UNITED STATES GOVERNMENT
MEMORANDUM

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

Subject: Public Information copy of plan

Control # - S-07359
Type - Supplemental Exploration Plan
Lease(s) - OCS-G27982 Block - 834 Ewing Bank Area
Operator - Walter Oil & Gas Corporation
Description - Subsea Wells D, E, and F
Rig Type - SEMISUBMERSIBLE

Attached is a copy of the subject plan.

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

Michelle Griffitt
Plan Coordinator

<table>
<thead>
<tr>
<th>Site Type/Name</th>
<th>Botm Lse/Area/Blk</th>
<th>Surface Location</th>
<th>Surf Lse/Area/Blk</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELL/D</td>
<td>G27982/EW/834</td>
<td>1240 FNL, 5813 FEL</td>
<td>G27982/EW/834</td>
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<tr>
<td>WELL/E</td>
<td>G27982/EW/834</td>
<td>1518 FNL, 5422 FEL</td>
<td>G27982/EW/834</td>
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<tr>
<td>WELL/F</td>
<td>G27982/EW/834</td>
<td>2149 FNL, 3197 FEL</td>
<td>G27982/EW/834</td>
</tr>
</tbody>
</table>
October 14, 2009

Mr. Michael Saucier  
Regional Supervisor  
Office of Field Operations  
U.S. Department of the Interior  
Minerals Management Service  
1201 Elmwood Park Boulevard  
New Orleans, LA 70123-2394  

RE: Supplemental Exploration Plan  
Lease OCS-G 27982, Ewing Bank Area Block 834  
OCS Federal Waters, Gulf of Mexico, Offshore, Louisiana  

Gentlemen:

In accordance with the provisions of Title 30 CFR 250.203 and NTL 2008-G04 and NTL 2009-G27, Walter Oil & Gas Corporation hereby submits for your review and approval two (2) hard copies of an Supplemental Exploration Plan (Plan) for Lease OCS-G 27982, Ewing Bank Area Block 834, Offshore Louisiana. One (1) copy is "Proprietary Information" and one (1) copy is "Public Information". There are two (2) CD-ROM’s in a PDF format each for MMS Public and Proprietary copies. The State of Louisiana CZM does not require a review at this time.

Walter anticipates commencing drilling operations approximately December 1, 2009.

Should additional information be required, please contact the undersigned at 713/659-1221.

Sincerely,

WALTER OIL & GAS CORPORATION

Judy Archer  
Regulatory / Environmental Coordinator  
JA:KC  
Enclosures
AIR EMISSIONS INFORMATION

(a) Screening Checklist

Included in this section, (if applicable) is the Projected Air Emissions Worksheet prepared in accordance with NTL No. 2008-G04 and 2009-G27.

For this plan, there are no existing facilities or activities co-located with the current proposed activities; therefore, the Complex Total Emissions are the same as the Plan Emissions.

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The following information was prepared by:

Kathy Camp
K. Camp & Associates
Phone: 713.201.9627
Fax: 713.513.5291
Email: Kathy.camp@kcampassociates.com

(b) Summary Table of Emissions

<table>
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<tr>
<th>COMPANY</th>
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<th>BLOCK</th>
<th>LEASE</th>
<th>PLATFORM</th>
<th>WELL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walter Oil &amp; Gas Corporation</td>
<td>Ewing Bank</td>
<td>834</td>
<td>G-27982</td>
<td>NA</td>
<td>Locations D, E, F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>PM</th>
<th>SOx</th>
<th>NOx</th>
<th>VOC</th>
<th>CO</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2.37</td>
<td>10.89</td>
<td>81.60</td>
<td>2.45</td>
<td>17.80</td>
</tr>
<tr>
<td>2010</td>
<td>18.54</td>
<td>85.07</td>
<td>637.80</td>
<td>19.42</td>
<td>141.02</td>
</tr>
<tr>
<td>2011</td>
<td>6.88</td>
<td>31.58</td>
<td>236.78</td>
<td>7.25</td>
<td>52.59</td>
</tr>
</tbody>
</table>

| Allowable | 2131.20 | 2131.20 | 2131.20 | 2131.20 | 54400.00 |

(c) Spreadsheets

Not required for this submittal.
OIL SPILL INFORMATION

(a) Oil Spill Response Planning

(1) Site-Specific OSRP

Lease OCS-G 27982 is not located in the Eastern Gulf of Mexico therefore a site-specific OSRP is not required.

(2)(i) Regional or Subregional OSRP Information

Walter’s (MMS Operator No. 00730) Regional Oil Spill Response Plan (OSRP) biennial update was approved on August 21, 2009 for period ending July 31, 2011. The Regional OSRP will cover activities proposed in this Supplemental EP.

(ii) Spill Response Sites

<table>
<thead>
<tr>
<th>Primary Response Equipment Location</th>
<th>Preplanned Staging Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houma, LA and Lake Charles, LA</td>
<td>Morgan City, LA</td>
</tr>
</tbody>
</table>

(iii) OSRO Information

Walter’s primary equipment provider is Clean Gulf Associates (CGA). The Marine Spill Response Corporation’s (MSRC) STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

(iv) Worst Case Scenario Determination

<table>
<thead>
<tr>
<th>Category</th>
<th>Regional OSRP</th>
<th>Supplemental EP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Activity</td>
<td>Drilling</td>
<td>Drilling</td>
</tr>
<tr>
<td>Facility Location (area/block)</td>
<td>EW 834</td>
<td>EW 834</td>
</tr>
<tr>
<td>Facility Designation°</td>
<td>MODU</td>
<td>MODU</td>
</tr>
<tr>
<td>Distance to Nearest Shoreline (miles)</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>Volume°</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage tanks (total)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flowlines (on facility)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease term pipelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncontrolled blowout (volume per day)</td>
<td>4000 bbls</td>
<td>4000 bbls</td>
</tr>
<tr>
<td>Total Volume</td>
<td>4000 bbls</td>
<td>4000 bbls</td>
</tr>
<tr>
<td>Type of Oil(s) (crude oil, condensate, diesel)</td>
<td>Oil</td>
<td>Oil</td>
</tr>
<tr>
<td>API Gravity(s)°</td>
<td>40°</td>
<td>40°</td>
</tr>
</tbody>
</table>

Footnotes:
1. Types of activities include pipeline, platform, caisson, subsca 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 30 CFR 254.47(b). For DOCD’s, determine the volume of your worst-case scenario using the provisions of 30 CFR 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 EP’s.
Walter Oil & Gas Corporation
Supplemental Exploration Plan
Ewing Bank Area, Block 834
Lease OCS-G 27982
October 14, 2009

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- Mineral and Resource Conservation Information
- Biological, Physical and Socioeconomic Information
- Waste and Discharge Information
- Air Emissions Information
- Oil Spill Information
- Environmental Monitoring Information
- Lease Stipulations Information
- Environmental Mitigation Measures Information
- Decommissioning Information
- Related Facilities and Operations Information
- Support Vessels and Aircraft Information
- Onshore Support Facilities Information
- Sulphur Operations Information
- Coastal Zone Management Act (CZMA) Information
- Environmental Impact Analysis (EIA)
- Administrative Information

Attachments

<table>
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<td>Attachment A</td>
<td>Plan Information Form</td>
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<td>Attachment B</td>
<td>Well Location Map</td>
</tr>
<tr>
<td>Attachment C</td>
<td>Bathymetry Map / Anchor Radius</td>
</tr>
<tr>
<td>Attachment D</td>
<td>No attachment</td>
</tr>
<tr>
<td>Attachment E</td>
<td>Structure Map</td>
</tr>
<tr>
<td>Attachment F</td>
<td>2-D or 3-D Seismic</td>
</tr>
<tr>
<td>Attachment G</td>
<td>Structure Cross-Section</td>
</tr>
<tr>
<td>Attachment H</td>
<td>Shallow Hazards / Archaeological Assessment</td>
</tr>
<tr>
<td>Attachment I</td>
<td>Stratigraphic Column</td>
</tr>
<tr>
<td>Attachment J</td>
<td>Time vs. Depth</td>
</tr>
<tr>
<td>Attachment K</td>
<td>Vicinity Plat</td>
</tr>
<tr>
<td>Attachment L</td>
<td>Pay.gov Receipt</td>
</tr>
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</table>
Supplemental Exploration Plan
for
Walter Oil & Gas Corporation
Ewing Bank Area, Block 834
Lease OCS-G 27982
Offshore Louisiana

CONTENTS OF PLAN

Under this Supplemental EP, Walter Oil & Gas Corporation (Walter) plans to drill, complete and test three (3) subsea wells (Locations D, E & F) in Ewing Bank Block 834, Lease OCS-G 27982. If proved to be economical, a subsea tree will be set with the rig prior to leaving each location.

(a) Plan Information Form

An OCS Information Form with details of the proposed drilling and completion operations as provided for in this Plan along with a tentative schedule is included as Attachment A.

(b) Bathymetry Map and Location Plat

Included in this section is the Well Location Plat and Bathymetry Map (Attachments B and C). The map shows the surface location of the proposed well. The proposed bottom hole location(s), depth of well(s) (MD and TVD) and the associated water depth for each well are provided in tabular format. Please note, bottom hole locations, MD & TVD depths are omitted from the Public Information Copy.

These wells will be drilled with a typical semi submersible rig. The anchor radius associated with the drilling of each proposed subsea well is 4600 ft and is listed on Attachment A referenced above. An anchor radius is overlaid on the bathymetry map (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 Title 30 CFR Part 250, Subparts C, D, E, G and Q; and as further clarified by MMS Notice to Lessees, and current policy making invoked by the MMS, Environmental Protection Agency and the U.S. Coast Guard. The appropriate life rafts, life jackets, ring buoys, etc., as prescribed by the U.S. Coast Guard will be maintained on the facility at all times.

In accordance with Title 30 CFR Part 250, Subpart 0, an operator is to ensure Well Control Training is provided for lessee and contractor personnel engaged in oil and gas operations in the OCS Gulf of Mexico. Further, the operator is charged with the responsibility to not create conditions that will pose unreasonable risk to the public health, life, property, aquatic life, wildlife, recreation, navigation, commercial fishing, or other uses of the ocean.
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 NPDES General Permit GMG290000. Some of these pollution prevention measures include installation of curbs, gutters, drip pans, and drains on drilling deck areas to collect all contaminants and debris.

The MMS is required to conduct onsite inspections of offshore facilities to confirm operators are complying with lease stipulations, operating regulations, approved plans, and other conditions; as well as to assure safety and pollution prevention requirements are being met. The National Potential Incident of Noncompliance (PINC) List serves as the baseline for these inspections. The MMS also inspects the stockpiles of equipment listed in the operator's approved Oil Spill Response Plan that would be used for the containment and cleanup of hydrocarbon spills.

(d) **Storage Tanks and Production Vessels**

Tanks with a capacity of 25 bbls or more of oil as defined at 30 CFR 254.6 are listed below:

<table>
<thead>
<tr>
<th>Type of Storage Tank</th>
<th>Type of Facility</th>
<th>Tank Capacity (bbls)</th>
<th>Number of Tanks</th>
<th>Total Capacity (bbls)</th>
<th>Fluid Gravity (API)</th>
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</thead>
<tbody>
<tr>
<td>Fuel Oil</td>
<td>Semisubmersible</td>
<td>6632</td>
<td>1</td>
<td>6632</td>
<td>32°</td>
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</table>

(e) **Pollution Prevention Measures**

This information is only required for activities proposed for which the State of Florida is an affected State.

(f) **Additional Measures**

This information is not required by the State of Louisiana for this plan.
GENERAL INFORMATION

(a) Applications and Permits

<table>
<thead>
<tr>
<th>Application / Permit</th>
<th>Issuing Agency</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>APD</td>
<td>MMS District</td>
<td>To be submitted via eWell</td>
</tr>
<tr>
<td>DWOP</td>
<td>MMS Region</td>
<td>Pending</td>
</tr>
<tr>
<td>CID</td>
<td>MMS Region</td>
<td>Pending</td>
</tr>
</tbody>
</table>

(b) Drilling Fluids

This information is not required by the State of Louisiana for this plan.

(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

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

(f) Bonding Information

The bond requirements for the activities and facilities proposed in this Supplemental EP are satisfied by an area-wide bond furnished and maintained according to 30 CFR Part 256, Subpart I; NTL No. 2000-G16, “Guidelines for General Lease Surety Bonds”; and additional security under 30 CFR 256.53(d) and National NTL No. 2008-N07, “Supplemental Bond Procedures”.

