.

4.1 Stratigraphy

Subsurface horizon and sequence designations have been assigned for the purpose of this report. Higher numbers indicate deeper, older horizons and sequences, respectively. Five mapped horizons (Horizons 10, 20, 30, 40, and 50) were interpreted in continuation of interpretation conducted in GC 298 (Fugro, 2014). Two additional horizons (Horizons 60 and 70) were interpreted for better delineation of sediment sequences present in the GC 297 subsurface study area. The mapped horizons and sequences, along with relevant figure references, are summarized in Table 4.1.

Table 4.1: Summary of horizons, sequences, and lithologies in the GC 297 subsurface study area

Stratigraphic Sequence	Inferred Lithology	Sequence Thickness [ft] or Horizon Depth [ft BML]
Sequence 1	Continuous, parallel, low-amplitude reflectors interpreted as fine-grained stratified sediments. In the eastern part of the study area, thin, chaotic intervals interpreted as predominantly fine-grained mass transport deposits (MTDs) are interbedded with parallel to subparallel reflectors (Figure 7). An isopach of Sequence 1 is shown on Chart 6.	186 - 430

Stratigraphic Sequence	Inferred Lithology	Sequence Thickness [ft] or Horizon Depth [ft BML]
Horizon 10	Low-amplitude, continuous to discontinuous peak reflector, marking the base of stratified sediments.	186 - 427
Sequence 2	Primarily low- to moderate-amplitude, chaotic reflectors interpreted as an MTD consisting of silts and clays with some coarser-grained layers. Discontinuous segments of parallel reflectors are present at the base of the sequence. In the western part of the study area, the sequence includes thicker sections of parallel reflectors (Figures 5 and 8).	87 - 447
Horizon 20	High-amplitude continuous peak reflector at the base of the MTD.	369 - 827
Sequence 3	Low- to moderate-amplitude discontinuous and chaotic reflectors interpreted to represent a fine-grained MTD overlying a thin layer of parallel, moderate-amplitude reflectors interpreted as fine- and coarse-grained stratified sediments. In the eastern part of the study area, the sequence includes thicker sections of parallel reflectors (Figures 7 and 9).	61 - 506
Horizon 30	High-amplitude, continuous peak reflector separating parallel reflectors from an underlying MTD.	750 - 1311
Sequence 4	Primarily low- to moderate-amplitude chaotic and discontinuous reflectors with occasional high-amplitude reflectors, interpreted to represent a fine-grained MTD that contains some sand. In the southern part of the study area, this MTD has eroded into underlying MTDs (Figures 5, 6, 7, and 9).	5 - 364
Horizon 40	Strong trough reflector marking the base of the MTD. The structure of Horizon 40 is shown on Chart 7.	910 - 1621
Sequence 5	Low- to high-amplitude, discontinuous to chaotic reflectors, interpreted to represent repeated, overlapping MTDs and channel deposits containing both fine- and coarse-grained sediments. Sands are significantly more prevalent in Sequence 5 than in shallower sequences (Figures 5, 8, and 9).	645 - 1392
Horizon 50	Moderate-amplitude, discontinuous peak reflector marking the base of the MTD package.	2051 - 2696
Sequence 6	Low- to high-amplitude subparallel to discontinuous reflectors, interpreted to be composed of alternating intervals of fine- and coarse-grained sediments, with locally discontinuous sediment packages likely representing MTDs or small channels (Figures 5, 8, and 9).	257 - 895
Horizon 60	High-amplitude, discontinuous peak reflector separating Sequence 6 from the underlying high-amplitude sequence.	2537 - 3048
Sequence 7	Moderate- to high-amplitude, subparallel to discontinuous reflectors, interpreted to be interbedded medium- and coarse-grained sediments (Figures 5 and 9).	62 – 396
Horizon 70	Moderate-amplitude, discontinuous peak reflector separating Sequence 7 from the underlying lower-amplitude sequence.	2662 - 3258
Sequence 8	Primarily low- to moderate-amplitude, subparallel to discontinuous reflectors with occasional high-amplitude reflectors, interpreted to be interbedded and mixed fine- and coarse-grained sediments (Figures 5 and 9).	1758 - 2353

An isopach of Sequence 1 (seafloor to Horizon 10) is presented on Chart 6 to display the thickness of drape sediments near the seabed. A structure map of Horizon 40 has been created (Chart 7) to display the depth to the top of the thick, high-amplitude MTD/channel complex of Sequence 5. Prominent normal faults with significant offset are also identified on these charts.

Please note that the inferred lithology in Table 4.1 is a general interpretation of the 3D seismic data. Conditions are variable within each sequence, and the general description may not be applicable in specific areas.

4.2 Faulting

No buried faults were identified within the subsurface study area, although buried faults are observed just outside the study area bounds (Figure 5). Two prominent seafloor faults and several smaller faults are present in the eastern part of the subsurface study area (Chart 8). These faults strike roughly north-south and are downthrown to the east. They offset sediments in Sequences 1 through 5 within the subsurface study area.

4.3 Gas Hydrate

Conditions conducive to gas hydrate formation and stability in shallow sediments depend on ambient pressure, temperature conditions, specific gas composition, and other variables. Water depths within the subsurface study area are sufficiently deep (> 400 m) for conditions conducive to the formation of hydrates to exist. However, no bottom-simulating reflector (BSR) mimicking the seafloor is present within the subsurface study area, although a BSR is not a prerequisite for the presence of gas hydrates. Additionally, while high-amplitude anomalies indicative of shallow gas are identified throughout the subsurface study area, these anomalies are detected within each sedimentary sequence and do not appear as a predictable lineation of high amplitudes at a generally consistent depth, which could indicate a possible base of gas hydrate stability.

If gas hydrates are present, they are likely localized and disseminated in the form of small crystals, small to large nodules, lenses and partings, or thin veins. It is important to note that although disseminated accumulations of gas hydrates may not pose a significant problem to drilling operations, even small quantities of gas hydrates may create significant challenges for the foundations of structures that may be used for development. We are not aware of any problems with wells or other facilities in the immediate vicinity of the study area caused by the existence or dissociation of seafloor or subsurface gas hydrate.

4.4 Shallow Free-Phase Gas

Gas accumulation in the shallow subsurface is typically identified by low-impedance high-amplitude anomalies in seismic data and is a potential drilling hazard. The horizon-bounded amplitude extractions within each stratigraphic sequence (Sequences 1 through 8) were used to screen all 3D seismic lines and traces from the seafloor to the depth limit of

investigation (1.61 sec TWT BML) for high-amplitude anomalies representing possible shallow-gas accumulations. Maximum negative-amplitude extractions and potential shallow-gas accumulations are shown by stratigraphic sequence in plan view on Chart 8. In general, amplitude anomaly thresholds were selected to try to delineate anomalies due to gas and not lithology. Further analysis was performed on Sequences 5 and 7 to remove additional lithologic anomalies (Figures 10 and 11). However, due to the complexity of the analysis, some anomalies due to lithology (e.g., high-impedance sand layers) remain and are shown on Chart 8. Amplitude anomalies should be evaluated on an individual basis for wellsite assessment, and anomalies that may be indicative of shallow gas should be avoided by 245 ft (MMS, 2008). Refer to Table 3.1 for a generalized assessment of shallow gas per sequence.

Based on the methodology described above, amplitude anomalies indicative of shallow gas occur within all sequences except for Sequences 1 and 3.

Table 4.2: Summary of Amplitude Anomalies and Possible Shallow Gas in the GC 297 subsurface study area

Stratigraphic Sequence	Description and considerations
Sequence 1	No shallow gas anomalies identified.
Sequence 2	Amplitude anomalies are more prevalent in the southeastern half of the study area. Most are likely to represent small pockets of biogenic gas accumulated within coarser portions of the MTD; however, one particularly strong anomaly represents the base of a rotated block at the base of the MTD (Figure 8).
Sequence 3	No shallow gas anomalies identified.
Sequence 4	Amplitude anomalies are relatively small and isolated. Both possible gas and lithologic anomalies are present.
Sequence 5	Amplitude anomalies include significant areas of lithologic anomalies which overlap and merge with possible gas-bearing sediments. The chaotic nature of the deposits in the sequence increases the difficulty of distinguishing between lithologic and gas-related anomalies. Larger anomalies in are more likely to be lithologic and may indicate increased potential for shallow water flow (see Section 4.5). However, the possibility of gas accumulation in these areas must still be considered. Sediments within this sequence should be scrutinized on a location-specific basis for future well planning.
Sequence 6	Amplitude anomalies include significant areas of lithologic anomalies which overlap and merge with possible gas-bearing sediments. Larger anomalies in the southern half of the study area are more likely to be lithologic; however, the possibility of gas accumulation in these areas must still be considered. Sediments within this sequence should be scrutinized on a location-specific basis for future well planning.
Sequence 7	Amplitude anomalies include significant areas of lithologic anomalies which overlap and merge with possible gas-bearing sediments. Large anomalies in this sequence may indicate increased potential for shallow water flow (see Section 4.5). Sediments within this sequence should be scrutinized on a location-specific basis for future well planning.
Sequence 8	Amplitude anomalies are both larger and more prevalent in the southern half of the study area. Anomalies are interpreted to represent both possible gas and lithologic anomalies.

4.5 Shallow Water Flow

Based on regional analysis, the northeastern corner of Green Canyon lies within a region of high potential for shallow water flow (SWF; Pelletier et al., 1999). Block GC 297 lies within the estimated boundaries of the regional Red unit as described by Winker and Booth (2000; see Figure 3). Ostermeier et al. (2000) indicate that the provenance of sands associated with SWF in the area is related to intraslope fans, canyons, and channels, which are features of the latest Pleistocene low stand ecosystems of the Mississippi River.

The BOEM published database and associated graphic of reported SWF occurrences in the Gulf of Mexico (BOEM, 2011) indicate several recorded events in the vicinity of the study area. A reported flow of unknown severity was reported at the GC 341 #1 well, located approximately 4900 ft south of the subsurface study area (Figure 3). The depth of the reported flow correlates to the uppermost part of Sequence 5, but it is also possible that the flow originated from the base of Sequence 4 (Figure 9). Another flow of unknown severity was reported at the GC 254 #1 well, located approximately 2.1 miles northeast of the subsurface study area, at a depth correlating to Sequence 5. A flow of moderate severity was reported at the GC 296 #1 well, located approximately 1.6 miles west of the subsurface study area and approximately 4200 ft beyond the available data extents. This event was reported at a depth that may correspond to the lower portion of Sequence 3 or the upper portion of Sequence 4. All three wells were successfully completed.

Table 4.3 summarizes the overall potential for SWF within each stratigraphic sequence. Any planned wellsites should be assessed individually for site-specific potential for SWF.

Table 4.3: Summary of SWF Potential in the GC 297 subsurface study area

Stratigraphic Sequence	Description and considerations	Generalized SWF Potential
Sequence 1	Dominated by fine-grained sediments. Insufficient burial depth to create overpressure.	Negligible
Sequence 2	Dominated by fine-grained sediments. Insufficient burial depth to create overpressure.	Negligible
Sequence 3	Predominantly fine-grained MTD with areas of bedded sand layers near the base of the sequence. Upper portions of the sequence have insufficient burial depth to create overpressure. Possible correlation between lower portions of Sequence 3 and a nearby reported SWF event.	Negligible (upper section) to low (lower section)
Sequence 4	Fine-grained MTD that contains some sand. Possible correlation to a nearby SWF event.	Low to moderate
Sequence 5	Repeated, overlapping MTDs and channel deposits containing both fine- and coarse-grained sediments. Correlation to two nearby reported SWF events.	Moderate to high
Sequence 6	Alternating intervals of fine- and coarse-grained sediments, with locally discontinuous MTDs or small channels.	Low to moderate

Stratigraphic Sequence	Description and considerations	Generalized SWF Potential
Sequence 7	Interbedded medium- and coarse-grained sediments.	Moderate to high
Sequence 8	Interbedded and mixed fine- and coarse-grained sediments.	Low to moderate

Note that our assessment of the potential for shallow water flow refers to the *likelihood* of experiencing this hazard, but the *severity* of the potential hazard cannot be reliably assessed using only the data provided for this study. Our assessment assumes open-hole drilling conditions with no pressure control in place, and without regard to any specialized drilling fluid or casing program that may be planned.

4.6 General Considerations for Conductor Jetting

Variability of shallow sediments in the study area due to localized MTDs within Sequence 1 should be taken into consideration for conductor jetting at potential wellsites. The majority of shallow sediments are dominated by fine-grained material (mostly silts and clay) but zones comprising thin MTDs may include grain-size distributions from fine to coarse as well as more consolidated sediments that may make jetting more difficult. To help visualize the thickness of these shallow sediments, an isopach map showing the thickness of Sequence 1 can be found on Chart 6 (see Section 4.1 for sequence information). Please be aware that the exploration seismic data provided for this assessment are not sufficient to determine or infer the geotechnical soil properties or to estimate bearing capacity and calculate the optimum surface conductor setting depth. For such purposes, a dedicated geotechnical survey should be performed.

5. Conclusions and Recommendations

Based on the results of the geophysical interpretation, the following conclusions and recommendations are presented:

- Seafloor and shallow subsurface geologic conditions across the study area are generally favorable for future development. Potential hazards and constraints for future drilling and infrastructure planning are present but can be avoided or planned for.
- Water depths range from 3091 ft to 3399 ft BSS. Seafloor slopes are generally less than 4° but can reach 52° along seafloor faults.
- Seafloor faults are present in the eastern part of the study area and should be considered to be active. Potential wellsites must avoid these features by 245 ft.
- A network of gullies crosses the study area. These gullies are likely preferred sediment transport pathways, and should be avoided by 245 ft if possible.
- Three active pipelines, four abandoned pipelines, and one salvaged well are present within the seafloor study area. This infrastructure should be avoided during future drilling and construction operations.
- A shipwreck was identified in the northwestern part of the study area. This location should be avoided by at least 1000 ft. Ten additional sonar contacts located within the study area were assigned avoidance zones of 200 ft. It is recommended that an ROV be used to inspect the seafloor at proposed wellsite(s) immediately before drilling activities to confirm that no seafloor obstructions have been added since the archaeological survey was completed.
- High-amplitude anomalies indicative of shallow gas are interpreted in most stratigraphic sequences. Some high-amplitude anomalies are interpreted to be lithologic in origin. The potential to encounter shallow gas should be evaluated individually at any proposed wellsite. Anomalies that are found to be likely indicative of shallow gas accumulations should be avoided by 245 ft or accounted for in well planning.
- Based on regional analysis, the study area lies in a region of high potential for shallow water flow (SWF). Sand-prone sequences were identified in the study area below Horizon 40 (910 ft to 1621 ft BML). Two nearby reported SWF event correlate to Sequence 5 in the study area. SWF should be further assessed at proposed wellsite locations.
- A characteristic tophole section in the study area will intersect several MTDs with variable grain size content and compaction level. Wellbore stability should be closely monitored while drilling through this section.
- Results of this assessment should be considered when selecting future wellsite and infrastructure locations.
- Individual tophole prognosis charts should be prepared for each proposed wellsite.

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Figures

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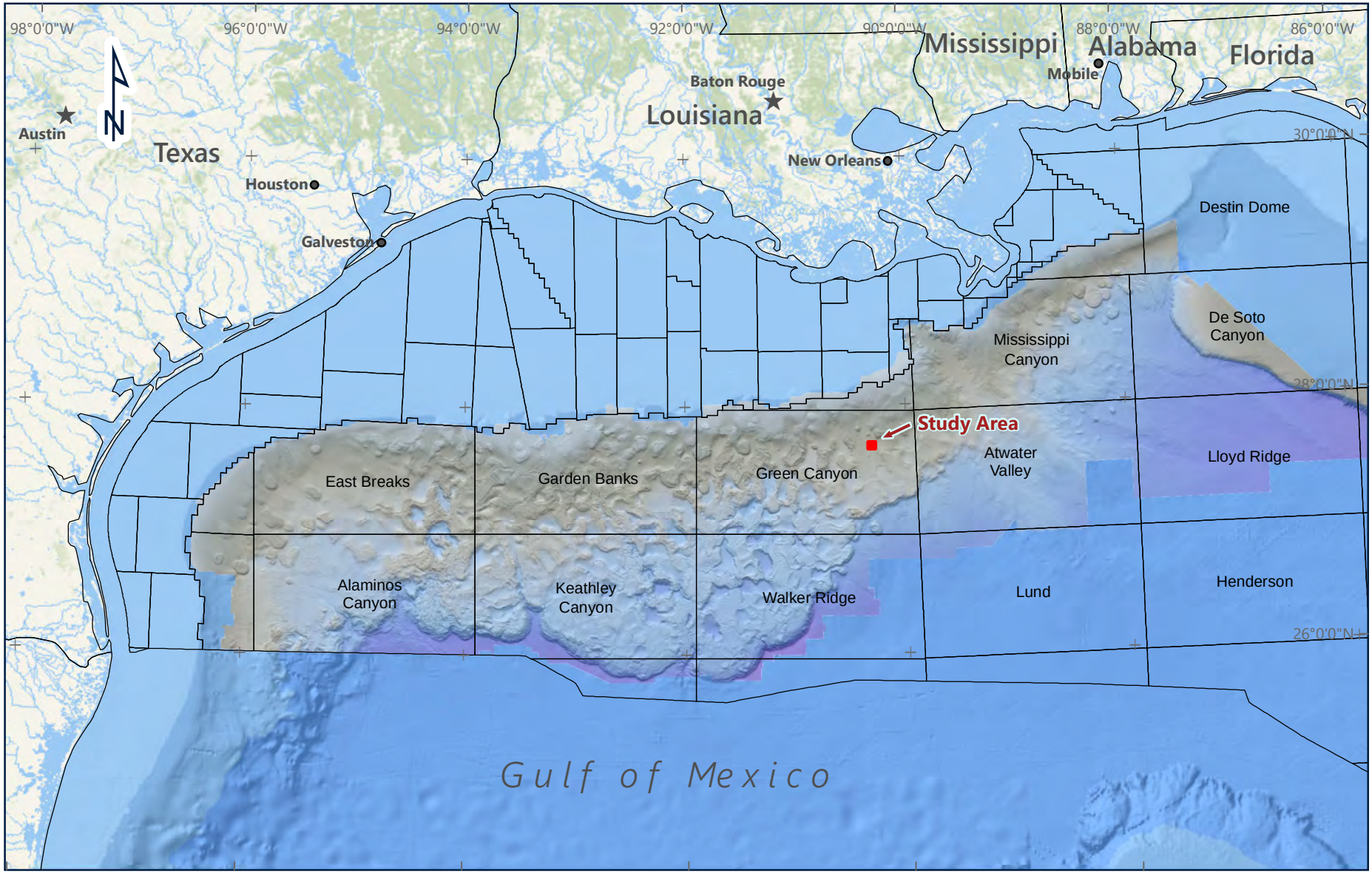

0 25 50 75 100 Nautical Miles

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EPSG CODE 32065 COORDINATE SYSTEM NAD 1927 BLM Zone 15N

GENERAL LOCATION MAP

Eni US Operating

Proposed GC 297 #3 Wellsite

Wellsite Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

02.21010027-02 01 | June 15, 2021

Final

Eni US Operating

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Document Control

Document Information

Project Title	Wellsite Clearance Assessment
Document Title	Proposed GC 297 #3 Wellsite
Fugro Project No.	02.21010027
Fugro Document No.	02.21010027-02
Issue Number	01
Issue Status	Final

Client Information

Client	Eni US Operating
Client Address	1200 Smith St, Ste 1700, Houston, TX, 77002
Client Contact	Deanne Prusak

Revision History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
00	June 11, 2021	For Review	Awaiting client comments	JT	YS	YS
01	June 15, 2021	Final		JT	JT	JT

Project Team

Initials	Name	Role
JT	Juli Thompson	Consultant Geoscientist
YS	Yosmel Sanchez	Project Manager

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Ms. Deanne Prusak
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June 15, 2021

Attention: Deanne Prusak

Eni US Operating Company, Inc. (Eni) contracted Fugro USA Marine, Inc. (Fugro) to prepare a wellsite clearance letter addressing shallow drilling geohazards for the proposed GC 297 #3 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. The proposed well will be drilled by a dynamically positioned vessel. This letter is intended to address specific seafloor conditions within a 2000-ft radius and shallow geologic conditions within a 3000-ft radius of the proposed wellsite. The depth limit of investigation (DLI) is defined as 5000 ft below mudline (BML). This letter is also intended to be submitted to the United States Bureau of Ocean Energy Management (BOEM) and will meet or exceed the BOEM requirements as stipulated in the Notice to Lessees (NTLs) 2008-G05 (Shallow Hazards Program), 2008-G04 (Exploration Plans), and 2009-G40 (Deepwater Benthic Communities). NTL 2015-N02 was released February 06, 2015, and eliminates the expiration date on previous NTLs, continuing their validity. GC 297 falls within an area designated as having a high probability of containing cultural resources as specified in NTLs 2005-G07 and 2011-Joint-G20, and requires an archaeological assessment, which will be submitted under separate cover.

Graphics

A 3D Seismic Power Spectrum (Figure 1) is included as an assessment of the resolution of the seismic data in the vicinity of the proposed wellbore. Four 1:12000-scale maps, including Seafloor Rendering (Figure 2), Water Depth and Seafloor Features (Figure 3), Seafloor Amplitude (Figure 4), and Subsurface Geologic Features (Figure 5), are provided. A 2000-ft radius circle around the proposed wellsite is shown on the seafloor maps, as required by Notice to Lessees (NTL) 2009-G40 (MMS, 2009). Annotated data examples of the nearest 3D seismic survey inline (Figure 6) and crossline (Figure 7) are also included. Shallow geologic conditions at the proposed wellbore are summarized on the attached Tophole Prognosis Chart (Figure 8). Please refer to Fugro (2021) for a comprehensive shallow hazards assessment covering Block GC 297, and for a complete list of references used in this investigation. All graphics included in this assessment are page size (8.5″x11″).

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Seismic Data Parameters

Primary interpretation was conducted on the 3D seismic time cube "Full Stack Allegheny," provided by Eni to Fugro. Inlines are oriented southwest-northeast, crosslines are oriented northwest-southeast, and both have a line spacing of 12.5 m (41.01 ft). A full dataset description is found in the GC 297 shallow hazards report (Fugro, 2021).

The dominant frequency in the vicinity of the proposed GC 297 #3 wellsite is approximately 31.9 Hz (Figure 1), resulting in a limit of separability of approximately 43 ft within the shallow section. Individual strata or other geologic features thinner than this limit of separability may be detected but may not be resolved in true thickness or lateral extent. Small-scale topographic features and anthropogenic obstructions such as pipelines, shipwrecks, and seafloor debris generally cannot be resolved in 3D seismic data.

A companion depth dataset, derived from the 3D time dataset, was used to calibrate time-depth conversions as described in Fugro (2021).

Offset Well Data

Information regarding shallow water flow (SWF) events at nearby wells available from the BOEM (2011) was used in this assessment.

Previous Work

A comprehensive shallow hazards assessment for Block GC 297 was produced by Fugro (2021). Lithological, regional geologic, and stratigraphic information presented in the shallow hazards report was reviewed and used to prepare this wellsite clearance letter.

An archaeological report covering the vicinity of the proposed GC 297 #3 well was conducted by Tesla (2006). General findings from the report are included in this report.

Proposed Well Location

The surface location for the proposed GC 297 #3 wellsite is in northeastern Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 #3 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,518,254.30 ft	Y = 10,054,098.10 ft
Longitude: 90° 17' 14.311" W	Latitude: 27° 40' 46.915" N
Nearest 3D Inline: 34175	Nearest 3D Crossline: 73970
305.70 ft FEL	7301.90 ft FNL

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about 3257 ft, with zero datum at sea surface (Figures 2 and 3). The local seafloor gradient is less than 0.1° to the southeast. The regional slope is to the south. Seafloor slopes within 2000 ft of the proposed location do not exceed 6° except along seafloor faults, where they may exceed 30° (Figure 4).

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. Five seafloor faults lie within 2000 ft of the proposed GC 297 #3 well (Figure 3). The two westernmost faults are deep-seated and rooted in salt. All are downthrown to the east. The nearest seafloor fault is located 598 ft southeast of the proposed well location (Figure 3) and has a seafloor offset of less than 5 ft in the area of the proposed well. No seafloor or near-surface amplitude anomalies are associated with the faults (Figure 5).

No areas of anomalous seafloor amplitude were identified in the 3D seismic data within 2,000 ft of the proposed well (Figure 5).

Potential High-Density Benthic Communities

There is no geophysical evidence of hydrocarbon seepage sites or areas that could potentially support high-density benthic communities within 2000 ft of the proposed location (Figures 3 and 5). Therefore, there is a negligible potential for high-density communities of benthic and/or chemosynthetic organisms within 2000 ft of the proposed wellsite, indicating that site conditions comply with MMS NTL 2009-G40 requirements.

Anthropogenic Obstructions

According to Fugro's GIS database of infrastructure and seafloor obstructions, updated in May 2021 for this area, one pipeline is located within 2000 ft of the proposed wellsite (Figures 2 through 5). A 7-inch bulk oil pipeline passes 750 ft east of the proposed location, based on the reported as-built location. The location of the pipeline should be reviewed prior to operations commencing on site, and extra caution is advised should any work occur in the vicinity.

In general, it is recommended that a remotely operated vehicle (ROV) be used to inspect the seafloor at the proposed wellsite immediately before drilling activities to confirm that there are no additional seafloor obstructions.

Stratigraphy

The seafloor and seven subsurface horizons (Horizons 10, 20, 30, 40, and 50) were mapped in the 3D seismic data, and are displayed on the nearest seismic inline (Figure 7) and crossline (Figure 8), to divide the tophole section into eight stratigraphic units (Sequences 1 through 8) of distinctive seismic and inferred lithologic character at the proposed wellbore. All mapped horizons are present at the proposed GC 297 #3 wellsite. Predicted depths and thicknesses associated with each of the mapped horizons and sequences are provided in Table 2 below and displayed on the attached Tophole Prognosis Chart (Figure 9) for the proposed drilling location.

Table 2: Summary of horizons, sequences, and lithologies at the proposed GC 297 #3 wellsite.

Stratigraphic Sequence	Inferred Lithology	Sequence Thickness (ft) or Horizon Depth (ft BML)
Sequence 1	Fine-grained stratified sediments interbedded with thin mass transport deposits (MTDs).	366
Horizon 10	Base of stratified sediments.	366
Sequence 2	MTD consisting of silts and clays with some coarser-grained layers.	411
Horizon 20	Base of the MTD.	777
Sequence 3	Fine-grained MTD overlying fine- and coarse-grained stratified sediments.	431
Horizon 30	Base of the stratified sediments.	1208
Sequence 4	Predominantly fine-grained MTD that contains some sand.	221
Horizon 40	Base of the MTD.	1429
Sequence 5	Repeated, overlapping MTDs and channel deposits containing both fine- and coarse-grained sediments.	860
Horizon 50	Base of the MTD package.	2289
Sequence 6	Alternating intervals of fine- and coarse-grained sediments.	526
Horizon 60	Top of a high-amplitude package.	2815
Sequence 7	Interbedded medium- and coarse-grained sediments.	130
Horizon 70	Base of the high-amplitude package.	2945
Sequence 8	Interbedded and intermingled fine- and coarse-grained sediments.	2071

Fault Penetrations

A vertical wellbore will penetrate two faults within the shallow section at depths of 1429 ft and 1836 ft BML (4686 ft and 5093 ft BSS; Figure 9). Both faults are seafloor faults displaying a normal sense of offset, striking roughly north to south, and downthrown to the east.

Penetration of these faults is not expected to pose a hazard or constraint to well installation. However, the faults represent a zone of weakness, and potentially a zone of enhanced permeability, with the possible result that drilling fluid could be lost to the formation and/or potential for localized wellbore instability.

Gas Hydrate and Gas Hazards

Temperature and pressure conditions within the area containing the proposed well location are favorable for the presence of gas hydrates at the seafloor or within the shallow subsurface. A bottom-simulating reflector (BSR) was not observed at the proposed well location nor in the surrounding region; however, localized concentrations of generally low-density gas hydrates may still be present in the area. Higher concentrations of gas hydrates with possible underlying accumulations of free gas are possible in areas close to faults where gas migration may occur. There are no indications of elevated amplitudes suggestive of possible high-concentration gas hydrates at or near the proposed well location; thus, these conditions are not expected. A negligible potential for high concentrations of gas hydrate accumulations is assessed at the proposed wellbore.

Amplitude extractions were performed for all sequences of the shallow section between the seafloor and the depth limit of investigation, and all identified amplitude anomalies indicative of possible shallow gas accumulations are displayed on Figure 6.

No amplitude anomalies are present within 245 ft of the proposed GC 297 #3 well in Sequences 1, 3, 6, 7, or 8 (Figure 6). An amplitude anomaly in Sequence 2 is located 137 ft east of the proposed location, and an amplitude anomaly in Sequence 4 lies 84 ft to the southeast. Both of these anomalies are interpreted to be lithologic. The proposed GC 297 #3 location is assessed a negligible potential for shallow gas in Sequences 1, 2, 3, 6 and 8 (Figure 9).

A low potential for shallow gas is assessed for the lower portion Sequence 4 because the interpreted lithologic anomaly is located near a deep-seated fault, where hydrocarbon migration is likely.

The proposed wellbore penetrates a large amplitude anomaly in Sequence 5 (Figure 6). This anomalous body is interpreted to represent gas accumulations in some areas and lithologic anomalies in others, and was further assessed for the proposed well to determine a site-specific potential for shallow gas. The anomalous amplitudes in the vicinity of the wellbore fall within a package of channelized sediments, and are directly adjacent to the seafloor faults penetrated by the proposed well. These faults may provide a pathway for gas to migrate from depth; therefore, it should be assumed that gas is present in this package. Based on these findings, Sequence 5 is assigned a moderate to high potential for shallow gas (Figure 9).

A low potential for shallow gas is assessed for Sequence 7 (Figure 9). Although no amplitude anomalies were identified within 245 ft of the proposed wellbore, the generally high amplitude range of this sequence makes it difficult to distinguish clearly between lithologic and gas-sourced amplitude anomalies. Table 3 summarizes the sections of elevated shallow gas potential along the proposed GC 297 #3 wellbore.

Table 3: Summary of elevated shallow gas potential at the proposed GC 297 #3 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 4	4625	4686	Low
Sequence 5	4686	4921	Moderate
Sequence 5	4921	5093	High
Sequence 5	5093	5546	Low
Sequence 7	6072	6202	Low

Shallow Water Flow (SWF)

Based on regional analysis, the northeastern corner of Green Canyon lies within a region of high potential for shallow water flow (SWF; Pelletier et al., 1999). Block GC 297 lies within the estimated boundaries of the regional Red unit as described by Winker and Booth (2000). Ostermeier et al. (2000) indicate that sands associated with SWF in the area are associated with intraslope fans, canyons, and channels, which are features of the latest Pleistocene low stand ecosystems of the Mississippi River.

The BOEM published database and associated graphic of reported SWF occurrences in the Gulf of Mexico (BOEM, 2011) indicate several recorded events in the vicinity of the proposed well. A reported flow of unknown severity was reported at the GC 341 #1 well, located approximately 3.5 miles southwest of the proposed well (see Fugro, 2021). The depth of the reported flow correlates to the uppermost part of Sequence 5, but it is also possible that the flow originated from the base of Sequence 4. Another flow of unknown severity was reported at the GC 254 #1 well, located approximately 2.8 miles northeast of the proposed well, at a depth correlating to Sequence 5. A flow of moderate severity was reported at the GC 296 #1 well, located approximately 4.6 miles west of the proposed well and approximately 4200 ft beyond the available data extents. This event was reported at a depth that may correspond to the lower portion of Sequence 3 or the upper portion of Sequence 4. All three wells were successfully completed.

Sand-prone portions of Sequence 5, along with the generally coarse-grained Sequence 7, are assigned a moderate to high potential for a SWF.

Table 4 summarizes the sections of elevated SWF potential along the proposed GC 297 #3 wellbore.

Table 4: Summary of elevated SWF potential at the proposed GC 297 #3 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 4	4465	4686	Low
Sequence 5	4686	4921	Moderate
Sequence 5	4921	5093	High
Sequence 5	5093	5546	Moderate
Sequence 6	5546	6072	Low
Sequence 7	6072	6202	High
Sequence 8	6202	8273	Low

Considering the regional risk analysis and offset well information reviewed during this assessment, the potential for encountering overpressured sands within the depth of investigation should be considered during well design. Standard SWF mitigation practices should be implemented when drilling through any intervals that have been assessed a non-negligible potential for SWF in the tophole section. Note that our assessment of the potential for shallow water flow refers to the likelihood of experiencing this hazard, but the severity of the potential hazard cannot be reliably assessed using only the data provided for this study. Our assessment assumes open-hole drilling conditions with no pressure control in place, and without regard to any specialized drilling fluid or casing program that may be planned.

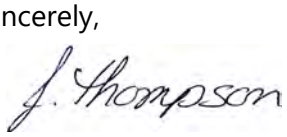
Suitability for Temporary Occupation for Drilling

The proposed GC 297 #3 well is considered suitable for temporary-occupation drilling activities provided that the aforementioned conditions and constraints are considered and planned for in the final well design. The preceding assessment of drilling hazards conveys the likelihood of particular hazards occurring based on a review of the available data and does not forecast the severity of any events that may occur.

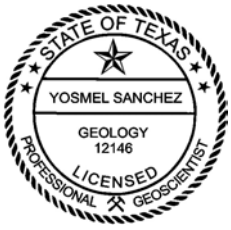
We recommend designing a casing plan to topset the elevated potential for shallow gas and SWF in Sequence 5.