(g) Oil Spill Financial Responsibility (OSFR)

Walter (MMS Operator No. 00730) has demonstrated oil spill financial responsibility for the facilities proposed in this Supplemental EP according to 30 CFR Part 253, and NTL No. 2008-N05, “Guidelines for Oil Spill Financial Responsibility for Covered Facilities”.

Walter Oil & Gas Corporation
Supplemental EP

PUBLIC INFORMATION COPY
(h) **Deepwater Well Control Statement**

Not required for the location of the activities proposed in this plan. Water depth is less than 400m (1312 feet).

(i) **Suspensions of Production**

Not applicable for exploration plans.

(j) **Blowout Scenario**

This information is not required by the State of Louisiana for this plan.

(k) **Chemical Products**

This information is not required for the activities proposed in this plan in the MMS GOMR.
GEOLOGICAL AND GEOPHYSICAL INFORMATION

In accordance with 43 CFR 2.13 (c) (9), 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

Walter Oil & Gas Corporation contracted Tesla Offshore LLC to conduct a high-resolution deep tow archaeological site survey covering the proposed well sites in Block 834, Ewing Bank Area (OCS-G 27982) with a projected anchor/mooring perimeter into adjacent Blocks 789, 790 and 833, Ewing Bank Area. The survey was conducted from November 1st through November 10th of 2006.

Gardline Surveys Incorporated was contracted to provide a 3D geohazard review study in the Ewing Bank area of the Gulf of Mexico. The object of the study was to investigate Block 834 for seabed and sub-seabed geohazards. The seabed includes all of Blocks EW 789, 790, 833 and 834. The sub seabed mapping area was restricted to EW 834 and an 800ft band to the west to allow complete 1500ft evaluation around proposed well locations. The scope of work called for identification of potential shallow drilling hazards and problems, which may impact on siting or drilling of proposed wells.

Copies of these reports were previously submitted with the Initial Exploration Plan (Plan No. N-9234) approved in September 2008.

(f) Site Specific Shallow Hazards Assessment

A shallow hazards letter and an archaeological assessment from Tesla Offshore has been prepared for each proposed surface location, evaluating seafloor and subsurface geologic and manmade features and conditions, and are included as Attachment H.
(g) **High Resolution Seismic Lines**

Walter Oil & Gas Corporation contracted Tesla Offshore LLC to conduct a high-resolution deep tow archaeological site survey covering the proposed well site in Block 834, Ewing Bank Area (OCS-G 27982) with a projected anchor/mooring perimeter into adjacent Blocks 789, 790 and 833, Ewing Bank Area. The survey was conducted from November 1st through November 10th of 2006.

A copy of the high resolution seismic lines are included with Attachment H.

(h) **Stratigraphic Column**

**Proprietary Data**

(i) **Time Versus Depth Tables**

**Proprietary Data**

(j) **Geochemical Information**

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

(k) **Future G&G Activities**

This information is not required for the activities proposed in this plan in the MMS GOMR.
HYDROGEN SULFIDE INFORMATION

(a) **Concentration**

Walter does not anticipate encountering H₂S while conducting our proposed exploratory activities.

(b) **Classification Request**

In accordance with Title 30 CFR 250.417(c), Walter requests Ewing Bank Block 834, Lease OCS-G 27982 be classified by the Minerals Management Service as an area where the "absence" of hydrogen sulfide has been confirmed based upon the following:

PROPRIETARY DATA

(c) **Contingency Plan**

Walter does not anticipate encountering H₂S while conducting our proposed exploratory activities therefore a contingency plan is not required at this time.

(d) **Modeling Report**

Walter does not anticipate encountering H₂S while conducting our proposed exploratory activities therefore a modeling report is not required at this time.
Mineral and Resource Conservation Information

(a) Technology and Reservoir Engineering Practices and Procedures
Not Required for Exploration Plans

(b) Technology and Recovery Practices and Procedures
Not Required for Exploration Plans

(c) Reservoir Development
Not Required for Exploration Plans
**BIOLOGICAL, PHYSICAL AND SOCIOECONOMIC INFORMATION**

(a) **Chemosynthetic Communities Report**

The seafloor disturbing activities proposed in the Plan are in water depths less than 400 meters (1312 feet); therefore, the report described in Attachment B of NTL No. 2000-G20 is not required.

(b) **Topographic Features Map**

There is no topographic feature associated with Lease OCS-G 27982.

(c) **Topographic Features Statement**

A topographic features statement is not required at this time.

(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**

Walter does not propose bottom-disturbing activities within 61 meters (200 feet) of potentially sensitive biological features; therefore the map the map described in Attachment B, Section A, of NTL No. 2004-G05 “Biologically Sensitive Areas of the Gulf of Mexico” is not required.

(g) **ROV Monitoring Survey Plan**

Walter is familiar with the ROV survey and reporting provisions of NTL 2008-G06.

Ewing Bank Block 834 is located in Grid 12. The MMS GOMR website and NTL 2008-G06 indicate that this grid does not require a ROV survey plan.

(h) **Threatened or Endangered Species, Critical Habitat, and Marine Mammal Information**

The Marine Mammal Protection Act (MMPS) 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. Five marine mammal
species (sea otters, manatees, dugong, walrus and polar bear) fall under the jurisdiction of the Department of the Interior and its US Fish and Wildlife Service (USFWS). The cetaceans (whales, porpoises and dolphins) and all pinnipeds (seals and sea lions – except for walrus) are managed by the Department of Commerce’s National Marine Fisheries Service (NMFS).

Endangered Species Act of 1973 (ESA) provides for the conservation of species that are endangered or threatened throughout all of a significant portion of their range, and the conservation of the ecosystems / critical habitat on which they depend.

The bottlenose dolphin is a common inhabitant of the continental shelf and upper slope waters of the northern GOM.

Five baleen whales (the northern right, blue, fin, sei, and humpback), one toothed whale (the sperm whale), and one sirenian (the West Indian manatee) occur in the GOM and are listed as endangered under the Endangered Species Act (ESA). The sperm whale is common in oceanic waters of the northern GOM and appears to be a resident species, while the baleen whales are considered rare or extralimital in the Gulf (Würsig et al., 2000). The West Indian manatee typically inhabits only coastal marine, brackish, and freshwater areas.

Walter is aware of the above referenced federal acts and will ensure that all offshore personnel, including contractors and other support services-related personnel have an understanding of the need to conserve marine mammals and the conservation of their ecosystems. This topic is also addressed in detail in under the Lease Stipulations section in this Plan.

(i) Archaeological Report

Since Lease OCS-G 27982 is in a high probability area for historic shipwreck occurrence Walter Oil & Gas contracted Tesla Offshore to provide an archaeological assessment in accordance with NTL 2005-G07 published by the Minerals Management Service Gulf of Mexico Region. The water depth at these locations range from 1224 to 1253 feet.

There are no archaeological resources or potential archaeological resources identified within the survey area.

(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.
WASTE AND DISCHARGE INFORMATION

(a)  **Projected Generated Wastes**

Not required for the location of the activities proposed in this plan offshore the State of Louisiana.

Walter does not plan to treat, store or dispose of any wastes downhole at our proposed drilling locations.

(b)  **Projected Ocean Discharges:**

Not required for the location of the activities proposed in this plan offshore the State of Louisiana.

(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 MMS GOMR.

(e)  **Cooling Water Intakes**

This information is not required for the activities proposed in this plan in the MMS GOMR.
AIR EMISSIONS INFORMATION

(a) Screening Checklist

Included in this section, (if applicable) is the Projected Air Emissions Worksheet prepared in accordance with NTL No. 2008-G04 and 2009-G27.

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The following information was prepared by:

Kathy Camp  
K. Camp & Associates  
Phone: 713.201.9627  
Fax: 713.513.5291  
Email: Kathy.camp@kcampassociates.com

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<tbody>
<tr>
<td>Walter Oil &amp; Gas</td>
<td>Ewing Bank</td>
<td>834</td>
<td>G-27982</td>
<td>NA</td>
<td>Locations D, E, F</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Emitted</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PM</td>
<td>SOx</td>
</tr>
<tr>
<td>2009</td>
<td>7.09</td>
<td>32.54</td>
</tr>
<tr>
<td>2010</td>
<td>55.84</td>
<td>256.19</td>
</tr>
<tr>
<td>2011</td>
<td>20.89</td>
<td>95.83</td>
</tr>
<tr>
<td>Allowable</td>
<td>2131.20</td>
<td>2131.20</td>
</tr>
</tbody>
</table>

(c) Spreadsheets

Not required for this submittal.
OIL SPILL INFORMATION

(a) Oil Spill Response Planning

(1) Site-Specific OSRP

Lease OCS-G 27982 is not located in the Eastern Gulf of Mexico therefore a site-specific OSRP is not required.

(2)(i) Regional or Subregional OSRP Information

Walter's (MMS Operator No. 00730) Regional Oil Spill Response Plan (OSRP) biennial update was approved on August 21, 2009 for period ending July 31, 2011.

(ii) Spill Response Sites

<table>
<thead>
<tr>
<th>Primary Response Equipment Location</th>
<th>Preplanned Staging Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houma, LA and Lake Charles, LA</td>
<td>Morgan City, LA</td>
</tr>
</tbody>
</table>

(iii) OSRO Information

Walter's primary equipment provider is Clean Gulf Associates (CGA). The Marine Spill Response Corporation's (MSRC) STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

(iv) Worst Case Scenario Determination

<table>
<thead>
<tr>
<th>Category</th>
<th>Regional OSRP</th>
<th>Supplemental EP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Activity</td>
<td>Drilling</td>
<td>Drilling</td>
</tr>
<tr>
<td>Facility Location (area/block)</td>
<td>EW 834</td>
<td>EW 834</td>
</tr>
<tr>
<td>Facility Designation</td>
<td>MODU</td>
<td>MODU</td>
</tr>
<tr>
<td>Distance to Nearest Shoreline (miles)</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>Volume *</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Storage tanks (total)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flowlines (on facility)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lease term pipelines</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uncontrolled blowout (volume per day)</td>
<td>4000 bbls</td>
<td>4000 bbls</td>
</tr>
<tr>
<td>Total Volume</td>
<td>4000 bbls</td>
<td>4000 bbls</td>
</tr>
<tr>
<td>Type of Oil(s) (crude oil, condensate, diesel)</td>
<td>Oil</td>
<td>Oil</td>
</tr>
<tr>
<td>API Gravity(s) ^</td>
<td>40°</td>
<td>40°</td>
</tr>
</tbody>
</table>

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 30 CFR 254.47(b). For DOCD's, determine the volume of your worst-case scenario using the provisions of 30 CFR 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 EP's.
The worst-case discharge (WCD) proposed in this Supplemental EP does not supersede the worst-case discharge as approved in our Regional OSRP.

Walter has the capability to respond to the appropriate worst-case spill scenario included in its Regional OSRP. I hereby certify that Walter 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 Supplemental EP.

(b) **Oil Spill Response Discussion**

Not required for the location of the activities proposed in this plan offshore the State of Louisiana.

(c) **Modeling Report**

Not required for the location of the activities proposed in this plan.
ENVIRONMENTAL MONITORING INFORMATION

(a) Monitoring Systems

Walter is aware of the requirements of NTL No. 2009-G02 whereby MMS established and implemented a program to monitor ocean currents and require operators to share the data for all floating MODU's and production facilities operating or installed in water depths greater than 400 meters (1,312 feet). Ocean current data must be supplied to the National Oceanic and Atmospheric Administration (NOAA) National Data Buoy Center (NDBC) Internet website as required.

The exploratory operations proposed in this plan are not located in water depths greater than 400 meters (1,312 feet).

(b) Incidental Takes

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

(c) Flower Garden Banks National Marine Sanctuary

Walter's activities under this Supplemental EP are not located within the Protective Zones of the Flower Garden Banks or Stetson Bank and therefore are not required to monitor the impacts of an oil spill.
LEASE STIPULATIONS INFORMATION

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. The MMS is responsible for ensuring full compliance with stipulations.

The Minerals Management Service invoked stipulation number 6 for Ewing Bank Area, Block 834, OCS-G 27982.

Stipulation No. 6 – Marine Protected Species

To reduce the potential taking of federally protected species (e.g., sea turtles, marine mammals, Gulf sturgeon, and other listed species):

a) MMS will condition all permits issued to lessees and their operators to require them to collect and remove flotsam resulting from activities related to exploration, development, and production of this lease.

b) MMS will condition all permits issued to lessees and their operators to require them to post signs in prominent places on all vessels and platforms used as a result of activities related to exploration, development, and production of this lease detailing the reasons (legal and ecological) why release of debris must be eliminated.

NOTE: The Minerals Management Service issued NTL 2007-G03 pursuant to 30 CFR 150.103 to provide 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.

c) MMS will require that vessel operators and crews watch for marine mammals and sea turtles, reduce vessel spread to 10 knots or less when assemblages of cetaceans are observed and maintain a distance of 90 meters or greater from whales, and a distance of 45 meters or greater from small cetaceans and sea turtles.

NOTE: The Minerals Management Service issued NTL 2007-G04 pursuant to 30 CFR 250.103, 250.23(o) and 250.204(s) to explain how Operators must implement measures to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species effective February 7, 2007. We 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 MMS Protected Species Biologist by telephone.
d) MMS will require that all seismic surveys employ mandatory mitigation measures to include the use of a 500-meter "exclusion zone" based upon the appropriate water depth, ramp-up and shut-down procedures, visual monitoring and reporting. Seismic operations must immediately cease when certain marine mammals are detected within the 500-meter exclusion zone. Ramp-up procedures and seismic surveys may be initiated only during daylight unless alternate monitoring methods approved by MMS are used.

NOTE: The Minerals Management Service issued NTL 2007-G02 pursuant to 30 CFR 250.103, to explain how to implement seismic survey mitigation measures, requiring ramp-up procedures, protected species observer training, visual monitoring and reporting. This NTL applies to all marine mammals, some of which may be encountered in water depths less than 200 meters in certain areas of the Gulf of Mexico.

e) The MMS will require lessees and operators to instruct offshore personnel to immediately report all sightings and locations of injured or dead protected species (marine mammals and sea turtles) to the appropriate stranding network. If oil and gas industry activity is responsible for the injured or dead animals (e.g. because of a vessel strike), the responsible parties should remain available to assist the stranding network. If the injury or death was caused by a collision with your vessel, you must notify MMS within 24 hours of the strike.

NOTE: The Minerals Management Service issued NTL 2007-G04 pursuant to 30 CFR 250.103, 250.23(o) and 250.204(s) to explain how Operators must implement measures to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species effective February 7, 2007. We 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 MMS Protected Species Biologist by telephone.

f) MMS will require oil spill contingency planning to identify important habitats, including designated critical habitat, used by listed species (e.g. sea turtle nesting beaches, piping clover critical habitat), and require the strategic placement of spill cleanup to be used only by personnel trained in less-intrusive cleanup techniques on beach and bay shores.
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

Walter does not believe that protected species may be incidentally taken during the exploratory activities proposed in this plan.
Decommissioning Information

This information is not required for plans submitted in the MMS GOMR.
(a) **Related OCS Facilities and Operations**

This discussion is not required for EP's.

(b) **Transportation System**

This discussion is not required for EP's.

(c) **Produced Liquid Hydrocarbons Transportation Vessels**

There will be no produced liquid hydrocarbons, including well test fluids, transported by means other than a pipeline for the activities proposed in this plan.
SUPPORT VESSELS AND AIRCRAFT INFORMATION

(a) **General**

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

<table>
<thead>
<tr>
<th>Type of Vessel</th>
<th>Maximum Fuel Tank Storage Capacity</th>
<th>Maximum No. in Area at Any Time</th>
<th>Trip Frequency or Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tug boat(s)</td>
<td>140,000 gals</td>
<td>2</td>
<td>1 move on and 1 move off</td>
</tr>
<tr>
<td>Supply boat(s)</td>
<td>25,000 - 35,000 gals</td>
<td>1</td>
<td>4 times / week</td>
</tr>
<tr>
<td>Service boat(s)</td>
<td>25,000 - 35,000 gals</td>
<td>0</td>
<td>NA</td>
</tr>
<tr>
<td>Crew boat(s)</td>
<td>25,000 - 35,000 gals</td>
<td>1</td>
<td>5 times / week</td>
</tr>
<tr>
<td>Helicopter</td>
<td>440 gals</td>
<td>1</td>
<td>As needed</td>
</tr>
</tbody>
</table>

(b) **Diesel Oil Supply Vessels**

This information is not required by the State of Louisiana CZM for the location of the activity proposed in this plan.

(c) **Drilling Fluids Transportation**

This information is not required by the State of Louisiana CZM for the location of the activity proposed in this plan.

(d) **Solid and Liquid Wastes Transportation**

This information is not required by the State of Louisiana CZM for the location of the activity proposed in this plan.

(e) **Vicinity Map**

Ewing Bank Block 834 is located approximately 64 statute miles from the nearest Louisiana shoreline and approximately 70 statute miles from the onshore support base located in Fourchon, LA.

A Vicinity Plat showing the location of Ewing Bank Block 834 relative to the shoreline and the onshore base is included as Attachment K.
ONSHORE SUPPORT FACILITIES INFORMATION

(a) **General**

Walter proposes to utilize the following existing onshore base for support:

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Existing, New or Modified</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOS Port</td>
<td>Fourchon, LA</td>
<td>Existing</td>
</tr>
</tbody>
</table>

(b) **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.

(c) **Support Base Construction or Expansion Timetable**

This discussion is not required for the activities proposed in this plan.

(d) **Waste Disposal**

<table>
<thead>
<tr>
<th>Name / Location of Facility</th>
<th>Type of Waste</th>
<th>Amount</th>
<th>Rate</th>
<th>Disposal Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>Hazardous Solid: Oil-contaminated produced sand</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Newpark, Fourchon, LA</td>
<td>Waste Oil</td>
<td>50 BBLS</td>
<td>0.5 BBLS / DAY</td>
<td>Incinerate / Recycle</td>
</tr>
<tr>
<td>NA</td>
<td>Non-hazardous solid: Oil-based drilling muds</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>NA</td>
<td>Non-hazardous liquid: Workover fluids</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

(e) **Air Emissions**

This discussion is not required to accompany EP’s submitted in the MMS GOMR.

(f) **Unusual Solid and Liquid Wastes**

This discussion is not required to accompany EP’s submitted in the MMS GOMR.
SULPHUR OPERATIONS INFORMATION

Walter is not proposing to conduct sulphur operations in this plan.
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 Minerals Management Service 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 supplemental exploratory activities proposed in this plan.

(b) **Other Information**

**State of Louisiana:**

The enforceable policies of the State of Louisiana have been considered in making our certification of consistency and will be complied with.
**ENVIRONMENTAL IMPACT ANALYSIS (EIA)**

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

Walter 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.

<table>
<thead>
<tr>
<th>Environmental Resources</th>
<th>Impact Producing Factors (IPFs) Categories and Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emissions (air, noise, light, etc.)</td>
</tr>
<tr>
<td>Site-specific at Offshore Location</td>
<td></td>
</tr>
<tr>
<td>Designated topographic features</td>
<td>(1)</td>
</tr>
<tr>
<td>Pinnacle Trend area live bottoms</td>
<td>(2)</td>
</tr>
<tr>
<td>Eastern Golf live bottoms</td>
<td>(3)</td>
</tr>
<tr>
<td>Chemosynthetic communities</td>
<td>(4)</td>
</tr>
<tr>
<td>Water quality</td>
<td>X</td>
</tr>
<tr>
<td>Fisheries</td>
<td>X</td>
</tr>
<tr>
<td>Marine mammals</td>
<td>(8) X</td>
</tr>
<tr>
<td>Sea turtles</td>
<td>(6) X</td>
</tr>
<tr>
<td>Air quality</td>
<td></td>
</tr>
<tr>
<td>Shipwreck sites (known or potential)</td>
<td></td>
</tr>
<tr>
<td>Prehistoric archaeological sites</td>
<td></td>
</tr>
<tr>
<td>Vicinity of Offshore Location</td>
<td></td>
</tr>
<tr>
<td>Essential fish habitat</td>
<td></td>
</tr>
<tr>
<td>Marine and pelagic birds</td>
<td></td>
</tr>
<tr>
<td>Public health and safety</td>
<td></td>
</tr>
<tr>
<td>Coastal and Onshore</td>
<td></td>
</tr>
<tr>
<td>Beaches</td>
<td></td>
</tr>
<tr>
<td>Wetlands</td>
<td></td>
</tr>
<tr>
<td>Shore birds and coastal nesting birds</td>
<td></td>
</tr>
<tr>
<td>Coastal wildlife refuges</td>
<td></td>
</tr>
<tr>
<td>Wilderness areas</td>
<td></td>
</tr>
<tr>
<td>Other Resources You Identify</td>
<td>None</td>
</tr>
</tbody>
</table>

**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 a 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 MMS as being in water depths 400 meters or greater.
5. Exploration or production activities where H₂S 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 MMS 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

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 IPF's (including effluents, physical disturbances to the seafloor, and accidents) from the proposed activities in Ewing Bank Block 834 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 northeastern Central Planning Area includes portions of 70 lease blocks that are characterized by a pinnacle trend. The pinnacle trend extends into the northwest portion of the Eastern Planning Area. The pinnacles are a series of topographic irregularities with variable biotic coverage, which provide structural habitat for a variety of pelagic fish. The Live Bottom (Pinnacle Trend) Stipulation is 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.

There are no IPF's (including effluents, physical disturbances to the seafloor, and accidents) from the proposed activities in Ewing Bank Block 834 that could cause impacts to pinnacle trend area live bottoms. The site-specific offshore location of the proposed activities is greater than 100 miles from a pinnacle trend live bottom stipulated area.

The activities proposed in this plan will be covered by our regional OSRP.
3. **Eastern Gulf Live Bottoms**

A small portion of the northeastern Central Planning Area includes portions of 70 lease blocks that are characterized by a pinnacle trend. The pinnacle trend extends into the northwest portion of the Eastern Planning Area. The pinnacles are a series of topographic irregularities with variable biotic coverage, which provide structural habitat for a variety of pelagic fish. The Live Bottom (Pinnacle Trend) Stipulation is 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.

There are no IPF’s (including effluents, physical disturbances to the seafloor, and accidents) from the proposed activities in Ewing Bank Block 834 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 IPF’s (including effluents, physical disturbances to the seafloor, and accidents) from the proposed activities in Ewing Bank Block 834 that could cause impacts to Chemosynthetic Communities.

The proposed activities will be conducted in accordance with NTL 2008-G04 and NTL 2009-G27.

5. **Water Quality**

Effluents, physical disturbances to the seafloor and accidents from the proposed activities in Ewing Bank Block 834 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.

With regards to marine trash and debris, effective February 7, 2007, the Minerals Management Service issued NTL 2007-G03 pursuant to 30 CFR 150.103 to provide 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 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 resuspension 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).

There are no platforms or lease term pipelines proposed in this plan.

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

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.

7. Marine Mammals

Marine mammals may be adversely impacted by several IPF’s (including vessel traffic, noise, accidental oil spills, and loss of trash and debris, all of which could occur due to the proposed action in Ewing Bank Block 834. 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.

The Minerals Management Service issued NTL 2007-G04 pursuant to 30 CFR 250.103, 250.23(o) and 250.204(s) to explain how Operators must implement measures to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species effective February 7, 2007. We 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 MMS Protected Species Biologist by telephone.

With regards to marine trash and debris, effective February 7, 2007, the Minerals Management Service issued NTL 2007-G03 pursuant to 30 CFR 150.103 to provide 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

IPF's 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.
The activities proposed in this plan will be covered by our regional OSRP. The Minerals Management Service issued NTL 2007-G04 pursuant to 30 CFR 250.103, 250.23(o) and 250.204(s) to explain how Operators must implement measures to minimize the risk of vessel strikes to protected species and report observations of injured or dead protected species effective February 7, 2007. We 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 MMS Protected Species Biologist by telephone.

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9. Air Quality

The proposed drilling activities are located 64 statute 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. These emissions are temporary in nature. 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.

The Projected Air Quality Emissions Report indicates that the MMS exemption level will not be exceeded during the operations proposed in the Supplemental EP. There are no existing facilities or activities co-located with the current proposed activities; therefore, the Complex Total Emissions are the same as the Plan Emissions.