We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to contact Juli Thompson at jthompson2@fugro.com, or Yosmel Sanchez at ysanchez@fugro.com

Sincerely,



Juli Thompson, PG (TX, LA)
Consultant Geoscientist



Yosmel Sanchez, Ph.D., PG (TX)
Deputy Geoscience Department Manager

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Figures

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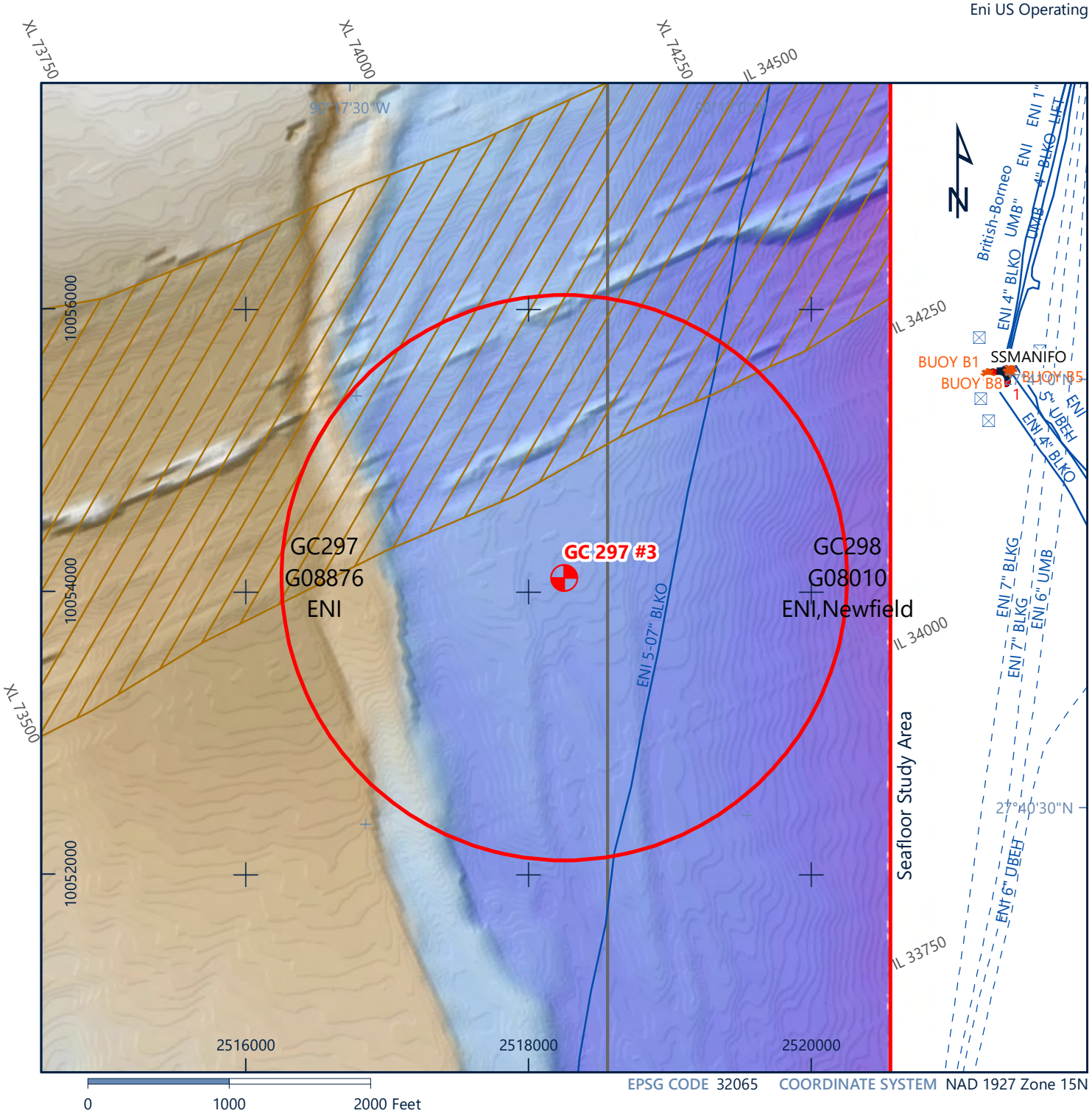
Figures



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LEGEND

BACKGROUND

- Proposed well location with 2,000-ft buffer
- IL 34500 3D Seismic Survey Line Number
- Existing Well Location
- Existing Manifold
- Existing Pipeline
- Abandoned Pipeline
- Existing Compatt
- Seafloor Obstruction

SEAFLOOR FEATURES

- Area of Data Artifacts

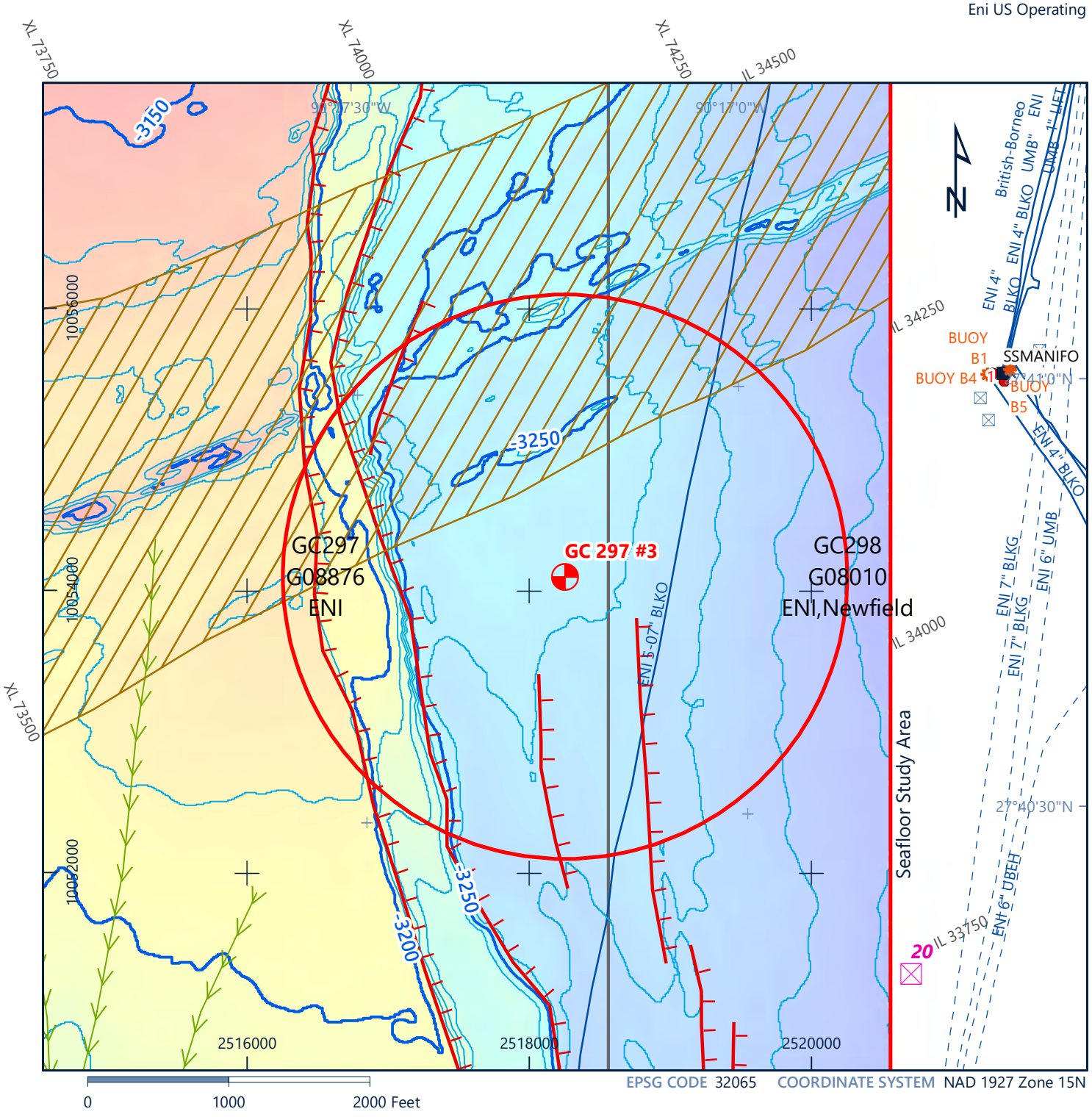
BATHYMETRY

- - 3,144 ft
- - 3,298 ft

SEAFLOOR RENDERING
PROPOSED GC 297 #3 WELLSITE

02.21010027-02-01 | Proposed GC 297 #3 Wellsite
Figure 2

ATTACHMENT I



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LEGEND

BACKGROUND

- Proposed well location with 2,000-ft buffer
- IL 34500 3D Seismic Survey Line Number
- Existing Well Location
- Existing Manifold

- Existing Pipeline
- Abandoned Pipeline
- Existing Compatt
- Seafloor Obstruction

SEAFLOOR FEATURES

- Seafloor Gully
- Seafloor Fault
- Side Scan Sonar Contact
- Area of Data Artifacts

BATHYMETRY CONTOURS

- 3250' Major - 50 ft Interval
- Minor - 10 ft Interval

BATHYMETRY

- - 3,144 ft
- - 3,298 ft

WATER DEPTH AND SEAFLOOR FEATURES
PROPOSED GC 297 #3 WELLSITE

02.21010027-02-01 | Proposed GC 297 #3 Wellsite
Figure 3

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Proposed GC 297 #3 Wellsite

Archaeological Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

02.21010027-03_Arch 02 | July 23, 2021

Final

ENI US Operating

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Document Control

Document Information

Project Title	Archaeological Clearance
Document Title	Proposed GC 297 #3 Wellsite
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Client Information

Client	ENI US Operating
Client Address	1200 Smith St., Ste. 1700, Houston, TX 77002
Client Contact	Deanne Prusak
Client Document No.	N/A

Revision History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
01	July 21, 2021	For Review	Awaiting client comments	RB	DG	DG
02	July 23, 2021	Final		RB	DG	DG

Project Team

Initials	Name	Role
SS	Shane Smith	Geoscience Department Manager
DG	Dean Gresham	Deputy Geoscience Department Manager
CN	Cedric Noel	Senior GIS Analyst
RB	Ray Blackmon	Supervising Archaeologist

FUGRO
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ENI US Operating
1200 Smith St, Ste. 1700
Houston, TX 77002
USA

July 23, 2021

Attention: Ms. Deanne Prusak

Archaeological Clearance
Proposed GC 297 #3 Wellsite
Block 297, Green Canyon Area, Gulf of Mexico

Introduction

ENI US Operating Company, Inc. (ENI) contracted Fugro USA Marine, Inc. (Fugro) to prepare an Archaeological Clearance letter addressing potential cultural resources in the vicinity of the proposed GC 297 #3 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. This letter is intended to address specific seafloor conditions within a 1000-ft radius of the proposed wellsite. The study area lies within a zone designated as archaeologically sensitive according to NTL 2005-G07 and NTL 2011-JOINT-G01 (BOEM 2005 and 2011, respectively).

Please refer to Tesla Report No. 05-353-11 (Allegheny Prospect), "Archaeological Report, Deep Tow Survey, Proposed Anchor/Mooring Arrays, Wells in Blocks 254 & 298, Green Canyon Area, Gulf of Mexico" (Tesla, 2006) for a comprehensive archaeological assessment within GC 297, as well as a complete list of references used in this investigation. Also, please refer to Fugro (2021) for a comprehensive shallow hazards assessment utilizing 3D exploration seismic data and offset well data covering Block GC 297

High-Resolution Geophysical Data

Tesla Offshore LLC (Tesla) acquired the high-resolution deep tow sonar covering proposed anchor/mooring arrays radiating from proposed well sites in Blocks 254 and 298, Green Canyon Area. The fieldwork was completed between August 21st through 23rd and 25th through 26th; September 17th through 20th, September 30th through October 1st, and October 13th through 19th of 2005.

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An Edgetech DTSMS side scan sonar was utilized and combined full spectrum chirp frequency (75 and 410 kHz) modulated pulse with amplitude and phase weighting providing 2 to 10 cm resolution along 200-meter sweeps. Digital recordings and strip chart recordings were annotated with USBL corrected shot points at 500-foot intervals. The Echotrac DF 3200 MKIII operated at 24 kHz with velocity applications added during post-processing.

To provide precise sonar tow fish position accuracy, a Sonardyne USBL system was utilized from a tracking vessel to correctly position the sonar fish. Shot points at 500-foot intervals were printed on the strip charts and digital files at the corrected sonar fish position relative to the seafloor. Differential enabled GPS receivers were interfaced to a HYPAK navigation system with differential signals provided via WAAS & USCG Reference Station Networks.

Additional details regarding the deep tow data, project personnel, and survey equipment can be found in Tesla Report No. 05-353-11 (Tesla 2006).

Graphics

Water depths and interpreted seafloor features from the Fugro Shallow Hazards Assessment (Fugro 2021) are displayed on Figure 1 along with the sonar contacts from the Tesla Archaeological Assessment (Tesla 2006). All existing and proposed infrastructure are also shown on Figure 1.

Proposed Well Location

The surface location for the proposed GC 297 #3 wellsite is in the northeastern portion of Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 #3 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,518,254.30 ft	Y = 10,054,098.10 ft
Longitude: 90° 17' 14.311" W	Latitude: 27° 40' 46.915" N

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about -3,257 ft, with zero datum at sea surface (Figure 1). The local seafloor gradient is less than 0.1° to the southeast. The regional slope is to the south.

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. Two seafloor faults lie within 1,000 ft of the proposed GC 297 #3 well (Figure 1). The nearest

seafloor fault is located 598 ft southeast of the proposed well location (Figure 1) and has a seafloor offset of less than 5 ft.

No other seafloor features were noted within 1000 ft of the proposed GC 297 #3 well.

Existing Infrastructure

According to Fugro's GIS database of infrastructure and seafloor obstructions, one pipeline is located within 1,000 ft of the proposed wellsite (Figure 1). A 7-inch bulk oil pipeline plots 750 ft east of the proposed location, based on the reported as-built location.

Anthropogenic Debris

Twenty-four sonar targets were noted during the Tesla deep tow sonar survey. All twenty-four sonar targets were interpreted to represent modern anthropogenic debris and are not deemed archaeologically significant. A 200 ft avoidance criteria was given to each contact to ensure safe operations as well as the protection of potential cultural resources in over 2,900 feet of water.

There were no sonar targets identified within 1,000 ft of the proposed wellsite. The nearest sonar target (No. 20) is located 3,500 ft southeast of the proposed wellsite.

In addition to the 24 sonar targets, one shipwreck was noted during the Tesla deep tow survey. The shipwreck measures 75 ft in length, 50 ft in width, and consists of a large antennae or tower that extends 40 ft above the seafloor. The shipwreck is located within the northwest portion of GC 297 over 18,000 ft from the proposed wellsite location.

There were no unusual depressions, scours, sediment changes, or unidentified seafloor targets observed during the Tesla deep tow survey within 1,000 ft of the proposed wellsite that could represent unidentified shipwreck remains. It is possible that small features representing high-probability areas for historic shipwreck materials may not be detected by the geophysical instruments used for this survey. If evidence of historic cultural remains is encountered during construction activities, the BOEM/BSEE archaeologists must be contacted within 48 hours to provide an assessment of these artifacts, and all operations must cease within 1,000 feet of the exposed objects.

The previous survey was performed prior to the passage of numerous hurricanes and tropical storms. Seafloor disturbance, pipeline movement, or other possible damage to man-made infrastructure caused by wind or storm surge (currents) may have occurred and will not be reflected in this letter and figure. In addition, Fugro cannot be held responsible for the identification of any debris that may have been deposited within the survey area due to past hurricanes and/or tropical storms.

Closing. We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to call (337) 268-3357 or email at: rblackmon@fugro.com.

Sincerely,

FUGRO USA MARINE, INC.

Ray Blackmon
Supervising Archaeologist

Figure

Figure 1: Water Depth and Seafloor Features

References:

Bureau of Ocean Energy Management, 2005, "Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the Outer Continental Shelf, Gulf of Mexico OCS Region, Archaeological Resource Surveys and Reports", United States Department of the Interior, Minerals Management Service, Gulf of Mexico, NTL 2005-G07.

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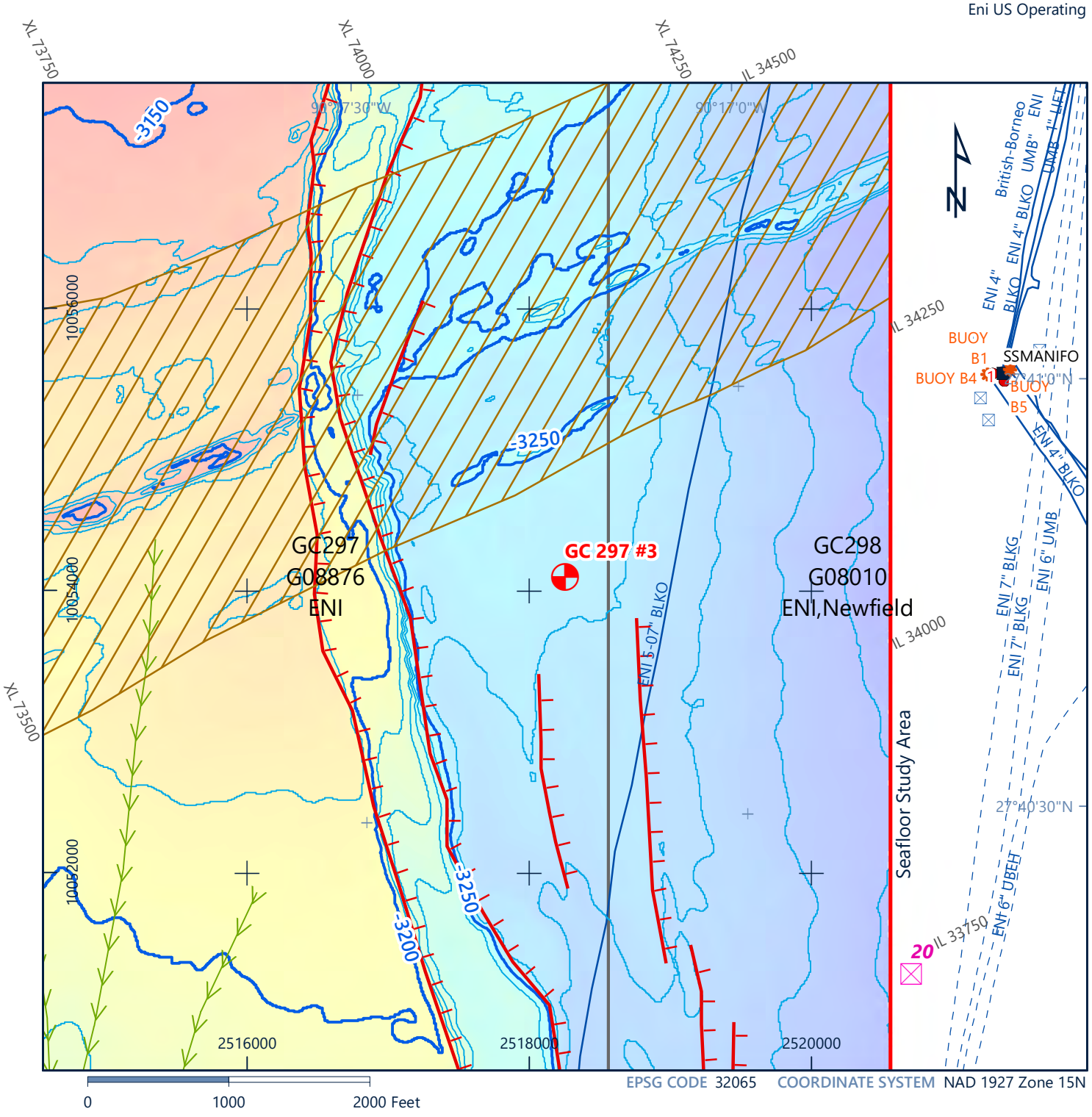
Bureau of Ocean Energy Management, 2015, "Notice to Lessees and Operators (NTL) of Federal Oil and Gas Leases in the Outer Continental Shelf (OCS), "Elimination of Expiration Dates on Certain Notices to Lessees and Operators Pending Review and Reissuance", United States Department of the Interior, Gulf of Mexico, NTL 2015-N02.

Fugro, 2021. Shallow Hazards Assessment, Block 297, Green Canyon Area, Gulf of Mexico, Document Number 02.21010027-01, in production.

Tesla Offshore, LLC, 2006. Archaeological Report, Deep Tow Survey, Proposed Anchor/Mooring Arrays, Wells in Blocks 254 and 298, Green Canyon Area, OCS-G 07049 & 08010, Gulf of Mexico, October 2006.

Figure



Scale 1:12,000 at original 8.5"x11" page size

LEGEND

BACKGROUND

- Proposed well location
- IL 34500 3D Seismic Survey Line Number
- Existing Well Location
- Existing Manifold
- Existing Pipeline
- Abandoned Pipeline
- Existing Compatt
- Seafloor Obstruction

SEAFLOOR FEATURES

- Seafloor Gully
- Seafloor Fault
- Side Scan Sonar Contact
- Area of Data Artifacts

BATHYMETRY CONTOURS

- -3250' Major - 50 ft Interval
- Minor - 10 ft Interval

BATHYMETRY

- - 3,144 ft
- - 3,298 ft

WATER DEPTH AND SEAFLOOR FEATURES
PROPOSED GC 297 #3 WELLSITE

02.21010027-03_Arch-02 | Archaeological Clearance Letter, Proposed GC 297 #3
Figure 1

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Proposed GC 297 #4 Wellsite

Wellsite Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

02.21010027-03 01 | June 15, 2021

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Eni US Operating

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Document Control

Document Information

Project Title	Wellsite Clearance Assessment
Document Title	Proposed GC 297 #4 Wellsite
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Issue Number	01
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Client Information

Client	Eni US Operating
Client Address	1200 Smith St, Ste 1700, Houston, TX, 77002
Client Contact	Deanne Prusak

Revision History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
00	June 11, 2021	For Review	Awaiting client comments	JT	YS	YS
01	June 15, 2021	Final		JT	JT	JT

Project Team

Initials	Name	Role
JT	Juli Thompson	Consultant Geoscientist
YS	Yosmel Sanchez	Project Manager

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ENI US Operating
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June 15, 2021

Attention: Deanne Prusak

Eni US Operating Company, Inc. (Eni) contracted Fugro USA Marine, Inc. (Fugro) to prepare a wellsite clearance letter addressing shallow drilling geohazards for the proposed GC 297 #4 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. The proposed well will be drilled by a dynamically positioned vessel. This letter is intended to address specific seafloor conditions within a 2000-ft radius and shallow geologic conditions within a 3000-ft radius of the proposed wellsite. The depth limit of investigation (DLI) is defined as 5000 ft below mudline (BML). This letter is also intended to be submitted to the United States Bureau of Ocean Energy Management (BOEM) and will meet or exceed the BOEM requirements as stipulated in the Notice to Lessees (NTLs) 2008-G05 (Shallow Hazards Program), 2008-G04 (Exploration Plans), and 2009-G40 (Deepwater Benthic Communities). NTL 2015-N02 was released February 06, 2015, and eliminates the expiration date on previous NTLs, continuing their validity. GC 297 falls within an area designated as having a high probability of containing cultural resources as specified in NTLs 2005-G07 and 2011-Joint-G20, and requires an archaeological assessment, which will be submitted under separate cover.

Graphics

A 3D Seismic Power Spectrum (Figure 1) is included as an assessment of the resolution of the seismic data in the vicinity of the proposed wellbore. Four 1:12,000-scale maps, including Seafloor Rendering (Figure 2), Water Depth and Seafloor Features (Figure 3), Seafloor Amplitude (Figure 4), and Subsurface Geologic Features (Figure 5), are provided. A 2000-ft radius circle around the proposed wellsite is shown on the seafloor maps, as required by Notice to Lessees (NTL) 2009-G40 (MMS, 2009). Annotated data examples of the nearest 3D seismic survey inline (Figure 6) and crossline (Figure 7) are also included. Shallow geologic conditions at the proposed wellbore are summarized on the attached Tophole Prognosis Chart (Figure 8). Please refer to Fugro (2021) for a comprehensive shallow hazards assessment covering Block GC 297, and for a complete list of references used in this investigation. All graphics included in this assessment are page size (8.5″x11″).

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Seismic Data Parameters

Primary interpretation was conducted on the 3D seismic time cube "Full Stack Allegheny," provided by Eni to Fugro. Inlines are oriented southwest-northeast, crosslines are oriented northwest-southeast, and both have a line spacing of 12.5 m (41.01 ft). A full dataset description is found in the GC 297 shallow hazards report (Fugro, 2021).

The dominant frequency in the vicinity of the proposed GC 297 #4 wellsite is approximately 31.9 Hz (Figure 1), resulting in a limit of separability of approximately 43 ft within the shallow section. Individual strata or other geologic features thinner than this limit of separability may be detected but may not be resolved in true thickness or lateral extent. Small-scale topographic features and anthropogenic obstructions such as pipelines, shipwrecks, and seafloor debris generally cannot be resolved in 3D seismic data.

A companion depth dataset, derived from the 3D time dataset, was used to calibrate time-depth conversions as described in Fugro (2021).

Offset Well Data

Information regarding shallow water flow (SWF) events at nearby wells available from the BOEM (2011) was used in this assessment.

Previous Work

A comprehensive shallow hazards assessment for Block GC 297 was produced by Fugro (2021). Lithological, regional geologic, and stratigraphic information presented in the shallow hazards report was reviewed and used to prepare this wellsite clearance letter.

An archaeological report covering the vicinity of the proposed GC 297 #4 well was conducted by Tesla (2006). General findings from the report are included in this report.

Proposed Well Location

The surface location for the proposed GC 297 #4 wellsite is in northeastern Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 #4 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,518,104.30 ft	Y = 10,054,098.10 ft
Longitude: 90° 17' 15.978" W	Latitude: 27° 40' 46.947" N
Nearest 3D Inline: 34180	Nearest 3D Crossline: 73955
455.70 ft FEL	7301.90 ft FNL

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about 3256 ft, with zero datum at sea surface (Figures 2 and 3). The local seafloor gradient is less than 0.1° to the southeast. The regional slope is to the south. Seafloor slopes within 2000 ft of the proposed location do not exceed 6° except along seafloor faults, where they may exceed 30° (Figure 4).

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. Five seafloor faults lie within 2000 ft of the proposed GC 297 #4 well (Figure 3). The two westernmost faults are deep-seated and rooted in salt. All are downthrown to the east. The nearest seafloor fault is located 695 ft south of the proposed well location (Figure 3) and has a seafloor offset of less than 5 ft in the area of the proposed well. No seafloor or near-surface amplitude anomalies are associated with the faults (Figure 5).

No areas of anomalous seafloor amplitude were identified in the 3D seismic data within 2,000 ft of the proposed well (Figure 5).

Potential High-Density Benthic Communities

There is no geophysical evidence of hydrocarbon seepage sites or areas that could potentially support high-density benthic communities within 2000 ft of the proposed location (Figures 3 and 5). Therefore, there is a negligible potential for high-density communities of benthic and/or chemosynthetic organisms within 2000 ft of the proposed wellsite, indicating that site conditions comply with MMS NTL 2009-G40 requirements.

Anthropogenic Obstructions

According to Fugro's GIS database of infrastructure and seafloor obstructions, updated in May 2021 for this area, one pipeline is located within 2000 ft of the proposed wellsite (Figures 2 through 5). A 7-inch bulk oil pipeline passes 895 ft east of the proposed location, based on the reported as-built location. The location of the pipeline should be reviewed prior to operations commencing on site, and extra caution is advised should any work occur in the vicinity.

In general, it is recommended that a remotely operated vehicle (ROV) be used to inspect the seafloor at the proposed wellsite immediately before drilling activities to confirm that there are no additional seafloor obstructions.

Stratigraphy

The seafloor and seven subsurface horizons (Horizons 10, 20, 30, 40, and 50) were mapped in the 3D seismic data, and are displayed on the nearest seismic inline (Figure 7) and crossline (Figure 8), to divide the tophole section into eight stratigraphic units (Sequences 1 through 8) of distinctive seismic and inferred lithologic character at the proposed wellbore. All mapped horizons are present at the proposed GC 297 #4 wellsite. Predicted depths and thicknesses associated with each of the mapped horizons and sequences are provided in Table 2 below and displayed on the attached Tophole Prognosis Chart (Figure 9) for the proposed drilling location.

Table 2: Summary of horizons, sequences, and lithologies at the proposed GC 297 #4 wellsite.

Stratigraphic Sequence	Inferred Lithology	Sequence Thickness (ft) or Horizon Depth (ft BML)
Sequence 1	Fine-grained stratified sediments interbedded with thin mass transport deposits (MTDs).	366
Horizon 10	Base of stratified sediments.	366
Sequence 2	MTD consisting of silts and clays with some coarser-grained layers.	405
Horizon 20	Base of the MTD.	771
Sequence 3	Fine-grained MTD overlying fine- and coarse-grained stratified sediments.	414
Horizon 30	Base of the stratified sediments.	1185
Sequence 4	Predominantly fine-grained MTD.	101
Horizon 40	Base of the MTD.	1286
Sequence 5	Repeated, overlapping MTDs and channel deposits containing both fine- and coarse-grained sediments.	969
Horizon 50	Base of the MTD package.	2255
Sequence 6	Alternating intervals of fine- and coarse-grained sediments.	544
Horizon 60	Top of a high-amplitude package.	2799
Sequence 7	Interbedded medium- and coarse-grained sediments.	140
Horizon 70	Base of the high-amplitude package.	2939
Sequence 8	Interbedded and intermingled fine- and coarse-grained sediments.	2077

Fault Penetrations

A vertical wellbore will penetrate two faults within the shallow section at depths of 1286 ft and 1568 ft BML (4542 ft and 4824 ft BSS; Figure 9). Both faults are seafloor faults displaying a normal sense of offset, striking roughly north to south, and downthrown to the east.

Penetration of these faults is not expected to pose a hazard or constraint to well installation. However, the faults represent a zone of weakness, and potentially a zone of enhanced permeability, with the possible result that drilling fluid could be lost to the formation and/or potential for localized wellbore instability.

Gas Hydrate and Gas Hazards

Temperature and pressure conditions within the area containing the proposed well location are favorable for the presence of gas hydrates at the seafloor or within the shallow subsurface. A bottom-simulating reflector (BSR) was not observed at the proposed well location nor in the surrounding region; however, localized concentrations of generally low-density gas hydrates may still be present in the area. Higher concentrations of gas hydrates with possible underlying accumulations of free gas are possible in areas close to faults where gas migration may occur. There are no indications of elevated amplitudes suggestive of possible high-concentration gas hydrates at or near the proposed well location; thus, these conditions are not expected. A negligible potential for high concentrations of gas hydrate accumulations is assessed at the proposed wellbore.

Amplitude extractions were performed for all sequences of the shallow section between the seafloor and the depth limit of investigation, and all identified amplitude anomalies indicative of possible shallow gas accumulations are displayed on Figure 6.

No amplitude anomalies are present within 245 ft of the proposed GC 297 #4 well in Sequences 1, 2, 3, 6, 7, or 8 (Figure 6). The proposed Block location is assessed a negligible potential for shallow gas in Sequences 1, 2, 3, 6 and 8 (Figure 9).

Amplitude anomalies in Sequence 4 lie 223 ft to the southeast and 232 ft to the northwest of the proposed location. Both of these anomalies are interpreted to be lithologic. A low potential for shallow gas is assessed for Sequence 4 because the anomalies are located near deep-seated faults, where hydrocarbon migration is likely.

The proposed wellbore penetrates a large amplitude anomaly in Sequence 5 (Figure 6). This anomalous body is interpreted to represent gas accumulations in some areas and lithologic anomalies in others, and was further assessed for the proposed well to determine a site-specific potential for shallow gas. The anomalous amplitudes in the vicinity of the wellbore fall within a package of channelized sediments, and are directly adjacent to the seafloor faults penetrated by the proposed well. These faults may provide a pathway for gas to migrate from depth; therefore, it should be assumed that gas is present in this package. Based on these findings, Sequence 5 is assigned a moderate to high potential for shallow gas (Figure 9).

A low potential for shallow gas is assessed for Sequence 7 (Figure 9). Although no amplitude anomalies were identified within 245 ft of the proposed wellbore, the generally high amplitude range of this sequence makes it difficult to distinguish clearly between lithologic and gas-sourced amplitude anomalies. Table 3 summarizes the sections of elevated shallow gas potential along the proposed GC 297 #4 wellbore.

Table 3: Summary of elevated shallow gas potential at the proposed GC 297 #4 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 4	4542	468612	Low
Sequence 5	4612	4824	Moderate
Sequence 5	4824	5095	High
Sequence 5	5095	5511	Low
Sequence 7	6055	6195	Low

Shallow Water Flow (SWF)

Based on regional analysis, the northeastern corner of Green Canyon lies within a region of high potential for shallow water flow (SWF; Pelletier et al., 1999). Block GC 297 lies within the estimated boundaries of the regional Red unit as described by Winker and Booth (2000). Ostermeier et al. (2000) indicate that sands associated with SWF in the area are associated with intraslope fans, canyons, and channels, which are features of the latest Pleistocene low stand ecosystems of the Mississippi River.

The BOEM published database and associated graphic of reported SWF occurrences in the Gulf of Mexico (BOEM, 2011) indicate several recorded events in the vicinity of the proposed well. A reported flow of unknown severity was reported at the GC 341 #1 well, located approximately 3.5 miles southwest of the proposed well (see Fugro, 2021). The depth of the reported flow correlates to the uppermost part of Sequence 5, but it is also possible that the flow originated from the base of Sequence 4. Another flow of unknown severity was reported at the GC 254 #1 well, located approximately 2.8 miles northeast of the proposed well, at a depth correlating to Sequence 5. A flow of moderate severity was reported at the GC 296 #1 well, located approximately 4.6 miles west of the proposed well and approximately 4200 ft beyond the available data extents. This event was reported at a depth that may correspond to the lower portion of Sequence 3 or the upper portion of Sequence 4. All three wells were successfully completed.

Sand-prone portions of Sequence 5, along with the generally coarse-grained Sequence 7, are assigned a moderate to high potential for a SWF.

Table 4 summarizes the sections of elevated SWF potential along the proposed GC 297 #4 wellbore.

Table 4: Summary of elevated SWF potential at the proposed GC 297 #4 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 4	4441	4542	Low
Sequence 5	4542	4612	Moderate
Sequence 5	4612	5095	High
Sequence 5	5095	5511	Moderate
Sequence 6	5511	6055	Low
Sequence 7	6055	6195	High
Sequence 8	6195	8272	Low

Considering the regional risk analysis and offset well information reviewed during this assessment, the potential for encountering overpressured sands within the depth of investigation should be considered during well design. Standard SWF mitigation practices should be implemented when drilling through any intervals that have been assessed a non-negligible potential for SWF in the tophole section. Note that our assessment of the potential for shallow water flow refers to the likelihood of experiencing this hazard, but the severity of the potential hazard cannot be reliably assessed using only the data provided for this study. Our assessment assumes open-hole drilling conditions with no pressure control in place, and without regard to any specialized drilling fluid or casing program that may be planned.

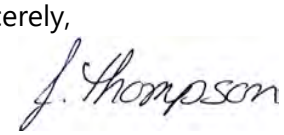
Suitability for Temporary Occupation for Drilling

The proposed GC 297 #4 well in GC 297 is considered suitable for temporary-occupation drilling activities provided that the aforementioned conditions and constraints are considered and planned for in the final well design. The preceding assessment of drilling hazards conveys the likelihood of particular hazards occurring based on a review of the available data and does not forecast the severity of any events that may occur.

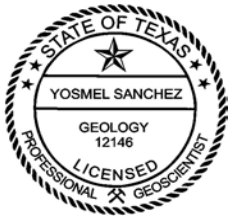
We recommend designing a casing plan to topset the elevated potential for shallow gas and SWF in Sequence 5.

We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to contact Juli Thompson at JThompson2@fugro.com, or Yosmel Sanchez at YSanchez@fugro.com

Sincerely,



Juli Thompson, PG (TX, LA)
Consultant Geoscientist



Yosmel Sanchez, Ph.D., PG (TX)
Deputy Geoscience Department Manager

Figures

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Fugro, 2021. Shallow Hazards Assessment, Block 297, Green Canyon Area, Gulf of Mexico, Document Number 02.21010027-01, in production.

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Minerals Management Service, 2008. Notice to lessees and operators of federal oil, gas, and sulphur leases in the outer continental shelf, Gulf of Mexico OCS region, Information Requirements for Exploration Plans and Development Operations Coordination Documents. United States Department of the Interior, Minerals Management Service, Gulf of Mexico, NTL 2008-G04.

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Proposed GC 297 #4 Wellsite

Archaeological Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

02.21010027-04_Arch 02 | July 23, 2021

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ENI US Operating

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Document Control

Document Information

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Document Title	Proposed GC 297 #4 Wellsite
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Client Information

Client	ENI US Operating
Client Address	1200 Smith St., Ste. 1700, Houston, TX 77002
Client Contact	Deanne Prusak
Client Document No.	N/A

Revision History

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01	July 21, 2021	For Review	Awaiting client comments	RB	DG	DG
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Project Team

Initials	Name	Role
SS	Shane Smith	Geoscience Department Manager
DG	Dean Gresham	Deputy Geoscience Department Manager
CN	Cedric Noel	Senior GIS Analyst
RB	Ray Blackmon	Supervising Archaeologist

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ENI US Operating
1200 Smith St, Ste. 1700
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July 23, 2021

Attention: Ms. Deanne Prusak

Archaeological Clearance
Proposed GC 297 #4 Wellsite
Block 297, Green Canyon Area, Gulf of Mexico

Introduction

ENI US Operating Company, Inc. (ENI) contracted Fugro USA Marine, Inc. (Fugro) to prepare an Archaeological Clearance letter addressing potential cultural resources in the vicinity of the proposed GC 297 #4 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. This letter is intended to address specific seafloor conditions within a 1000-ft radius of the proposed wellsite. The study area lies within a zone designated as archaeologically sensitive according to NTL 2005-G07 and NTL 2011-JOINT-G01 (BOEM 2005 and 2011, respectively).