10. Shipwreck Sites (Known or Potential)

IPF's that could cause impacts to known or potential shipwreck sites from the proposed activities in Ewing Bank Block 834 include physical disturbances to the seafloor such as anchor or rig emplacement.

Since Lease OCS-G 27982 is in a high probability area for historic shipwreck occurrence Walter Oil & Gas contracted Tesla Offshore to provide an archaeological assessment in accordance with NTL 2005-G07 published by the Minerals Management Service Gulf of Mexico Region. The water depth at this location ranges from 1224 to 1253 feet.

There are no reported shipwrecks within the survey area, and lease exploration and development will not impact any shipwrecks based on the geophysical data obtained during this survey. More detailed information is provided in Attachment H.
However, in the event items of significant cultural resource potential are discovered during the proposed operations, Walter will immediately halt all operations and notify the appropriate department at the Minerals Management Service for further evaluation and assistance.

11. Prehistoric Archaeological Sites

IPF's that could cause impacts to known or potential prehistoric archaeological sites from the proposed activities include physical disturbances to the seafloor such as anchor or rig emplacement.

Since Lease OCS-G 27982 is in a high probability area for cultural resources Walter Oil & Gas contracted Tesla Offshore to provide an archaeological assessment in accordance with NTL 2005-G07 published by the Minerals Management Service Gulf of Mexico Region. The water depth at the proposed locations range from 1224 to 1253 feet.

This report indicates lease exploration and development will not impact any archaeologically significant resource based on the geophysical data obtained during this survey. More detailed information is provided in Attachment H.

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

Vicinity of Offshore Location:

1. Essential Fish Habitat

IPF's that could impact essential fish habitats as a result of the proposed operations in Ewing Bank Block 834 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. 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.

An accidental oil spill that may occur as a result of the proposed action has the potential to cause some detrimental effects on essential fish habitat. However, it is unlikely that an accidental surface or subsurface oil spill would occur from the proposed activities.

Offshore oil spillage from OCS operations is small compared with the volume of oil produced. Since 1980, OCS operators have produced about 5.5 BBO of oil, while the amount of oil spilled offshore totaled about 61,500 bbl (0.001%) or 1 bbl spilled for every 89,500 produced. In 1994, MMS revised its oil-spill occurrence rates for large spills (Anderson and LaBelle, 1994). An examination of the two major sources of OCS-related
offshore spills (platforms and pipelines) shows that the greater risk of a large spill is from a pipeline. There have been no spills ≥1000 bbls from OCS platforms since 1980.

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 limited and lessened due to the capability of adult fish and shellfish to avoid a spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. The activities proposed in this plan will be covered by our regional OSRP.

2.  Marine and Pelagic Birds

IPF's that could impact marine and pelagic birds as a result of the proposed operations in Ewing Bank Block 834 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.

With regards to marine trash and debris, coastal and marine birds can commonly become entangled and snared in discarded trash and debris. Effective February 7, 2007, the Minerals Management Service issued NTL 2007-G03 pursuant to 30 CFR 150.103 to provide 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 IPF's (including an accidental H₂S 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 2008-G04 and NTL 2009-G27 we have submitted sufficient information to justify our request that the area of our proposed activities be classified by MMS as H₂S absent.
Coastal and Onshore:

1. **Beaches**

Primary IPF’s associated with offshore oil and gas exploration and exploration, and most widely recognized as major threats to the enjoyment and use of recreational beaches, are oil spills (accidents) and marine trash and debris. 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 on coastal beaches. However, it is unlikely that an accidental surface or subsurface oil spill would occur from the proposed activities in Ewing Bank Block 834. The level of response to a spill will be based on volume, weather, and the characteristics of the product spilled. Walter’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.

With regards to marine trash and debris, effective February 7, 2007, the Minerals Management Service issued NTL 2007-G03 pursuant to 30 CFR 150.103 to provide 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.

2. **Wetlands**

There are no IPF’s associated with this offshore oil and gas exploration activity in Ewing Bank Block 834 recognized as major threats to wetlands. The operations proposed in this plan are located 64 statute miles from the nearest shoreline and are not projected to have significant impacts on wetlands.

Detailed spill response discussions are included in Walter Oil & Gas Corporation’s Regional Oil Spill Response Plan. The activities proposed in this plan will be covered by our regional OSRP.

3. **Shore Birds and Coastal Nesting Birds**

There are no IPF’s associated with this offshore oil and gas exploration activity in Ewing Bank Block 834 recognized as major threats to shore birds and coastal nesting birds. The operations proposed in this plan are located 64 statute miles from the nearest shoreline and are not projected to have significant impacts on shore birds and coastal nesting birds.

The activities proposed in this plan will be covered by our regional OSRP.
4. Coastal Wildlife Refuges

There are no IPF's associated with this offshore oil and gas exploration activity in Ewing Bank Block 834 recognized as major threats to coastal wildlife refuges. The operations proposed in this plan are not projected to have significant impacts on coastal wildlife refuges.

Detailed spill response discussions are included in Appendix H of Walter Oil & Gas Corporation's Regional Oil Spill Response Plan. The activities proposed in this plan will be covered by our regional OSRP.

5. Wilderness Areas

There are no IPF's associated with offshore oil and gas exploration activity in Ewing Bank Block 834 recognized as major threats to wilderness areas. The closest designated wilderness is the southern portion of the Lacassine National Wildlife Refuge, which is primarily a freshwater marsh. The operations proposed in this plan are located 64 statute miles south of the nearest shoreline and 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 sometime 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 (storms 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 73 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

Not required for EP's.
(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 Supplemental EP.

(h) Preparer(s)

Kathy Camp  
K. Camp & Associates  
Phone: 713.201.9627  
Fax: 713.513.5291  
Email: Kathy.camp@kcampassociates.com

(i) References

Deep Tow Geophysical Hazard Survey of Block 834, Ewing Bank Area, OCS-G 27982, (with extended coverage in Blocks 833, 789 and 790 in November 2006 prepared for Walter Oil & Gas Corporation by Tesla Offshore LLC

Site Clearance and Anchor Assessment based on 3D Geohazard Assessment of Ewing Bank Block 834, OCS-G 27982 by Gardline Surveys, Inc.

Archaeological Analysis for Locations D, E and F in Block 834 prepared for Walter Oil & Gas Corporation by Tesla Offshore LLC

Federal Register, Tuesday, August 30, 2005, 30 CFR Parts 250 and 282, Oil and Gas Sulphur Operations in the Outer Continental Shelf – Plans and Information; Final Rule effective September 29, 2005

NTL 2007-G03, effective February 7, 2007 for Marine Trash and Debris Awareness and Elimination

NTL 2007-G04, effective February 7, 2007 for Vessel Strike Avoidance and Injured / Dead Protected Species Reporting

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

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

Final EIS, Western Planning Area Sales (204,207,210,215&218), and Central Planning Area Sales (025, 206, 208, 213, 216 & 222)

Marine Mammal Protection Act of 1972 (MMPA)

Endangered Species Act of 1973 (ESA)
ADMINISTRATIVE INFORMATION

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

In accordance with 43 CFR Part 2, Appendix E, sections (4) and (9), 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 MMS-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 H2S classification request under Hydrogen Sulfide Information

(b) Bibliography

Deep Tow Geophysical Hazard Survey of Block 834, Ewing Bank Area, OCS-G 27982, (with extended coverage in Blocks 833, 789 and 790 in November 2006 prepared for Walter Oil & Gas Corporation by Tesla Offshore LLC

Site Clearance and Anchor Assessment based on 3D Geohazard Assessment of Ewing Bank Block 834, OCS-G 27982 by Gardline Surveys, Inc.

**General Information**

- **Type of OCS Plan:** X Exploration Plan (EP)
- **Company Name:** Walter Oil & Gas Corporation
- **MMS Operator Number:** 0730
- **Address:** 1100 Louisiana, Suite 200, Houston, TX 77002
- **Contact Person:** Judy Archer
- **Phone Number:** 713.659.1222
- **E-Mail Address:** jarcher@walteroil.com
- **Lease(s):** OCS G27982
- **Area:** Ewing Bank
- **Block(s):** 834
- **Onshore Base:** Fouchon, LA
- **Distance to Closest Land (Miles):** 64

### Description of Proposed Activities (Mark all that apply)

- **X** Exploration drilling
- **X** Well completion
  - Well test flaring (for more than 48 hours)
  - Installation of caisson or platform as well protection structure
- **X** Installation of subsea wellheads and/or manifolds
- **X** Installation of lease term pipelines

Have you submitted or do you plan to submit a Conservation Information Document to accompany this plan? **Yes X No**

Do you propose to use new or unusual technology to conduct your activities? **Yes X No**

Do you propose any facility that will serve as a host facility for deepwater subsea development? **Yes X No**

Do you propose any activities that may disturb an MMS-designated high-probability archaeological area? **X Yes X No**

Have all of the surface locations of your proposed activities been previously reviewed and approved by MMS? **Yes X No**

### Tentative Schedule of Proposed Activities

<table>
<thead>
<tr>
<th>Proposed Activity</th>
<th>Start Date</th>
<th>End Date</th>
<th>No. of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drill and Complete Location D</td>
<td>12/01/2009</td>
<td>03/02/2010</td>
<td>90</td>
</tr>
<tr>
<td>Test Well</td>
<td>03/03/2010</td>
<td>03/03/2010</td>
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</tr>
<tr>
<td>Install Sub-Sea tree while rig on location</td>
<td>03/04/2010</td>
<td>03/04/2010</td>
<td>1</td>
</tr>
<tr>
<td>Drill and Complete Location E</td>
<td>04/01/2010</td>
<td>06/30/2010</td>
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</tr>
<tr>
<td>Test Well</td>
<td>07/01/2010</td>
<td>07/01/2010</td>
<td>1</td>
</tr>
<tr>
<td>Install Sub-Sea tree while rig on location</td>
<td>07/02/2010</td>
<td>07/02/2010</td>
<td>1</td>
</tr>
<tr>
<td>Drill and Complete Location F, Test well, install subsea tree</td>
<td>01/01/2011</td>
<td>03/02/2011</td>
<td>92</td>
</tr>
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</table>

### Description of Drilling Rig

- **Jackup**
- **Gorilla Jackup**
- **Semisubmersible**
- **DP Semisubmersible**

### Description of Production Platform

- **Caisson**
- **Drillship**
- **Platform rig**
- **Submersible**
- **Fixed platform**
- **Subsea manifold**
- **Spar**
- **Tension leg platform**
- **Well protector**
- **Guyed tower**
- **Floating production system**
- **Other (Attach Description)**

### Description of Lease Term Pipelines

<table>
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<tr>
<th>From (Facility/Area/Block)</th>
<th>To (Facility/Area/Block)</th>
<th>Diameter (Inches)</th>
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### Proposed Well/Structure Location

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<tr>
<th>Well or Structure Name/Number (if renaming well or structure, reference previous name):</th>
<th>Location D</th>
<th>Subsea Completion</th>
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<tbody>
<tr>
<td></td>
<td>X</td>
<td>Yes</td>
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**Anchor Radius (if applicable) in feet:** 4600'

<table>
<thead>
<tr>
<th>Surface Location</th>
<th>Bottom-Hole Location (For Wells)</th>
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</table>

**Lease No.:** G-27982

**Area Name:** Ewing Bank

**Block No.:** 834

**Block line Departures (in feet):**
- N/S Departure: 1240' FNL
- E/W Departure: 5813' FEL

**Lambert X-Y coordinates:**
- X: 2,623,627.00'
- Y: -10,231,400.00

**Latitude/Longitude:**
- Latitude: 28° 09' 36.456" N
- Longitude: 86° 56' 54.165" W

**TVD (Feet):**

**MD (Feet):**

**Water Depth (Feet):** 1224

### Anchor Locations for Drilling Rig or Construction Barge (8 POINT)

<table>
<thead>
<tr>
<th>Anchor Name or No.</th>
<th>Area</th>
<th>Block</th>
<th>X Coordinate</th>
<th>Y Coordinate</th>
<th>Length of Anchor Chain on Seafloor</th>
</tr>
</thead>
</table>

### Paperwork Reduction Act of 1995 Statement:
The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 600 per response, or 640 with an accompanying EP, or 690 with an accompanying DPP or DODC, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms associated with subpart B. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.
**Proposed Well/Structure Location**