Please refer to Tesla Report No. 05-353-11 (Allegheny Prospect), "Archaeological Report, Deep Tow Survey, Proposed Anchor/Mooring Arrays, Wells in Blocks 254 & 298, Green Canyon Area, Gulf of Mexico" (Tesla, 2006) for a comprehensive archaeological assessment within GC 297, as well as a complete list of references used in this investigation. Also, please refer to Fugro (2021) for a comprehensive shallow hazards assessment utilizing 3D exploration seismic data and offset well data covering Block GC 297

High-Resolution Geophysical Data

Tesla Offshore LLC (Tesla) acquired the high-resolution deep tow sonar covering proposed anchor/mooring arrays radiating from proposed well sites in Blocks 254 and 298, Green Canyon Area. The fieldwork was completed between August 21st through 23rd and 25th through 26th; September 17th through 20th, September 30th through October 1st, and October 13th through 19th of 2005.

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An Edgetech DTSMS side scan sonar was utilized and combined full spectrum chirp frequency (75 and 410 kHz) modulated pulse with amplitude and phase weighting providing 2 to 10 cm resolution along 200-meter sweeps. Digital recordings and strip chart recordings were annotated with USBL corrected shot points at 500-foot intervals. The Echotrac DF 3200 MKIII operated at 24 kHz with velocity applications added during post-processing.

To provide precise sonar tow fish position accuracy, a Sonardyne USBL system was utilized from a tracking vessel to correctly position the sonar fish. Shot points at 500-foot intervals were printed on the strip charts and digital files at the corrected sonar fish position relative to the seafloor. Differential enabled GPS receivers were interfaced to a HYPAK navigation system with differential signals provided via WAAS & USCG Reference Station Networks.

Additional details regarding the deep tow data, project personnel, and survey equipment can be found in Tesla Report No. 05-353-11 (Tesla 2006).

Graphics

Water depths and interpreted seafloor features from the Fugro Shallow Hazards Assessment (Fugro 2021) are displayed on Figure 1 along with the sonar contacts from the Tesla Archaeological Assessment (Tesla 2006). All existing and proposed infrastructure are also shown on Figure 1.

Proposed Well Location

The surface location for the proposed GC 297 #4 wellsite is in the northeastern portion of Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 #4 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,518,104.30 ft	Y = 10,054,098.10 ft
Longitude: 90° 17' 15.978" W	Latitude: 27° 40' 46.947" N

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about -3,256 ft, with zero datum at sea surface (Figure 1). The local seafloor gradient is less than 0.1° to the southeast. The regional slope is to the south.

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. Three seafloor faults lie within 1,000 ft of the proposed GC 297 #4 well (Figure 1). The nearest

seafloor fault is located 695 ft south of the proposed well location (Figure 1) and has a seafloor offset of less than 5 ft.

No other seafloor features were noted within 1000 ft of the proposed GC 297 #4 well.

Existing Infrastructure

According to Fugro's GIS database of infrastructure and seafloor obstructions, one pipeline is located within 1,000 ft of the proposed wellsite (Figure 1). A 7-inch bulk oil pipeline plots 895 ft east of the proposed location, based on the reported as-built location.

Anthropogenic Debris

Twenty-four sonar targets were noted during the Tesla deep tow sonar survey. All twenty-four sonar targets were interpreted to represent modern anthropogenic debris and are not deemed archaeologically significant. A 200 ft avoidance criteria was given to each contact to ensure safe operations as well as the protection of potential cultural resources in over 2,900 feet of water.

There were no sonar targets identified within 1,000 ft of the proposed wellsite. The nearest sonar target (No. 20) is located 3,900 ft southeast of the proposed wellsite.

In addition to the 24 sonar targets, one shipwreck was noted during the Tesla deep tow survey. The shipwreck measures 75 ft in length, 50 ft in width, and consists of a large antennae or tower that extends 40 ft above the seafloor. The shipwreck is located within the northwest portion of GC 297 over 18,000 ft from the proposed wellsite location.

There were no unusual depressions, scours, sediment changes, or unidentified seafloor targets observed during the Tesla deep tow survey within 1,000 ft of the proposed wellsite that could represent unidentified shipwreck remains. It is possible that small features representing high-probability areas for historic shipwreck materials may not be detected by the geophysical instruments used for this survey. If evidence of historic cultural remains is encountered during construction activities, the BOEM/BSEE archaeologists must be contacted within 48 hours to provide an assessment of these artifacts, and all operations must cease within 1,000 feet of the exposed objects.

The previous survey was performed prior to the passage of numerous hurricanes and tropical storms. Seafloor disturbance, pipeline movement, or other possible damage to man-made infrastructure caused by wind or storm surge (currents) may have occurred and will not be reflected in this letter and figure. In addition, Fugro cannot be held responsible for the identification of any debris that may have been deposited within the survey area due to past hurricanes and/or tropical storms.

Closing. We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to call (337) 268-3357 or email at: rblackmon@fugro.com.

Sincerely,

FUGRO USA MARINE, INC.

Ray Blackmon
Supervising Archaeologist

Figure

Figure 1: Water Depth and Seafloor Features

References:

Bureau of Ocean Energy Management, 2005, "Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the Outer Continental Shelf, Gulf of Mexico OCS Region, Archaeological Resource Surveys and Reports", United States Department of the Interior, Minerals Management Service, Gulf of Mexico, NTL 2005-G07.

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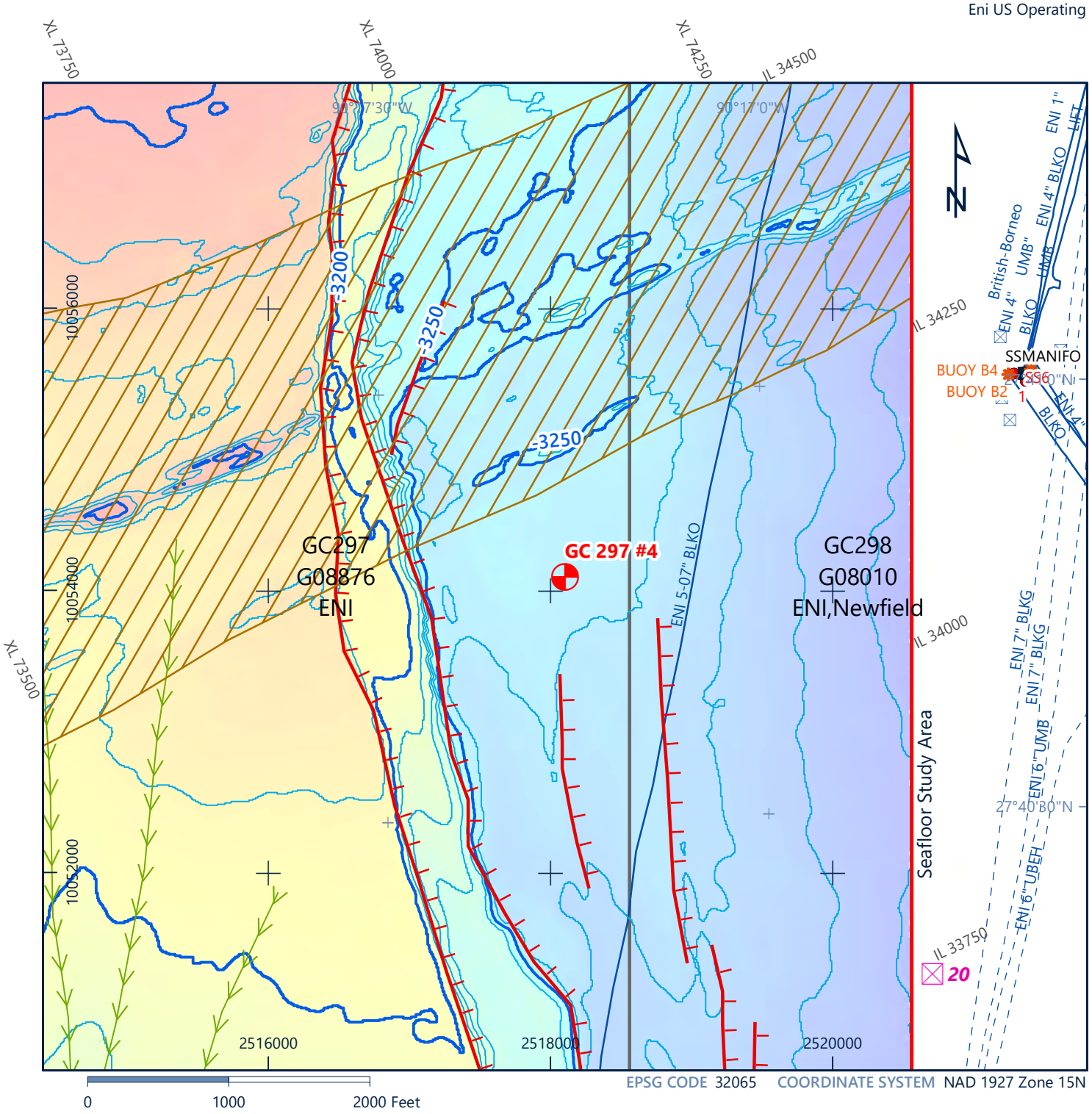
Tesla Offshore, LLC, 2006. Archaeological Report, Deep Tow Survey, Proposed Anchor/Mooring Arrays, Wells in Blocks 254 and 298, Green Canyon Area, OCS-G 07049 & 08010, Gulf of Mexico, October 2006.

Figure



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LEGEND

BACKGROUND

- Proposed well location
- IL 34500 3D Seismic Survey Line Number
- Existing Well Location
- Existing Manifold

- Existing Pipeline
- Abandoned Pipeline
- Existing Compatt
- Seafloor Obstruction

SEAFLOOR FEATURES

- Seafloor Gully
- Seafloor Fault
- Side Scan Sonar Contact
- Area of Data Artifacts

BATHYMETRY CONTOURS

- Major - 50 ft Interval
- Minor - 10 ft Interval

BATHYMETRY

- 3,144 ft
- 3,298 ft

WATER DEPTH AND SEAFLOOR FEATURES
PROPOSED GC 297 #4 WELLSITE

02.21010027-04_Arch 02 | Archaeological Clearance Letter, Proposed GC 297 #4
Figure 1

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Proposed GC 297 RW1 Wellsite

Wellsite Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

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Client Information

Client	Eni US Operating
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Client Contact	Deanne Prusak

Revision History

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00	June 16, 2021	For Review	Awaiting client comments	JT	YS	YS
01	June 23, 2021	FInal		JT	YS	YS

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June 23, 2021

Attention: Deanne Prusak

Eni US Operating Company, Inc. (Eni) contracted Fugro USA Marine, Inc. (Fugro) to prepare a wellsite clearance letter addressing shallow drilling geohazards for the proposed GC 297 RW1 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. This wellsite is a relief well planned to accompany two proposed wells in the northeastern corner of GC 297, submitted to the United States BOEM (Bureau of Ocean Energy Management) as GC 297 #3 and #4. If needed, this relief well will be drilled by a dynamically positioned vessel. This letter is intended to address specific seafloor conditions within a 2,000-ft radius and shallow geologic conditions within a 3,000-ft radius of the proposed wellsite. The depth limit of investigation (DLI) is defined as 5,000 ft below mudline (BML). This letter is also intended to be submitted to the BOEM and will meet or exceed the BOEM requirements as stipulated in Notice to Lessees (NTLs) 2008-G05 (Shallow Hazards Program), 2008-G04 (Exploration Plans), and 2009-G40 (Deepwater Benthic Communities). NTL 2015-N02 was released on February 06, 2015, and eliminates the expiration date on previous NTLs, continuing their validity. GC 297 falls within an area designated as having a high probability of containing cultural resources as specified in NTLs 2005-G07 and 2011-Joint-G01, and requires an archaeological assessment, which will be submitted under separate cover.

Graphics

A 3D Seismic Power Spectrum (Figure 1) is included as an assessment of the resolution of the seismic data in the vicinity of the proposed wellbore. Four 1:12,000-scale maps, including a Seafloor Rendering (Figure 2), Water Depth and Seafloor Features Map (Figure 3), Seafloor Gradient Map (Figure 4), Seafloor Amplitude Map (Figure 5), and Subsurface Geologic Features Map (Figure 6), are provided. A 2000-ft radius circle around the proposed wellsite is shown on the seafloor maps, as required by Notice to Lessees (NTL) 2009-G40 (MMS, 2009). Annotated data examples of the nearest 3D seismic survey inline (Figure 7) and crossline (Figure 8) are also included. Shallow geologic conditions at the proposed wellbore are summarized on the attached Tophole Prognosis Chart (Figure 9). Please refer to Fugro

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(2021a) for a comprehensive shallow hazards assessment covering Block GC 297, and for a complete list of references used in this investigation. All graphics included in this assessment are page size (8.5"x11").

Seismic Data Parameters

Primary interpretation was conducted on the 3D seismic time cube "Full Stack Allegheny," provided by Eni to Fugro. Inlines are oriented southwest-northeast, crosslines are oriented northwest-southeast, and both have a line spacing of 12.5 m (41.01 ft). A full dataset description is found in the GC 297 shallow hazards report (Fugro, 2021a).

The dominant acoustic frequency in the vicinity of the proposed GC 297 RW1 wellsite is approximately 29.3 Hz (Figure 1), resulting in a limit of separability of approximately 47 ft within the shallow section. Individual strata or other geologic features thinner than this limit of separability may be detected but may not be resolved in true thickness or lateral extent. Small-scale topographic features and anthropogenic obstructions such as pipelines, shipwrecks, and seafloor debris generally cannot be resolved in 3D seismic data.

A companion depth dataset, derived from the 3D time dataset, was used to calibrate time-depth conversions as described in Fugro (2021a).

Offset Well Data

Information regarding shallow water flow (SWF) events at nearby wells available from the BOEM (2011) was used in this assessment.

Previous Work

A comprehensive shallow hazards assessment for Block GC 297 was produced by Fugro (2021a). Lithological, regional geologic, and stratigraphic information presented in the shallow hazards report was reviewed and used to prepare this wellsite clearance letter.

An archaeological report covering the vicinity of the proposed GC 297 RW1 well was conducted by Tesla (2006). General findings from the report are included in this report.

Individual wellsite clearance letters have been prepared for planned wellsites GC 297 #3 (Fugro, 2021b) and GC 297 #4 (Fugro, 2021c). Clearance letters for the two planned wells will be submitted under separate cover.

Proposed Well Location

The surface location for the proposed GC 297 RW1 wellsite is in northeastern portion of Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 RW1 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,517,604.30 ft	Y = 10,054,098.10 ft
Longitude: 90° 17' 21.535" W	Latitude: 27° 40' 47.056" N
Nearest 3D Inline: 34205	Nearest 3D Crossline: 73900
955.70 ft FEL	7301.90 ft FNL

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about 3,254 ft, with zero datum at sea surface (Figures 2 and 3). The local seafloor gradient is less than 0.1° to the east. The regional slope is to the south. Seafloor slopes within 2,000 ft of the proposed location do not exceed 6° except along seafloor faults, where they may exceed 30° (Figure 4).

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. Five seafloor faults lie within 2,000 ft of the proposed GC 297 RW1 well (Figure 3). The two westernmost faults are deep-seated and rooted in salt. All are downthrown to the east. The nearest seafloor fault is located 516 ft west of the proposed well location (Figure 3) and has a seafloor offset ranging from 15 ft to 35 ft in the area of the proposed well. No seafloor or near-surface amplitude anomalies are associated with the faults (Figure 5).

No areas of anomalous seafloor amplitude were identified in the 3D seismic data within 2,000 ft of the proposed well (Figure 5).

Potential High-Density Benthic Communities

There is no geophysical evidence of hydrocarbon seepage sites or areas that could potentially support high-density benthic communities within 2,000 ft of the proposed location (Figures 3 and 5). Therefore, there is a negligible potential for high-density communities of benthic and/or chemosynthetic organisms within 2,000 ft of the proposed wellsite, indicating that site conditions comply with MMS NTL 2009-G40.

Anthropogenic Obstructions

According to Fugro's GIS database of infrastructure and seafloor obstructions, (updated in May 2021 for this area) one pipeline is located within 2,000 ft of the proposed wellsite (Figures 2 through 5). A 7-inch bulk oil pipeline passes 1,385 ft east of the proposed location, based on the reported as-built location. The location of the pipeline should be reviewed prior to lease development, and extra caution is advised should any work occur in the vicinity.

In general, it is recommended that a remotely operated vehicle (ROV) be used to inspect the seafloor at the proposed wellsite immediately before drilling activities to confirm that there are no additional seafloor obstructions.

Stratigraphy

The seafloor and seven subsurface horizons (Horizons 10, 20, 30, 40, 50, 60, and 70) were mapped in the 3D seismic data, and are displayed on the nearest seismic inline (Figure 7) and crossline (Figure 8), to divide the tophole section into eight stratigraphic units (Sequences 1 through 8) of distinct seismic and inferred lithologic character at the proposed wellbore. All mapped horizons are present at the proposed GC 297 RW1 wellsite. Predicted depths and thicknesses associated with each of the mapped horizons and sequences are provided in Table 2 below and displayed on the attached Tophole Prognosis Chart (Figure 9) for the proposed drilling location.

Table 2: Summary of horizons, sequences, and lithologies at the proposed GC 297 RW1 wellsite.

Stratigraphic Sequence	Inferred Lithology	Sequence Thickness (ft) or Horizon Depth (ft BML)
Sequence 1	Fine-grained stratified sediments interbedded with thin mass transport deposits (MTDs).	360
Horizon 10	Base of stratified sediments.	360
Sequence 2	MTD consisting of silts and clays with some coarser-grained layers.	295
Horizon 20	Base of the MTD.	655
Sequence 3	Fine-grained MTD overlying fine- and coarse-grained stratified sediments.	392
Horizon 30	Base of the stratified sediments.	1047
Sequence 4	Predominantly fine-grained MTD.	115
Horizon 40	Base of the MTD.	1162
Sequence 5	Repeated, overlapping MTDs and channel deposits containing both fine- and coarse-grained sediments.	1081
Horizon 50	Base of the MTD package.	2243
Sequence 6	Alternating intervals of fine- and coarse-grained sediments.	511
Horizon 60	Top of a high-amplitude package.	2754
Sequence 7	Interbedded medium- and coarse-grained sediments.	132
Horizon 70	Base of the high-amplitude package.	2886
Sequence 8	Interbedded and intermingled fine- and coarse-grained sediments.	2130

Fault Penetrations

The proposed vertical wellbore will penetrate two faults within the shallow section at depths of 598 ft and 1,127 ft BML (3,852 ft and 4,381 ft BSS; Figure 9). Both faults are seafloor faults displaying a normal sense of offset, striking roughly north to south, and downthrown to the east.

Penetration of these faults is not expected to pose a hazard or constraint to well installation. However, the faults represent a zone of weakness, and potentially a zone of enhanced permeability, with the possible result that drilling fluid could be lost to the formation and/or potential for localized wellbore instability.

Gas Hydrate and Gas Hazards

Temperature and pressure conditions within the area containing the proposed well location are favorable for the presence of gas hydrates at the seafloor or within the shallow subsurface. A bottom-simulating reflector (BSR) was not observed at the proposed well location nor in the surrounding region; however, localized concentrations of generally low-density gas hydrates may still be present in the area. Higher concentrations of gas hydrates with possible underlying accumulations of free gas are possible in areas close to faults where gas migration may occur. There are no indications of elevated amplitudes suggestive of possible high-concentration gas hydrates at or near the proposed well location; thus, these conditions are not expected. A negligible potential for high concentrations of gas hydrate accumulations is assessed at the proposed wellbore.

Amplitude extractions were performed for all sequences of the shallow section between the seafloor and the depth limit of investigation, and all identified amplitude anomalies indicative of possible shallow gas accumulations are displayed on Figure 6.

No amplitude anomalies are present within 245 ft of the proposed GC 297 RW1 well in Sequences 1, 3, 4, 6, 7, or 8 (Figure 6). The proposed location is assessed a negligible potential for shallow gas in Sequences 1, 3, 4, 6 and 8 (Figure 9).

An amplitude anomaly in Sequence 2 lies 38 ft to the southwest of the proposed location. This anomaly is part of a coarse-grained layer within the sequence, and is interpreted to be lithologic. However, a low potential for shallow gas is assessed for part of Sequence 2 because the anomaly is located adjacent to a deep-seated fault, where hydrocarbon migration is likely.

A large amplitude anomaly in Sequence 5 lies 110 ft from the proposed wellbore, and includes areas north, east, and west of the proposed well (Figure 6). This anomalous acoustic response is interpreted to represent gas accumulations in some areas and lithologic changes in others, and was further assessed for the proposed well to determine a site-specific potential for shallow gas. The anomalous amplitudes in the vicinity of the wellbore fall within a package of channelized sediments, and are directly adjacent to the seafloor faults penetrated by the proposed well. These faults may provide a pathway for gas to migrate from depth; therefore, it should be assumed that gas is present in this package. Based on these findings, Sequence 5 is assigned a low to moderate potential for shallow gas (Figure 9).

A low potential for shallow gas is assessed for Sequence 7 (Figure 9). Although no amplitude anomalies were identified within 245 ft of the proposed wellbore, the generally high amplitude range of this sequence makes it difficult to distinguish clearly between lithologic and gas-sourced amplitude

anomalies. Table 3 summarizes the sections of elevated shallow gas potential along the proposed GC 297 RW1 wellbore.

Table 3: Summary of elevated shallow gas potential at the proposed GC 297 RW1 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 2	3708	3778	Low
Sequence 5	4416	4808	Low
Sequence 5	4808	4927	Moderate
Sequence 5	4927	5497	Low
Sequence 7	6008	6140	Low

Shallow Water Flow (SWF)

Based on regional analysis, the northeastern corner of Green Canyon lies within a zone of high potential for shallow water flow (SWF; Pelletier et al., 1999). Block GC 297 lies within the estimated boundaries of the regional "Red Unit" as described by Winker and Booth (2000). Ostermeier et al. (2000) indicate that sands associated with SWF in the area are associated with intraslope fans, canyons, and channels, which are features of the latest Pleistocene low stand ecosystems of the Mississippi River.

The BOEM-published database and associated graphic of reported SWF occurrences in the Gulf of Mexico (BOEM, 2011) indicate several recorded events in the vicinity of the proposed well. A flow of unknown severity was reported at the GC 341 #1 well, located approximately 3.4 miles southwest of the proposed well (Fugro, 2021a). The depth of the reported flow correlates to the uppermost part of Sequence 5, but it is also possible that the flow originated from the base of Sequence 4. Another flow of unknown severity was reported at the GC 254 #1 well, located approximately 2.9 miles northeast of the proposed well, at a depth correlating to Sequence 5. A flow of moderate severity was reported at the GC 296 #1 well, located approximately 4.6 miles west of the proposed well and approximately 4,200 ft beyond the available data extents. This event was reported at a depth that may correspond to the lower portion of Sequence 3 or the upper portion of Sequence 4. All three wells were successfully completed.

Sand-prone portions of Sequence 5, along with sand-prone Sequence 7, are assigned a moderate to high potential for SWF.

Table 4 summarizes the sections of elevated SWF potential along the proposed GC 297 RW1 wellbore.

Table 4: Summary of elevated SWF potential at the proposed GC 297 RW1 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 4	4301	4416	Low
Sequence 5	4416	4808	Moderate
Sequence 5	4808	4927	High
Sequence 5	4927	5497	Moderate
Sequence 6	5497	6008	Low
Sequence 7	6008	6140	High
Sequence 8	6140	8270	Low

Considering the regional risk analysis and offset well information reviewed during this assessment, the potential for encountering overpressured sands within the depth of investigation should be considered during well design. Standard SWF mitigation practices should be implemented when drilling through any intervals that have been assessed a non-negligible potential for SWF in the tophole section. Note that our assessment of the potential for shallow water flow refers to the likelihood of experiencing this hazard, but the severity of the potential hazard cannot be reliably assessed using only the data provided for this study. Our assessment assumes open-hole drilling conditions with no pressure control in place, and without regard to any specialized drilling fluid or casing program that may be planned.

Suitability for Temporary Occupation for Drilling

The proposed GC 297 RW1 well in GC 297 is considered suitable for temporary-occupation drilling activities provided that the aforementioned conditions and constraints are considered and planned for in the final well design. The preceding assessment of drilling hazards conveys the likelihood of particular hazards occurring based on a review of the available data and does not forecast the severity of any events that may occur.

A casing plan is recommended to topset the elevated potential for shallow gas and SWF in Sequence 5.

We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to contact Juli Thompson at JThompson2@fugro.com, or Dean Gresham at DGresham@fugro.com

Sincerely,

J. Thompson

Juli Thompson, PG (TX, LA)
Consultant Geoscientist

STATE OF TEXAS J. THOMPSON GEOLOGY 11956 LICENSED PROFESSIONAL GEOSCIENTIST

Dean Gresham

Dean Gresham, PG (LA)
Deputy Geoscience Department Manager

LOUISIANA BOARD OF PROFESSIONAL GEOSCIENTISTS DEAN M. GRESHAM No. 415 Est. 2011

ATTACHMENT I

Figures

References

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Bureau of Ocean Energy Management, 2015. Notice to Lessees and Operators (NTL) of Federal Oil and Gas Leases on the Outer Continental Shelf (OSC), Elimination of Expiration Dates on Certain Notices to Lessees and Operators Pending Review and Reissuance, United States Department of the Interior, Gulf of Mexico, NTL 2015-N02.

Fugro, 2021a. Shallow Hazards Assessment, Block 297, Green Canyon Area, Gulf of Mexico, Document Number 02.21010027-01, in production.

Fugro, 2021b. Proposed GC 297 #3 Wellsite, Wellsite Clearance Letter, Block 297, Green Canyon Area, Gulf of Mexico, Document Number 02.21010027-02, in production.

Fugro, 2021c. Proposed GC 297 #4 Wellsite, Wellsite Clearance Letter, Block 297, Green Canyon Area, Gulf of Mexico, Document Number 02.21010027-03, in production.

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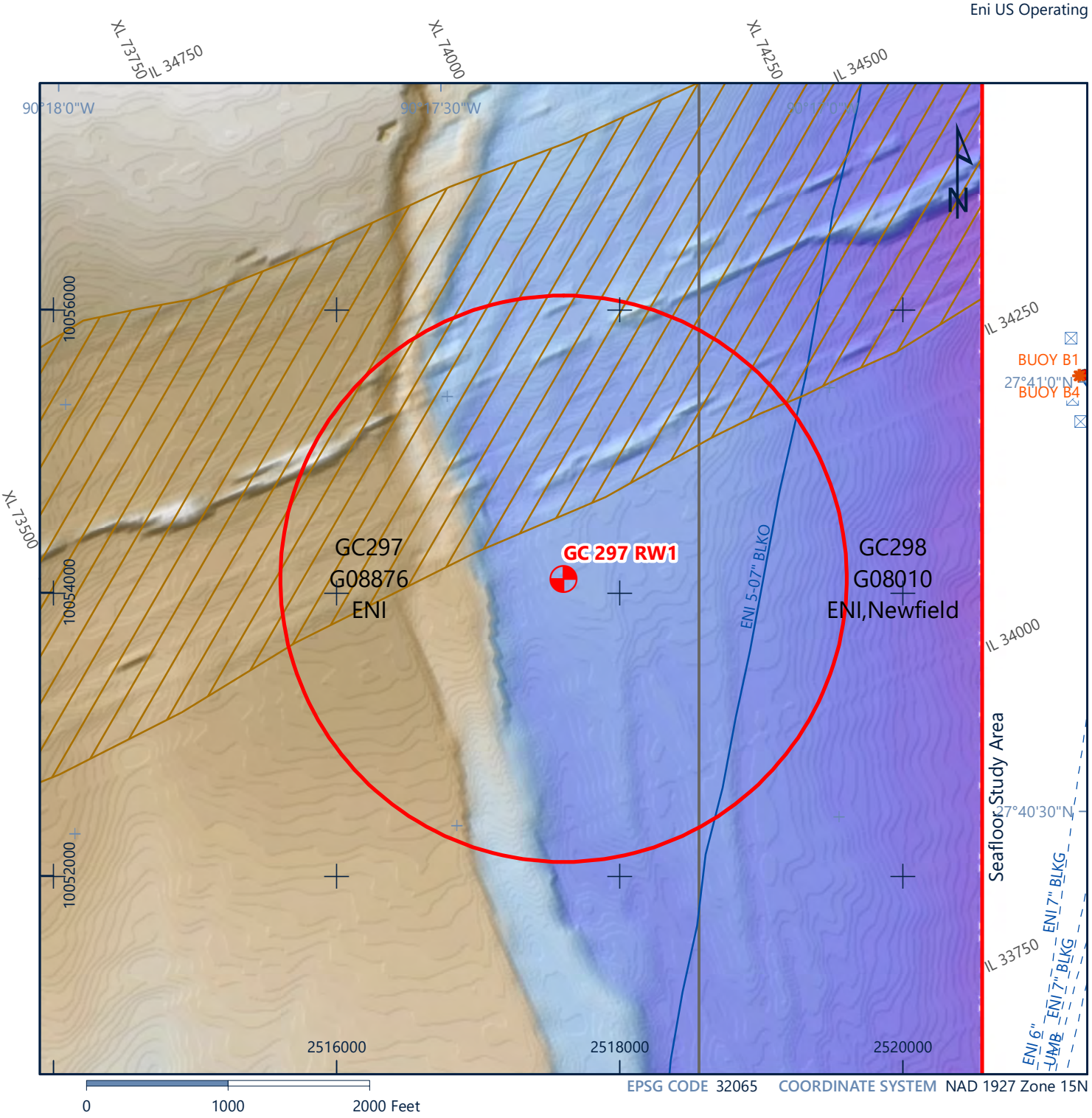
Tesla Offshore, LLC, 2006. Archaeological Report, Deep Tow Survey, Proposed Anchor/Mooring Arrays, Wells in Blocks 254 and 298, Green Canyon Area, OCS-G 07049 & 08010, Gulf of Mexico, October 2006.

Winker, C. D., and J. R. Booth, 2000. Sedimentary dynamics of the salt-dominated Continental Slope, Gulf of Mexico, integration of observations from the seafloor, near surface, and deep subsurface: GC SSEPM Foundation 20th Annual Research Conference, Deep-Water reservoirs of the world, Dec. 3 6, 2000, Houston, Texas.

Figures



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LEGEND

BACKGROUND

- Proposed well location with 2,000-ft buffer
- IL 34500 3D Seismic Survey Line Number
- Existing Well Location
- Existing Manifold
- Existing Pipeline
- Abandoned Pipeline
- Existing Compatt
- Seafloor Obstruction

SEAFLOOR FEATURES

- Area of Data Artifacts

BATHYMETRY

- - 3,144 ft
- - 3,298 ft

SEAFLOOR RENDERING
PROPOSED RELIEF WELL #1 WELLSITE

02.21010027-04 01 | Wellsite Clearance Letter, Proposed GC 297 RW1 Wellsite
Figure 2

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Proposed GC 297 RW1 Wellsite

Archaeological Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

02.21010027-RW1_Arch 02 | July 23, 2021

Final

ENI US Operating

ATTACHMENT I

Document Control

Document Information

Project Title	Archaeological Clearance
Document Title	Proposed GC 297 RW1 Wellsite
Fugro Project No.	02.21010027
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Issue Number	02
Issue Status	Final

Client Information

Client	ENI US Operating
Client Address	1200 Smith St., Ste. 1700, Houston, TX 77002
Client Contact	Deanne Prusak
Client Document No.	N/A

Revision History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
01	July 21, 2021	For Review	Awaiting client comments	RB	DG	DG
02	July 23, 2021	Final		RB	DG	DG

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Initials	Name	Role
SS	Shane Smith	Geoscience Department Manager
DG	Dean Gresham	Deputy Geoscience Department Manager
CN	Cedric Noel	Senior GIS Analyst
RB	Ray Blackmon	Supervising Archaeologist

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ENI US Operating
1200 Smith St, Ste. 1700
Houston, TX 77002
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July 23, 2021

Attention: Ms. Deanne Prusak

Archaeological Clearance
Proposed GC 297 RW1 Wellsite
Block 297, Green Canyon Area, Gulf of Mexico

Introduction

ENI US Operating Company, Inc. (ENI) contracted Fugro USA Marine, Inc. (Fugro) to prepare an Archaeological Clearance letter addressing potential cultural resources in the vicinity of the proposed GC 297 RW1 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. This letter is intended to address specific seafloor conditions within a 1000-ft radius of the proposed wellsite. The study area lies within a zone designated as archaeologically sensitive according to NTL 2005-G07 and NTL 2011-JOINT-G01 (BOEM 2005 and 2011, respectively).

Please refer to Tesla Report No. 05-353-11 (Allegheny Prospect), "Archaeological Report, Deep Tow Survey, Proposed Anchor/Mooring Arrays, Wells in Blocks 254 & 298, Green Canyon Area, Gulf of Mexico" (Tesla, 2006) for a comprehensive archaeological assessment within GC 297, as well as a complete list of references used in this investigation. Also, please refer to Fugro (2021) for a comprehensive shallow hazards assessment utilizing 3D exploration seismic data and offset well data covering Block GC 297

High-Resolution Geophysical Data

Tesla Offshore LLC (Tesla) acquired the high-resolution deep tow sonar covering proposed anchor/mooring arrays radiating from proposed well sites in Blocks 254 and 298, Green Canyon Area. The fieldwork was completed between August 21st through 23rd and 25th through 26th; September 17th through 20th, September 30th through October 1st, and October 13th through 19th of 2005.
An Edgetech DTSMS side scan sonar was utilized and combined full spectrum chirp frequency (75 and 410 kHz) modulated pulse with amplitude and phase weighting providing 2 to 10 cm resolution along

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200-meter sweeps. Digital recordings and strip chart recordings were annotated with USBL corrected shot points at 500-foot intervals. The Echotrac DF 3200 MKIII operated at 24 kHz with velocity applications added during post-processing.

To provide precise sonar tow fish position accuracy, a Sonardyne USBL system was utilized from a tracking vessel to correctly position the sonar fish. Shot points at 500-foot intervals were printed on the strip charts and digital files at the corrected sonar fish position relative to the seafloor. Differential enabled GPS receivers were interfaced to a HYPAK navigation system with differential signals provided via WAAS & USCG Reference Station Networks.

Additional details regarding the deep tow data, project personnel, and survey equipment can be found in Tesla Report No. 05-353-11 (Tesla 2006).

Graphics

Water depths and interpreted seafloor features from the Fugro Shallow Hazards Assessment (Fugro 2021) are displayed on Figure 1 along with the sonar contacts from the Tesla Archaeological Assessment (Tesla 2006). All existing and proposed infrastructure are also shown on Figure 1.

Proposed Well Location

The surface location for the proposed GC 297 RW1 wellsite is in the northeastern portion of Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 RW1 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,517,604.30 ft	Y = 10,054,098.10 ft
Longitude: 90° 17' 21.535" W	Latitude: 27° 40' 47.056" N

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about -3,254 ft, with zero datum at sea surface (Figure 1). The local seafloor gradient is less than 0.1° to the east. The regional slope is to the south.

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. Two seafloor faults lie within 1,000 ft of the proposed GC 297 RW1 well (Figure 1). The nearest seafloor fault is located 516 ft west of the proposed well location (Figure 1) and has a seafloor offset ranging from 15 ft to 35 ft.

No other seafloor features were noted within 1000 ft of the proposed GC 297 RW1 well.

Existing Infrastructure

According to Fugro's GIS database of infrastructure and seafloor obstructions, no existing infrastructure is located within 1,000 ft of the proposed wellsite (Figure 1). A 7-inch bulk oil pipeline plots 1,385 ft east of the proposed location, based on the reported as-built location.