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<tr>
<th>Anchor Radius (if applicable) in feet:</th>
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<tr>
<td><strong>Location E</strong></td>
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<tr>
<td><strong>Subsea Completion</strong></td>
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**Surface Location**

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<td>Ewing Bank</td>
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<tr>
<td>Block No.</td>
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**Block line Departures (in feet)**

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<td>E/W Departure:</td>
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**Lambert X-Y coordinates**

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**Latitude/Longitude**

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<th>Latitude:</th>
<th>28° 09' 33.609° N</th>
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<tbody>
<tr>
<td>Longitude:</td>
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**Anchor Locations for Drilling Rig or Construction Barge (8 POINT)**

<table>
<thead>
<tr>
<th>Anchor Name or No.</th>
<th>Area</th>
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<th>Y Coordinate</th>
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### Proposed Well/Structure Location

**Well or Structure Name/Number (If renaming well or structure, reference previous name):**

**Location F**

**Subsea Completion:**

- [x] Yes
- [ ] No

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**Anchor Radius (if applicable) in feet:** 4600'

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<table>
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<tr>
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**Block line Departures (in feet):**

- N/S Departure: 2149' FNL
- E/W Departure: 3197' FEL

**Lambert X-Y coordinates:**

- X: 2,526,243.00'
- Y: -10,230,491.00

**Latitude/Longitude:**

- Latitude: 28° 09' 26.813" N
- Longitude: 89° 55' 25.229" W

**TVD (Feet):**

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### Anchor Locations for Drilling Rig or Construction Barge (8 POINT)

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</tbody>
</table>

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**Paperwork Reduction Act of 1995 Statement:** The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant’s Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 600 per response, or 640 with an accompanying EP, or 660 with an accompanying DPP or DOCD, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the forms associated with subpart B. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1949 C Street, N.W., Washington, DC 20240.
### Proposed Location - EW834-D

<table>
<thead>
<tr>
<th>Location</th>
<th>Call N/S</th>
<th>Call E/W</th>
<th>X Coordinate</th>
<th>Y Coordinate</th>
<th>Latitude</th>
<th>Longitude</th>
<th>WD</th>
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</thead>
<tbody>
<tr>
<td>EW834-D SL</td>
<td>1,240 ft FNL</td>
<td>5,813 ft FEL</td>
<td>2,623,627</td>
<td>10,231,400</td>
<td>28° 09' 36.4566&quot;N</td>
<td>89° 56' 54.1696&quot;W</td>
<td>-1,224</td>
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### Proposed Location - EW834-E

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<th>Call E/W</th>
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<th>Y Coordinate</th>
<th>Latitude</th>
<th>Longitude</th>
<th>WD</th>
</tr>
</thead>
<tbody>
<tr>
<td>EW834-E SL</td>
<td>1,518 ft FNL</td>
<td>5,422 ft FEL</td>
<td>2,624,018</td>
<td>10,231,122</td>
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### Proposed Location - EW834-F

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<th>Y Coordinate</th>
<th>Latitude</th>
<th>Longitude</th>
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</thead>
<tbody>
<tr>
<td>EW834-F SL</td>
<td>2,149 ft FNL</td>
<td>3,187 ft FEL</td>
<td>2,626,243</td>
<td>10,230,491</td>
<td>28° 09' 26.8134&quot;N</td>
<td>89° 56' 25.2296&quot;W</td>
<td>-1,253</td>
</tr>
</tbody>
</table>

**Well Location Plat - Public Information**

Figure 11
October 13, 2009 (Rev.)  

Minerals Management Service (MS 5230)  
Gulf of Mexico OCS Region  
1201 Elmwood Park Blvd.  
New Orleans, LA 70123-2394  

RE:  Walter Oil & Gas Corporation  
     Proposed OCS-G 27982 'D' Well Location  
     Block 834, Ewing Bank Area  
     Archaeological Analysis  

Dear Staff:  

Walter Oil & Gas Corporation proposes to drill the OCS-G 27982 'D' Well from the following surface location:  

- **5,813’ FEL & 1,240’ FNL of Block 834, Ewing Bank Area**  

Tesla Offshore surveyed the site specific area in Block 834, Ewing Bank Area, with extended coverage in Blocks 789, 790, and 833, Ewing Bank Area, in November of 2006 along a 300-meter by 900-meter grid (Tesla Job# 06-741-12). Additional survey coverage was obtained in August, 2009 which included the easternmost extent of Block 834, all of Block 835, and portions of Blocks 790 and 791, Ewing Bank Area, along with portions of Blocks 749, 793, and 837, Mississippi Canyon Area (Tesla Job# 09-318-11). Walter Oil & Gas Corporation operates lease OCS-G 27982 and contracted Tesla Offshore, LLC to provide this *archaeological assessment (NTL 2005-G07)* in accordance with the Minerals Management Service Gulf of Mexico OCS Region.  

- **Water depth** is approximately 1,215 feet BSL surrounding the proposed drill site. The seafloor slopes relatively smoothly, with water depths increasing to the southeast.  

- **Seafloor soils** are a mixture of clay, and sand, silt, and clay (MMS Visual No. 3, 1983).  

- **Man-made features** are not present within the 4,600’ anchor spread surrounding Well ‘D’. The closest infrastructure include P&A Well No. 1 in Block 834, Ewing Bank Area, located approximately 10,025’ WSW of the proposed well site, and the closest of the Walter pipelines in Blocks 789 and 833, Ewing Bank located over 12,000’ west of the proposed drill site. A shipping fairway is located approximately 10,150’ east of the proposed well site.  

- The requirement for *magnetometer data acquisition* was waived for this survey due to water depths in excess of 200 meters (NTL 2005-G07 Appendix 1, Part IV, Section 3).
Walter Oil & Gas Corporation
Proposed OCS-G 27982 'D' Well Location
Block 834, Ewing Bank Area
Page 2

- **Sonar data** indicated a fine-textured seafloor with relict fault scarps on the seafloor, isolated outcrops and dimpling. None of these features were identified within the 4,600' anchor radius surrounding the proposed Well 'D'. A total of four targets were recorded within the survey area from the side scan sonar data. Only Target No. 4 is located within the anchor radius surrounding the proposed well site. Target No. 4 is located 4,450' WSW of the proposed well site, and is a linear feature measuring approximately 30' by 6' with no measured relief above the surrounding seafloor. This feature is likely natural, associated with some minor seafloor mottling, which in turn is associated with sub-surface faulting. The target is not believed to be culturally significant, but was recommended for avoidance as a potential hazard by at least 100'.

- **Subbottom Data** showed penetration of approximately 150 feet of sediments throughout the survey area. The heavily laminated and stratified sediment layers have been uplifted by an underlying salt, resulting in numerous fault scarps and sub-surface normal and graben faults located at and beneath the seafloor, although none were identified in proximity to the proposed well site.

An analysis of processed 3-D data will conducted by Gardline Surveys, Inc. in compliance with NTL 008-G07 and NTL 2000-G20.

The operator has surveyed the area for potential archaeological resources in the vicinity of the proposed well. No archaeological resources, or potential archaeological resources were identified, and lease development in this portion of Block 834, Ewing Bank Area will not impact identified archaeological resources. However, geophysical sensors can not identify all seafloor and sub-seafloor features. Therefore, in accordance with NTL 2005-G07 and 30 CFR 250.194(c) and 30 CFR 250.101(c), if during lease activities, materials or artifacts archaeological in nature are uncovered or observed, lease activity shall cease and the Regional Supervisor, Leasing and Environment, Minerals Management Service, shall be contacted within 48 hours of discovery.

Walter Oil & Gas Corporation and subcontractors will apply the safest and best available technologies during drilling operations and installation of future platforms.

Yours truly,

\[Signature\]

Matt Keith
Geoscience Manager

The undersigned has reviewed the information contained in this report and concurs with the findings.

\[Signature\]

Pete Hetherington, Geologist
Walter Oil & Gas Corporation

\[Date\]

10/14/2009
October 13, 2009 (Rev.)

Minerals Management Service (MS 5230)
Gulf of Mexico OCS Region
1201 Elmwood Park Blvd.
New Orleans, LA 70123-2394

RE: Walter Oil & Gas Corporation
    Proposed OCS-G 27982 'E' Well Location
    Block 834, Ewing Bank Area
    Archaeological Analysis

Dear Staff:

Walter Oil & Gas Corporation proposes to drill the OCS-G 27982 'E' Well from the following surface location:

- 5,422' FEL & 1,518' FNL of Block 834, Ewing Bank Area

Tesla Offshore surveyed the site specific area in Block 834, Ewing Bank Area, with extended coverage in Blocks 789, 790, and 833, Ewing Bank Area, in November of 2006 along a 300-meter by 900-meter grid (Tesla Job# 06-741-12). Additional survey coverage was obtained in August, 2009 which included the easternmost extent of Block 834, all of Block 835, and portions of Blocks 790 and 791, Ewing Bank Area, along with portions of Blocks 749, 793, and 837, Mississippi Canyon Area (Tesla Job# 09-318-11). Walter Oil & Gas Corporation operates lease OCS-G 27982 and contracted Tesla Offshore, LLC to provide this *archaeological assessment (NTL 2005-G07)* in accordance with the Minerals Management Service Gulf of Mexico OCS Region.

- Water depth is approximately 1,225 feet BSL surrounding the proposed drill site. The seafloor slopes relatively smoothly, with water depths increasing to the southeast.

- Seafloor soils are a mixture of clay, and sand, silt, and clay (MMS Visual No. 3, 1983).

- Man-made features are not present within the 4,600' anchor spread surrounding Well 'E'. The closest infrastructure include P&A Well No. 1 in Block 834, Ewing Bank Area, located approximately 10,500' WSW of the proposed well site, and the closest of the Walter pipelines in Blocks 789 and 833, Ewing Bank located over 12,000' west of the proposed drill site. A shipping fairway is located approximately 9,800' east of the proposed well site.

- The requirement for *magnetometer data acquisition* was waived for this survey due to water depths in excess of 200 meters (NTL 2005-G07 Appendix 1, Part IV, Section 3).
Sonar data indicated a fine-textured seafloor with relict fault scarps on the seafloor, isolated outcrops and dimpling. None of these features were identified within the 4,600' anchor radius surrounding the proposed Well 'E'. A total of four targets were recorded within the survey area from the side scan sonar data. None of the targets are located within the 4,600' anchor radius surrounding Well 'E', however, Target No. 4 is located 4,750' WSW of the proposed well site. The target is a linear feature measuring approximately 30' by 6' with no measured relief above the surrounding seafloor. This feature is likely natural, associated with some minor seafloor mottling, which in turn is associated with sub-surface faulting. The target is not believed to be culturally significant, but was recommended for avoidance as a potential hazard by at least 100'.

Subbottom Data showed penetration of approximately 150 feet of sediments throughout the survey area. The heavily laminated and stratified sediment layers have been uplifted by an underlying salt, resulting in numerous fault scarps and sub-surface normal and graben faults located at and beneath the seafloor, although none were identified in proximity to the proposed well site.

An analysis of processed 3-D data will conducted by Gardline Surveys, Inc. in compliance with NTL 008-G07 and NTL 2000-G20.

The operator has surveyed the area for potential archaeological resources in the vicinity of the proposed well. No archaeological resources, or potential archaeological resources were identified, and lease development in this portion of Block 834, Ewing Bank Area will not impact identified archaeological resources. However, geophysical sensors can not identify all seafloor and sub-seafloor features. Therefore, in accordance with NTL 2005-G07 and 30 CFR 250.194(c) and 30 CFR 250.101(c), if during lease activities, materials or artifacts archaeological in nature are uncovered or observed, lease activity shall cease and the Regional Supervisor, Leasing and Environment, Minerals Management Service, shall be contacted within 48 hours of discovery.

Walter Oil & Gas Corporation and subcontractors will apply the safest and best available technologies during drilling operations and installation of future platforms.

Yours truly,

Matt Keith
Geoscience Manager

The undersigned has reviewed the information contained in this report and concurs with the findings.

Pete Hetherington, Geologist
Walter Oil & Gas Corporation

10/15/2009

Date
October 13, 2009 (Rev.)  