Anthropogenic Debris

Twenty-four sonar targets were noted during the Tesla deep tow sonar survey. All twenty-four sonar targets were interpreted to represent modern anthropogenic debris and are not deemed archaeologically significant. A 200 ft avoidance criteria was given to each contact to ensure safe operations as well as the protection of potential cultural resources in over 2,900 feet of water.

There were no sonar targets identified within 1,000 ft of the proposed wellsite. The nearest sonar target (No. 20) is located 4,300 ft southeast of the proposed wellsite.

In addition to the 24 sonar targets, one shipwreck was noted during the Tesla deep tow survey. The shipwreck measures 75 ft in length, 50 ft in width, and consists of a large antennae or tower that extends 40 ft above the seafloor. The shipwreck is located within the northwest portion of GC 297 over 18,000 ft from the proposed wellsite location.

There were no unusual depressions, scours, sediment changes, or unidentified seafloor targets observed during the Tesla deep tow survey within 1,000 ft of the proposed wellsite that could represent unidentified shipwreck remains. It is possible that small features representing high-probability areas for historic shipwreck materials may not be detected by the geophysical instruments used for this survey. If evidence of historic cultural remains is encountered during construction activities, the BOEM/BSEE archaeologists must be contacted within 48 hours to provide an assessment of these artifacts, and all operations must cease within 1,000 feet of the exposed objects.

The previous survey was performed prior to the passage of numerous hurricanes and tropical storms. Seafloor disturbance, pipeline movement, or other possible damage to man-made infrastructure caused by wind or storm surge (currents) may have occurred and will not be reflected in this letter and figure. In addition, Fugro cannot be held responsible for the identification of any debris that may have been deposited within the survey area due to past hurricanes and/or tropical storms.

Closing. We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to call (337) 268-3357 or email at: rblackmon@fugro.com.

Sincerely,

FUGRO USA MARINE, INC.

Ray Blackmon
Supervising Archaeologist

Figure

Figure 1: Water Depth and Seafloor Features

References:

Bureau of Ocean Energy Management, 2005, "Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the Outer Continental Shelf, Gulf of Mexico OCS Region, Archaeological Resource Surveys and Reports", United States Department of the Interior, Minerals Management Service, Gulf of Mexico, NTL 2005-G07.

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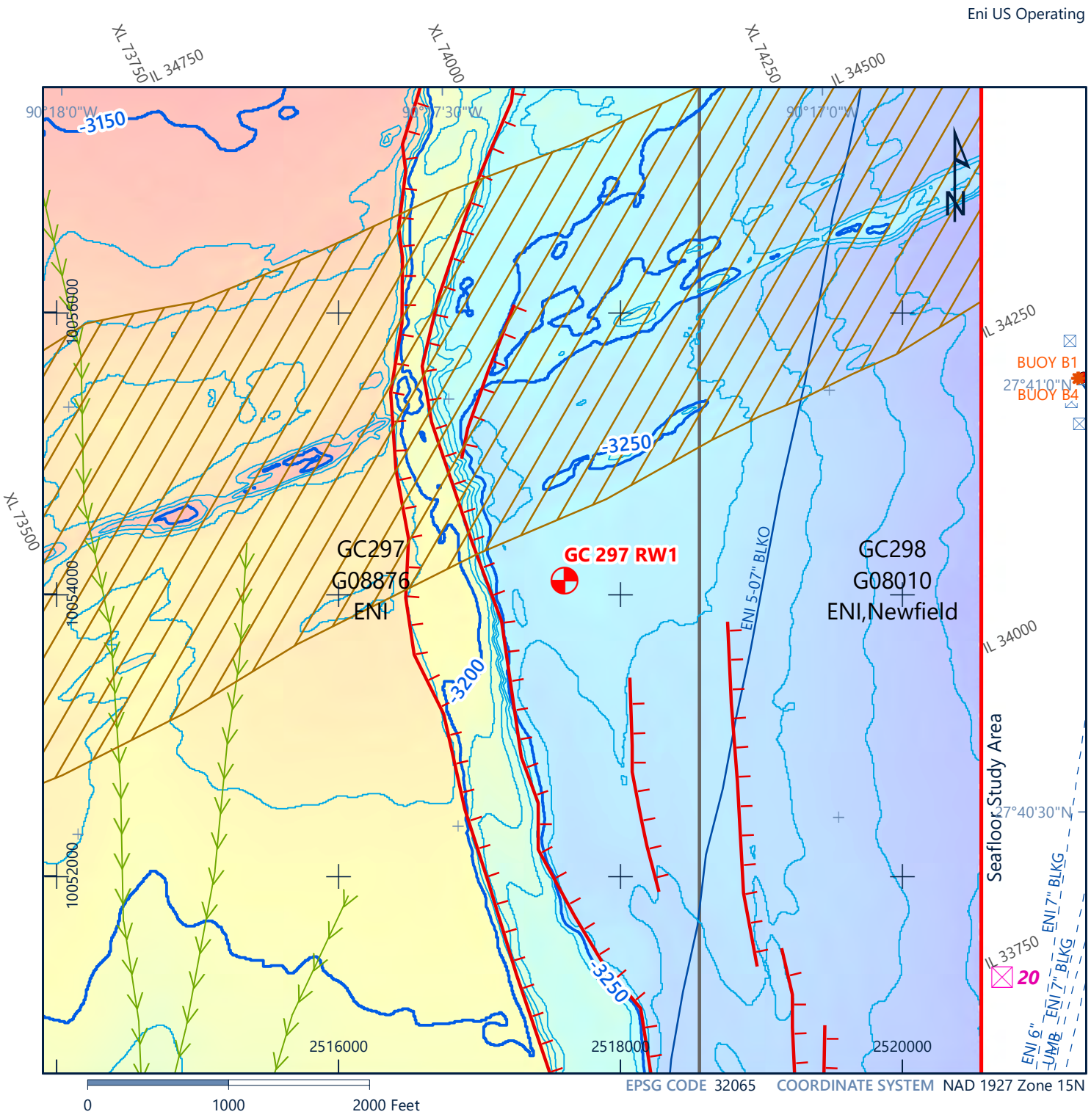
Figure



Scale 1:12,000 at original 8.5"x11" page size

LEGEND

BACKGROUND

- Proposed well location
- IL 34500 3D Seismic Survey Line Number
- Existing Well Location
- Existing Manifold

- Existing Pipeline
- Abandoned Pipeline
- Existing Compatt
- Seafloor Obstruction

SEAFLOOR FEATURES

- Seafloor Gully
- Seafloor Fault
- Side Scan Sonar Contact
- Area of Data Artifacts

BATHYMETRY CONTOURS

- -3250 Major - 50 ft Interval
- Minor - 10 ft Interval

BATHYMETRY

- - 3,144 ft
- - 3,298 ft

WATER DEPTH AND SEAFLOOR FEATURES
PROPOSED GC 297 RW1 WELLSITE

02.21010027-RW1_Arch 02 | Archaeological Clearance Letter, Proposed GC 297 RW1 Wellsite
Figure 1

ATTACHMENT I

Proposed GC 297 RW2 Wellsite

Wellsite Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

02.21010027-05 01 | June 23, 2021

Final

Eni US Operating

ATTACHMENT I

Document Control

Document Information

Project Title	Wellsite Clearance Assessment
Document Title	Proposed GC 297 RW2 Wellsite
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Issue Number	01
Issue Status	Final

Client Information

Client	Eni US Operating
Client Address	1200 Smith St, Ste 1700, Houston, TX, 77002
Client Contact	Deanne Prusak

Revision History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
00	June 16, 2021	For Review	Awaiting client comments	JT	YS	YS
01	June 23, 2021	Final		JT	YS	YS

Project Team

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JT	Juli Thompson	Consultant Geoscientist
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June 16, 2021

Attention: Deanne Prusak

Eni US Operating Company, Inc. (Eni) contracted Fugro USA Marine, Inc. (Fugro) to prepare a wellsite clearance letter addressing shallow drilling geohazards for the proposed GC 297 RW2 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. This wellsite is a relief well planned to accompany two proposed wells in the northeastern corner of GC 297, submitted to the United States Bureau of Ocean Energy Management (BOEM) as GC 297 #3 and #4. If needed, this relief well will be drilled by a dynamically positioned vessel. This letter is intended to address specific seafloor conditions within a 2000-ft radius and shallow geologic conditions within a 3000-ft radius of the proposed wellsite. The depth limit of investigation (DLI) is defined as 5000 ft below mudline (BML). This letter is also intended to be submitted to the BOEM and will meet or exceed the BOEM requirements as stipulated in the Notice to Lessees (NTLs) 2008-G05 (Shallow Hazards Program), 2008-G04 (Exploration Plans), and 2009-G40 (Deepwater Benthic Communities). NTL 2015-N02 was released February 06, 2015, and eliminates the expiration date on previous NTLs, continuing their validity. GC 297 falls within an area designated as having a high probability of containing cultural resources as specified in NTLs 2005-G07 and 2011-Joint-G20, and requires an archaeological assessment, which will be submitted under separate cover.

Graphics

A 3D Seismic Power Spectrum (Figure 1) is included as an assessment of the resolution of the seismic data in the vicinity of the proposed wellbore. Four 1:12,000-scale maps, including a Seafloor Rendering (Figure 2), Water Depth and Seafloor Features Map (Figure 3), Seafloor Gradient Map (Figure 4) Seafloor Amplitude Map (Figure 5), and Subsurface Geologic Features Map (Figure 6), are provided. A 2000-ft radius circle around the proposed wellsite is shown on the seafloor maps, as required by Notice to Lessees (NTL) 2009-G40 (MMS, 2009). Annotated data examples of the nearest 3D seismic survey inline (Figure 7) and crossline (Figure 8) are also included. Shallow geologic conditions at the proposed wellbore are summarized on the attached Tophole Prognosis Chart (Figure 9). Please refer to Fugro

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(2021a) for a comprehensive shallow hazards assessment covering Block GC 297, and for a complete list of references used in this investigation. All graphics included in this assessment are page size (8.5"x11").

Seismic Data Parameters

Primary interpretation was conducted on the 3D seismic time cube "Full Stack Allegheny," provided to Fugro by Eni. Inlines are oriented southwest–northeast, crosslines are oriented northwest–southeast, and both have a line spacing of 12.5 m (41.01 ft). A full dataset description is found in the GC 297 shallow hazards report (Fugro, 2021a).

The dominant frequency in the vicinity of the proposed GC 297 RW2 wellsite is approximately 30.6 Hz (Figure 1), resulting in a limit of separability of approximately 45 ft within the shallow section. Individual strata or other geologic features thinner than this limit of separability may be detected but may not be resolved in true thickness or lateral extent. Small-scale topographic features and anthropogenic obstructions such as pipelines, shipwrecks, and seafloor debris generally cannot be resolved in 3D seismic data.

A companion depth dataset, derived from the 3D time dataset, was used to calibrate time-depth conversions (Fugro 2021a).

Offset Well Data

Public information regarding shallow water flow (SWF) events at nearby wells was used in this assessment (BOEM 2011).

Previous Work

A comprehensive shallow hazards assessment for Block GC 297 was produced by Fugro (2021a). Lithological, regional geologic, and stratigraphic information presented in the shallow hazards report was reviewed and used to prepare this wellsite clearance letter.

An archaeological report covering the vicinity of the proposed GC 297 RW2 well was conducted by Tesla (2006). General findings from the report are included in this document.

Individual wellsite clearance letters have been prepared for planned wellsites GC 297 #3 (Fugro, 2021b) and GC 297 #4 (Fugro, 2021c). Clearance letters for the two planned wells will be submitted under separate cover.

Proposed Well Location

The surface location for the proposed GC 297 RW2 wellsite is in northeastern Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 RW2 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,518,254.30 ft	Y = 10,054,598.10 ft
Longitude: 90° 17' 14.188" W	Latitude: 27° 40' 51.862" N
Nearest 3D Inline: 34230	Nearest 3D Crossline: 74000
305.70 ft FEL	6801.90 ft FNL

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about 3,256 ft, with zero datum at sea surface (Figures 2 and 3). The local seafloor gradient is less than 0.1° to the east. The regional slope is to the south. Seafloor slopes within 2,000 ft of the proposed location do not exceed 6° except along seafloor faults, where they may exceed 30° (Figure 4).

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. Five seafloor faults lie within 2000 ft of the proposed GC 297 RW2 well (Figure 3). The two westernmost faults are deep-seated and rooted in salt. All are downthrown to the east. The nearest seafloor fault is located 940 ft southeast of the proposed well location (Figure 3) and has a seafloor offset of less than five ft in the area of the proposed well. No seafloor or near-surface amplitude anomalies are associated with the faults (Figure 5).

No areas of anomalous seafloor amplitude were identified in the 3D seismic data within 2,000 ft of the proposed well (Figure 5).

Potential High-Density Benthic Communities

There is no geophysical evidence of hydrocarbon seepage sites or areas that could potentially support high-density benthic communities within 2,000 ft of the proposed location (Figures 3 and 5). Therefore, there is a negligible potential for high-density communities of benthic and/or chemosynthetic organisms within 2,000 ft of the proposed wellsite, indicating that site conditions comply with MMS NTL 2009-G40 requirements.

Anthropogenic Obstructions

According to Fugro's GIS database of infrastructure and seafloor obstructions, updated in May 2021 for this area, one pipeline is located within 2,000 ft of the proposed wellsite (Figures 2 through 5). A 7-inch bulk oil pipeline passes 840 ft east of the proposed location, based on the reported as-built location. The location of the pipeline should be reviewed prior to lease development, and extra caution is advised should any work occur in the vicinity.

In general, it is recommended that a remotely operated vehicle (ROV) be used to inspect the seafloor at the proposed wellsite immediately before drilling activities to confirm that there are no additional seafloor obstructions.

Stratigraphy

The seafloor and seven subsurface horizons (Horizons 10, 20, 30, 40, 50, 60, and 70) were mapped in the 3D seismic data, and are displayed on the nearest seismic inline (Figure 7) and crossline (Figure 8), to divide the tophole section into eight stratigraphic units (Sequences 1 through 8) of distinctive seismic and inferred lithologic character at the proposed wellbore. All mapped horizons are present at the proposed GC 297 RW2 wellsite. Predicted depths and thicknesses associated with each of the mapped horizons and sequences are provided in Table 2 below and displayed on the attached Tophole Prognosis Chart (Figure 9) for the proposed drilling location.

Table 2: Summary of horizons, sequences, and lithologies at the proposed GC 297 RW2 wellsite.

Stratigraphic Sequence	Inferred Lithology	Sequence Thickness (ft) or Horizon Depth (ft BML)
Sequence 1	Fine-grained stratified sediments interbedded with thin mass transport deposits (MTDs).	366
Horizon 10	Base of stratified sediments.	366
Sequence 2	MTD consisting of silts and clays with some coarser-grained layers.	416
Horizon 20	Base of the MTD.	782
Sequence 3	Fine-grained MTD overlying fine- and coarse-grained stratified sediments.	452
Horizon 30	Base of the stratified sediments.	1,234
Sequence 4	Predominantly fine-grained MTD.	305
Horizon 40	Base of the MTD.	1,539
Sequence 5	Repeated, overlapping MTDs and channel deposits containing both fine- and coarse-grained sediments.	782
Horizon 50	Base of the MTD package.	2,321
Sequence 6	Alternating intervals of fine- and coarse-grained sediments.	533
Horizon 60	Top of a high-amplitude package.	2,854
Sequence 7	Interbedded medium- and coarse-grained sediments.	133
Horizon 70	Base of the high-amplitude package.	2,987
Sequence 8	Interbedded and intermingled fine- and coarse-grained sediments.	2,029

Fault Penetrations

A vertical wellbore will penetrate two faults within the shallow section at depths of 1,607 ft and 1,854 ft BML (4,863 ft and 5,110 ft BSS; Figure 9). Both faults are seafloor faults displaying a normal sense of offset, striking roughly north to south, and downthrown to the east.

Penetration of these faults is not expected to pose a hazard or constraint to well installation. However, the faults represent a zone of weakness, and potentially a zone of enhanced permeability, with the possible result that drilling fluid could be lost to the formation and/or potential for localized wellbore instability.

Gas Hydrate and Gas Hazards

Temperature and pressure conditions within the area containing the proposed well location are favorable for the presence of gas hydrates at the seafloor or within the shallow subsurface. A bottom-simulating reflector (BSR) was not observed at the proposed well location nor in the surrounding region; however, localized concentrations of generally low-density gas hydrates may still be present in the area. Higher concentrations of gas hydrates with possible underlying accumulations of free gas are possible in areas close to faults where gas migration may occur. There are no indications of elevated amplitudes suggestive of possible high-concentration gas hydrates at or near the proposed well location; thus, these conditions are not expected. A negligible potential for high concentrations of gas hydrate accumulations is assessed at the proposed wellbore.

Amplitude extractions were performed for all sequences of the shallow section between the seafloor and the depth limit of investigation, and all identified amplitude anomalies indicative of possible shallow gas accumulations are displayed on Figure 6.

No amplitude anomalies are present within 245 ft of the proposed GC 297 RW2 well in Sequences 1, 2, 3, 4, 6, 7, or 8 (Figure 6). The proposed Block location is assessed a negligible potential for shallow gas in Sequences 1, 2, 3, 4, 6 and 8 (Figure 9).

The proposed wellbore penetrates a large amplitude anomaly in Sequence 5 (Figure 6). This anomalous body is interpreted to represent gas accumulations in some areas and lithologic anomalies in others, and was further assessed for the proposed well to determine a site-specific potential for shallow gas. The anomalous amplitudes in the vicinity of the wellbore fall within a package of channelized sediments, and are directly adjacent to the seafloor faults penetrated by the proposed well. These faults may provide a pathway for gas to migrate from depth; therefore, it should be assumed that gas is present in this package. Based on these findings, Sequence 5 is assigned a low to high potential for shallow gas (Figure 9).

A low potential for shallow gas is assessed for Sequence 7 (Figure 9). Although no amplitude anomalies were identified within 245 ft of the proposed wellbore, the generally high amplitude range of this sequence makes it difficult to distinguish clearly between lithologic and gas-sourced amplitude anomalies. Table 3 summarizes the sections of elevated shallow gas potential along the proposed GC 297 RW2 wellbore.

Table 3: Summary of elevated shallow gas potential at the proposed GC 297 RW2 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 5	4,795	4,863	Moderate
Sequence 5	4,863	5,414	High
Sequence 5	5,414	5,577	Low
Sequence 7	6,110	6,243	Low

Shallow Water Flow (SWF)

Based on regional analysis, the northeastern corner of Green Canyon lies within a region of high potential for shallow water flow (SWF; Pelletier et al., 1999). Block GC 297 lies within the estimated boundaries of the regional "Red Unit" as described by Winker and Booth (2000). Ostermeier et al. (2000) indicate that sands associated with SWF in the area are associated with intraslope fans, canyons, and channels, which are features of the latest Pleistocene low stand ecosystems of the Mississippi River.

The BOEM-published database and associated graphic of reported SWF occurrences in the Gulf of Mexico (BOEM, 2011) indicate several recorded events in the vicinity of the proposed well. A reported flow of unknown severity was reported at the GC 341 #1 well, located approximately 3.5 miles southwest of the proposed well (see Fugro, 2021a). The depth of the reported flow correlates to the uppermost part of Sequence 5, but it is also possible that the flow originated from the base of Sequence 4. Another flow of unknown severity was reported at the GC 254 #1 well, located approximately 2.8 miles northeast of the proposed well, at a depth correlating to Sequence 5. A flow of moderate severity was reported at the GC 296 #1 well, located approximately 4.6 miles west of the proposed well and approximately 4,200 ft beyond the available data extents. This event was reported at a depth that may correspond to the lower portion of Sequence 3 or the upper portion of Sequence 4. All three wells were successfully completed.

Sand-prone portions of Sequence 5, along with the generally coarse-grained Sequence 7, are assigned a moderate to high potential for SWF.

Table 4 summarizes the sections of elevated SWF potential along the proposed GC 297 RW2 wellbore.

Table 4: Summary of elevated SWF potential at the proposed GC 297 RW2 wellsite.

Stratigraphic Sequence	Upper limit (ft BSS)	Lower Limit (BSS)	Ranking
Sequence 4	4490	4795	Low
Sequence 5	4795	4863	Moderate
Sequence 5	4863	5414	High
Sequence 5	5414	5577	Moderate
Sequence 6	5577	6110	Low
Sequence 7	6110	6243	High
Sequence 8	6243	8272	Low

Considering the regional risk analysis and offset well information reviewed during this assessment, the potential for encountering overpressured sands within the depth of investigation should be considered during well design. Standard SWF mitigation practices should be implemented when drilling through any intervals that have been assessed a non-negligible potential for SWF in the tophole section. Note that our assessment of the potential for shallow water flow refers to the likelihood of experiencing this hazard, but the severity of the potential hazard cannot be reliably assessed using only the data provided for this study. Our assessment assumes open-hole drilling conditions with no pressure control in place, and without regard to any specialized drilling fluid or casing program that may be planned.

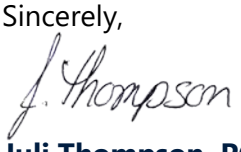
Suitability for Temporary Occupation for Drilling

The proposed GC 297 RW2 well in GC 297 is considered suitable for temporary-occupation drilling activities provided that the aforementioned conditions and constraints are considered and planned for in the final well design. The preceding assessment of drilling hazards conveys the likelihood of particular hazards occurring based on a review of the available data and does not forecast the severity of any events that may occur.

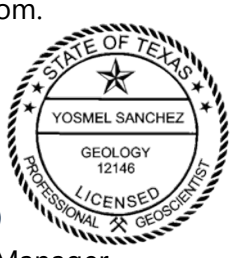
A casing plan to topset the elevated potential for shallow gas and SWF in Sequence 5 is recommended during the well design phase.

We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to contact Juli Thompson at JThompson2@fugro.com or Yosmel Sanchez at YSanchez@fugro.com.

Sincerely,



Juli Thompson, PG (TX, LA)
Consultant Geoscientist



Yosmel Sanchez, Ph.D., PG (TX)
Deputy Geoscience Department Manager

Figures

References

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Fugro, 2021b. Proposed GC 297 #3 Wellsite, Wellsite Clearance Letter, Block 297, Green Canyon Area, Gulf of Mexico, Document Number 02.21010027-02, in production.

Fugro, 2021c. Proposed GC 297 #4 Wellsite, Wellsite Clearance Letter, Block 297, Green Canyon Area, Gulf of Mexico, Document Number 02.21010027-03, in production.

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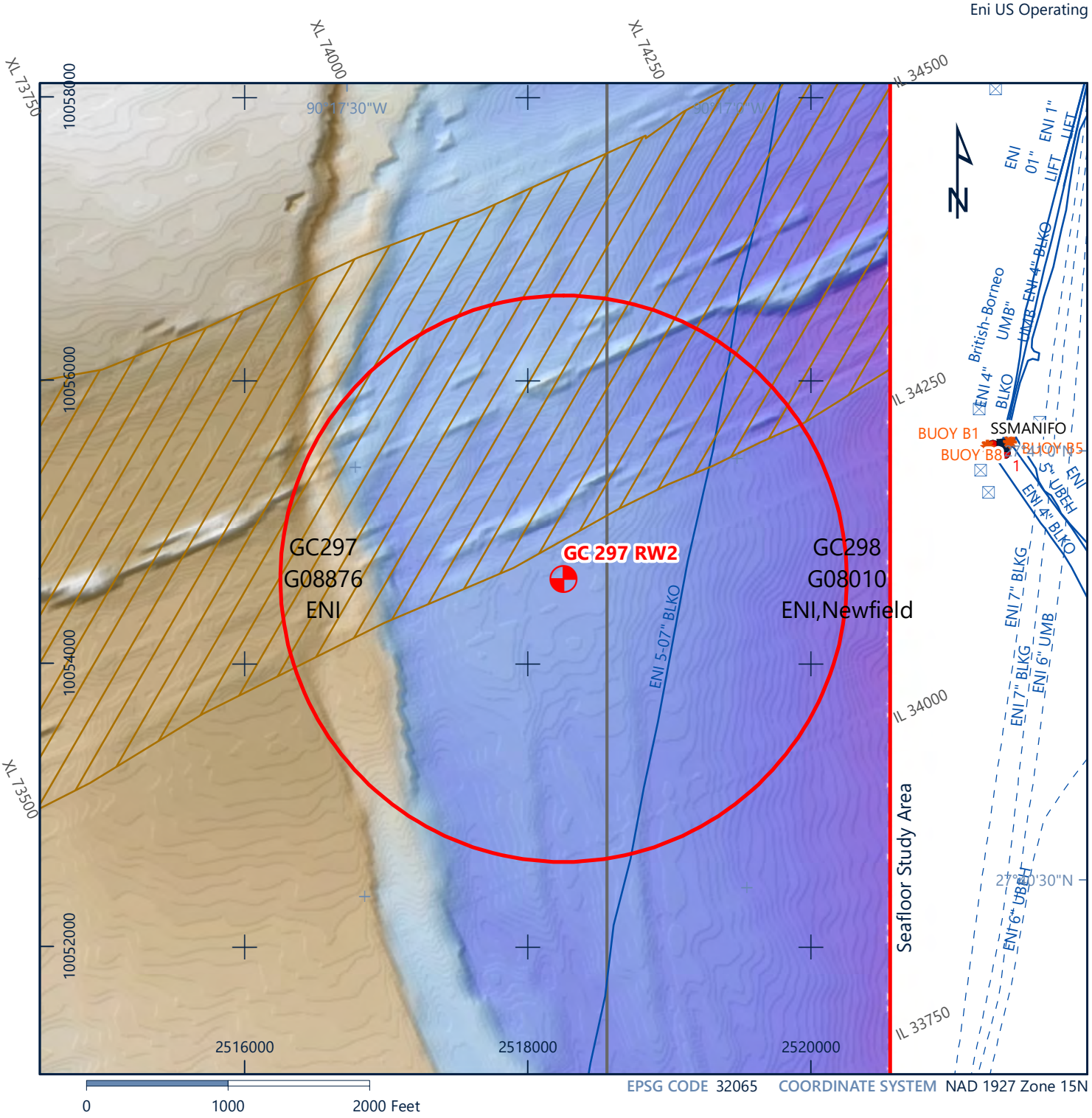
Figures



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LEGEND

BACKGROUND

- Proposed well location with 2,000-ft buffer
- IL 34500 3D Seismic Survey Line Number
- Existing Well Location
- Existing Manifold
- Existing Pipeline
- Abandoned Pipeline
- Existing Compatt
- Seafloor Obstruction

SEAFLOOR FEATURES

- Area of Data Artifacts

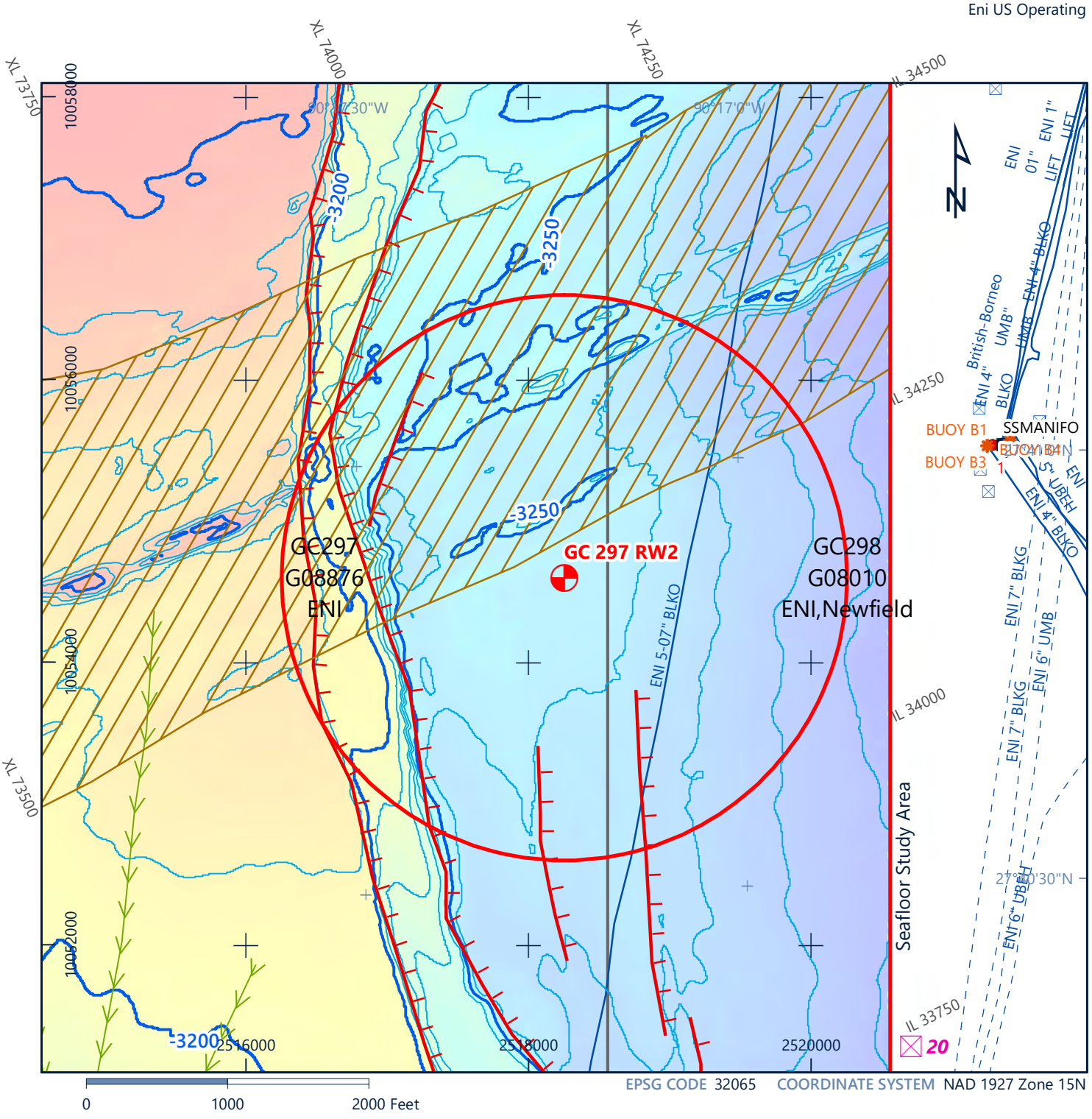
BATHYMETRY

- - 3,144 ft
- - 3,298 ft

SEAFLOOR RENDERING
PROPOSED RELIEF WELL #2 WELLSITE

02.21010027-05 01 | Wellsite Clearance Letter, Proposed GC 297 RW2 Wellsite
Figure 2

ATTACHMENT I



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SEAFLOOR FEATURES

- Seafloor Gully
- Seafloor Fault
- Side Scan Sonar Contact
- Area of Data Artifacts

BATHYMETRY CONTOURS

- -3250' Major - 50 ft Interval
- Minor - 10 ft Interval

BATHYMETRY

- - 3,144 ft
- - 3,298 ft

WATER DEPTH AND SEAFLOOR FEATURES
PROPOSED GC 297 RW2 WELLSITE

02.21010027-05 01 | Wellsite Clearance Letter, Proposed GC 297 RW2 Wellsite
Figure 3

ATTACHMENT I

Proposed GC 297 RW2 Wellsite

Archaeological Clearance Letter | Block 297, Green Canyon Area, Gulf of Mexico

02.21010027-RW2_Arch 02 | July 23, 2021

Final

ENI US Operating

ATTACHMENT I

Document Control

Document Information

Project Title	Archaeological Clearance
Document Title	Proposed GC 297 RW2 Wellsite
Fugro Project No.	02.21010027
Fugro Document No.	02.21010027-RW2_Arch
Issue Number	02
Issue Status	Final

Client Information

Client	ENI US Operating
Client Address	1200 Smith St., Ste. 1700, Houston, TX 77002
Client Contact	Deanne Prusak
Client Document No.	N/A

Revision History

Issue	Date	Status	Comments on Content	Prepared By	Checked By	Approved By
01	July 21, 2021	For Review	Awaiting client comments	RB	DG	DG
02	July 23, 2021	Final		RB	DG	DG

Project Team

Initials	Name	Role
SS	Shane Smith	Geoscience Department Manager
DG	Dean Gresham	Deputy Geoscience Department Manager
CN	Cedric Noel	Senior GIS Analyst
RB	Ray Blackmon	Supervising Archaeologist

FUGRO
Fugro USA Marine, Inc.
6100 Hillcroft Ave.
Houston, TX 77081
USA

ENI US Operating
1200 Smith St, Ste. 1700
Houston, TX 77002
USA

July 23, 2021

Attention: Ms. Deanne Prusak

Archaeological Clearance
Proposed GC 297 RW2 Wellsite
Block 297, Green Canyon Area, Gulf of Mexico

Introduction

ENI US Operating Company, Inc. (ENI) contracted Fugro USA Marine, Inc. (Fugro) to prepare an Archaeological Clearance letter addressing potential cultural resources in the vicinity of the proposed GC 297 RW2 wellsite located in Block 297 (OCS-G-35856), Green Canyon (GC) Protraction Area, Gulf of Mexico. This letter is intended to address specific seafloor conditions within a 1000-ft radius of the proposed wellsite. The study area lies within a zone designated as archaeologically sensitive according to NTL 2005-G07 and NTL 2011-JOINT-G01 (BOEM 2005 and 2011, respectively).

Please refer to Tesla Report No. 05-353-11 (Allegheny Prospect), "Archaeological Report, Deep Tow Survey, Proposed Anchor/Mooring Arrays, Wells in Blocks 254 & 298, Green Canyon Area, Gulf of Mexico" (Tesla, 2006) for a comprehensive archaeological assessment within GC 297, as well as a complete list of references used in this investigation. Also, please refer to Fugro (2021) for a comprehensive shallow hazards assessment utilizing 3D exploration seismic data and offset well data covering Block GC 297

High-Resolution Geophysical Data

Tesla Offshore LLC (Tesla) acquired the high-resolution deep tow sonar covering proposed anchor/mooring arrays radiating from proposed well sites in Blocks 254 and 298, Green Canyon Area. The fieldwork was completed between August 21st through 23rd and 25th through 26th; September 17th through 20th, September 30th through October 1st, and October 13th through 19th of 2005.

ATTACHMENT I

An Edgetech DTSMS side scan sonar was utilized and combined full spectrum chirp frequency (75 and 410 kHz) modulated pulse with amplitude and phase weighting providing 2 to 10 cm resolution along 200-meter sweeps. Digital recordings and strip chart recordings were annotated with USBL corrected shot points at 500-foot intervals. The Echotrac DF 3200 MKIII operated at 24 kHz with velocity applications added during post-processing.

To provide precise sonar tow fish position accuracy, a Sonardyne USBL system was utilized from a tracking vessel to correctly position the sonar fish. Shot points at 500-foot intervals were printed on the strip charts and digital files at the corrected sonar fish position relative to the seafloor. Differential enabled GPS receivers were interfaced to a HYPAK navigation system with differential signals provided via WAAS & USCG Reference Station Networks.

Additional details regarding the deep tow data, project personnel, and survey equipment can be found in Tesla Report No. 05-353-11 (Tesla 2006).

Graphics

Water depths and interpreted seafloor features from the Fugro Shallow Hazards Assessment (Fugro 2021) are displayed on Figure 1 along with the sonar contacts from the Tesla Archaeological Assessment (Tesla 2006). All existing and proposed infrastructure are also shown on Figure 1.

Proposed Well Location

The surface location for the proposed GC 297 RW2 wellsite is in the northeastern portion of Block GC 297 as follows:

Table 1: Proposed Wellsite Location Project Information

Proposed GC 297 RW2 Wellsite Block 297, Green Canyon Area CRS: NAD27, UTM Zone 15, feet	
X = 2,518,254.30 ft	Y = 10,054,598.10 ft
Longitude: 90° 17' 14.188" W	Latitude: 27° 40' 51.862" N

Water Depth and Seafloor Gradient

The water depth at the proposed wellsite is predicted to be about -3,256 ft, with zero datum at sea surface (Figure 1). The local seafloor gradient is less than 0.1° to the east. The regional slope is to the south.

Seafloor and Near-Surface Features

The local seafloor is generally smooth at the proposed wellsite and appears to be stable under natural conditions. One seafloor fault lies within 1,000 ft of the proposed GC 297 RW2 well (Figure 1). The nearest

seafloor fault is located 940 ft southeast of the proposed well location (Figure 1) and has a seafloor offset of less than 5 ft.

No other seafloor features were noted within 1000 ft of the proposed GC 297 RW2 well.

Existing Infrastructure

According to Fugro's GIS database of infrastructure and seafloor obstructions, one pipeline is located within 1,000 ft of the proposed wellsite (Figure 1). A 7-inch bulk oil pipeline plots 840 ft east of the proposed location, based on the reported as-built location.

Anthropogenic Debris

Twenty-four sonar targets were noted during the Tesla deep tow sonar survey. All twenty-four sonar targets were interpreted to represent modern anthropogenic debris and are not deemed archaeologically significant. A 200 ft avoidance criteria was given to each contact to ensure safe operations as well as the protection of potential cultural resources in over 2,900 feet of water.

There were no sonar targets identified within 1,000 ft of the proposed wellsite. The nearest sonar target (No. 20) is located 4,200 ft southeast of the proposed wellsite.

In addition to the 24 sonar targets, one shipwreck was noted during the Tesla deep tow survey. The shipwreck measures 75 ft in length, 50 ft in width, and consists of a large antennae or tower that extends 40 ft above the seafloor. The shipwreck is located within the northwest portion of GC 297 over 18,000 ft from the proposed wellsite location.

There were no unusual depressions, scours, sediment changes, or unidentified seafloor targets observed during the Tesla deep tow survey within 1,000 ft of the proposed wellsite that could represent unidentified shipwreck remains. It is possible that small features representing high-probability areas for historic shipwreck materials may not be detected by the geophysical instruments used for this survey. If evidence of historic cultural remains is encountered during construction activities, the BOEM/BSEE archaeologists must be contacted within 48 hours to provide an assessment of these artifacts, and all operations must cease within 1,000 feet of the exposed objects.

The previous survey was performed prior to the passage of numerous hurricanes and tropical storms. Seafloor disturbance, pipeline movement, or other possible damage to man-made infrastructure caused by wind or storm surge (currents) may have occurred and will not be reflected in this letter and figure. In addition, Fugro cannot be held responsible for the identification of any debris that may have been deposited within the survey area due to past hurricanes and/or tropical storms.

Closing. We appreciate the opportunity to work with you on this project and look forward to continuing as your geohazards consultants. If you have any questions concerning this assessment, please do not hesitate to call (337) 268-3357 or email at: rblackmon@fugro.com.

Sincerely,

FUGRO USA MARINE, INC.

Ray Blackmon
Supervising Archaeologist

Figure

Figure 1: Water Depth and Seafloor Features

References:

Bureau of Ocean Energy Management, 2005, "Notice to Lessees and Operators of Federal Oil, Gas, and Sulphur Leases in the Outer Continental Shelf, Gulf of Mexico OCS Region, Archaeological Resource Surveys and Reports", United States Department of the Interior, Minerals Management Service, Gulf of Mexico, NTL 2005-G07.

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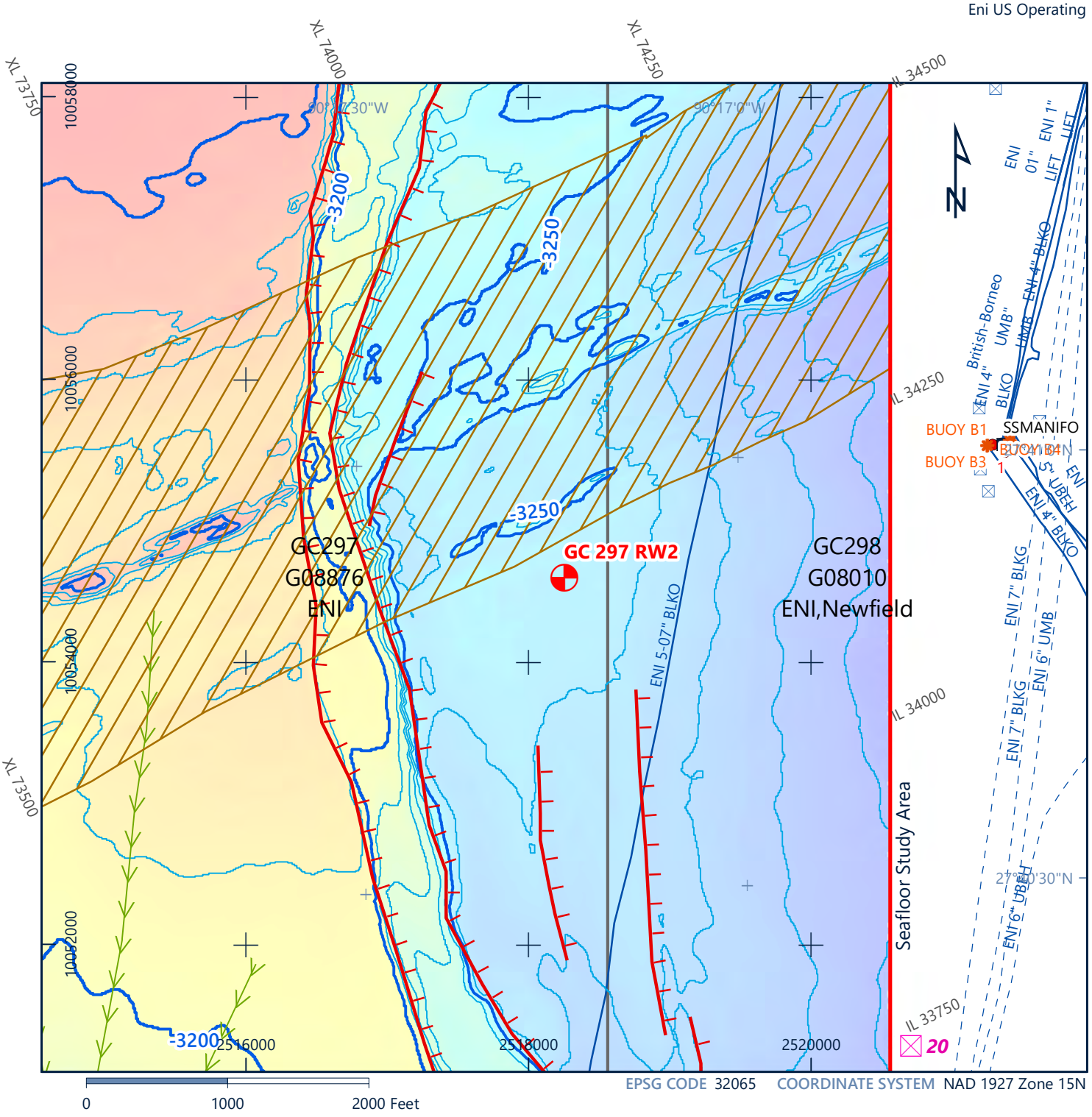
Figure



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BATHYMETRY CONTOURS

- -3250' Major - 50 ft Interval
- Minor - 10 ft Interval

BATHYMETRY

- - 3,144 ft
- - 3,298 ft

WATER DEPTH AND SEAFLOOR FEATURES
PROPOSED GC 297 RW2 WELLSITE

02.21010027-RW2_Arch 02 | Archaeological Clearance Letter, Proposed GC 297 RW2 Wellsite
Figure 1

ATTACHMENT I

Listed Species	Scientific Name	Status	Critical Habitat Designated in Gulf of Mexico	Potential Presence	
				Lease/ Projected Area	Coastal
Marine Mammals					
Blue whale	*Balaenoptera musculus*	E	None	X[2]	-
Fin whale	*Balaenoptera physalus*	E	None	X[2]	-
Humpback whale	*Megaptera novaeangliae*	E	None	X[2]	-
Sei whale	*Balaenoptera borealis*	E	None	X[2]	-
Sperm whale	*Physeter macrocephalus*	E	None	X	-
West Indian manatee[1]	*Trichechus manatus*	E	Florida (peninsular)	-	X
North Atlantic Right whale	*Eubalaena glacialis*	E	None	X[2]	-
Bryde's whale[3]	*Balaenoptera edeni*	E	None	X	-
Rice's whale[3]	*Balaenoptera ricei*	E	None	X	-
Terrestrial Mammals					
Beach Mice (Alabama, Choctawhatchee, Perdido Key, St. Andrew)	*Peromyscus polionotus*	E	Alabama and Florida (Panhandle) Beaches	-	X
Sea Turtles					
Green sea turtle	*Chelonia mydas*	T	None	X	X
Hawksbill sea turtle	*Eretmochelys imbricata*	E	None	X	X
Kemp's ridley sea turtle	*Lepidochelys kempii*	E	None	X	X
Leatherback sea turtle	*Dermochelys coriacea*	E	None	X	X
Loggerhead sea turtle	*Caretta caretta*	T	Nesting beaches and nearshore reproductive habitat in Mississippi, Alabama, and Florida (Panhandle); Sargassum habitat including most of the central & western Gulf of Mexico.	X	X
Fish					
Gulf Sturgeon	*Acipenser oxyrinchus desotoi*	T	Coastal Louisiana, Mississippi, Alabama, and Florida (Panhandle)	X	X
Giant manta ray	*Manta birostris*	E	None	X	-
Oceanic whitetip shark	*Carcharhinus longimanus*	T	None	X	-
Smalltooth sawfish	*Pristis pectinate*	E	Southwest Florida	-	X
Nassau grouper	*Epinephelus striatus*	T	None	-	X

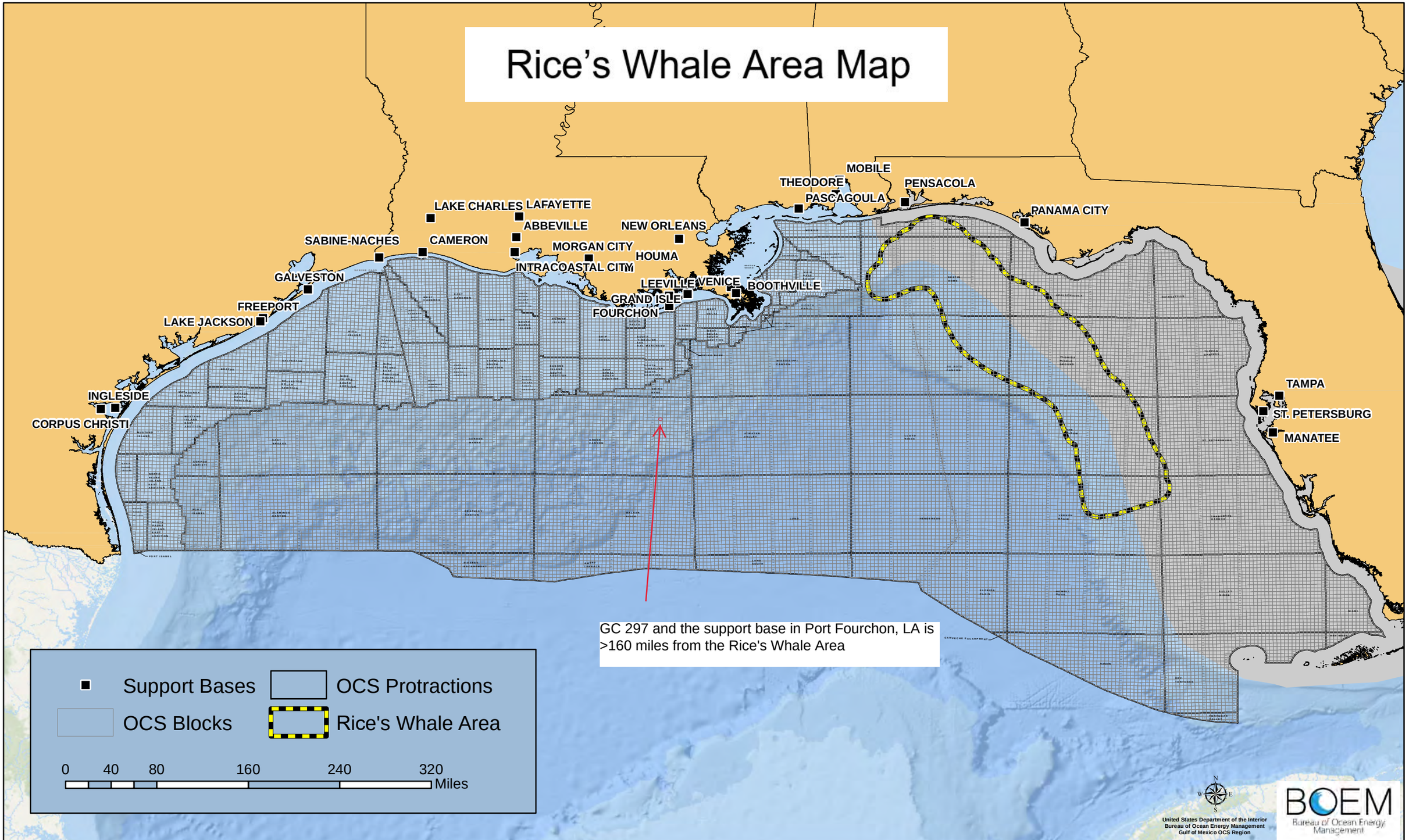
Listed Species	Scientific Name	Status	Critical Habitat Designated in Gulf of Mexico	Potential Presence	
				Lease/ Projected Area	Coastal
Birds					
Piping Plover	*Charadrius melodus*	T	Coastal Texas, Louisiana, Mississippi, Alabama, and Florida (Panhandle)	-	X
Whooping Crane	*Grus americana*	E	Coastal Texas, Louisiana, Mississippi, Alabama, and Florida (Panhandle)	-	X
Mississippi sandhill crane	*Grus canadensis pulla*	E	Wherever found	-	X
Yellow-shouldered blackbird	*Agelaius xanthomus*	E	Wherever found	-	X
Wood Stork	*Mycteria americana*	T	AL, FL, GA, MS, NC, SC	-	X
Invertebrates					
Elkhorn coral	*Acropora palmata*	T	Florida Keys and the Dry Tortugas	-	X
Staghorn coral	*Acropora cervicornis*	T	Florida Keys and the Dry Tortugas	-	X
Pillar coral	*Dendrogyra cylindrus*	T	None	-	X
Rough cactus coral	*Mycerophyllia ferox*	T	None	-	X
Lobed star coral	*Orbicella annularis*	T	None	-	X
Mountainous star coral	*Orbicella faveolata*	T	None	-	X
Boulder star coral	*Orbicella franksi*	T	None	-	X

Abbreviations: E = Endangered; T = Threatened; X = Potential Presence

[1] There are two subspecies of West Indian manatee: the Florida manatee (T. m. latirostris), which ranges from the northern Gulf of Mexico to Virginia, and the Antillean manatee (T. m. manatus), which ranges from northern Mexico to eastern Brazil. Only the Florida manatee subspecies is likely to be found in the northern Gulf of Mexico. On 30 March 2017, the USFWS announced the West Indian manatee, including the Florida manatee subspecies, was reclassified as Threatened.

[2] The Blue, Fin, Humpback, Sei, and North Atlantic Right whales are uncommon in the Gulf of Mexico and are unlikely to be present in the projected area.

[3] The Bryde's whale, also known as the Bryde's whale complex, is a collection of baleen whales that are still being researched to determine if they are the same species or if they are individual species of whales. In 2021, the Rice's whale, formerly known as the Gulf of Mexico Bryde's whale, was determined to be a separate species. There are less than 100 Rice's whales living in the Gulf of Mexico year-round. These whales retain all the protections of the Gulf of Mexico Bryde's whale under the Endangered Species Act. Other Bryde's whales are migratory and may enter the Gulf of Mexico; however, the migratory Bryde's whales are rare or extralimital in the Gulf of Mexico and are unlikely to be present in the lease area.



Office of Leasing and Plans, Mapping and Automation Section | MAS202000234 | 21 April 2020

TABLE 1. WASTES YOU WILL GENERATE, TREAT AND DOWNHOLE DISPOSE OR DISCHARGE TO THE GOM

please specify if the amount reported is a total or per well amount

Projected generated waste based on single well			Projected ocean discharges		Projected Downhole Disposal
Type of Waste	**Composition**	**Projected Amount**	**Discharge rate**	**Discharge Method**	**Answer yes or no**
Will drilling occur ? If yes, you should list muds and cuttings					
Water-based drilling fluid	Water Based Drilling Mud	50000 Bbl/well	100 Bbl/hr/well	Overboard	No
Cuttings wetted with water-based fluid	Sand/Shale Cuttings	5150 Bbl/well	10Bbl/hr/well	Overboard	N/A
Synthetic-based drilling fluid	N/A	N/A	N/A	N/A	N/A
Cuttings wetted with synthetic-based fluid	N/A	N/A	N/A	N/A	N/A
Will humans be there? If yes, expect conventional waste					
Domestic waste	Trash/Debris	1000 ft^3/well	20 ft^3/day/well	Transport To Dock	No
Sanitary waste	Sanitary Waste	100 bbls/well	5 bbls/day/well	Treated - Overboard	No
Is there a deck? If yes, there will be Deck Drainage					
Deck Drainage	Rainfall	35 bbls/well	1 bbl/day/well	Treated - Overboard	No
Will you conduct well treatment, completion, or workover?					
Well treatment fluids	N/A	N/A	N/A	N/A	No
Well completion fluids	CaCl/CaBr Brine	2000	5 Bbl/hr/well	Overbaord	No
Workover fluids	N/A	N/A	N/A	N/A	No
Miscellaneous discharges. If yes, only fill in those associated with your activity.					
Desalinization unit discharge	N/A	N/A	N/A	N/A	N/A
Blowout prevent fluid	N/A	N/A	N/A	N/A	N/A
Ballast water	N/A	N/A	N/A	N/A	N/A
Bilge water	N/A	N/A	N/A	N/A	N/A
Excess cement at seafloor	N/A	N/A	N/A	N/A	N/A
Fire water	N/A	N/A	N/A	N/A	N/A
Cooling water	Seawater	10000 Bbl/well	10 Bbl/hr/well	Overboard	N/A
Will you produce hydrocarbons? If yes fill in for produced water.					
Produced water	N/A	N/A	N/A	N/A	N/A

Will you be covered by an individual or general NPDES permit ?	General

NOTE: If you will not have a type of waste, enter NA in the row.

ATTACHMENT M

TABLE 2. WASTES YOU WILL TRANSPORT AND /OR DISPOSE OF ONSHORE

Please specify whether the amount reported is a total or per well

	Projected generated waste		Solid and Liquid Wastes transportation	Waste Disposal		
Type of Waste	Composition		Transport Method	Name/Location of Facility	Amount	Disposal Method
Will drilling occur ? If yes, fill in the muds and cuttings.						
Oil-based drilling fluid or mud	N/A		N/A	N/A	N/A	N/A
Synthetic-based drilling fluid or mud	N/A		N/A	N/A	N/A	N/A
Cuttings wetted with Water-based fluid	N/A		N/A	N/A	N/A	N/A
Cuttings wetted with Synthetic-based fluid	N/A		N/A	N/A	N/A	N/A
Cuttings wetted with oil-based fluids	N/A		N/A	N/A	N/A	N/A
Will you produce hydrocarbons? If yes fill in for produced sand.						
Produced sand	N/A		N/A	N/A	N/A	N/A
Will you have additional wastes that are not permitted for discharge? If yes, fill in the appropriate rows.						
Trash and debris	Trash & Debris		Storage Bins on Crewboat	Port Fourchon, La.	1000 ft^3/well	Landfill
Used oil	Motor Oil		Drums on Crewboat	Ecosource-Fourchon	100 bbls/well	Recycled
Wash water	N/A		N/A	N/A	N/A	N/A
Chemical product wastes	Chemical Product Waste		Drums on Crewboat	Ecosource-Fourchon	50 lbs/well	Treatment / Recycled

NOTE: If you will not have a type of waste, enter NA in the row.

ATTACHMENT M

OMB Control No. 1010-0151
OMB Approval Expires: 08/31/2023

COMPANY	Eni US Operating Co. Inc.
AREA	Green Canyon
BLOCK	297
LEASE	G08876
RIG	Drillship
WELL(s)	003 & 004
COMPANY CONTACT	Brunita Flores
TELEPHONE NO.	713-393-6355
REMARKS	Drill / Complete

LEASE TERM PIPELINE CONSTRUCTION INFORMATION:		
YEAR	NUMBER OF PIPELINES	TOTAL NUMBER OF CONSTRUCTION DAYS
2022		
2023		
2024		
2025		
2026		
2027		
2028		
2029		
2030		
2031		

ATTACHMENT N

AIR EMISSIONS COMPUTATION FACTORS

Fuel Usage Conversion Factors	Natural Gas Turbines				Natural Gas Engines		Diesel Recip. Engine		Diesel Turbines			
	SCF/hp-hr	9.524			SCF/hp-hr	7.143	GAL/hp-hr	0.0514	GAL/hp-hr	0.0514		

Equipment/Emission Factors	units	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	REF.	DATE	Reference Links
Natural Gas Turbine	g/hp-hr		0.0086	0.0086	0.0026	1.4515	0.0095	N/A	0.3719	N/A	AP42 3.1-1& 3.1-2a	4/00	https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf
RECIP. 2 Cycle Lean Natural Gas	g/hp-hr		0.1293	0.1293	0.0020	6.5998	0.4082	N/A	1.2009	N/A	AP42 3.2-1	7/00	https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf
RECIP. 4 Cycle Lean Natural Gas	g/hp-hr		0.0002	0.0002	0.0020	2.8814	0.4014	N/A	1.8949	N/A	AP42 3.2-2	7/00	https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf
RECIP. 4 Cycle Rich Natural Gas	g/hp-hr		0.0323	0.0323	0.0020	7.7224	0.1021	N/A	11.9408	N/A	AP42 3.2-3	7/00	https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s02.pdf
Diesel Recip. < 600 hp	g/hp-hr	1	1	1	0.0279	14.1	1.04	N/A	3.03	N/A	AP42 3.3-1	10/96	https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s03.pdf
Diesel Recip. > 600 hp	g/hp-hr	0.32	0.182	0.178	0.0055	10.9	0.29	N/A	2.5	N/A	AP42 3.4-1 & 3.4-2	10/96	https://www3.epa.gov/ttn/chief/ap42/ch03/final/c03s04.pdf
Diesel Boiler	lbs/bbl	0.0840	0.0420	0.0105	0.0089	1.0080	0.0084	5.14E-05	0.2100	0.0336	AP42 1.3-6; Pb and NH3: WebFIRE (08/2018)	9/98 and 5/10	https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s05.pdf https://cfpub.epa.gov/webfire/
Diesel Turbine	g/hp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0013	4.45E-05	0.0105	N/A	AP42 3.1-1 & 3.1-2a	4/00	https://www3.epa.gov/ttnchie1/ap42/ch03/final/c03s01.pdf
Dual Fuel Turbine	g/hp-hr	0.0381	0.0137	0.0137	0.0048	2.7941	0.0095	4.45E-05	0.3719	0.0000	AP42 3.1-1& 3.1-2a; AP42 3.1-1 & 3.1-2a	4/00	https://cfpub.epa.gov/webfire/
Vessels – Propulsion	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data
Vessels – Drilling Prime Engine, Auxiliary	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	
Vessels – Diesel Boiler	g/hp-hr	0.0466	0.1491	0.1417	0.4400	1.4914	0.0820	3.73E-05	0.1491	0.0003	USEPA 2017 NEI;TSP (units converted) refer to Diesel Boiler Reference	3/19	
Vessels – Well Stimulation	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	
Natural Gas Heater/Boiler/Burner	lbs/MMscf	7.60	1.90	1.90	0.60	190.00	5.50	5.00E-04	84.00	3.2	AP42 1.4-1 & 1.4-2; Pb and NH3: WebFIRE (08/2018)	7/98 and 8/18	https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s04.pdf https://cfpub.epa.gov/webfire/
Combustion Flare (no smoke)	lbs/MMscf	0.00	0.00	0.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	https://www3.epa.gov/ttn/chief/ap42/ch13/final/C13S05_02-05-18.pdf
Combustion Flare (light smoke)	lbs/MMscf	2.10	2.10	2.10	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Combustion Flare (medium smoke)	lbs/MMscf	10.50	10.50	10.50	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Combustion Flare (heavy smoke)	lbs/MMscf	21.00	21.00	21.00	0.57	71.40	35.93	N/A	325.5	N/A	AP42 13.5-1, 13.5-2	2/18	
Liquid Flaring	lbs/bbl	0.42	0.0966	0.0651	5.964	0.84	0.01428	5.14E-05	0.21	0.0336	AP42 1.3-1 through 1.3-3 and 1.3-5	5/10	https://www3.epa.gov/ttnchie1/ap42/ch01/final/c01s03.pdf
Storage Tank	tons/yr/tank						4.300				2014 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2017	https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory
Fugitives	lbs/hr/component						0.0005				API Study	12/93	https://www.apiwebstore.org/publications/item.cgi?9879d38a-8bc0-4abe-bb5c-9b623870125d
Glycol Dehydrator	tons/yr/dehydrator						19.240				2011 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2014	https://www.boem.gov/environment/environmental-studies/2011-gulfwide-emission-inventory
Cold Vent	tons/yr/vent						44.747				2014 Gulfwide Inventory; Avg emiss (upper bound of 95% CI)	2017	https://www.boem.gov/environment/environmental-studies/2014-gulfwide-emission-inventory
Waste Incinerator	lb/ton		15.0	15.0	2.5	2.0	N/A	N/A	20.0	N/A	AP 42 2.1-12	10/96	https://www3.epa.gov/ttnchie1/ap42/ch02/final/c02s01.pdf
On-Ice – Loader	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	https://www.epa.gov/moves/nonroad2008a-installation-and-updates
On-Ice – Other Construction Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Other Survey Equipment	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Tractor	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Truck (for gravel island)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
On-Ice – Truck (for surveys)	lbs/gal	0.043	0.043	0.043	0.040	0.604	0.049	N/A	0.130	0.003	USEPA NONROAD2008 model; TSP (units converted) refer to Diesel Recip. <600 reference	2009	
Man Camp - Operation (max people/day)	tons/person/day		0.0004	0.0004	0.0004	0.006	0.001	N/A	0.001	N/A	BOEM 2014-1001	2014	https://www.boem.gov/sites/default/files/uploadedFiles/BOEM/BOEM_Newsroom/Library/Publications/2014-1001.pdf
Vessels - Ice Management Diesel	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	https://www.epa.gov/air-emissions-inventories/2017-national-emissions-inventory-nei-data
Vessels - Hovercraft Diesel	g/hp-hr	0.320	0.1931	0.1873	0.0047	7.6669	0.2204	2.24E-05	1.2025	0.0022	USEPA 2017 NEI;TSP refer to Diesel Recip. > 600 hp reference	3/19	

Sulfur Content Source	Value	Units
Fuel Gas	3.38	ppm
Diesel Fuel	0.0015	% weight
Produced Gas (Flare)	3.38	ppm
Produced Oil (Liquid Flaring)	1	% weight

Natural Gas Flare Parameters	Value	Units
VOC Content of Flare Gas	0.6816	lb VOC/lb-mol gas
Natural Gas Flare Efficiency	98	%

Density and Heat Value of Diesel Fuel		
Density	7.05	lbs/gal
Heat Value	19,300	Btu/lb

Heat Value of Natural Gas		
Heat Value	1,050	MMBtu/MMscf

ATTACHMENT N

AIR EMISSIONS CALCULATIONS - 1ST YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
Eni US Operating Co. Inc.	Green Canyon		297	G08876	Drillship	003 & 004					Brunita Flores		713-393-6355		Drill / Complete										
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR									ESTIMATED TONS								
	Diesel Engines		HP	GAL/HR	GAL/D																				
	Nat. Gas Engines		HP	SCF/HR	SCF/D																				
	Burners		MMBTU/HR	SCF/HR	SCF/D	HR/D	D/YR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
DRILLING & COMPLETE	VESSELS- Drilling - Propulsion Engine - Diesel		61800	3179.3628	76304.71	24	210	43.60	26.30	25.51	0.63	1044.59	30.03	0.00	163.84	0.30	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels - Diesel Boiler		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels – Drilling Prime Engine, Auxiliary		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Pipeline Burying - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	VESSELS - Heavy Lift Vessel/Derrick Barge Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	VESSELS - Shuttle Tankers		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Well Stimulation		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Turbine		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Diesel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--
	Dual Fuel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP. 2 Cycle Lean Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP. 4 Cycle Lean Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP. 4 Cycle Rich Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Diesel Boiler					0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Heater/Boiler/Burner		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.		**BPD**	**SCF/HR**	**COUNT**																				
	STORAGE TANK				0	0	0	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COLD VENT				0	0	0	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	FUGITIVES				0	0	0	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	GLYCOL DEHYDRATOR				0	0	0	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	WASTE INCINERATOR		0			0	0	--	0.00	0.00	0.00	0.00	--	--	0.00	--	--	0.00	0.00	0.00	0.00	--	--	0.00	--
DRILLING WELL TEST	Liquid Flaring		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
ALASKA-SPECIFIC SOURCES	**VESSELS**		**kW**			**HR/D**	**D/YR**																		
	VESSELS - Ice Management Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
2022	**Facility Total Emissions**							**43.60**	**26.30**	**25.51**	**0.63**	**1,044.59**	**30.03**	**0.00**	**163.84**	**0.30**	**109.87**	**66.29**	**64.30**	**1.60**	**2,632.36**	**75.69**	**0.01**	**412.88**	**0.77**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**																**3,163.50**			**3,163.50**	**3,163.50**	**3,163.50**		**70,788.27**	
	95.0																								
DRILLING	VESSELS- Crew Diesel		9965	512.659391	12303.83	24	75	7.03	4.24	4.11	0.10	168.44	4.84	0.00	26.42	0.05	6.33	3.82	3.70	0.09	151.59	4.36	0.00	23.78	0.04
	VESSELS - Supply Diesel		11826	608.400397	14601.61	24	75	8.34	5.03	4.88	0.12	199.89	5.75	0.00	31.35	0.06	7.51	4.53	4.39	0.11	179.90	5.17	0.00	28.22	0.05
	VESSELS - Tugs Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	VESSELS - Support Diesel, Laying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Support Diesel, Burying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Crew Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Supply Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	VESSELS - Material Tug Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Crew Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Supply Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	VESSELS - Support Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ALASKA-SPECIFIC SOURCES	**On-Ice Equipment**			**GAL/HR**	**GAL/D**																				
	Man Camp - Operation (maximum people per day)		**PEOPLE/DAY**																						
	VESSELS		**kW**			**HR/D**	**D/YR**																		
	On-Ice – Loader			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Other Construction Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Other Survey Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Tractor			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Truck (for gravel island)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Truck (for surveys)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	Man Camp - Operation		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	
	VESSELS - Hovercraft Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2022	**Non-Facility Total Emissions**							**15.37**	**9.27**	**9.00**	**0.22**	**368.33**	**10.59**	**0.00**	**57.77**	**0.11**	**13.84**	**8.35**	**8.10**	**0.20**	**331.49**	**9.53**	**0.00**	**51.99**	**0.10**

ATTACHMENT N

AIR EMISSIONS CALCULATIONS - 2ND YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
Eni US Operating Co. Inc.	Green Canyon		297	G08876	Drillship	003 & 004					Brunita Flores		713-393-6355		Drill / Complete										
OPERATIONS	**EQUIPMENT**	**EQUIPMENT ID**	**RATING**	**MAX. FUEL**	**ACT. FUEL**	**RUN TIME**		**MAXIMUM POUNDS PER HOUR**									**ESTIMATED TONS**								
	Diesel Engines		**HP**	**GAL/HR**	**GAL/D**																				
	Nat. Gas Engines		**HP**	**SCF/HR**	**SCF/D**																				
	Burners		**MMBTU/HR**	**SCF/HR**	**SCF/D**	**HR/D**	**D/YR**	**TSP**	**PM10**	**PM2.5**	**SOx**	**NOx**	**VOC**	**Pb**	**CO**	**NH3**	**TSP**	**PM10**	**PM2.5**	**SOx**	**NOx**	**VOC**	**Pb**	**CO**	**NH3**
DRILLING & COMPLETE	VESSELS- Drilling - Propulsion Engine - Diesel		61800	3179.3628	76304.71	24	210	43.60	26.30	25.51	0.63	1044.59	30.03	0.00	163.84	0.30	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels - Diesel Boiler		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels – Drilling Prime Engine, Auxiliary		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Pipeline Burying - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	VESSELS - Heavy Lift Vessel/Derrick Barge Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	VESSELS - Shuttle Tankers		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Well Stimulation		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Turbine		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Diesel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--
	Dual Fuel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP. 2 Cycle Lean Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP. 4 Cycle Lean Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP. 4 Cycle Rich Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Diesel Boiler		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Heater/Boiler/Burner		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.		**BPD**	**SCF/HR**	**COUNT**																				
	STORAGE TANK				0	1	1	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COLD VENT				0	1	1	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	FUGITIVES				0	0	0	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	GLYCOL DEHYDRATOR				0	1	1	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	WASTE INCINERATOR		0			0	0	--	0.00	0.00	0.00	0.00	--	--	0.00	--	--	0.00	0.00	0.00	0.00			0.00	
DRILLING	Liquid Flaring		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
ALASKA-SPECIFIC SOURCES	**VESSELS**		**kW**			**HR/D**	**D/YR**																		
	VESSELS - Ice Management Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
2023	**Facility Total Emissions**							**43.60**	**26.30**	**25.51**	**0.63**	**1,044.59**	**30.03**	**0.00**	**163.84**	**0.30**	**109.87**	**66.29**	**64.30**	**1.60**	**2,632.36**	**75.69**	**0.01**	**412.88**	**0.77**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**																**3,163.50**			**3,163.50**	**3,163.50**	**3,163.50**		**70,788.27**	
	95.0																								
DRILLING	VESSELS- Crew Diesel		9965	512.659391	12303.83	24	75	7.03	4.24	4.11	0.10	168.44	4.84	0.00	26.42	0.05	6.33	3.82	3.70	0.09	151.59	4.36	0.00	23.78	0.04
	VESSELS - Supply Diesel		11826	608.400397	14601.61	24	75	8.34	5.03	4.88	0.12	199.89	5.75	0.00	31.35	0.06	7.51	4.53	4.39	0.11	179.90	5.17	0.00	28.22	0.05
	VESSELS - Tugs Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE INSTALLATION	VESSELS - Support Diesel, Laying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Support Diesel, Burying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Crew Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Supply Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	VESSELS - Material Tug Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Crew Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Supply Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	VESSELS - Support Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ALASKA-SPECIFIC SOURCES	**On-Ice Equipment**			**GAL/HR**	**GAL/D**																				
	Man Camp - Operation (maximum people per day)		**PEOPLE/DAY**																						
	VESSELS		**kW**			**HR/D**	**D/YR**																		
	On-Ice – Loader			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Other Construction Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Other Survey Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Tractor			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Truck (for gravel island)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Truck (for surveys)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	Man Camp - Operation		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	
	VESSELS - Hovercraft Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023	**Non-Facility Total Emissions**							**15.37**	**9.27**	**9.00**	**0.22**	**368.33**	**10.59**	**0.00**	**57.77**	**0.11**	**13.84**	**8.35**	**8.10**	**0.20**	**331.49**	**9.53**	**0.00**	**51.99**	**0.10**