Minerals Management Service (MS 5230)  
Gulf of Mexico OCS Region  
1201 Elmwood Park Blvd.  
New Orleans, LA 70123-2394  

RE: Walter Oil & Gas Corporation  
Proposed OCS-G 27982 ‘F’ Well Location  
Block 834, Ewing Bank Area  
Archaeological Analysis  

Dear Staff:  

Walter Oil & Gas Corporation proposes to drill the OCS-G 27982 ‘F’ Well from the following surface location:  

- 3,197’ FEL & 2,149’ FNL of Block 834, Ewing Bank Area  

Tesla Offshore surveyed the site specific area in Block 834, Ewing Bank Area, with extended coverage in Blocks 789, 790, and 833, Ewing Bank Area, in November of 2006 along a 300-meter by 900-meter grid (Tesla Job# 06-741-12). Additional survey coverage was obtained in August, 2009 which included the easternmost extent of Block 834, all of Block 835, and portions of Blocks 790 and 791, Ewing Bank Area, along with portions of Blocks 749, 793, and 837, Mississippi Canyon Area (Tesla Job# 09-318-11). Walter Oil & Gas Corporation operates lease OCS-G 27982 and contracted Tesla Offshore, LLC to provide this archaeological assessment (NTL 2005-G07) in accordance with the Minerals Management Service Gulf of Mexico OCS Region.  

- **Water depth** is approximately 1,250 feet BSL surrounding the proposed drill site. The seafloor slopes relatively smoothly, with water depths increasing to the southeast.  

- **Seafloor soils** are a mixture of clay, and sand, silt, and clay (MMS Visual No. 3, 1983).  

- **Man-made features** are not present within the 4,600’ anchor spread surrounding Well ‘F’. The closest infrastructure include P&A Well No. 1 in Block 834, Ewing Bank Area, and the Walter pipelines in Blocks 789 and 833, Ewing Bank all located over 12,000’ SW of the proposed drill site. A shipping fairway is located approximately 7,600’ east of the proposed well site.  

- The requirement for **magnetometer data acquisition** was waived for this survey due to water depths in excess of 200 meters (NTL 2005-G07 Appendix 1, Part IV, Section 3).
Walter Oil & Gas Corporation  
Proposed OCS-G 27982 'F' Well Location  
Block 834, Ewing Bank Area  
Page 2

- **Sonar data** indicated a fine-textured seafloor with relict fault scarps on the seafloor, isolated outcrops and dimpling. Some minor fault scarps were identified along the eastern extents of the anchor radius surrounding the proposed Well 'F'. A total of four targets were recorded within the survey area from the side scan sonar data. None of the targets are located within the 4,600' anchor radius surrounding Well 'F'. The closest target is No. 4, located 6,850' west of the proposed well site. The target is a linear feature measuring approximately 30' by 6' with no measured relief above the surrounding seafloor. This feature is likely natural, associated with some minor seafloor mottling, which in turn is associated with sub-surface faulting. The target is not believed to be culturally significant, but was recommended for avoidance as a potential hazard by at least 100'.

- **Subbottom Data** showed penetration of approximately 150 feet of sediments throughout the survey area. The heavily laminated and stratified sediment layers have been uplifted by an underlying salt, resulting in numerous fault scarps and sub-surface normal and graben faults located at and beneath the seafloor, although none were identified in proximity to the proposed well site.

An analysis of processed 3-D data will conducted by Gardline Surveys, Inc. in compliance with NTL 008-G07 and NTL 2000-G20.

The operator has surveyed the area for potential archaeological resources in the vicinity of the proposed well. No archaeological resources, or potential archaeological resources were identified, and lease development in this portion of Block 834, Ewing Bank Area will not impact identified archaeological resources. However, geophysical sensors can not identify all seafloor and sub-seafloor features. Therefore, in accordance with NTL 2005-G07 and 30 CFR 250.194(c) and 30 CFR 250.101(c), if during lease activities, materials or artifacts archaeological in nature are uncovered or observed, lease activity shall cease and the Regional Supervisor, Leasing and Environment, Minerals Management Service, shall be contacted within 48 hours of discovery.

Walter Oil & Gas Corporation and subcontractors will apply the safest and best available technologies during drilling operations and installation of future platforms.

Yours truly,

Matt Keith  
Geoscience Manager

The undersigned has reviewed the information contained in this report and concurs with the findings.

Pete Hetherington, Geologist  
Walter Oil & Gas Corporation  
10/14/2009  
Date
WELL CLEARANCE LETTER – Proposed EW834-D Well Location
September 30, 2009
Walter Oil & Gas Corporation
1100 Louisiana Suite 200
Houston, TX 77002

Attention: Mr. Pete Hetherington

Well Clearance Letter
Proposed EW834-D Location
Block 834, Ewing Bank Area
OCS-G 27982

Gardline Surveys Inc was contracted by Walter Oil & Gas Corporation to prepare a Well Clearance Letter for the proposed EW834-D well location in Block 834, Ewing Bank Area (OCS-G 27982). This letter addresses seafloor and shallow geologic conditions that may impact exploratory drilling operations within 1,500ft of the proposed wellsite. The depth limit of this site clearance assessment is Horizon H50 (~5,000ft below sea surface, 3,776ft below seabed). We understand that Walter Oil and Gas Corporation plans to drill the proposed exploration well from an anchored semi-submersible rig; therefore, an anchoring assessment is included in Appendix A. Letter-size Seabed Depth, Seabed Morphology, Seabed Amplitude and Geohazard Summary extracts are presented with this Well Clearance Letter at a scale of 1" = 1,000ft (1:12,000), plus annotated data examples of intersecting 3D survey lines over the proposed surface location. This Well Clearance Letter is based on the interpretation of 3D seismic data, and is issued as a supplement to Gardline Report No. 7071 entitled: 3D Geohazard Assessment, Ewing Bank, Block 834, Volume 1, Geohazard Study, dated June 2007.

3D Geophysical Survey. Walter Oil & Gas provided the 3D dataset to Gardline Surveys Inc. on tape media in SEG-Y format for loading onto a Seismic Micro-Technology (SMT) workstation. The 3D data cube contains a survey with 4 millisecond sample rate data to a record length of 9.8 seconds TWT below sea surface. Inlines are oriented north to south, have a numerical increment of one, and exhibit a line spacing of 61.62ft. Crosslines are oriented east to west, have a numerical increment of one, and exhibit a line spacing of 41.01ft.

The data presents an acceptable frequency response across the upper 1 second below seabed with an effective frequency range of 10 - 70Hz. The data exhibits a dominant frequency in the upper 1 second of approximately 50Hz resulting in a mean vertical resolvability of approximately 26ft and a layer detectability of 5ft. The data is considered to be of good to excellent quality. A Power Spectrum Diagram derived from the upper 1 second of data below seabed is included in the attached documentation (Figure 9).
Acquisition & Processing History are:

- Cable and Source depth during acquisition were 7.5m below sea surface, and the data was acquired at 2ms sample rate
- The survey was acquired by PGS in February 1997 and is termed Grand Isle Phase 1
- The basic processing sequence is:
  - Seg-D Reformat
  - Resample to 4ms
  - Trace Editing
  - Navigation Merged with Seismic
  - High Pass Filter (Low Cut 2Hz, Low Pass 4Hz)
  - Datum Correction
  - Spherical Divergence and Gain Correction
  - First Break Mute
  - Deconvolution (Spike, 2 window)
  - Trace Balancing
  - DMO Stack
  - Clean Up Mute
  - Band-pass Filter
    - 0 sec 3/5 75/95
    - 5 sec 3/5 65/80
    - 6 sec 3/5 50/60
  - Gain Down (-2db/sec)
  - Migration (One pass cascaded finite difference)
  - Gain Recovery (+2db/sec)
  - Water Bottom Clean Up Mute
  - Global Relative Amplitude Compensation

In summary and with reference to NTL No. 2008-G04

a) The data provides images of sufficient resolution of the shallow section allowing a clear analysis of the shallow conditions
b) The data can be loaded to a workstation at 16bit resolution or greater, and is unscaled
c) There is no trace or sample decimation
d) The sample interval and bin size are maintained throughout the assessment area
e) The data possess a frequency content of 50Hz or higher across the first second below seafloor (See Power Spectrum Diagram)
f) Seafloor reflection is free of gaps and is defined by a wavelet of stable shape and phase, allowing auto-tracking of the seafloor event with minimum user intervention and guidance
g) There are no significant acquisition artefacts throughout the dataset
h) There are no merge points in the data
i) Processed bin sizes are 65.62ft x 41.01ft
j) The sample rate of the data is 2ms
k) An accurate velocity model has been utilized in the shallow section allowing optimum structural and stratigraphy resolution with no evidence of under or over migration
l) There is no significant multiple energy
m) The proposed activities are not in an area of high archaeological potential.
1. LOCATION COORDINATES

1.1 Proposed EW834-D Well Location

The proposed EW834-D well location lies in the north-central area of Block EW834 (OCS-G 27982). The seafloor appears to be smooth to slightly undulating within 1,500ft of the well location.

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<thead>
<tr>
<th>Proposed EW834-D Location (Surface)</th>
<th>Location Coordinates</th>
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<tbody>
<tr>
<td>NAD 27 Datum - Clarke 1866 Ellipsoid</td>
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<tr>
<td>Latitude</td>
<td>Easting</td>
</tr>
<tr>
<td>28° 09'</td>
<td>2,623,627 US ft E</td>
</tr>
<tr>
<td>Longitude</td>
<td>54.1696° West</td>
</tr>
<tr>
<td>89° 56'</td>
<td>5,813   US ft</td>
</tr>
<tr>
<td>FEL of Ewing Bank 834</td>
<td>1,240   US ft</td>
</tr>
<tr>
<td>FNIL of Ewing Bank 834</td>
<td>-1,224ft</td>
</tr>
<tr>
<td>Water Depth</td>
<td>Inline   4266</td>
</tr>
<tr>
<td>Nearest Shoreline</td>
<td>63.35 Miles @ 29.4°</td>
</tr>
<tr>
<td>Port of Operation</td>
<td>Fourchon</td>
</tr>
</tbody>
</table>
2. VELOCITY DATA

2.1 Velocity Data

Time-to-depth conversion for the water column was derived using the Advocate and Hood (1993) polynomial.

Water Depth (ft) =
0.1105 - 5066.9193X + 468.6693X^2 - 554.7107X^3 + 340.7019X^4 - 116.991X^5 + 20.728X^6 - 1.4658X^7
Where X = One Way Time to Seabed (in Seconds)

Sub-seabed Time-to-depth conversion was performed using a second order polynomial derived from checkshot data from well EW790-1 from library records:

Depth below seabed (ft) = 176.51X^2 + 2628.7X
Where X = two way time in seconds below seabed.

Depth below sea surface to any interface was therefore obtained by summing the results of the above equations.
3. **SEABED CONDITIONS**

3.1 *Bathymetry*

Water depth at the proposed EW834-D well location is -1,224ft below sea surface (Figure 1). The seafloor deepens to the southeast at <1.0°.

3.2 *Seafloor Morphology and Man Made Features*

The proposed EW834-D well location is in the north-central part of the study area. At the proposed well location the seabed is smooth to slightly undulating (Figure 2). The proposed well is located 7,939ft to the north of a graben area. The nearest chemosynthetic community is located 7,250ft to the northeast of the proposed well. Soft clays and silts are predicted at seabed. Sediments appear conducive for jetting of seabed casing with no hard layers predicted.

There are no anomalous seabed amplitudes indicative of hydrocarbon macroseep observed within a 1,500ft radius of the proposed location (Figure 3).

No additional features are observed within a 1,500ft radius that could affect well emplacement or jetting of casing.
4. **SUB-SEABED CONDITIONS**

4.1 **Geology and Lithology**

The sedimentary sequence at the proposed well location has been divided into five units, A, B, C, D and E, separated by four horizons, H10, H20 H30 and H40 (Figures 5 through 7).

4.2 **Unit A**

Lithology in this upper interval of Unit A, from seabed to -1,470ft below sea surface (246ft below seabed), is interpreted as well-layered soft clays and silts.

The stratigraphy from -1,470ft to -1,706ft below sea surface (246ft to 482ft below seabed) consists of slightly higher energy clays and silts with the possibility of minor coarser-grained interbeds.

Seabed sediments and shallow soils are generally expected to be good for jetting or piling of the seabed casing.

No shallow gas hazards or shallow water flow risks are predicted in Unit A.

Horizon H10 marks the base of Unit A occurring at -1,706ft below sea-surface (482ft below seabed).

4.3 **Unit B**

The uppermost interval in Unit B, from -1,706ft to -1,876ft below sea surface (482ft to 652ft below seabed), is composed of clays and silts.