AIR EMISSIONS CALCULATIONS - 2ND YEAR

COMPANY	AREA		BLOCK	LEASE	FACILITY	WELL					CONTACT		PHONE		REMARKS										
Eni US Operating Co. Inc.	Green Canyon		297	G08876	Drillship	003 & 004					Brunita Flores		713-393-6355		Drill / Complete										
OPERATIONS	EQUIPMENT	EQUIPMENT ID	RATING	MAX. FUEL	ACT. FUEL	RUN TIME		MAXIMUM POUNDS PER HOUR									ESTIMATED TONS								
	Diesel Engines		HP	GAL/HR	GAL/D																				
	Nat. Gas Engines		HP	SCF/HR	SCF/D																				
	Burners		MMBTU/HR	SCF/HR	SCF/D	HR/D	D/YR	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
DRILLING &	VESSELS- Drilling - Propulsion Engine - Diesel		61800	3179.3628	76304.71	24	210	43.60	26.30	25.51	0.63	1044.59	30.03	0.00	163.84	0.30	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
COMPLETE	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS- Drilling - Propulsion Engine - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels - Diesel Boiler		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Vessels – Drilling Prime Engine, Auxiliary		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE	VESSELS - Pipeline Laying Vessel - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTALLATION	VESSELS - Pipeline Burying - Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY INSTALLATION	VESSELS - Heavy Lift Vessel/Derrick Barge Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	RECIP.<600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP.>600hp Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	VESSELS - Shuttle Tankers		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Well Stimulation		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Turbine		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Diesel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--
	Dual Fuel Turbine		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	RECIP. 2 Cycle Lean Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP. 4 Cycle Lean Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	RECIP. 4 Cycle Rich Natural Gas		0	0	0.00	0	0	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--	--	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	Diesel Boiler		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Natural Gas Heater/Boiler/Burner		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	MISC.		**BPD**	**SCF/HR**	**COUNT**																				
	STORAGE TANK				0	1	1	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COLD VENT				0	1	1	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	FUGITIVES				0	0	0	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	GLYCOL DEHYDRATOR				0	1	1	--	--	--	--	--	0.00	--	--	--	--	--	--	--	--	0.00	--	--	--
	WASTE INCINERATOR		0			0	0	--	0.00	0.00	0.00	0.00	--	--	0.00	--	--	0.00	0.00	0.00	0.00			0.00	
DRILLING	Liquid Flaring		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WELL TEST	COMBUSTION FLARE - no smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - light smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - medium smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
	COMBUSTION FLARE - heavy smoke			0		0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--
ALASKA-SPECIFIC SOURCES	**VESSELS**		**kW**			**HR/D**	**D/YR**																		
	VESSELS - Ice Management Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
2024	**Facility Total Emissions**							**43.60**	**26.30**	**25.51**	**0.63**	**1,044.59**	**30.03**	**0.00**	**163.84**	**0.30**	**109.87**	**66.29**	**64.30**	**1.60**	**2,632.36**	**75.69**	**0.01**	**412.88**	**0.77**
EXEMPTION CALCULATION	**DISTANCE FROM LAND IN MILES**																**3,163.50**			**3,163.50**	**3,163.50**	**3,163.50**		**70,788.27**	
	95.0																								
DRILLING	VESSELS- Crew Diesel		9965	512.659391	12303.83	24	75	7.03	4.24	4.11	0.10	168.44	4.84	0.00	26.42	0.05	6.33	3.82	3.70	0.09	151.59	4.36	0.00	23.78	0.04
	VESSELS - Supply Diesel		11826	608.400397	14601.61	24	75	8.34	5.03	4.88	0.12	199.89	5.75	0.00	31.35	0.06	7.51	4.53	4.39	0.11	179.90	5.17	0.00	28.22	0.05
	VESSELS - Tugs Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PIPELINE	VESSELS - Support Diesel, Laying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTALLATION	VESSELS - Support Diesel, Burying		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Crew Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Supply Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FACILITY	VESSELS - Material Tug Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
INSTALLATION	VESSELS - Crew Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	VESSELS - Supply Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PRODUCTION	VESSELS - Support Diesel		0	0	0.00	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ALASKA-SPECIFIC SOURCES	**On-Ice Equipment**			**GAL/HR**	**GAL/D**																				
	Man Camp - Operation (maximum people per day)		**PEOPLE/DAY**																						
	VESSELS		**kW**			**HR/D**	**D/YR**																		
	On-Ice – Loader			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Other Construction Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Other Survey Equipment			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Tractor			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Truck (for gravel island)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	On-Ice – Truck (for surveys)			0	0.0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	0.00
	Man Camp - Operation		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	--	0.00	0.00	0.00	0.00	0.00	0.00	--	0.00	
	VESSELS - Hovercraft Diesel		0			0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	**Non-Facility Total Emissions**							**15.37**	**9.27**	**9.00**	**0.22**	**368.33**	**10.59**	**0.00**	**57.77**	**0.11**	**13.84**	**8.35**	**8.10**	**0.20**	**331.49**	**9.53**	**0.00**	**51.99**	**0.10**

ATTACHMENT N

AIR EMISSIONS CALCULATIONS

COMPANY	AREA	BLOCK	LEASE	RIG	WELL(s)	
Eni US Operating Co. Inc.	Green Canyon	297	G08876	Drillship	003 & 004	

Year	Facility Emitted Substance								
	TSP	PM10	PM2.5	SOx	NOx	VOC	Pb	CO	NH3
2022	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
2023	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
2024	109.87	66.29	64.30	1.60	2632.36	75.69	0.01	412.88	0.77
Allowable	3163.50			3163.50	3163.50	3163.50		70788.27	

ATTACHMENT N

WCD DATA - PROPRIETARY INFO

ATTACHMENT O

Worst Case Discharge scenario for GC 297 #3

1) Worst Case Summary

Eni has estimated its worst case scenario for discharge from a drilling operation that may occur from GC 297 #3. Given the anticipated reservoir thickness and historical productivity index the initial worst case discharge is estimated to be 355,325 barrels of crude oil per day. Calculations are based on formulas defined by BSEE regulations.

2) Facility Information

- Type of Operation: Drilling
- Facility Name: Allegheny Attic
- Area and Block: Green Canyon Block 297
- Latitude: 27° 40' 46.91" N
- Longitude: -90° 17' 14.31" W
- Distance to Shore: ~ 101 miles
- Water Depth: Approximately 3,308 feet
- API Gravity: 30°

3) Worst Case Discharge Volume

Criteria	Barrels
Highest Capacity Well uncontrolled Blowout Volume Associate with Facility	355,000
Highest Capacity Storage Tank Volume Associated with Facility	325
TOTAL WORST CASE DISCHARGE	**355,325**
Surface Natural Evaporation and Dispersion – 7% (ADIOS2)	24,873
TOTAL SPILL VOLUME REMAINING AFTER NATURAL SURFACE EVAPORATION & DISPERSON	**330,452**

4) Land Segment Identification

In compliance with NTL 2006-G21, Eni has determined the land areas that could be potentially impacted by a potential GC 297 #3 oil spill using the BOEM Oil Spill Risk Analysis Model (OSRAM) trajectory results. The OSRAM estimates the probability that oil spills from designated locations would contact shoreline and offshore natural resources. Whether and where a particular spill would reach shore is dependent on various factors, such as weather, currents and product characteristics and, as a result, actual oil movement in the event of a spill may vary from the OSRAM results. These probabilities are intended to indicate, in terms of percentage, the computed likelihood that an oil spill occurring in a particular launch area will contact a certain county or parish within 3, 10, and 30 days.

OCS Launch Block #44 was utilized as GC 297 #3 point of origin. Land segments identified by the model are listed below (referenced from "Oil-Spill Risk Analysis: Contingency Planning Statistics for Gulf of Mexico OCS Activities" – OCS Report MMS 2004-026):

4) Land Segment Identification (Cont'd)

Area and Spill Site	Land Segment Contact	Percent Impact Chance (Days)		
Green Canyon 297 Launch Block #44	Land Segment No. & County/ Parish & State	3	10	30
	Matagorda, TX	--	--	1
	Galveston. TX	--	--	2
	Jefferson, TX	--	--	1
	Cameron, LA	--	--	5
	Vermilion, LA	--	--	2
	Terrebonne, LA	--	1	2
	Lafourche, LA	--	--	1
	Jefferson, LA	--	--	1
	Plaquemines, LA	--	1	4

5) Resource Identification

The land segment that has the highest computed probability of being impacted by a release from GC 297 #3 within 30 days is **Plaquemines, Louisiana** at 4 percent. Sources which may be used to identify the sensitive resources located in Plaquemines, LA and the other land segments identified in the table above can be identified in the OSRP, **Section 12**. Resources that may be impacted in Plaquemines, Louisiana, being it has the highest impact rate include, but may not be limited to are shown in Figure 5-1.

Figure 5-1 – Environmental Sensitivities & Socioeconomic Resources for Plaquemines Parish, Louisiana

Sensitive Area:	Delta National Wildlife Refuge
Habitat:	48,800 acres of marsh, wetlands, open water, shallow ponds, channels and bayous provides a habitat for migratory birds, a multitude of fish and wildlife species, and serve as a nursery for the rich aquatic resources of the region.
Wildlife:	***Waterfowl:*** Winter residents include mallards, northern shovelers, northern pintail, wigeon, gadwall, redheads, ringnecks, scaup, megangers, American widgeon, bufflehead, mottled ducks, blue and green-winged teal, coots, canvasbacks, and Canada snow, white-fronted, and Ross' geese. ***Shorebirds:*** Commonly observed species include greater and lesser yellowlegs, long-billed dowitchers, dunlins, least and western sandpipers, avocets, black-necked stilts, American oystercatchers, ruddy turnstones, Wilson's plovers, killdeer and willets. ***Wading Birds:*** Cranes, herons, egrets, roseate spoonbills, and ibises. ***Fish and Marine Life:*** Speckled trout, redfish, flounder, blue crabs, and shrimp are key saltwater species found on the refuge. Catfish, largemouth bass, and various sunfish species are found in the freshwater areas of the Refuge.
Shoreline Type:	***Seaward Shore Type:*** 3A: Fine- to medium-grained sand beaches 5: Mixed sand and gravel beaches 6A: Gravel beaches 7: Exposed tidal flats 9A: Sheltered tidal flats ***Landward Shore Type:*** 6B: Riprap 10A: Salt- and brackish-water marshes 10B: Freshwater marshes
Access:	Boat Only
Contact:	***Owned:*** U.S. Fish and Wildlife Service ***Email:*** southeastlouisianarefuges@fws.gov ***Phone:*** (985) 882-2000

Figure 5-1 – Environmental Sensitivities & Socioeconomic Resources for Plaquemines Parish, Louisiana cont.

Sensitive Area:	Breton National Wildlife Refuge
Habitat:	The refuge provides a sandy barrier island beach with vegetation comprised of black mangrove, groundsel bush, and wax myrtle. The shallow areas around the islands support beds of manatee, shoal, turtle, and widgeon grass. The habitat provided by the islands offers significant importance for nesting sea, shore, and wading birds.
Wildlife:	The refuge provides crucial habitat and nesting ground for twenty-three species of shore birds and sea birds. Common nesting species include royal, caspian, and sandwich terns, laughing gulls, brown pelicans, and black skimmers. The refuge has a large tern colony and a nesting population of endangered brown pelicans. During the winter large numbers of waterfowl such as redheads, canvasback, and scaup frequent the numerous islands. The submerged aquatic grasses in the northern islands make this area one of the top four most important wintering areas for redhead ducks in the U.S. Frigate birds are commonly observed flying over the refuge. Endangered species that inhabit the refuge are brown pelicans, piping plover and least terns.
Shoreline Type:	***Seaward Shore Type:*** 2A: Exposed Wave-cut Platform in clay 2B: Exposed scarps and steep slopes in clay 3A: Fine- to medium-grained sand beaches 5: Mixed sand and gravel beaches 6A: Gravel beaches 7: Exposed tidal flats 9A: Sheltered tidal flats 10A: Salt- and brackish-water marshes 10D: Scrub-shrub wetlands ***Landward Shore Type:*** 2A: Exposed Wave-cut Platform in clay 3A: Fine- to medium-grained sand beaches 5: Mixed sand and gravel beaches 6A: Gravel beaches 6B: Riprap 10A: Salt- and brackish-water marshes 10D: Scrub-shrub wetlands
Access:	Boat Only
Contact:	***Owned:*** U.S. Fish and Wildlife Service ***Email:*** breton@fws.gov ***Phone:*** (985) 882-2000

Figure 5-1 – Environmental Sensitivities & Socioeconomic Resources for Plaquemines Parish, Louisiana cont.

Sensitive Area:	Pass a Loutre Wildlife Management Area
Habitat:	The 115,000 acre area is characterized by river channels with attendant channel banks, natural bayous, and man-made canals which are interspersed with intermediate and fresh marshes. Hurricane damage and subsidence have contributed to a major demise of vegetated marsh areas resulting in formation of large ponds. Habitat development is primarily directed toward diverting sediment-laden waters into open bay systems (i.e., creating delta crevasses), which promotes delta growth.
Wildlife:	Waterfowl and other migratory game bird, rabbit, deer. Freshwater fish species including bass, bream, catfish, crappie, warmouth, drum, and garfish can be caught in the interior marsh ponds. Salt water fish species include redfish, speckled trout and flounder.
Shoreline Type:	***Seaward Shore Type*** 2A: Exposed Wave-cut Platform in clay 3A: Fine- to medium-grained sand beaches 5: Mixed sand and gravel beaches 6A: Gravel beaches 6B: Riprap 7: Exposed tidal flats 9A: Sheltered tidal flats 10A: Salt- and brackish-water marshes 10B: Freshwater marshes 10C: Freshwater swamps ***Landward Shore Type*** 1B: Exposed, solid man-made structures 2A: Exposed Wave-cut Platform in clay
Access:	Boat Only
Contact:	***Owned:*** Louisiana Department of Wildlife and Fisheries ***Email:*** sgranier@wlf.la.gov ***Phone:*** (504) 284-5264

Figure 5-1 – Environmental Sensitivities & Socioeconomic Resources for Plaquemines Parish, Louisiana cont.

Socio-Economic Sensitives	Description
Water Intakes:	Surface Raw Water Intake • Belle Chasse Water District • Dalcour waterworks District • Pointe a la Hache W S • Port Sulphur water District Public Water Intake • Dalcour Water Intake • Belle Chase Water Intake • Boothville Water Intake • Empire Water Intake Industrial Water Intake • International Matex Terminal Site • United Bulk Terminal • Freeport Nickle Plant • Tennessee Gas Pipeline • Freeport Dock • Harvest States Grain Elevator Diversions • West Point La Hache Fresh Water Diversion • Ostrica Locks • Bayou Lamoque
Commercial Fishing:	Essential Fish Habitat for Shrimp, Crab, Oyster, Finfish, and Crawfish
Shipping Fairway:	Shipping Safety Fairway • Grand Bayou Pass • Empire to the Gulf • South Pass, South Pass to Sea • Southwest Pass to Sea • Mississippi River-Gulf Outlet Coastal Maintained Channels • Southwest Pass Channel • South Pass Channel • Baptiste Collette Bayou
Nearby Platforms:	Please see the Offset Operators Map in **Section 6** of this response discussion. Platforms shown are current as of the date the response discussion was developed.

6) Response

Eni has contracted with OSROs as identified in **Section 7** of the OSRP. Upon notification of a spill, Eni could request a partial or full mobilization of the resources referenced in **Appendix E** of the OSRP. The Qualified Individual, Incident Commander or his/her designee may contact other service companies if appropriate.

Release Modeling

When oil is released, modeling may serve as an important tool in planning a response. It is important to understand how the oil may behave based on oil characteristics, so that the proper response measures can be taken. One tool that can be used for modeling is NOAA's Automated Data Inquiry for Oil Spills 2 (ADIOS2), which is an oil spill response software tool for emergency spill responders and contingency planners. ADIOS2 is designed to model the natural evaporation and dispersion of various types of oil on the surface of the water. Integrated within the tool is an oil library with a short-term oil fate and cleanup model to help responders/planners estimate the amount of time that spilled oil will remain in the marine environment and develop cleanup strategies. The results of the ADIOS2 model may be used to estimate the volume of oil remaining on the surface after natural evaporation and dispersion have taken place as well as determine the appropriate response technologies that need to be used for the remaining oil. However, the actual behavior of the released product during an incident could be affected by many factors and may, as a result, vary from the ADIOS2 model results.

Response Technologies Discussion

This section discusses various response technologies (in no prioritized order) that might be used during a response to a release of oil from GC 297 #3. The particular response technologies applied during a spill event will be coordinated based on the most accurate and up-to-date knowledge of the situation, the locations at which particular technologies are applied and the implementation of simultaneous operations (SIMOPS). Currently there are no new or unusual technology proposed for spill prevention, control, or cleanup.

The status boards below set forth a representative list of equipment and are not meant to be exhaustive. The status boards outline on-water containment; on-water recovery; temporary storage; aerial, vessel dispersant application; in-situ burning and shoreline protection equipment identified as most relevant in addressing the volume of oil that does not either evaporate or naturally disperse into the water column. These status boards estimate times needed for procurement, load out, travel time to the site and deployment.

The status boards show that upon notification of an incident, dispersant operations can commence within an estimated 3.70 hours, pending regulatory approval, followed by on-water recovery which can be on site and operational within an estimated 12 hours. According to the status boards, Eni can be on site with adequate response capacity to contain and recover surface hydrocarbons, and prevent land impact, to the maximum extent practicable, within an estimated 4 days. Consistent with the maximum extent practicable standard, and given the uncertainties and situation-specific variations associated with a marine oil release, this plan cannot guarantee that Eni's response to oil discharged offshore will in all cases prevent oil from reaching shorelines or impacting resources.

6) Response (Cont'd)

Surveillance

Upon notification of a release and mobilization of the response, either a fixed-wing aircraft or a field-support helicopter would be dispatched as promptly as possible (considering available daylight hours, weather conditions and other safety factors) in order to conduct visual surveillance at the source of the spill. If necessary, visual surveillance could be supplemented through use of field vessels. The effectiveness of many response technologies (such as in-situ burning, dispersant application and mechanical recovery) may be enhanced through collaboration with air-based spotters, who can guide these systems to oil concentrations and coordinate SIMOPS. Air-based spotters may be equipped with air to marine/ground communication equipment to facilitate immediate communications with marine- and land-based response assets. Vessel locations may also be monitored in real-time using vessel-tracking technologies (such as AIS data, GPS-based tracking, cell phone data, etc.), which can facilitate vessels being deployed for optimal recovery. Further information regarding methods of identifying and tracking a spill on water are discussed in **Section 11** in the OSRP. Specifically, Figure 11-2 sets forth various oil spill detection systems, remote thickness detection systems, and other remote sensing technologies that could be utilized in a response.

Source Containment/Source Control

Source containment and source control operations would be implemented simultaneously with the above response technologies to either reduce or stop the flow of the well into the environment. Source containment is designed to temporarily stop or redirect the flow from the well. Source control addresses the original source through either well-kill operations or the drilling of a relief well to permanently stop the flow of oil from the well.

The steps applied to achieve flow containment will be dependent on the specific characteristics and nature of the spill at hand. This could include multidisciplinary initiatives to recover flow to the surface for contained processing and disposal, efforts to shut-in flow at the source using pressure rated, tight seal fit for purpose assemblies, and techniques to kill (cease pressure source) the well. See **Appendix I** of the OSRP for further information needed regarding this topic.

Slick (Fresh Oil) Containment Systems

Slick (fresh oil) containment systems may be deployed (provided it is safe to do so) in thick, fresh oil to minimize further spreading of oil on the water's surface. These systems would typically consist of two offshore vessels (capable of trolling speeds of 0.5 knots) towing between 1,000 to 1,500 feet of offshore boom in a "U" or "V" configuration. The containment systems may allow fresh oil to be contained, concentrated and diverted to both skimming systems and in-situ burn task forces, as appropriate, increasing their encounter rate and containment efficiency in order to support enhanced skimming and burning operations.

6) Response (Cont'd)

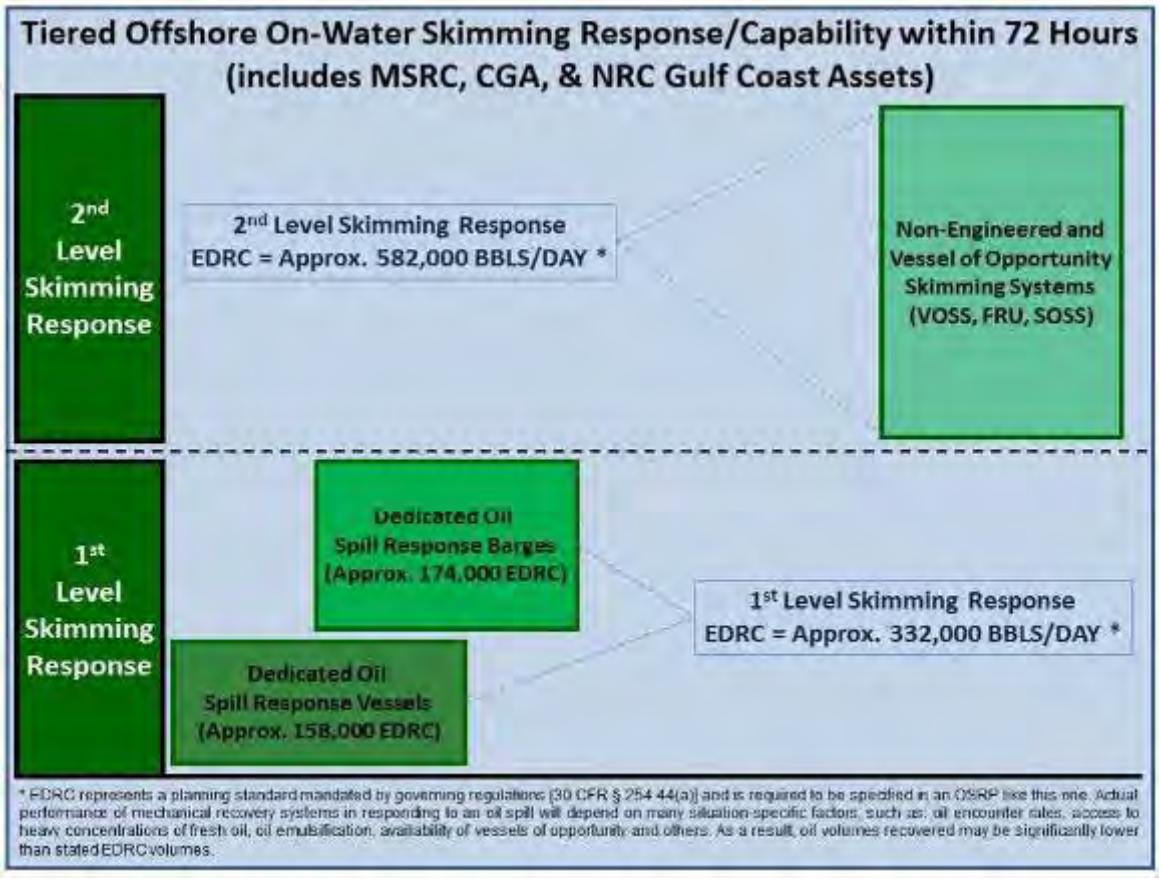
Mechanical Recovery

Mechanical recovery equipment, include Oil Spill Response Vessels (OSRVs), Oil Spill Recovery Barge (OSRBs) and Vessels of Opportunity Skimming System (VOSS) may be mobilized from contracted OSROs. As necessary, response equipment could be cascaded from locations along the Gulf of Mexico and other regions of the United States, as well as from international locations. This equipment could be deployed either at the source of the release or in concentrations of recoverable oil. Offshore mechanical recovery assets could be organized according to span of control concepts within Incident Command System (ICS). Vessels should be organized into task forces or groups with consideration for effective communication and control. As operations increase in scale or complexity, dedicated command/control vessel(s) may be considered for each major operating area or mission. These vessels could provide response activity coordination of all marine assets under their control, as well as provide communication between marine and air assets. Additionally, other technologies such as GPS-based vessel tracking systems may be used to facilitate coordination of marine assets. Positioning this equipment can be facilitated by collaboration with air-based spotters, who can guide these systems to oil concentrations. During night-time operations, skimming activities could be facilitated through the use of alternative spill surveillance technologies (such as infrared [IR] and X-band radio systems) to guide skimming vessels to sufficient concentrations of oil. The specific technologies used will be chosen based on availability suitability, OSRO recommendations, and other situation-specific considerations.

The combined Effective Daily Recovery Capacity (EDRC) for the offshore on-water skimming vessel systems is 500,388 barrels; total storage volume for these dedicated systems is 708,525 barrels. (EDRC represents a planning standard mandated by governing regulations [30 CFR § 254.44(a)] and is required to be specified in an OSRP. Actual performance of mechanical recovery systems in responding to an oil spill will depend on many situation-specific factors, such as: oil encounter rates, access to heavy concentrations of fresh oil, oil emulsification, availability of support vessels and others. As a result, oil volumes recovered may be significantly lower than stated EDRC volumes.) Additional response equipment is available from Eni's OSROs; the resources identified in the status boards below represent a "first line of defense" of dedicated oil spill response vessels and barges and select VOSS, identified based on recent response experience. However, a secondary line of defense (primarily VOSS) is available to augment the response if necessary and appropriate under the circumstances, as depicted in the illustration below.

6) Response (Cont'd)

Mechanical Recovery (Cont'd)



Dispersant Planning Case

We plan whenever possible to use aerial, vessel based, and/or sub-sea application methodologies. Eni's ability to utilize dispersants in a future response will be dependent upon numerous factors, including government actions needed to authorize and support such dispersant use. Most importantly, regulatory approval, pursuant to applicable regulations, must be obtained. As prefaced in **Section 18** of the OSRP, inventories of dispersants available via contract to Eni are detailed in Figure 18-2. Eni has contracts to acquire dispersants and to implement measures to deploy them with the parties listed in **Appendix D** of the OSRP. In addition to OSRO dispersant stockpiles available to Eni, Nalco, the current Corexit 9500 manufacturer, has represented that it anticipates being able to ramp up within 10 to 14 days to begin replenishing stocks piles in support of the anticipated daily dispersant operations, depending on raw material availability.

During the use of dispersants, the Operations and Logistics sections will be tracking daily usage and replenishment rates in order to support dispersant activity for the length of time required to drill a relief well. The use of dispersants can, under the right circumstances, reduce responders' potential exposure to volatile organic compounds (VOCs) at the surface, thereby allowing increased levels of vertical access for source control responders.

6) Response (Cont'd)

Aerial Dispersant Application

Aerial dispersants may be a response option depending on the circumstances of the release. Aerial dispersants are applied under the direction and approval of a designated Federal On Scene Coordinator (FOSC), and in a manner consistent with the National Contingency Plan and the applicable Regional Response plan(s) and/or Area Contingency Plan(s) (ACPs). Spotter aircraft could be activated along with aerial dispersant aircraft to coordinate more precise dispersant application on concentrations of free floating oil and to ensure that dispersant operations do not impact other ongoing response technologies. The table below identifies aerial dispersant application aircraft to which Eni has contractual access, as well as their response capacities. A table listing the dispersant stockpile available to Eni may be found in **Section 18** of the OSRP.

Aircraft	Owner/Contractor	Dispersant Capacity	Possible Sorties per Day
Regional Assets			
(2) DC-3	ASI (through CGA)	1,200 gallons	1-4
BT-67 (DC-3 Turboprop)	ASI (through CGA)	2,000 gallons	1-4
(3) Convair 340	NRC	1,500 gallons	1-4

For planning purposes, Eni assumes a 1:20 application rate and approximately a 50 to 75% effectiveness rate. Based on the estimates regarding aircraft dispersant capacities identified in the table above, 8,900 to 35,600 gallons of dispersant could be applied per day, which translates to approximately 2,119 to 12,714 barrels per day based on the stated application rate and range of estimated effectiveness. It is important to note that studies, laboratory tests, and field tests show a relatively wide range for the optimal application rate and actual effectiveness rate of dispersants applied to spilled oil. These rates may vary depending upon an assortment of situation-specific variables such as water temperature, weather, and timely access to the released oil. Further information regarding dispersant application methods and monitoring may be found in **Section 18** of the OSRP.

Vessel-Based Dispersant Application

Vessel-based dispersant application may be another effective response option. In previous responses, boat-spray systems were used for both dispersing oil and suppressing vapors on the water surface near the spill source. Vessel-based dispersants are also applied under the direction and approval of a designated FOSC, and in a manner consistent with the National Contingency Plan and the applicable Regional Response Plan(s) and/or ACPs. If appropriate, vessel spray systems can be installed on offshore vessels of opportunity to apply dispersants at the source or at other areas where there are significant concentrations of oil. Using inductor nozzles installed on fire-water monitors, skid mounted systems, or purpose-built boom-arm spray systems, vessels can initially apply dispersant beginning in the first 12 to 24 hours of the response, and thereafter as needed. In previous responses, boat-spray systems were used for both dispersing oil and suppressing vapors on the water surface near the spill source.

6) Response (Cont'd)

Subsea Dispersant Application

Depending on the circumstances, the use of a subsea dispersant application system may provide another response option in the event of a subsurface well blowout or other ongoing subsurface release. A modular Subsea Dispersant Application Unit (SDAU)—including an integrated chemical storage, distribution and deployment system—may be installed at the spill site, in close proximity to the release.

The subsea application of dispersants is a new variation on proven dispersant technology. Therefore, certain assumptions, including application rates and effectiveness, have been made based on past experience. However, additional data collection, laboratory tests, and field tests will likely be conducted by industry, government, and/or academia, and will help evaluate further the optimal application rates and anticipated effectiveness rates for subsea application of dispersants. For planning purposes, and subject to obtaining regulatory approval, BP GoM assumes a 1:75 application rate, at 50 to 75% effectiveness, and a system flow rate of 8 to 11 gallons per minute (approximately 11,500 to 16,000 gallons of dispersant per day). During a past response, the EPA limited sub-surface dispersant usage to 15,000 gallons per day. Under those assumptions, the system might be capable of dispersing approximately 10,268 to 21,429 barrels of oil per day. A table listing the dispersant stockpile available to Eni may be found in **Section 18** of the OSRP.

In-Situ Burning Planning Case and Strategy

Open-water in-situ burning (ISB) also may be used as a response strategy depending on the circumstances of the release. ISB services may be provided by the primary OSRO contractors. Eni plans, support the use of ISB as a response methodology when conditions allow it. In a past responses, ISB has been successfully used to remove oil from the response area. Under some circumstances, open water ISB of oil can be a safe and effective oil removal technique. The effective use of ISB depends on specific operational and environmental conditions, and on the composition and condition of the oil to be burned. In addition, the performance of ISB is subject to government regulation, approval and supervision throughout the burning process.

Additional ISB systems may be purchased, as production allows, from specialized fire boom manufacturers. For example, Elastec/American Marine, a widely-known supplier of boom in both the US and internationally, is capable of producing boom at a rate of up to one new system every 3 days, after a 6-8 week initial lead time (to allow procurement of source materials and to dedicate fabrication capabilities). Non-consumable components of the fire boom system may be reused with replacement boom, which could allow faster replenishment of available fire boom systems. During the use of ISB, the Operations and Logistics sections will be tracking daily usage and replenishment rates in order to support ISB activities for the length of time required to drill a relief well.

6) Response (Cont'd)

In-Situ Burning Planning Case and Strategy (Cont'd)

If appropriate conditions exist and approvals are granted, one to multiple ISB task forces could be deployed offshore. Task forces typically consist of two to four fire teams, each with two vessels capable of towing fire boom, guide boom or tow line and equipped with either handheld or aerially-deployed oil ignition systems. At least one support/safety boat would be present during active burning operations to provide logistics, safety and monitoring support. Depending upon a number of factors, including weather conditions and the nature and distribution of oil, up to 4 burns per 12-hour day may be completed per ISB fire team. Depending on weather and fire intensity, most fire boom systems can be used for approximately 8 to 12 burns before being replaced. Although the number of barrels eliminated per bun is dependent on many factors, past experience suggests that a typical burn might eliminate approximately 600 to 750 barrels. Based on these assumptions, a single task force of two fire teams assuming appropriate conditions, including weather and safety each completing four burns per day might be capable of removing up to approximately 4,800 to 6,000 barrels of oil per day. (See e.g., August 2010 reports: "Deepwater Horizon MC252 Gulf Incident Oil Budget" and "BP Deepwater Horizon Oil Budget: What Happened to the Oil?") Additional information on ISB is presented in **Section 19** of the OSRP.

Shoreline Response

While historical trajectory modeling is important for planning response tactics, the potential direction and impact of a spill depends heavily upon existing environmental conditions during an actual response. Strategies developed during tactical planning would be based upon surveillance and real time trajectories that depict areas of potential impact given actual sea and weather conditions. Near shore response may include the deployment of shoreline boom to protect beach areas, or protection and sorbent boom for vegetated areas. The ACP and relevant agencies including, as appropriate, "branch offices" similar to those stood up in previous responses can be consulted to ensure that environmental, special economic and cultural resources are correctly identified and prioritized to ensure optimal protection. If impact does occur, onshore cleanup response may include specialized beach and marsh cleanup techniques.

The status boards listed in the latter part of this section show equipment could be deployed for the protection of these shorelines. From the table labeled, "Sample Shoreline Protection and Wildlife Support List", it is shown that upon receipt of notification, equipment can be onsite and operational within 6 hours.

The Response Group's Shoreline Response Guides identify response strategies including equipment and personnel needs, possible tactics, and detailed job descriptions (ICS 204 Field Assignments) applicable for oil spill protection and clean-up operations. The guides are a tool for operational planning and logistics to initiate the procurement and deployment of resources while branch operations are established. Early tactical planning and deployment of advance (forward) teams should be considered to establish locations for branch offices as needed. (For more information on resource identification, see **Section 12** of the OSRP; for more information on resource protection methods, see **Section 13** of the OSRP; for more information on mobilization see **Section 14** of the OSRP.

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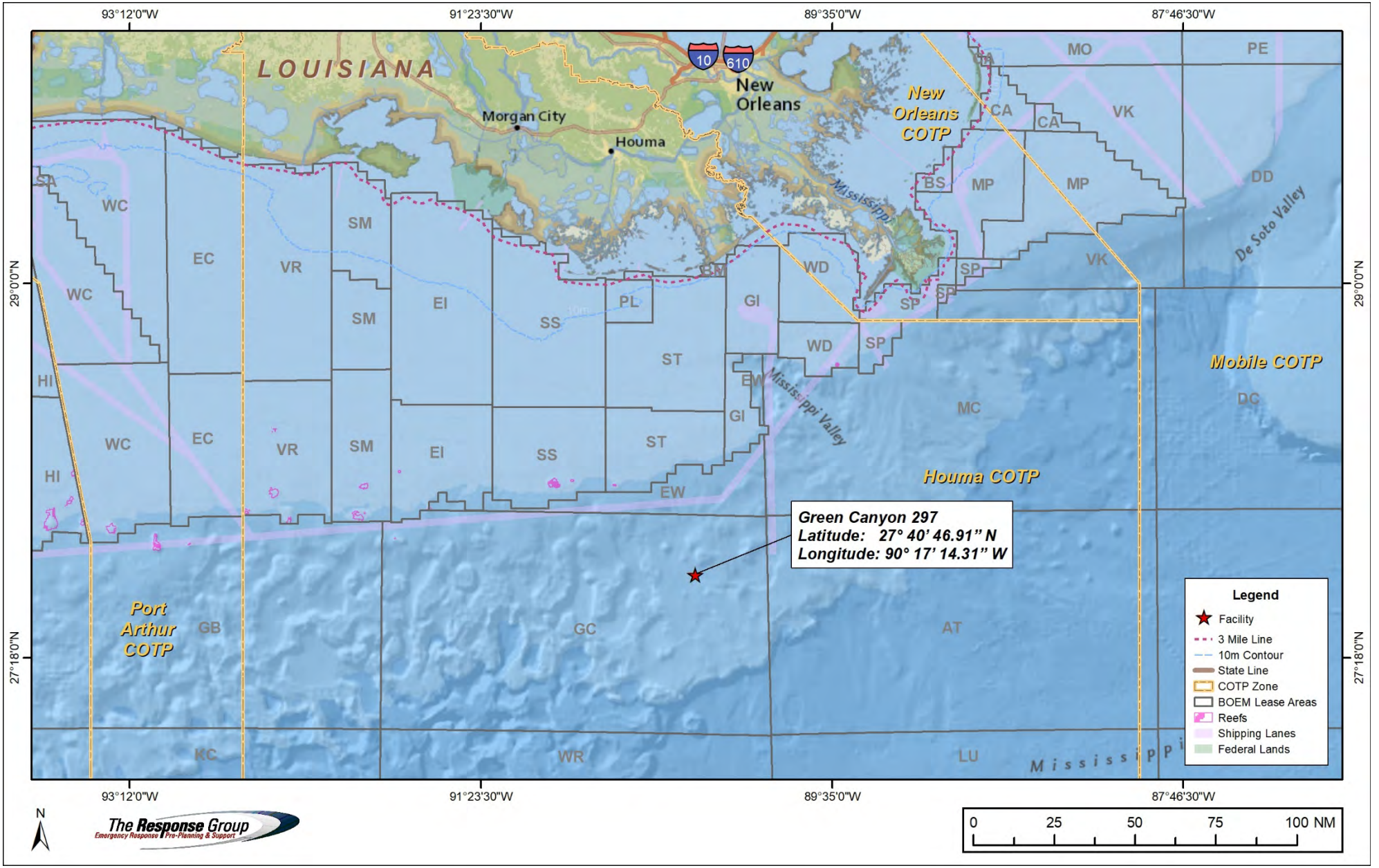

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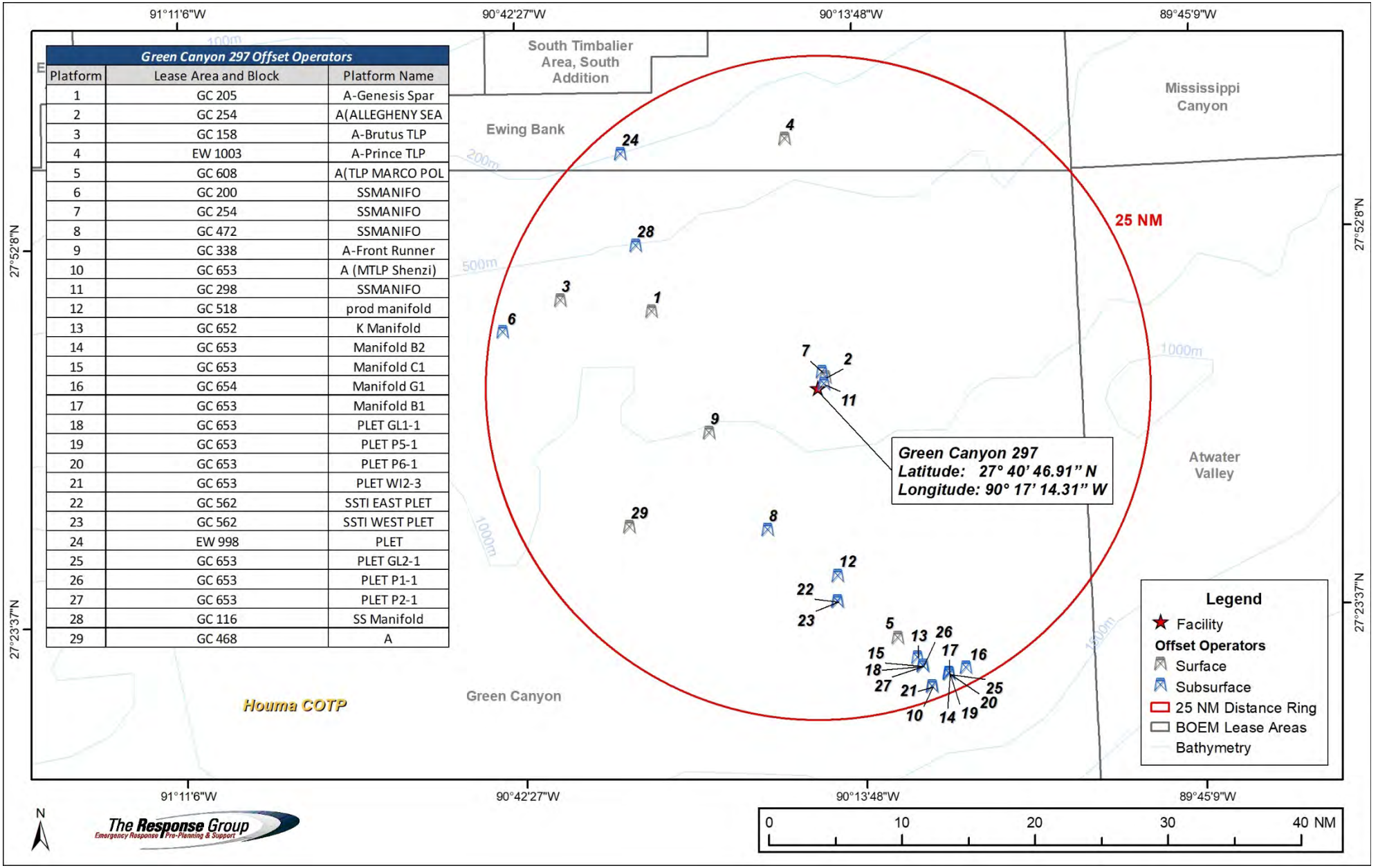

Green Canyon 297 Offset Operators		
Platform	Lease Area and Block	Platform Name
1	GC 205	A-Genesis Spar
2	GC 254	A(ALLEGHENY SEA
3	GC 158	A-Brutus TLP
4	EW 1003	A-Prince TLP
5	GC 608	A(TLP MARCO POL
6	GC 200	SSMANIFO
7	GC 254	SSMANIFO
8	GC 472	SSMANIFO
9	GC 338	A-Front Runner
10	GC 653	A (MTLP Shenzi)
11	GC 298	SSMANIFO
12	GC 518	prod manifold
13	GC 652	K Manifold
14	GC 653	Manifold B2
15	GC 653	Manifold C1
16	GC 654	Manifold G1
17	GC 653	Manifold B1
18	GC 653	PLET GL1-1
19	GC 653	PLET P5-1
20	GC 653	PLET P6-1
21	GC 653	PLET WI2-3
22	GC 562	SSTI EAST PLET
23	GC 562	SSTI WEST PLET
24	EW 998	PLET
25	GC 653	PLET GL2-1
26	GC 653	PLET P1-1
27	GC 653	PLET P2-1
28	GC 116	SS Manifold
29	GC 468	A

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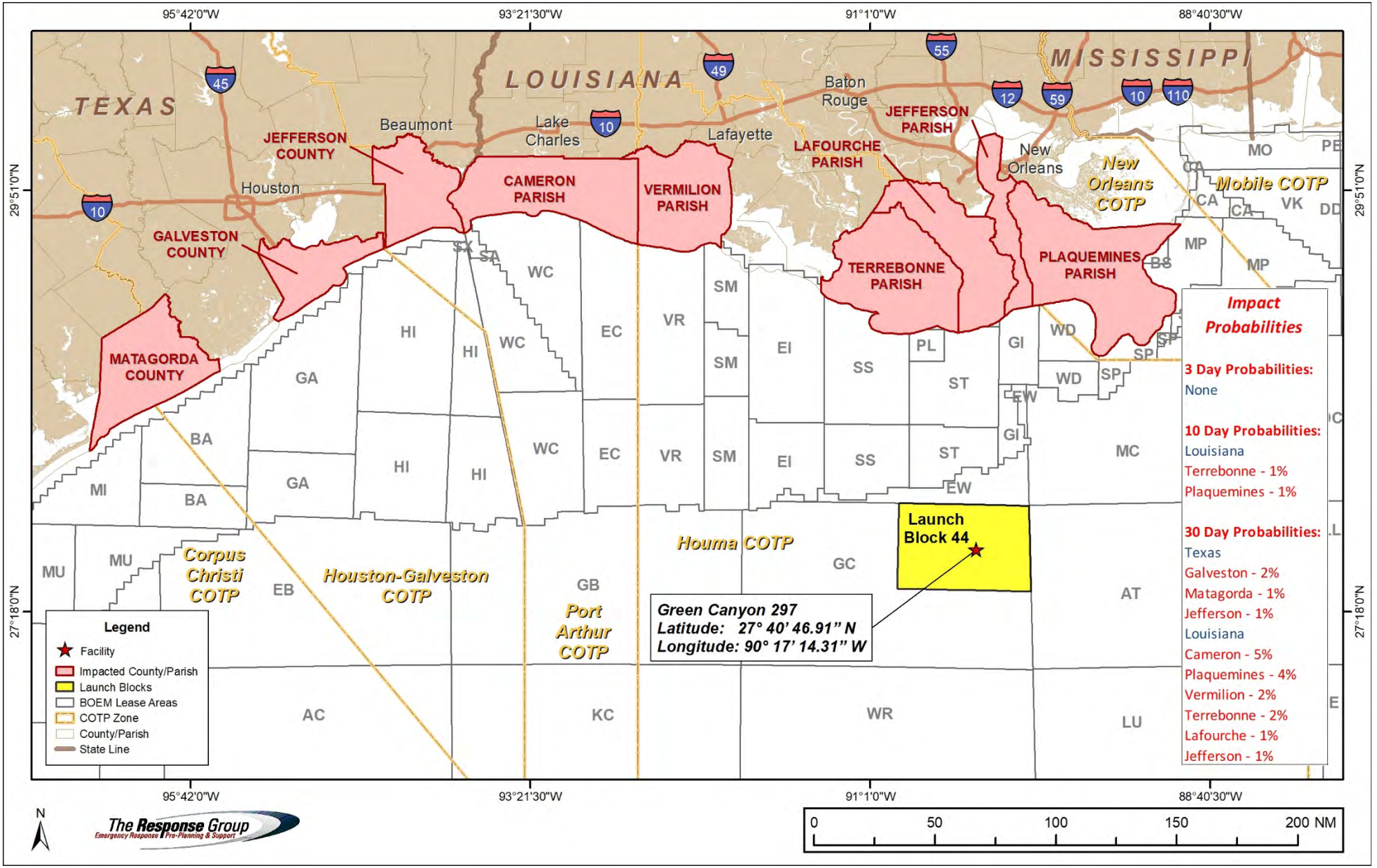

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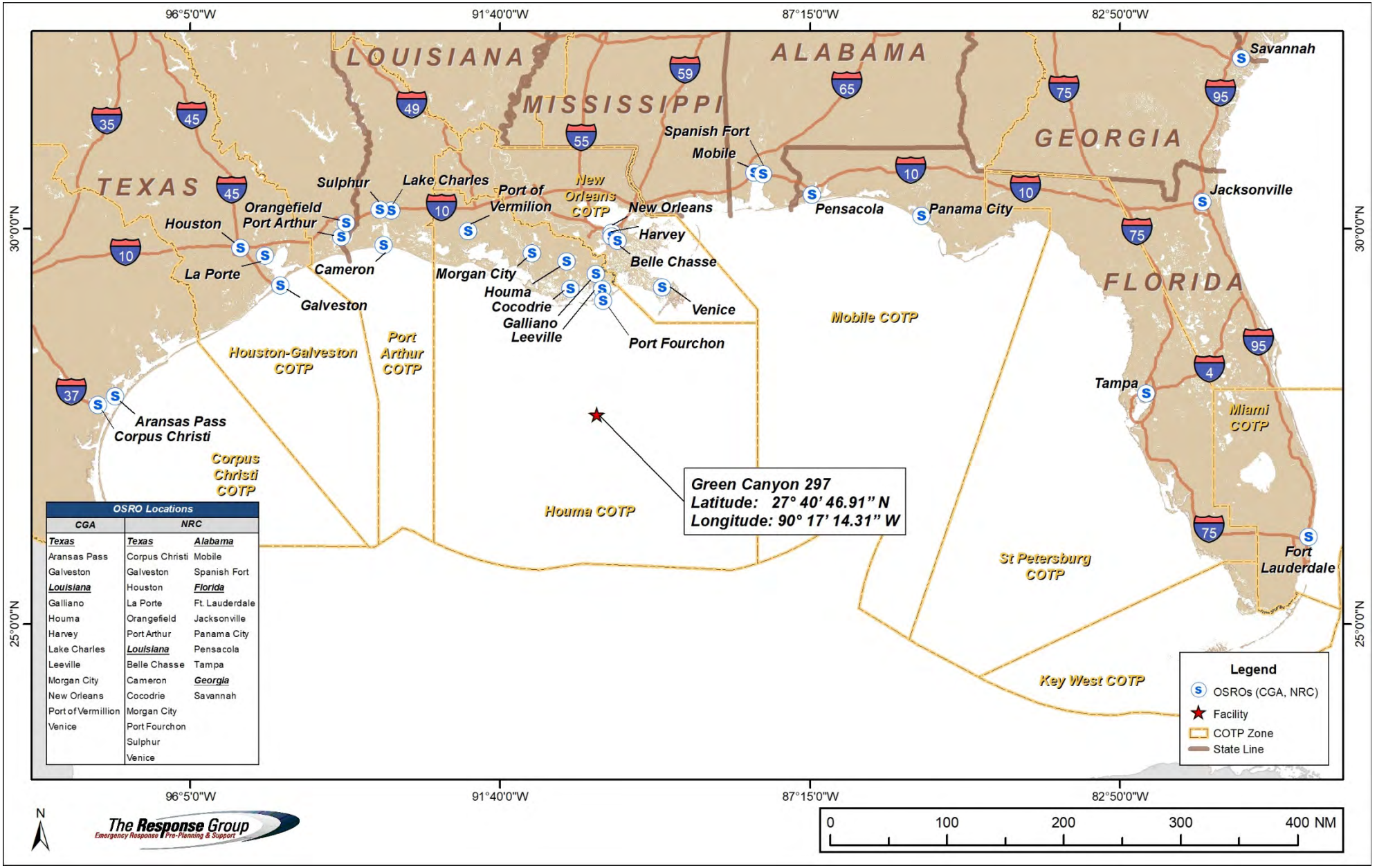

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Green Canyon 297 #3
Sample Aerial Surveillance Activation List

Aerial Surveillance System	Supplier & Phone	Airport/ City, State	Aerial Surveillance Package	Quantity	Staging Location	Distance to Site from Staging (nautical miles)	Response Times (Hours)			
							Staging ETA	Loadout Time	ETA to Site	Total ETA
** - These components are additional operational requirements that must be procured in addition to the system identified.*										
Twin Commander Air Speed - 260 Knots	Airborne Support (985) 851-6391	Houma, LA	Surveillance Aircraft	1	Houma, LA	132	1	0.25	0.44	**1.70**
			Spotter Personnel	2						
			Crew - Pilots	1						
Aztec Piper Air Speed - 150 Knots	Airborne Support (985) 851-6391	Houma, LA	Surveillance Aircraft	1	Houma, LA	132	1	0.25	0.77	**2.05**
			Spotter Personnel	2						
			Crew - Pilots	1						
Eurocopter EC-135 Helicopter Air Speed - 141 knots	PHI (800) 235-2452	Houma, LA	Surveillance Aircraft	1	Houma, LA	132	1	0.25	0.82	**2.10**
			Spotter Personnel	2						
			Crew - Pilots	1						
Sikorsky S-76 Helicopter Air Speed - 141 knots	PHI (800) 235-2452	Houma, LA	Surveillance Aircraft	1	Houma, LA	132	1	0.25	0.82	**2.10**
			Spotter Personnel	2						
			Crew - Pilots	1						

Green Canyon 297 #3
Sample Offshore Slick Containment Activation List

Skimming System	Supplier & Phone	Warehouse	Containment Package	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours) Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
Note: Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability.* - These components are additional operational requirements that must be procured in addition to the system identified. ** - The boom on this barge will be combined with vessels to create multiple containment systems, depending on the needs of the response.											
CGA-300 Boom Barge **	CGA (888) 242-2007	Leeville, LA	43" Auto Boom (ft) Ocean Tug * 70'+ Offshore Utility Boat Personnel Safety Monitor	25,000' 1 50 400 50	Leeville, LA	110	12	0	13.5	4	29.5
Offshore Slick Containment System	NRC (800) 899-4672	Grand Isle, LA	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	4	4	20	2	30
Offshore Slick Containment System	NRC (800) 899-4672	Grand Isle, LA	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	4	4	20	2	30
Offshore Slick Containment System	NRC (800) 899-4672	Lafitte, LA	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	4.5	4	20	2	30.5
Offshore Slick Containment System	NRC (800) 899-4672	Bayou La Batre, AL	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	6	4	20	2	32
Offshore Slick Containment System	NRC (800) 899-4672	Bayou La Batre, AL	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	6	4	20	2	32
Offshore Slick Containment System	NRC (800) 899-4672	Bayou La Batre, AL	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	6	4	20	2	32
Offshore Slick Containment System	NRC (800) 899-4672	Baytown, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	8	4	20	2	34
Offshore Slick Containment System	NRC (800) 899-4672	Baytown, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	8	4	20	2	34
Offshore Slick Containment System	NRC (800) 899-4672	Galveston, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	8.75	4	20	2	34.75
Offshore Slick Containment System	NRC (800) 899-4672	Galveston, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	8.75	4	20	2	34.75
Offshore Slick Containment System	NRC (800) 899-4672	Corpus Christi, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	11.5	4	20	2	37.5

Green Canyon 297 #3
Sample Offshore Slick Containment Activation List

Skimming System	Supplier & Phone	Warehouse	Containment Package	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours) Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
Offshore Slick Containment System	NRC (800) 899-4672	Corpus Christi, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	11.5	4	20	2	37.5
Offshore Slick Containment System	NRC (800) 899-4672	Corpus Christi, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	11.5	4	20	2	37.5
Offshore Slick Containment System	NRC (800) 899-4672	Corpus Christi, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	11.5	4	20	2	37.5
Offshore Slick Containment System	NRC (800) 899-4672	Aransas Pass, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	11.5	4	20	2	37.5
Offshore Slick Containment System	NRC (800) 899-4672	Aransas Pass, TX	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	11.5	4	20	2	37.5
Offshore Slick Containment System	NRC (800) 899-4672	Tampa, FL	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	13.25	4	20	2	39.25
Offshore Slick Containment System	NRC (800) 899-4672	Tampa, FL	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	13.25	4	20	2	39.25
Offshore Slick Containment System	NRC (800) 899-4672	Miami, FL	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	16.25	4	20	2	42.25
Offshore Slick Containment System	NRC (800) 899-4672	Miami, FL	42" Ocean Boom (ft) * Offshore Vessel * Personnel * Safety Representative	1,000' 2 6-12 2	Port Fourchon, LA	100	16.25	4	20	2	42.25
TOTAL SLICK CONTAINMENT BOOM SYSTEMS (FEET)									45,000'		

Note: Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability. - These components are additional operational requirements that must be procured in addition to the system identified.*
*** - The boom on this barge will be combined with vessels to create multiple containment systems, depending on the needs of the response.*

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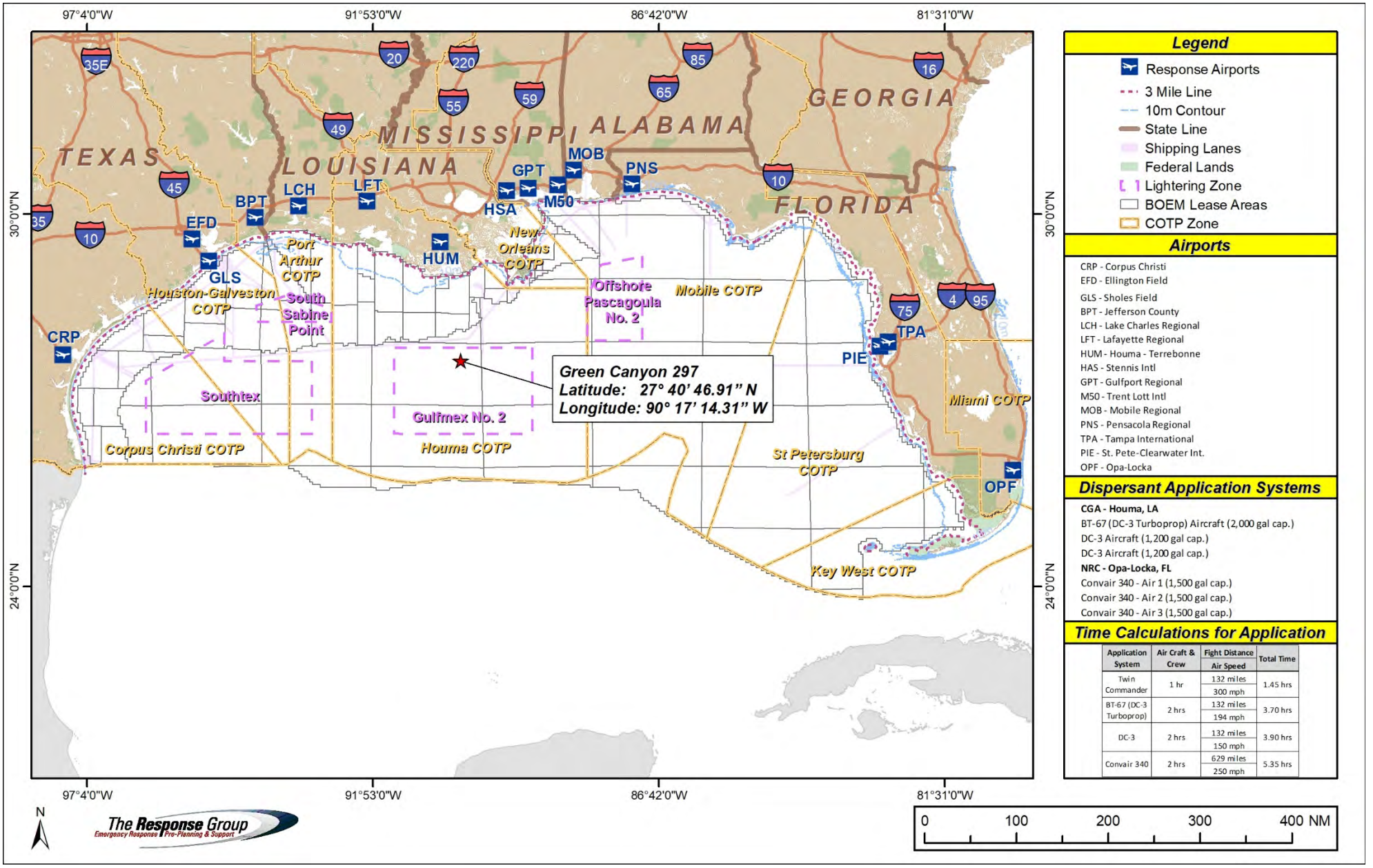
ATTACHMENT P

GC 297 #3



Legend

- Response Airports
- 3 Mile Line
- 10m Contour
- State Line
- Shipping Lanes
- Federal Lands
- Lightering Zone
- BOEM Lease Areas
- COTP Zone

Airports

CRP - Corpus Christi
EFD - Ellington Field
GLS - Sholes Field
BPT - Jefferson County
LCH - Lake Charles Regional
LFT - Lafayette Regional
HUM - Houma - Terrebonne
HAS - Stennis Intl
GPT - Gulfport Regional
M50 - Trent Lott Intl
MOB - Mobile Regional
PNS - Pensacola Regional
TPA - Tampa International
PIE - St. Pete-Clearwater Int.
OPF - Opa-Locka

Dispersant Application Systems

CGA - Houma, LA
BT-67 (DC-3 Turboprop) Aircraft (2,000 gal cap.)
DC-3 Aircraft (1,200 gal cap.)
DC-3 Aircraft (1,200 gal cap.)
NRC - Opa-Locka, FL
Convair 340 - Air 1 (1,500 gal cap.)
Convair 340 - Air 2 (1,500 gal cap.)
Convair 340 - Air 3 (1,500 gal cap.)

Time Calculations for Application

Application System	Air Craft & Crew	Fight Distance / Air Speed	Total Time
Twin Commander	1 hr	132 miles / 300 mph	1.45 hrs
BT-67 (DC-3 Turboprop)	2 hrs	132 miles / 194 mph	3.70 hrs
DC-3	2 hrs	132 miles / 150 mph	3.90 hrs
Convair 340	2 hrs	629 miles / 250 mph	5.35 hrs

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Green Canyon 297 #3
Sample Offshore Aerial Dispersant Activation List

Aerial Dispersant System	Supplier & Phone	Airport/ City, State	Aerial Dispersant Package	Quantity	Staging Location	Distance to Site from Staging (Miles)	Response Times (Hours)				
							Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
NOTE: Planholder has access to additional dispersant assets. For a comprehensive list of assets, see Section 18. *** - These components are additional operational requirements that must be procured in addition to the system(s) identified.** **** - The second flight times listed are to demonstrate subsequent sortie and application timeframes.** ***** - The dispersants listed is for gallon capacity only not amount stored at each location.**											
Twin Commander Air Speed - 300 MPH	CGA/Airborne Support (985) 851-6391	Houma, LA	Aero Commander	1	Houma, LA	132	1	0	0.44	0	**1.45**
			Spotter Personnel	2							
			Crew - Pilots	1							
BT-67 (DC-3 Turboprop) Aircraft Air Speed - 194 MPH	CGA/Airborne Support (985) 851-6391	Houma, LA	DC-3 Dispersant Aircraft	1	Houma, LA **1st Flight**	132	2	0.5	0.68	0.5	**3.70**
			Dispersant - Gallons	2000							
			Spotter Aircraft	1							
			Spotter Personnel	2	Houma, LA **2nd Flight**	132	0.68	0.5	0.68	0.3	**2.20**
			Crew - Pilots	2							
DC-3 Aircraft Air Speed - 150 MPH	CGA/Airborne Support (985) 851-6391	Houma, LA	DC-3 Dispersant Aircraft	1	Houma, LA **1st Flight**	132	2	0.5	0.88	0.5	**3.90**
			Dispersant - Gallons	1200							
			Spotter Aircraft	1							
			Spotter Personnel	2	Houma, LA **2nd Flight**	132	0.88	0.5	0.88	0.3	**2.60**
			Crew - Pilots	2							
DC-3 Aircraft Air Speed - 150 MPH	CGA/Airborne Support (985) 851-6391	Houma, LA	DC-3 Dispersant Aircraft	1	Houma, LA **1st Flight**	132	2	0.5	0.88	0.5	**3.90**
			Dispersant - Gallons	1200							
			Spotter Aircraft	1							
			Spotter Personnel	2	Houma, LA **2nd Flight**	132	0.88	0.5	0.88	0.3	**2.60**
			Crew - Pilots	2							
Convair 340 Air Speed - 250 MPH Air 1	NRC (800) 899-4672	Opa-Locka, FL	Convair 340 Disp. Aircraft	1	Opa-Locka, FL **1st Flight**	629	2	0.5	2.52	0.3	**5.35**
			* Dispersant - Gallons	***1,500							
			* Spotter Aircraft	1							
			* Spotter Personnel	2	New Iberia, LA **2nd Flight**	132	0.88	0.5	0.53	0.3	**2.25**
			Crew - Pilots	2							
Convair 340 Air Speed - 250 MPH Air 2	NRC (800) 899-4672	Opa-Locka, FL	Convair 340 Disp. Aircraft	1	Opa-Locka, FL **1st Flight**	629	2	0.5	2.52	0.3	**5.35**
			* Dispersant - Gallons	***1,500							
			* Spotter Aircraft	1							
			* Spotter Personnel	2	New Iberia, LA **2nd Flight**	132	0.88	0.5	0.53	0.3	**2.25**
			Crew - Pilots	2							
Convair 340 Air Speed - 250 MPH Air 3	NRC (800) 899-4672	Opa-Locka, FL	Convair 340 Disp. Aircraft	1	Opa-Locka, FL **1st Flight**	629	2	0.5	2.52	0.3	**5.35**
			* Dispersant - Gallons	***1,500							
			* Spotter Aircraft	1							
			* Spotter Personnel	2	New Iberia, LA **2nd Flight**	132	0.88	0.5	0.53	0.3	**2.25**
			Crew - Pilots	2							

Green Canyon 297 #3
Sample Offshore Boat Spray Dispersant Activation List

Boat Spray Dispersant System	Supplier & Phone	Warehouse	Boat Spray Dispersant Package	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
							Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
NOTE: Planholder has access to additional dispersant assets. For a comprehensive list of assets, see Section 18. *** - These components are additional operational requirements that must be procured by OSROs in addition to the system(s) identified.**											
USCG SMART Team	USCG	Mobile, AL	Personnel	4	Port Fourchon, LA	100	6.25	1	7	0.5	**14.75**
			* Crew Boat	1							
Vessel Based Dispersant Spray System	CGA (888) 242-2007	Harvey, LA	Dispersant Spray System	1	Port Fourchon, LA	100	4	12	10	1	**27**
			Dispersant (Gallons)	330							
			Personnel	4							
			* Utility Boat	1							

Green Canyon 297 #3
Sample In-Situ Burn Equipment Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
							Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
NOTE: Planholder has access to additional ISB assets. For a comprehensive list of those assets, see Section 19.											
Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability.											
*** - These components are additional operational requirements that must be procured in addition to the system identified.**											
**** - Teams will deploy in sections of 500' at any given time**											
ISB Fire-Fighting Team	TBD	TBD	* Offshore Firefighting Vessels	2	Port Fourchon, LA	100	4	1	7	1	13
			* Cranes	2							
			* Roll-off Boxes	2							
			Personnel	8							
			* Air Monitoring Equipment	2							
SMART In-Situ Burn Monitoring Team	USCG	Mobile, AL	* Air Monitoring Equipment	1	Port Fourchon, LA	100	4	1	7	1	13
			* Offshore Vessel	1							
			Personnel	4							
Safety Monitoring Team	TBD	TBD	* Air Monitoring Equipment	1	Port Fourchon, LA	100	4	1	7	1	13
			* Offshore Vessel	1							
			Personnel	4							
Wildlife Monitoring Team	TBD	TBD	* Air Monitoring Equipment	1	Port Fourchon, LA	100	4	1	7	1	13
			* Offshore Vessel	1							
			Personnel	4							
Aerial Spotting Team (per 2 ISB Task Forces)	TBD	TBD	Fixed Wing Aircraft	1	Port Fourchon, LA	100	4	1	7	1	13
			Trained ISB Spotter	2							
			ISB Documenter	1							
Fire Team (In-Situ Burn Fire System)	NRC (800) 899-4672	Houston, TX	Fire Boom (ft)	500	Port Fourchon, LA	100	8.25	4	20	1	33.25
			* Guide Boom/Tow Line (ft)	400							
			* Offshore Vessel (0.5 kt capability)	2							
			* Personnel	6-12							
			Ignition Device	10							
Fire Team (In-Situ Burn Fire System)	NRC (800) 899-4672	Houston, TX	Fire Boom (ft)	500	Port Fourchon, LA	100	8.25	4	20	1	33.25
			*Guide Boom/Tow Line (ft)	400							
			* Offshore Vessel (0.5 kt capability)	2							
			* Personnel	6-12							
			Ignition Device	10							
Fire Team (In-Situ Burn Fire System)	CGA (888) 242-2007	Harvey, LA	Fire Boom (ft)	500	Port Fourchon, LA	100	17	12	10	2	41
			Guide Boom/Tow Line (ft)	400							
			* Offshore Vessel (0.5 kt capability)	3							
			Personnel	20							
			Ignition Device	10							
Fire Team (In-Situ Burn Fire System)	CGA (888) 242-2007	Galveston, TX	Fire Boom (ft)	500	Port Fourchon, LA	100	22	12	10	2	46
			Guide Boom/Tow Line (ft)	400							
			* Offshore Vessel (0.5 kt capability)	3							
			Personnel	20							
			Ignition Device	10							
						TOTAL FIRE BOOM AVAILABLE (FEET)				2,000	

ATTACHMENT P

Green Canyon 297 #3
Sample Offshore On-Water Recovery & Storage Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Effective Daily Recovery Capacity (EDRC in Bbls/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
Note: Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability. * - These components are additional operational requirements that must be procured in addition to the system identified. ** - These components are additional operational requirements for the packages to be used in an enhanced skimming deployment. *** - Specific barge names may vary.													
FRV JL O'Brien	CGA (888) 242-2007	Leeville, LA	Lamor Brush Skimmer	2	22,885	249	Leeville, LA	110	2	0	8.5	1	12
			36" Boom	64									
			95' Vessel	1									
			X Band Radar	1									
			Personnel	6									
FRV Breton Island	CGA (888) 242-2007	Venice, LA	Lamor Brush Skimmer	2	22,885	249	Venice, LA	130	2	0	9.5	1	13
			36" Boom	64									
			95' Vessel	1									
			X Band Radar	1									
			Personnel	6									
FRV H.I. Rich	CGA (888) 242-2007	Vermilion, LA	Lamor Brush Skimmer	2	22,885	249	Vermilion, LA	222	2	0	13	1	16
			36" Boom	64									
			95' Vessel	1									
			X Band Radar	1									
			Personnel	6									
FRV Galveston Island	CGA (888) 242-2007	Galveston, TX	Lamor Brush Skimmer	2	22,885	249	Galveston, TX	299	2	0	19.5	1	23
			36" Boom	64									
			95' Vessel	1									
			X Band Radar	1									
			Personnel	6									
PT 150 Aquaguard Skimmer (2)	CGA (888) 242-2007	Harvey, LA	Brush skimmer	1	22,323	0	Port Fourchon, LA	100	4	12	10	2	28
			Personnel	4									
			* Offshore Utility Boat	1									
			* Add'l Storage	2		1,000							
NRC "Energy" OSRV	NRC (800) 899-4672	Grand Isle, LA	Vikoma Sea 50 Skimmer	1	1,509	300	Grand Isle, LA	114	4	2	23	2	31
			Operational 42" Sweep Boom	200'									
			42" Boom	2,000'									
			* Personnel	4-8									
			17' Deployment Vessel	1									
			110' Vessel	1									
SOS System 368	NRC (800) 899-4672	New Iberia, LA	Marco XI Skimmer	1	24,000	24	Port Fourchon, LA	100	4.75	4	20	2	31
			Vacuum Transfer Unit	1									
			* Support Vessel	1									
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Offshore Vessel	1									
			* Marine Tank	1		100							
SOS System 329	NRC (800) 899-4672	New Iberia, LA	4-Band Rope Mop Skimmer	1	1,509	24	Port Fourchon, LA	100	4.75	4	20	2	31
			Vacuum Transfer Unit	1									
			* Boom	100'									
			* Personnel	4-8									
			* Offshore Vessel	1									
			* Marine Tank	1		100							
SOS System 370	NRC (800) 899-4672	New Iberia, LA	4-Band Rope Mop Skimmer	1	3,621	0	Port Fourchon, LA	100	4.75	4	20	2	31
			Vikoma Fasflo Skimmer	1									
			* Boom	100'									
			* Personnel	4-8									
			* Offshore Vessel	1									
			* Marine Tank	1		100							
SOS System 362	NRC (800) 899-4672	Sulphur, LA	Vikoma Cascade Skimmer	1	5,520	24	Port Fourchon, LA	100	6.25	4	20	2	33
			Vacuum Transfer Unit	1									
			* Boom	100'									
			* Personnel	4-8									
			* Offshore Vessel	1									
			* Marine Tank	1		100							