From -1,876ft to -2,081ft below sea surface (652ft to 857ft below seabed) the stratigraphy consists of mass transport clays and silts with possible fine sands. Minor fine sands in this interval could be the source of minor shallow water flow. Low severity shallow water flow has been recorded at this depth in the southeast of the Ewing Bank area (Blocks 1005 & 1006). Given this nearby history a **Slight Shallow Water Flow Risk** is assigned to this interval.

The stratigraphy from -2,081ft to -2,268ft below sea surface (857ft to 1,044ft below seabed) is comprised of clays and silts.

The lower interval of Unit B, from -2,268ft to -2,478ft below sea surface (1,044ft to 1,254ft below seabed), is interpreted as mass transport clays and silts with possible fine sands. Minor fine sands in this interval could be the source of minor shallow water flow. Low severity shallow water flow has been recorded at this depth in the southeast of the Ewing Bank area (Blocks 1005 & 1006). Given this nearby history a **Slight Shallow Water Flow Risk** is assigned to this interval.
The base of this unit is marked by an erosional surface and a predicted lithology change. Horizon H20 represents this interface occurring at -2,478ft below sea surface (1,254ft below seabed).

4.4 Unit C

Lithology within this interval is expected to be comprised of clays and silts with a few minor coarser-grained interbeds.

No shallow gas hazards or shallow water flow risks are predicted in Unit C.

The base of this unit is marked by Horizon H30, and represents a boundary between lower energy deposits in Unit C and the higher energy deposits of the underlying Unit D. Horizon H30 occurs at -2,862ft below sea surface (1,638ft below seabed).

4.5 Unit D

The upper interval within this unit, from -2,862ft to -3,228ft below sea surface (1,638ft to 2,004ft below seabed), is interpreted to consist of complex interbedded clays, silts, and sands.

Lithology in the mid-part of Unit D, from -3,228ft to -3,586ft below sea surface (2,004ft to 2,362ft below seabed), consists of clays, silts and minor sandy interbeds.

The lower portion of Unit D, from -3,586ft to 3,726ft below sea surface (2,362ft to 2,594ft below seabed), is composed of clays, silts, and sand interbeds.

A vertical borehole will not penetrate any identified risk of gas anomalies. The nearest risk of gas occurs 1,793ft to the southwest of the proposed well. However, based on the lithology, reflection amplitudes, seismic character, and depositional environment within the lower interval from -3,586ft to 3,726ft below sea surface (2,362ft to 2,594ft below seabed) a Slight Risk of Gas and a Slight Shallow Water Flow Risk is assigned through this lower part of Unit D.

The base of this unit is marked by an erosional surface and a predicted lithology change. Horizon H40 represents this boundary at -3,726ft below sea surface (2,594ft below seabed).

4.6 Unit E

The upper interval of Unit E, from -3,726ft to -3,892ft below sea surface (2,594ft to -2,668ft below seabed), is comprised of clays, silts, and minor sandy interbeds.

The lower interval of Unit E, from -3,892ft to -5,000ft below sea surface (2,668ft to 3,776ft below seabed), is interpreted as clay and silt sediments with sandy interbeds. Minor wellbore
stability problems are possible within this interval. A <12ft thick sand interbed occurs at -4,526ft below sea surface (3,302ft below seabed).

A vertical borehole will not penetrate any identified risk of gas anomalies. The nearest anomaly with a high risk of gas occurs 280ft to the west of the proposed well associated with the <12ft thick sand interbed. Given this close occurrence a Slight Risk of Gas is assigned at the level of this sand interbed at -4,526ft below sea surface (3,302ft below seabed). However, there is no direct connectivity of the anomaly to the west to the proposed well location, as a small fault terminates the anomaly to the west of the proposed well path.

The higher energy character of the majority of Unit E with evidence of sandy interbeds and lenses being present leads to a Slight Shallow Water Flow Risk within Unit E from -3,892ft to -5,000ft below sea surface (2,668ft to 3,776ft below seabed).

A vertical borehole will penetrate a fault at -4,526ft below sea surface (3,302ft below seabed). Minor drilling fluid circulation problems may occur if pressure over hydrostatic are exerted by the drilling fluid column at the level of this fault.

Horizon H50 marks the base of this Unit and the base of this shallow hazards study. Horizon H50 occurs at -5,000ft below sea surface (3,776ft below seabed).

4.7 Shallow Gas Assessment

Within Unit D, a Slight Risk of Gas is assigned to the lower interval from -3,586ft to 3,726ft below sea surface (2,362ft to 2,594ft below seabed).

Within Unit E, a Slight Risk of Gas is assigned to the <12ft thick sand interbed at -4,526ft below sea surface (3,302ft below seabed).

4.8 Shallow Water Flow Assessment

Within Unit B, a Slight Shallow Water Flow Risk is predicted within the intervals from -1,876ft to -2,081ft below sea surface (652ft to 857ft below seabed) and -2,268ft to -2,478ft below sea surface (1,044ft to 1,254ft below seabed).

Within Unit D, a Slight Shallow Water Flow Risk is assigned to the interval from -3,586ft to 3,726ft below sea surface (2,362ft to 2,594ft below seabed).

Within Unit E, a Slight Shallow Water Flow Risk is assigned from -3,892ft to -5,000ft below sea surface (2,668ft to 3,776ft below seabed).
5. CONCLUSIONS AND RECOMMENDATIONS

• Seabed
  No significant problems are anticipated at seabed. Shallow soils are expected to be conducive to the jetting of seabed casing with no hardgrounds predicted.

• Unit A
  No hazards or problems are predicted.

• Unit B
  A Slight Shallow Water Flow Risk is interpreted within the intervals from -1,876ft to -2,081ft below sea surface (652ft to 857ft below seabed) and -2,268ft to -2,478ft below sea surface (1,044ft to 1,254ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

• Unit C
  No hazards or problems are predicted.

• Unit D
  A Slight Risk of Gas and a Slight Shallow Water Flow Risk is assigned to the interval from -3,586ft to 3,726ft below sea surface (2,362ft to 2,594ft below seabed). Drilling Caution is advised. Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

• Unit E
  Minor wellbore stability problems are possible within Unit E from -3,892ft to -5,000ft below sea surface (2,668ft to 3,776ft below seabed).

  A Slight Risk of Gas is assigned at the level of the <12ft sand interbed at -4,526ft below sea surface (3,302ft below seabed). Drilling Caution is advised.

  A Slight Shallow Water Flow Risk is possible from -3,892ft to -5,000ft below sea surface (2,668ft to 3,776ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

Minor drilling fluid circulation problems may occur if pressure over hydrostatic are exerted by the drilling fluid column at the level of a fault at -4,526ft below sea surface (3,302ft below seabed).
We appreciate the opportunity to work with you on this project, and look forward to continuing as your geohazards consultants. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

Gardline Surveys Inc.

Andrew Haigh
Geophysical Manager

Julie White
Quality Assurance

Copies Submitted: 6 copies to Mr. Pete Hetherington at Walter Oil & Gas Company

Attachments:

Proposed EW834-D Well Location
Seabed Depth Extract
Seabed Morphology Extract
Seabed Amplitude Extract
Geohazard Summary Extract
Inline Data Example
Crossline Data Example
Top Hole Prognosis
ROV Plat
Power Spectrum
Bathymetry Plat
Public Information Plat
Proprietary Information Plat
Vicinity Map
10-Mile Radius Plat

The undersigned has reviewed the information contained in this report and concurs with the findings.

Pete Hetherington, Geologist
Walter Oil & Gas Corporation

10/07/09
WELL CLEARANCE LETTER – Proposed EW834-E Well Location

September 30, 2009
Walter Oil & Gas Corporation
1100 Louisiana Suite 200
Houston, TX 77002

Attention: Mr. Pete Hetherington

Well Clearance Letter
Proposed EW834-E Well Location
Block 834, Ewing Bank Area
OCS-G 27982

Gardline Surveys Inc was contracted by Walter Oil & Gas Corporation to prepare a Well Clearance Letter for the proposed EW834-E well location in Block 834, Ewing Bank Area (OCS-G 27982). This letter addresses seafloor and shallow geologic conditions that may impact exploratory drilling operations within 1,500ft of the proposed wellsite. The depth limit of this site clearance assessment is Horizon H50 (-5,009ft below sea surface, 3,782ft below seabed). We understand that Walter Oil and Gas Corporation plans to drill the proposed exploration well from an anchored semi-submersible rig; therefore, an anchoring assessment is included in Appendix A. Letter-size Seabed Depth, Seabed Morphology, Seabed Amplitude and Geohazard Summary extracts are presented with this Well Clearance Letter at a scale of 1"=1,000ft (1:12,000), plus annotated data examples of intersecting 3D survey lines over the proposed surface location. This Well Clearance Letter is based on the interpretation of 3D seismic data, and is issued as a supplement to Gardline Report No. 7071 entitled: 3D Geohazard Assessment, Ewing Bank, Block 834, Volume 1, Geohazard Study, dated June 2007.

3D Geophysical Survey. Walter Oil & Gas provided the 3D dataset to Gardline Surveys Inc. on tape media in SEG-Y format for loading onto a Seismic Micro-Technology (SMT) workstation. The 3D data cube contains a survey with 4 millisecond sample rate data to a record length of 9.8 seconds TWT below sea surface. Inlines are oriented north to south, have a numerical increment of one, and exhibit a line spacing of 61.62ft. Crosslines are oriented east to west, have a numerical increment of one, and exhibit a line spacing of 41.01ft.

The data presents an acceptable frequency response across the upper 1 second below seabed with an effective frequency range of 10 - 70Hz. The data exhibits a dominant frequency in the upper 1 second of approximately 50Hz resulting in a mean vertical resolvability of approximately 26ft and a layer detectability of 5ft. The data is considered to be of good to excellent quality. A Power Spectrum Diagram derived from the upper 1 second of data below seabed is included in the attached documentation (Figure 9).
Acquisition & Processing History are:

- Cable and Source depth during acquisition were 7.5m, and the data was acquired at 2ms sample rate
- The survey was acquired by PGS in February 1997 and is termed Grand Isle Phase 1
- The basic processing sequence is:
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  - Resample to 4ms
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  - High Pass Filter (Low Cut 2Hz, Low Pass 4Hz)
  - Datum Correction
  - Spherical Divergence and Gain Correction
  - First Break Mute
  - Deconvolution (Spike, 2 window)
  - Trace Balancing
  - DMO Stack
  - Clean Up Mute
  - Band-pass Filter
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    - 6 sec 3/5 50/60
  - Gain Down (-2db/sec)
  - Migration (One pass cascaded finite difference)
  - Gain Recovery (+2db/sec)
  - Water Bottom Clean Up Mute
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In summary and with reference to NTL No. 2008-G04

a) The data provides images of sufficient resolution of the shallow section allowing a clear analysis of the shallow conditions
b) The data can be loaded to a workstation at 16bit resolution or greater, and is unscaled
c) There is no trace or sample decimation
d) The sample interval and bin size are maintained throughout the assessment area
e) The data possess a frequency content of 50Hz or higher across the first second below seafloor (See Power Spectrum Diagram)
f) Seafloor reflection is free of gaps and is defined by a wavelet of stable shape and phase, allowing auto-tracking of the seafloor event with minimum user intervention and guidance
g) There are no significant acquisition artefacts throughout the dataset
h) There are no merge points in the data
i) Processed bin sizes are 65.62ft x 41.01ft
j) The sample rate of the data is 2ms
k) An accurate velocity model has been utilized in the shallow section allowing optimum structural and stratigraphy resolution with no evidence of under or over migration
l) There is no significant multiple energy
m) The proposed activities are not in an area of high archaeological potential.
1. LOCATION COORDINATES

1.1 Proposed EW834-E Well Location

The proposed EW834-E well location lies in the north-central area of Block EW834 (OCS-G 27982). The seafloor appears to be smooth to slightly undulating within 1,500ft of the well location.