Green Canyon 297 #3
Sample Offshore On-Water Recovery & Storage Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Effective Daily Recovery Capacity (EDRC in Bbls/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
Note: Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability. *** - These components are additional operational requirements that must be procured in addition to the system identified.** **** - These components are additional operational requirements for the packages to be used in an enhanced skimming deployment.** ***** - Specific barge names may vary.**													
SOS System 215	NRC (800) 899-4672	Baytown, TX	Vikoma Cascade Skimmer Vacuum Transfer Unit * Boom * Personnel * Offshore Vessel * Marine Tank	1 1 100' 4-8 1 1	5,520	24 100	Port Fourchon, LA	100	8	4	20	2	34
PT 150 Aquaguard Skimmer (1)	CGA (888) 242-2007	Galveston, TX	Brush skimmer Personnel * Offshore Utility Boat * Add'l Storage	1 4 1 2	22,323	0 1,000	Port Fourchon, LA	100	13	12	10	2	37
CGA-200 HOSS Barge (OSRB)	CGA (888) 242-2007	Harvey, LA	Marco Skimmer 67" Sea Sentry Personnel * Tug - 1,200 HP X Band Radar * Tug - 1,800 HP	4 2640' 12 2 1 1	76,285	4,000	Harvey, LA	192	12	0	26	2	40
NRC "DEFENDER" OSRB	NRC (800) 899-4672	Bayou La Batre, AL	Vikoma Cascade Skimmer Marco XI Skimmer Operational 42" Sweep Boom 42" Boom * Personnel 198' Barge 20' Deployment Craft * Nearshore/Offshore Tug	1 1 200' 3,000' 4-8 1 1 2	29,520	16,500	Bayou La Batre, AL	230	4	2	46	2	54
Koseq Skimming Arms (6a) (Mariflex Weir)	CGA (888) 242-2007	Harvey, LA	15m rigid skimming arm Personnel * Offshore vessel (>200') * 30T crane * 500 bbl Portable tank * 4000 bbl Internal Mud tank	1 4 1 1 4 1	18,163	0 2,000 4,000	Port Fourchon, LA	100	24	24	10	2	60
Koseq Skimming Arms (6b) (Mariflex Weir)	CGA (888) 242-2007	Harvey, LA	15m rigid skimming arm Personnel * Offshore vessel (>200') * 30T crane * 500 bbl Portable tank * 4000 bbl Internal Mud tank	1 4 1 1 4 1	18,163	0 2,000 4,000	Port Fourchon, LA	100	24	24	10	2	60
Koseq Skimming Arms (7a) (Mariflex Weir)	CGA (888) 242-2007	Harvey, LA	15m rigid skimming arm Personnel * Offshore vessel (>200') * 30T crane * 500 bbl Portable tank * 4000 bbl Internal Mud tank	1 4 1 1 4 1	18,163	0 2,000 4,000	Port Fourchon, LA	100	24	24	10	2	60
Koseq Skimming Arms (7b) (Mariflex Weir)	CGA (888) 242-2007	Harvey, LA	15m rigid skimming arm Personnel * Offshore vessel (>200') * 30T crane * 500 bbl Portable tank * 4000 bbl Internal Mud tank	1 4 1 1 4 1	18,163	0 2,000 4,000	Port Fourchon, LA	100	24	24	10	2	60
Koseq Skimming Arms (1a) (Lamor Brush)	CGA (888) 242-2007	Galveston, TX	15m rigid skimming arm Personnel * Offshore vessel (>200') * 30T crane * 500 bbl Portable tank * 4000 bbl Internal Mud tank	1 4 1 1 4 1	22,885	0 2,000 4,000	Port Fourchon, LA	100	24	24	10	2	60

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Green Canyon 297 #3
Sample Offshore On-Water Recovery & Storage Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Effective Daily Recovery Capacity (EDRC In Bbls/Day)	Storage (Barrels)	Staging Area	Distance to Site from Staging (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Site	Deployment Time	Total ETA
Note: Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability. * - These components are additional operational requirements that must be procured in addition to the system identified. ** - These components are additional operational requirements for the packages to be used in an enhanced skimming deployment. *** - Specific barge names may vary.													
Koseq Skimming Arms (1b) (Lamor Brush)	CGA (888) 242-2007	Galveston, TX	15m rigid skimming arm	1	22,885	0	Port Fourchon, LA	100	24	24	10	2	60
			Personnel	4									
			* Offshore vessel (>200')	1									
			* 30T crane	1									
			* 500 bbl Portable tank	4		2,000							
			* 4000 bbl Internal Mud tank	1		4,000							
Koseq Skimming Arms (2a) (Lamor Brush)	CGA (888) 242-2007	Galveston, TX	15m rigid skimming arm	1	22,885	0	Port Fourchon, LA	100	24	24	10	2	60
			Personnel	4									
			* Offshore vessel (>200')	1									
			* 30T crane	1									
			* 500 bbl Portable tank	4		2,000							
			* 4000 bbl Internal Mud tank	1		4,000							
Koseq Skimming Arms (2b) (Lamor Brush)	CGA (888) 242-2007	Galveston, TX	15m rigid skimming arm	1	22,885	0	Port Fourchon, LA	100	24	24	10	2	60
			Personnel	4									
			* Offshore vessel (>200')	1									
			* 30T crane	1									
			* 500 bbl Portable tank	4		2,000							
			* 4000 bbl Internal Mud tank	1		4,000							
NRC "ADMIRAL" OSRV	NRC (800) 899-4672	Galveston, TX	Marco XI Skimmer	1	28,526	300	Galveston, TX	299	4	2	60	2	68
			Elastec X-150 Disk Skimmer	1									
			Operational 42" Boom	200'									
			42" Boom	2,000'									
			26" Boom	72'									
			* Personnel	4-8									
			110' Vessel	1									
			17' Deployment Vessel	1									
***Moran/ Long Island	CGA (888) 242-2007	Houma, LA	Offshore Barge	1	N/A	62,982	Houma, LA	136	24-72	0	17.5	1	43 to 91
			Personnel	4									
			Offshore Tug	1									
***Moran/ Tennessee	CGA (888) 242-2007	Houma, LA	Offshore Barge	1	N/A	82,022	Houma, LA	136	24-72	0	17.5	1	43 to 91
			Personnel	4									
			Offshore Tug	1									
***Moran/ New Hampshire	CGA (888) 242-2007	Houma, LA	Offshore Barge	1	N/A	118,836	Houma, LA	136	24-72	0	17.5	1	43 to 91
			Personnel	4									
			Offshore Tug	1									
***K-Sea DBL 101 Offshore Barge	CGA (888) 242-2007	Belle Chasse, LA	Offshore Barge	1	N/A	107,285	Houma, LA	136	24-72	0	17.5	1	43 to 91
			Personnel	10									
			* Offshore Tug	1									
***K-Sea DBL 102 Offshore Barge	CGA (888) 242-2007	Belle Chasse, LA	Offshore Barge	1	N/A	107,285	Houma, LA	136	24-72	0	17.5	1	43 to 91
			Personnel	10									
			* Offshore Tug	1									
***Moran/ Massachusetts	CGA (888) 242-2007	Houma, LA	Offshore Barge	1	N/A	137,123	Houma, LA	136	24-72	0	17.5	1	43 to 91
			Personnel	4									
			Offshore Tug	1									
NRC "VALIANT" OSRB	NRC (800) 899-4672	Aransas Pass, TX	Marco XI Skimmer	1	24,000	20,300	Aransas Pass, TX	422	4	2	84.5	2	93
			Operational 42" Sweep Boom	200'									
			42" Boom	2,000'									
			* Personnel	4-8									
			199' Barge	1									
			* Boom Boat	1									
			* Nearshore/Offshore Tug	2									
								DERATED RECOVERY RATE (BBLS/DAY)					500,388
								STORAGE CAPACITY INCLUDING SKIMMING VESSELS (BARRELS)					708,525

ATTACHMENT P

Green Canyon 297 #3
Sample Nearshore On-Water Recovery Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Effective Daily Recovery Capacity (EDRC in Bbls/Day)	Storage (Barrels)	Staging Area	Distance to Nearshore Environment (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Nearshore Environment	Deployment Time	Total ETA
* - These components are additional operational requirements that must be procured in addition to the system identified. NOTE: Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability.													
SW CGA-74 FRV	CGA (888) 242-2007	Vermilion, LA	Marco Belt Skimmer	2	21,500	249	Vermilion, LA	111	2	0	7	1	10
			36" Auto Boom	150'									
			Personnel	4									
			56' SW Vessel	1									
			* 14'-16' Alum. Flatboat	2									
FRV M/V Bastian Bay	CGA (888) 242-2007	Vermilion, LA	Lori Brush Skimmer	2	15,257	65	Vermilion, LA	111	2	0	8.5	1	11.5
			36" Boom	46'									
			46' Vessel	1									
			Personnel	4									
SWS CGA-75 FRV	CGA (888) 242-2007	Galveston, TX	Lori Brush Skimmer	2	22,885	249	Galveston, TX	87	2	0	9	1	12
			36" Boom	150									
			60' Vessel	1									
			X Band Radar	1									
			Personnel	4									
SWS CGA-51 MARCO Shallow Water Skimmer	CGA (888) 242-2007	Vermilion, LA	Marco Belt Skimmer	1	3,588	20	Cameron, LA	13	4	6	1	1	12
			* 18" Boom (contractor)	100'									
			Personnel	3									
			34' Skimming Vessel	1									
			Shallow Water Barge	1		249							
SOS System 385	NRC (800) 899-4672	Olive Branch, MS	Vikoma Fasflo Skimmer	1	2,112	24	Cameron, LA	13	4	4	3	2	13
			Vacuum Transfer Unit	1									
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
			* Marine Tank	1		50							
SOS System 371	NRC (800) 899-4672	Sulphur, LA	Vikoma Fasflo Skimmer	1	2,112	24	Cameron, LA	13	4	4	3	2	13
			Vacuum Transfer Unit	1									
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SOS System WDT - 102	NRC (800) 899-4672	New Iberia, LA	Weir Disc Skimmer	1	1,371	24	Cameron, LA	13	5	4	3	2	13
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SOS System 721	NRC (800) 899-4672	Baytown, TX	Action 24 Skimmer	1	823	96	Cameron, LA	13	5	4	3	2	13
			Pillow Tank	4									
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SOS System 332	NRC (800) 899-4672	Belle Chasse, LA	Vikoma Fasflo Skimmer	1	2,112	0	Cameron, LA	13	7	4	3	2	15
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
			* Marine Tank	1		50							
CGA-54 Egmopol Shallow Water Skimmer	CGA (888) 242-2007	Galveston, TX	Marco Belt Skimmer	1	1,810	100	Cameron, LA	13	6	6	2	1	15
			* 18" Boom (contractor)	100'									
			Personnel	3									
			34' Skimming Vessel	1									
			Shallow Water Barge	1		249							
SWS CGA-53 MARCO Shallow Water Skimmer	CGA (888) 242-2007	Leeville, LA	Marco Belt Skimmer	1	3,588	34	Cameron, LA	13	9	6	1	1	17
			* 18" Boom (contractor)	100'									
			Personnel	3									
			38' Skimming Vessel	1									
SOS System 225	NRC (800) 899-4672	Pensacola, FL	Weir Disc Skimmer	1	1,371	24	Cameron, LA	13	9	4	3	2	17
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SOS System 750	NRC (800) 899-4672	Pensacola, FL	Vikoma Fasflo Skimmer	1	2,112	24	Cameron, LA	13	9	4	3	2	17
			Vacuum Transfer Unit	1									
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SOS System 313	NRC (800) 899-4672	Corpus Christi, TX	Weir Disk Skimmer	1	1,371	24	Cameron, LA	13	8.00	4	3	2	17
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
FRV M/V RW Armstrong	CGA (888) 242-2007	Leeville, LA	Lori Brush Skimmer	2	15,257	65	Leeville, LA	218	2	0	15	1	18
			36" Boom	46'									
			46' Vessel	1									
			Personnel	4									

ATTACHMENT P

Green Canyon 297 #3
Sample Nearshore On-Water Recovery Activation List

Skimming System	Supplier & Phone	Warehouse	Skimming Package	Quantity	Effective Daily Recovery Capacity (EDRC in Bbls/Day)	Storage (Barrels)	Staging Area	Distance to Nearshore Environment (Miles)	Response Times (Hours)				
									Staging ETA	Loadout Time	ETA to Nearshore Environment	Deployment Time	Total ETA
* - These components are additional operational requirements that must be procured in addition to the system identified. NOTE: Total ETA might be effected by weather, sea state, lock closure, 3rd party vessel availability.													
SWS CGA-55 Egmopol Shallow Water Skimmer	CGA (888) 242-2007	Leeville, LA	Marco Skimmer	1	1,810	100	Cameron, LA	13	9	6	2	1	18
			* 18" Boom (contractor)	100'									
			Personnel	3									
			38' Skimming Vessel	1									
			Shallow Water Barge	1		249							
SWS CGA-76 FRV	CGA (888) 242-2007	Leeville, LA	Lori Brush Skimmer	2	22,885	249	Leeville, LA	218	2	0	16	1	19
			36" Boom	150									
			60' Vessel	1									
			X Band Radar	1									
			Personnel	4									
SW CGA-72 FRV	CGA (888) 242-2007	Leeville, LA	Marco Belt Skimmer	2	21,500	249	Leeville, LA	218	2	0	16	1	19
			36" Auto Boom	150'									
			Personnel	4									
			56' SWS Vessel	1									
			* 14'-16' Alum. Flatboat	2									
FRV M/V Grand Bay	CGA (888) 242-2007	Venice, LA	Lori Brush Skimmer	2	15,257	65	Venice, LA	276	2	0	16	1	19
			36" Boom	46'									
			46' Vessel	1									
			Personnel	4									
SWS CGA-52 MARCO Shallow Water Skimmer	CGA (888) 242-2007	Venice, LA	Marco Belt Skimmer	1	3,588	34	Cameron, LA	13	11	6	1	1	19
			* 18" Boom (contractor)	100'									
			Personnel	3									
			36' Skimming Vessel	1									
			Shallow Water Barge	1		249							
FRV CGA 58 Timbalier Bay	CGA (888) 242-2007	Aransas Pass, TX	Lori Brush Skimmer	2	15,257	65	Aransas Pass, TX	268	2	0	18	1	21
			36" Boom	46'									
			46' Vessel	1									
			Personnel	4									
SOS System 333	NRC (800) 899-4672	Atlantic Beach, FL	Vikoma Fasflo Skimmer	1	2,112	24	Cameron, LA	13	14	4	3	2	23
			Vacuum Transfer Unit	1									
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SWS CGA-77 FRV	CGA (888) 242-2007	Venice, LA	Lori Brush Skimmer	2	22,885	249	Venice, LA	276	2	0	20	1	23
			36" Boom	150									
			60' Vessel	1									
			X Band Radar	1									
			Personnel	4									
SW CGA-73 FRV	CGA (888) 242-2007	Venice, LA	Marco Belt Skimmer	2	21,500	249	Venice, LA	276	2	0	20	1	23
			36" Auto Boom	150'									
			Personnel	5									
			56' SWS Vessel	1									
			* 14'-16' Alum. Flatboat	2									
SW CGA-71 FRV	CGA (888) 242-2007	Aransas Pass, TX	Marco Belt Skimmer	2	21,500	249	Aransas Pass, TX	268	2	0	20	1	23
			36" Auto Boom	150'									
			Personnel	5									
			56' SWS Vessel	1									
			* 14'-16' Alum. Flatboat	2									
SOS System 203	NRC (800) 899-4672	Cocoa, FL	Weir Disk Skimmer	1	1,371	24	Cameron, LA	13	15	4	3	2	24
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SOS System WBT - 205	NRC (800) 899-4672	Cocoa, FL	Crucial Drum Skimmer	1	240	48	Cameron, LA	13	15	4	3	2	24
			Pillow Tank	2									
			* Sweep Boom	100'									
			* Personnel	4-8									
			28' Deployment Craft	1									
SOS System 205	NRC (800) 899-4672	Tampa, FL	Weir Disc Skimmer	1	1,371	24	Cameron, LA	13	15	4	3	2	24
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
SOS System 204	NRC (800) 899-4672	Fort Lauderdale, FL	Weir Disc Skimmer	1	1,371	24	Cameron, LA	13	18	4	3	2	26
			* Sweep Boom	100'									
			* Personnel	4-8									
			* Nearshore Vessel	1									
DERATED RECOVERY RATE (BBLS/DAY)													249,916
SKIMMING VESSEL STORAGE CAPACITY (BARRELS)													3,771

ATTACHMENT P

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
ES&H Environmental (877) 437-2634	Lake Charles, LA	Containment Boom - 10"	500'	Cameron, LA	4	1	1	6
		Containment Boom - 18"	15,000'					
		Containment Boom - 24"	5,000'					
		Jon Boat - 12' to 16'	3					
		Response Boats - 18' to 21'	2					
		Response Boats - 26' to 29'	2					
		Portable Skimmers	13					
		Wildlife Hazing Cannon	40					
USES Environmental (888) 279-9930	Lake Charles, LA	Containment Boom - 10"	100'	Cameron, LA	4	1	1	6
		Containment Boom - 18"	7,700'					
		Response Boats - 16'	3					
		Response Boats - 27'	1					
		Response Boats - 37'	1					
MSRC (800) OIL-SPIL	Lake Charles, LA	Wildlife Trailer	1	Cameron, LA	4	1	1	6
		Contract Truck (Third Party)	1					
		Personnel (Responder/Mechanic)	1					
Miller Env. Services (800) 929-7227	Sulphur, LA	Containment Boom - 10"	600'	Cameron, LA	4	1	1	6
		Containment Boom - 18"	14,000'					
		Jon Boats - 14' to 16'	2					
		Jon Boats - 16'	2					
		Air Boat - 18'	1					
		Work Boat - 18'	2					
		Response Boats - 24' - 28'	4					
		Portable Skimmers	5					
		Shallow Water Skimmers	1					
		Response Personnel	49					
AMPOL (800) 482-6765	Port Arthur, TX	Containment Boom - 18" to 24"	16,000'	Cameron, LA	4	1	1	6
		Response Boats - 14' to 20'	2					
		Response Boats - 21' to 36'	1					
		Portable Skimmers	3					
Clean Harbors (800) 645-8265	Port Arthur, TX	Containment Boom - 18" to 24"	3,000'	Cameron, LA	4	1	1	6
		Response Boats - 21' to 36'	2					
		Portable Skimmers	2					
		Response Personnel	54					
Garner Environmental (800) 424-1716	Port Arthur, TX	Containment Boom - 6"	22,000'	Cameron, LA	4	1	1	6
		Response Boats - 14' to 20'	8					
		Response Boats - 21' to 36'	1					
		Portable Skimmers	3					

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
OMI (800) 645-6671	Port Arthur, TX	Containment Boom - 18" to 24"	4000'	Cameron, LA	4	1	1	6
		Response Boats - 14' to 20'	6					
		Response Boats - 21' to 36'	2					
		Shallow Water Skimmers	1					
Miller Env. Services (800) 929-7227	Beaumont, TX	Containment Boom - 18"	14,000'	Cameron, LA	4	1	1	6
		Response Boats - 18'	2					
		Response Boats - 24'	2					
		Shallow Water Skimmers	1					
		Response Personnel	47					
Wildlife Ctr. of Texas (713) 861-9453	Baton Rouge, LA	Wildlife Specialist - Personnel	6 to 20	Cameron, LA	5	1	1	7
Clean Harbors (800) 645-8265	Baton Rouge, LA	Containment Boom - 18" to 24"	14,000'	Cameron, LA	5	1	1	7
		Response Boats - 14' to 20'	1					
		Portable Skimmers	3					
		Response Personnel	13					
ES&H Environmental (877) 437-2634	Morgan City, LA	Containment Boom - 10"	2,000'	Cameron, LA	5	1	1	7
		Containment Boom - 18"	500'					
		Jon Boat - 12' to 16'	3					
		Response Boats - 18' to 21'	2					
		Response Boats - 22' to 25'	1					
		Portable Skimmers	2					
		Wildlife Hazing Cannon	12					
OMI (800) 645-6671	Morgan City, LA	Containment Boom - 18" to 24"	2,500	Cameron, LA	5	1	1	7
		Containment Boom - 6" to 10"	400'					
		Response Boats - 16'	2					
		Response Boats - 25' to 28'	1					
		Portable Skimmers	3					
		Response Personnel	3					
ES&H Environmental (877) 437-2634	Lafayette, LA	Containment Boom - 10"	500'	Cameron, LA	5	1	1	7
		Containment Boom - 18"	13,000'					
		Jon Boat - 12' to 16'	3					
		Response Boats - 18' to 21'	1					
		Response Boats - 22' to 25'	1					
		Response Boats - 26' to 29'	1					
		Portable Skimmers	4					
		Wildlife Hazing Cannon	12					

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
AMPOL (800) 482-6765	New Iberia, LA	Containment Boom - 6" to 10"	4,150'	Cameron, LA	5	1	1	7
		Containment Boom - 18" to 24"	34,050'					
		Response Boats - 14' to 20'	3					
		Response Boats - 21' to 36'	3					
		Portable Skimmers	27					
Clean Harbors (800) 645-8265	New Iberia, LA	Containment Boom - 18" to 24"	33,800'	Cameron, LA	5	1	1	7
		Containment Boom - 6" to 10"	500'					
		Response Boats - 21' to 36'	4					
OMI (800) 645-6671	New Iberia, LA	Containment Boom - 18" to 24"	12,000'	Cameron, LA	5	1	1	7
		Containment Boom - 6" to 10"	300'					
		Response Boats - 16'	3					
		Response Boats (Barge) - 25' to 33'	1					
		Response Boats - 25' to 28'	1					
		Portable Skimmers	8					
		Response Personnel	8					
OMI (800) 645-6671	Port Allen, LA	Containment Boom - 18" to 24"	2500'	Cameron, LA	5	1	1	7
		Containment Boom - 6" to 10"	500'					
		Response Boats - 16'	2					
		Response Boats - 25 to 33'	1					
		Shallow Water Skimmers	1					
		Response Personnel	6					
USES Environmental (888) 534-2744	Geismar, LA	Containment Boom - 18"	1,000'	Cameron, LA	5	1	1	7
		Response Boats - 16'	2					
		Portable Skimmers	1					
USES Environmental (888) 279-9930	Shreveport, LA	Containment Boom - 6"	500'	Cameron, LA	5	1	1	7
		Containment Boom - 18"	2,000'					
		Response Boats - 16'	1					
		Response Boats - 24'	1					
		Shallow Water Skimmers	1					
Garner Environmental (800) 424-1716	Deer Park, TX	Containment Boom - 18"	16,000'	Cameron, LA	5	1	1	7
		Response Boats - 12'	2					
		Response Boats - 16' to 20'	5					
		Respons Boats - 30'	2					
		Portable Skimmers	13					

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
Garner Environmental (800) 424-1716	La Marque, TX	Containment Boom - 6"	9,500'	Cameron, LA	5	1	1	7
		Response Boats - 16'	5					
		Response Boats - 24'	1					
		Portable Skimmers	7					
Phoenix Pollution Control & Environmental Services (281) 838-3400	Baytown, TX	Containment Boom - 18"	13,000'	Cameron, LA	5	1	1	7
		Containment Boom - 10"	1,150'					
		Response Boats - 16'	6					
		Response Boats - 20'	3					
		Response Boats - 24'	1					
		Response Boats - 35'	2					
		Portable Skimmers	24					
ES&H Environmental (877) 437-2634	Houston, TX	Containment Boom - 10"	500'	Cameron, LA	5	1	1	7
		Containment Boom - 18"	13,000'					
		Containment Boom - 24"	5,000'					
		Jon Boat - 12' to 16'	2					
		Response Boats - 26' to 29'	2					
		Portable Skimmers	2					
		Wildlife Hazing Cannon	12					
Miller Env. Services (800) 929-7227	Houston, TX	Containment Boom - 18"	12,000'	Cameron, LA	5	1	1	7
		Shallow Water Skimmers	1					
		Response Boats - 28'	1					
		Responder Personnel	38					
Clean Harbors (800) 645-8265	Houston, TX	Containment Boom - 18" to 24"	4,500'	Cameron, LA	5	1	1	7
		Response Boats - 14' to 20'	2					
		Response Boats - 21' to 36'	3					
		Portable Skimmers	1					
		Response Personnel	14					
OMI (800) 645-6671	Houston, TX	Containment Boom - 18" to 24"	4000'	Cameron, LA	5	1	1	7
		Response Boats - 16'	3					
		Response Boats - 25' to 28'	1					
		Portable Skimmers	1					
USES Environmental (888) 279-9930	Houston, TX	Containment - 18"	10,000'	Cameron, LA	5	1	1	7
		Response Boats - 16'	4					
		Response Boats - 26'	1					
		Portable Skimmers	1					

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
Wildlife Ctr. of Texas (713) 861-9453	Houston, TX	Wildlife Specialist - Personnel	6 to 20	Cameron, LA	5	1	1	7
AMPOL (800) 482-6765	Harvey, LA	Containment Boom - 18" to 24"	8,000'	Cameron, LA	6	1	1	8
		Containment Boom - 6" to 10"	3,000'					
OMI (985) 798-1005	Houma, LA	Containment Boom - 18" to 24"	2,000'	Cameron, LA	6	1	1	8
		Containment Boom - 6" to 10"	500'					
		Response Boats - 16'	2					
		Response Boats - 25' to 28'	1					
		Response Boats - (Cabin Boat) 27' to 30'	1					
		Shallow Water Skimmers	3					
ES&H Environmental (877) 437-2634	Houma, LA	Containment Boom - 10"	2,000'	Cameron, LA	6	1	1	8
		Containment Boom - 18"	20,000'					
		Containment Boom - 24"	5,000'					
		Jon Boat - 12' to 16'	30					
		Response Boats - 22' to 25'	2					
		Response Boats - 26' to 29'	4					
		Portable Skimmers	23					
		Shallow Water Skimmers	2					
		Wildlife Hazing Cannon	57					
USES Environmental (888) 279-9930	Hahnville, LA	Containment Boom - 18"	500'	Cameron, LA	6	1	1	8
USES Environmental (888) 279-9930	Amelia, LA	Containment Boom - 18"	500'	Cameron, LA	6	1	1	8
USES Environmental (888) 279-9930	Marrero, LA	Containment Boom - 18"	600'	Cameron, LA	6	1	1	8
USES Environmental (888) 279-9930	Jackson, MS	Containment Boom - 10"	400'	Cameron, LA	6	1	1	8
		Containment Boom - 18"	2,000'					
		Response Boats - 12'	3					
		Response Boats - 14'	1					
		Response Boats - 16'	1					
		Response Boats - 18'	1					
		Response Boats - 20'	1					
		Portable Skimmers	2					

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

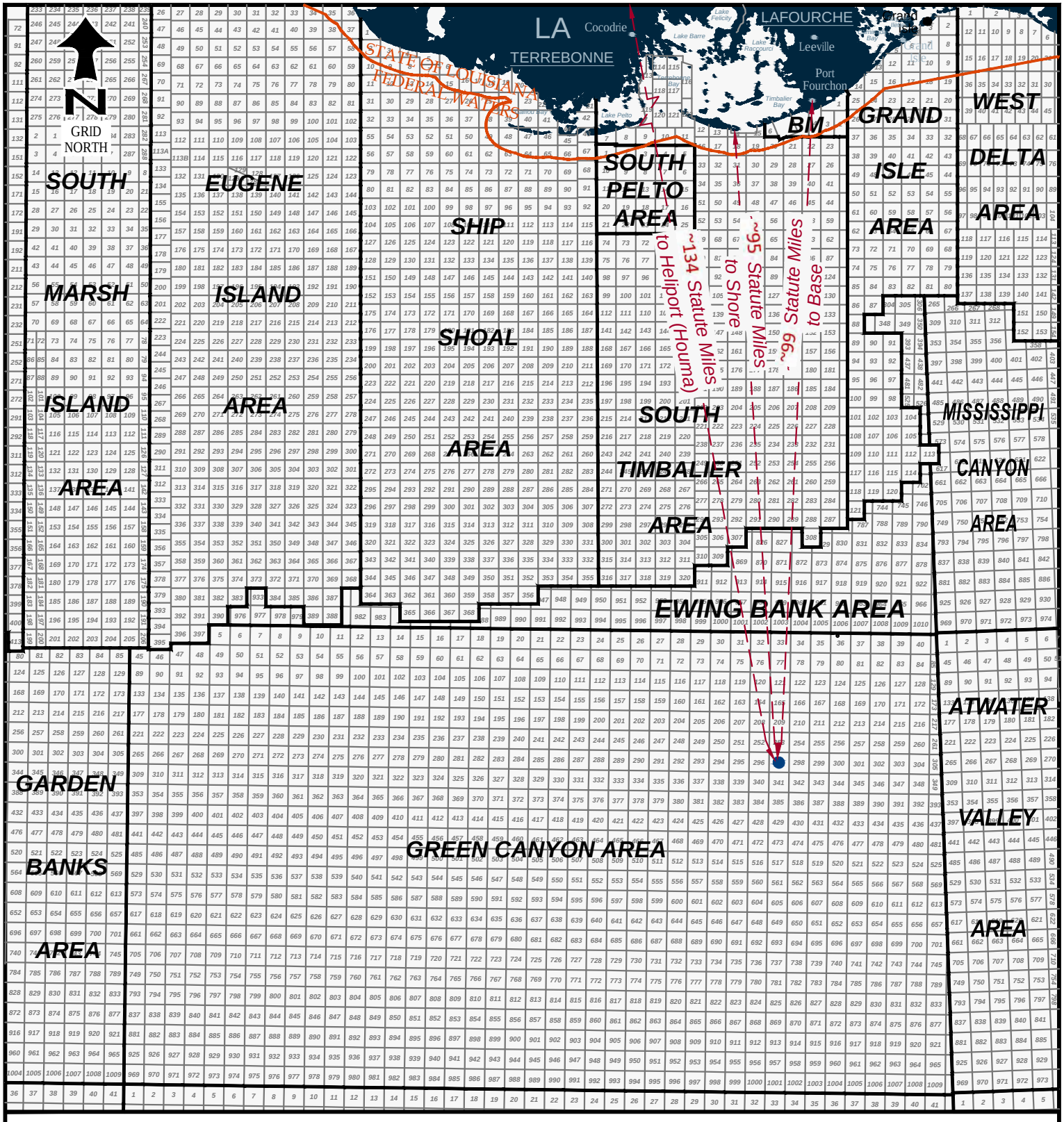
Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
ES&H Environmental (877) 437-2634	Port Fourchon, LA	Containment Boom - 18"	1000'	Cameron, LA	7	1	1	9
		Response Boats - 22' to 25'	1					
		Portable Skimmers	1					
ES&H Environmental (877) 437-2634	Belle Chasse, LA	Containment Boom - 10"	1,500'	Cameron, LA	7	1	1	9
		Containment Boom - 18"	15,500'					
		Containment Boom - 24"	5,000'					
		Jon Boat - 12' to 16'	4					
		Response Boats - 18' to 21'	1					
		Response Boats - 22' to 25'	1					
		Response Boats - 26' to 29'	3					
		Portable Skimmers	10					
		Wildlife Hazing Cannon	50					
OMI (800) 645-6671	Belle Chasse, LA	Containment Boom - 18" to 24"	4,500'	Cameron, LA	7	1	1	9
		Containment Boom - 6" to 10"	500'					
		Response Boats - 20'	1					
		Response Boats - 25' to 28'	2					
		Portable Skimmers	12					
		Shallow Water Skimmers	1					
		Bird Scare Cannons	12					
		Response Personnel	24					
ES&H Environmental (877) 437-2634	Golden Meadow, LA	Containment Boom - 10"	1,000'	Cameron, LA	7	1	1	9
		Containment Boom - 18"	13,000					
		Jon Boat - 12' to 16'	2					
		Response Boats - 18' to 21'	1					
		Response Boats - 22' to 25'	1					
		Response Boats - 26' to 29'	1					
		Portable Skimmers	5					
		Wildlife Hazing Cannon	12					
OMI (800) 645-6671	Galliano, LA	Containment Boom - 18" to 24"	2,000'	Cameron, LA	7	1	1	9
		Containment Boom - 6" to 10"	500'					
		Response Boats - 16'	1					
		Response Boats (Barge) - 25' to 33'	1					
		Response Boats - 25' to 28'	1					
		Portable Skimmers	3					

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
USES Environmental (888) 279-9930	Meraux, LA	Containment Boom - 18"	6,000'	Cameron, LA	7	1	1	9
		Containment Boom - 10"	1,000'					
		Response Boats - 16'	23					
		Response Boats - 18'	1					
		Response Boats - 24'	1					
		Response Boats - 26'	2					
		Response Boats - 28'	1					
		Portable Skimmers	2					
USES Environmental (888) 279-9930	Lafitte, LA	Containment Boom - 18"	1,000'	Cameron, LA	7	1	1	9
		Response Boats - 18'	2					
USES Environmental (888) 279-9930	Biloxi, MS	Containment Boom - 18"	2,000'	Cameron, LA	7	1	1	9
		Response Boats - 16'	1					
CGA (888) 242-2007	Harvey, LA	Wildlife Rehab Trailer	1	Cameron, LA	6	1	3	10
		Wildlife Husbandry Trailer	1					
		Support Trailer	3					
		Bird Scare Cannons	120					
		Contract Truck (Third Party)	3					
		Personnel (Responder/Mechanic)	4					
AMPOL (800) 482-6765	Venice, LA	Containment Boom - 18" to 24"	2,250'	Cameron, LA	8	1	1	10
		Response Boats - 14' to 20'	2					
		Response Boats - 21' to 36'	1					
		Portable Skimmers	2					
ES&H Environmental (877) 437-2634	Venice, LA	Containment Boom - 10"	2,000'	Cameron, LA	8	1	1	10
		Containment Boom - 18"	13,000'					
		Containment Boom - 24"	10,000					
		Jon Boat - 12' to 16'	4					
		Response Boats - 22' to 25'	1					
		Response Boats - 26' to 29'	2					
		Portable Skimmers	5					
		Wildlife Hazing Cannon	25					

Green Canyon 297 #3
Sample Shoreline Protection & Wildlife Support List

Supplier & Phone	Warehouse	Equipment Listing	Quantity	Staging Area	Response Times (Hours)			
					Staging ETA	Loadout Time	Deployment Time	Total ETA
OMI (800) 645-6671	Venice, LA	Containment Boom - 18" to 24"	1,500'	Cameron, LA	8	1	1	10
		Response Boats - 16'	4					
		Response Boats (Barge) - 25' to 33'	1					
		Response Boats - 25' to 28'	2					
		Response Boats - (Cabin Boat) 27' to 30'	1					
		Shallow Water Skimmers	3					
		Portable Skimmers	2					
USES Environmental (888) 279-9930	Venice, LA	Containment Boom - 18"	10,000'	Cameron, LA	8	1	1	10
		Response Boats - 16'	15					
		Response Boats - 26'	2					
		Response Boats - 30'	1					
		Portable Skimmers	2					
		Shallow Water Skimmers	1					
Miller Env. Services (800) 929-7227	Corpus Christi, TX	Containment Boom - 10"	2,000'	Cameron, LA	8	1	1	10
		Containment Boom - 18"	30,000'					
		Jon Boats - 14' to 16'	4					
		Jon Boats - 16' to 18'	4					
		Air Boat - 14'	1					
		Response Boats - 24' to 26'	4					
		Portable Skimmers	6					
		Shallow Water Skimmers	2					
		Response Personnel	142					
USES Environmental (888) 279-9930	Mobile, AL	Containment Boom - 10"	800'	Cameron, LA	8	1	1	10
		Containment Boom - 18"	5,000'					
		Response Boats - 16'	1					
		Response Boats - 18'	1					
		Response Boats - 20'	1					
		Response Boats - 26'	1					
		Portable Skimmers	2					
USES Environmental (888) 279-9930	Memphis, TN	Containment Boom - 6"	850'	Cameron, LA	11	1	1	13
		Containment Boom - 12"	300'					
		Containment Boom - 18"	5,000'					
		Response Boats - 12'	3					
		Response Boats - 14'	5					
		Response Boats - 16'	2					
		Response Boats - 24'	1					
		Response Boats - 28'	1					
		Portable Skimmers	2					
Tri-State Bird Rescue & Research, Inc. (800) 261-0980	Newark, DE	Wildlife Specialist - Personnel	6 to 12	Cameron, LA	23	1	1	25



VICINITY MAP

Block 279

Green Canyon Area

ATTACHMENT Q

DATE: AUGUST 31, 2021

SHEET 1 of 1

REV.

SIZE: 8.5" X 11"