<table>
<thead>
<tr>
<th>Proposed EW834-E Location (Surface)</th>
<th>Location Coordinates</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAD 27 Datum - Clarke 1866 Ellipsoid</td>
<td>UTM Zone 15 - CM 93° West</td>
</tr>
<tr>
<td>Latitude 28° 09' 33.6094&quot; North</td>
<td>Easting 2,624,018 US ft E</td>
</tr>
<tr>
<td>Longitude 89° 56' 49.8839&quot; West</td>
<td>Northing 10,231,122 US ft N</td>
</tr>
<tr>
<td>FEL of Ewing Bank 834</td>
<td>East 5,422 US ft Incline 4272</td>
</tr>
<tr>
<td>FNL of Ewing Bank 834</td>
<td>West 1,518 US ft Crossline 7039</td>
</tr>
<tr>
<td>Water Depth: -1.227ft</td>
<td>Slope: &lt;1.0° to the southeast</td>
</tr>
<tr>
<td>Nearest Shoreline</td>
<td>63.35 Miles @ 29.4°</td>
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<td>Fourchon 68.7 Miles @ 346°</td>
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<td>Nearest Manned Platform</td>
<td>Eni, A-Morphp East EW921 8.1 Miles @ 200°</td>
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2. VELOCITY DATA

2.1 Velocity Data

Time-to-depth conversion for the water column was derived using the Advocate and Hood (1993) polynomial.

Water Depth (ft) =

\[0.1105 - 5066.9193X + 468.6693X^2 - 554.7107X^3 + 340.7019X^4 - 116.991X^5 + 20.728X^6 - 1.4658X^7\]

Where X = One Way Time to Seabed (in Seconds)

Sub-seabed Time-to-depth conversion was performed using a second order polynomial derived from checkshot data from well EW790-1 from library records:

Depth below seabed (ft) = 176.51X^2 + 2628.7X

Where X = two way time in seconds below seabed.

Depth below sea surface to any interface was therefore obtained by summing the results of the above equations.
3. **SEABED CONDITIONS**

3.1 *Bathymetry*

Water depth at the proposed EW834-E location is -1,227ft below sea surface (Figure 1). The seafloor deepens to the southeast at <1.0°.

3.2 *Seafloor Morphology and Man Made Features*

The proposed EW834-E location is in the north-central part of the study area. The seabed is smooth to slightly undulating at the proposed well location (Figure 2). The proposed well is located 7,287ft to the NNW of a graben area. The nearest chemosynthetic community is located 7,063ft to the northeast of the proposed well. Soft clays and silts are predicted at seabed. Sediments appear conducive for jetting of seabed casing with no hard layers predicted.

There are no anomalous seabed amplitudes indicative of hydrocarbon macroseep observed within a 1,500ft radius of the proposed location (Figure 3).

No other features are observed within a 1,500ft radius that could affect well emplacement or jetting of casing.
4. SUBSEAED CONDITIONS

4.1 Geology and Lithology

The sedimentary sequence at the proposed well location has been subdivided into five units, A, B, C, D and E, separated by four horizons, H10, H20 H30 and H40 (Figures 5 through 7).

4.2 Unit A

Lithology in this upper interval of Unit A, from seabed to -1,470ft below sea surface (243ft below seabed), is interpreted as well-layered soft clays.

The stratigraphy from -1,470ft to -1,693ft below sea surface (243ft to 466ft below seabed) is comprised of clays and silts with the possibility of minor coarser-grained interbeds.

Seabed sediments and shallow soils are generally expected to be good for jetting or piling of the seabed casing.

No shallow gas hazards or shallow water flow risks are predicted in Unit A.

Horizon H10 marks the base of Unit A occurring at -1,693ft below sea-surface (466ft below seabed).

4.3 Unit B

The upper interval in Unit B, from -1,693ft to -1,871ft below sea surface (466ft to 644ft below seabed), is composed of clays and silts.

From -1,871ft to -2,089ft below sea surface (644ft to 862ft below seabed), the stratigraphy consists of mass transport clays and silts with possible fine sands. Minor fine sands in this interval could be the source of minor shallow water flow. Low severity shallow water flow has been recorded at this depth in the southeast of the Ewing Bank area (Blocks 1005 & 1006). Given this past provenance in the nearby area a **Slight Shallow Water Flow Risk** is assigned to this interval of Unit B.

The stratigraphy from -2,089ft to -2,257ft below sea surface (862ft to 1,030ft below seabed) is comprised of clays and silts.

The lower interval of Unit B, from -2,257ft to -2,476ft below sea surface (1,030ft to 1,249ft below seabed), is interpreted to consist of mass transport clays and silts with possible fine sands. Minor fine sands in this interval could be the source of minor shallow water flow. Low severity shallow water flow has been recorded at this depth in the southeast of the Ewing Bank area (Blocks 1005 & 1006). Given this past provenance in the nearby area a **Slight Shallow Water Flow Risk** is assigned to this interval of Unit B.
The base of this unit is marked by an erosional surface and a predicted lithology change. Horizon H20 represents this interface at -2,476ft below sea surface (1,249ft below seabed).

4.4 Unit C

Lithology within this interval is expected to be comprised of clays and silts with a few minor coarser-grained interbeds.

No shallow gas hazards or shallow water flow risks are predicted in Unit C.

The base of this unit is marked by Horizon H30, which represents a boundary between lower energy deposits in Unit C and higher energy deposits of the underlying Unit D. Horizon H30 occurs at -2,852ft below sea surface (1,625ft below seabed).

4.5 Unit D

The upper interval within this unit, from -2,852ft to -2,996ft below sea surface (1,625ft to 1,769ft below seabed), is interpreted to consist of complex interbedded clays, silts, and sands.

Lithology in the mid-part of Unit D, from -2,996ft to -3,604ft below sea surface (1,769ft to 2,377ft below seabed), consists of clays, silts and minor sandy interbeds.

The lower portion of Unit D, from -3,604ft to 3,734ft below sea surface (2,377ft to 2,507ft below seabed), is composed of clays, silts, and sand interbeds.

A vertical borehole will not penetrate any identified risk of gas anomalies. The nearest risk of gas area is located 1,955ft to the southwest of the proposed well. However, based on the lithology, reflection amplitudes, seismic character, and depositional environment within the lower interval from -3,604ft to 3,734ft below sea surface (2,377ft to 2,507ft below seabed), a Slight Risk of Gas and a Slight Shallow Water Flow Risk is assigned at the proposed well location through this interval.

The base of this unit is marked by an erosional surface and a predicted lithology change. Horizon H40 represents this boundary at -3,734ft below sea surface (2,507ft below seabed).

4.6 Unit E

The upper interval of Unit E, from -3,734ft to -3,887ft below sea surface (2,507ft to -2,660ft below seabed), consists of clays, silts, and minor sandy interbeds.

This lower interval of Unit E, from -3,887ft to -5,009ft below sea surface (2,660ft to 3,782ft below seabed), is interpreted as clay and silt sediments with complex sandy interbeds.
A vertical borehole will not penetrate any identified risk of gas anomalies. The nearest anomaly with a high risk of gas is located 733ft to the northeast and to the northwest of the proposed well. This anomaly is associated with complex sandy interbeds that do appear to extend to the well path. At the well location no anomalous response is observed, but the presence of sandy interbeds should be anticipated within the lower part of Unit E from -3,887ft to -5,009ft below sea surface (2,660ft to 3,782ft below seabed). As such a **Slight Shallow Water Flow Risk** is assigned and minor wellbore instabilities are possible.

A vertical borehole will penetrate a fault at -4,480ft below sea surface (3,253ft below seabed). Minor drilling fluid circulation problems may occur if pressure over hydrostatic are exerted by the drilling fluid column at the level of this fault.

Horizon H50 marks the base of this Unit and the base of this shallow hazards study. Horizon H50 occurs at -5,009ft below sea surface (3,782ft below seabed).

### 4.7 Shallow Gas Assessment

Within Unit D, a **Slight Risk of Gas** is assigned to the lower interval from -3,604ft to 3,734ft below sea surface (2,377ft to 2,507ft below seabed).

### 4.8 Shallow Water Flow Assessment

Within Unit B, a **Slight Shallow Water Flow Risk** is predicted within the intervals from -1,871ft to -2,089ft below sea surface (644ft to 862ft below seabed) and -2,257ft to -2,476ft below sea surface (1,030ft to 1,249ft below seabed).

Within Unit D, a **Slight Shallow Water Flow Risk** is assigned to the interval from -3,604ft to 3,734ft below sea surface (2,377ft to 2,507ft below seabed).

Within Unit E, a **Slight Shallow Water Flow Risk** is assigned from -3,887ft to -5,009ft below sea surface (2,660ft to 3,782ft below seabed).
5. CONCLUSIONS AND RECOMMENDATIONS

- Seabed
  No significant problems are anticipated at seabed. Shallow soils are expected to be conducive to the jetting of seabed casing with no hardgrounds predicted.

- Unit A
  No hazards or problems are predicted.

- Unit B
  A Slight Shallow Water Flow Risk is interpreted within the intervals from -1,871ft to -2,089ft below sea surface (644ft to 662ft below seabed) and -2,257ft to -2,476ft below sea surface (1,030ft to 1,249ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

- Unit C
  No hazards or problems are predicted.

- Unit D
  A Slight Risk of Gas and a Slight Shallow Water Flow Risk is assigned to the interval from -3,604ft to 3,734ft below sea surface (2,377ft to 2,507ft below seabed). Drilling Caution is advised. Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

- Unit E
  Minor wellbore stability problems are possible within Unit E from -3,887ft to -5,009ft below sea surface (2,660ft to 3,782ft below seabed).

  A Slight Shallow Water Flow Risk is assigned from -3,887ft to -5,009ft below sea surface (2,660ft to 3,782ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

  A vertical borehole will penetrate a fault at -4,480ft below sea surface (3,253ft below seabed). Minor drilling fluid circulation problems may occur if pressure over hydrostatic are exerted by the drilling fluid column at the level of this fault.
Walter Oil & Gas Corporation
Well Clearance Letters – Ewing Bank - Block 834 – Proposed EW834-D, E and F Locations

We appreciate the opportunity to work with you on this project, and look forward to continuing as your geohazards consultants. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,
Gardline Surveys Inc.

[Signatures]
Andrew Haigh
Geophysical Manager
Julie White
Quality Assurance

Copies Submitted: 6 copies to Mr. Pete Hetherington at Walter Oil & Gas Company

Attachments:
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The undersigned has reviewed the information contained in this report and concurs with the findings.

[Signature]
Pete Hetherington, Geologist
Walter Oil & Gas Corporation
10/07/09 Date
WELL CLEARANCE LETTER – Proposed EW834-F Well Location  
September 30, 2009  
Walter Oil & Gas Corporation  
1100 Louisiana Suite 200  
Houston, TX 77002  

Attention: Mr. Pete Hetherington

Well Clearance Letter  
Proposed EW834-F Well Location  
Block 834, Ewing Bank Area  
OCS-G 27982

Gardline Surveys Inc was contracted by Walter Oil & Gas Corporation to prepare a Well Clearance Letter for the proposed EW834-F well location in Block 834, Ewing Bank Area (OCS-G 27982). This letter addresses seafloor and shallow geologic conditions that may impact exploratory drilling operations within 1,500ft of the proposed wellsite. The depth limit of this site clearance assessment is Horizon H50 (~5,028ft below sea surface, 3,775ft below seabed). We understand that Walter Oil and Gas Corporation plans to drill the proposed exploration well from an anchored semi-submersible rig; therefore, an anchoring assessment is included in Appendix A. Letter-size Seabed Depth, Seabed Morphology, Seabed Amplitude and Geohazard Summary extracts are presented with this Well Clearance Letter at a scale of 1" = 1,000ft (1:12,000), plus annotated data examples of intersecting 3D survey lines over the proposed surface location. This Well Clearance Letter is based on the interpretation of 3D seismic data, and is issued as a supplement to Gardline Report No. 7071 entitled: 3D Geohazard Assessment, Ewing Bank, Block 834, Volume 1, Geohazard Study, dated June 2007.

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In summary and with reference to NTL No. 2008-G04:

a) The data provides images of sufficient resolution of the shallow section allowing a clear analysis of the shallow conditions
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c) There is no trace or sample decimation
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h) There are no merge points in the data
i) Processed bin sizes are 65.62ft x 41.01ft
j) The sample rate of the data is 2ms
k) An accurate velocity model has been utilized in the shallow section allowing optimum structural and stratigraphy resolution with no evidence of under or over migration
l) There is no significant multiple energy
m) The proposed activities are not in an area of high archaeological potential.
1. **LOCATION COORDINATES**

1.1 *Proposed EW834-F Well Location*

The proposed EW834-F well location lies in the northeast of Block EW834 (OCS-G 27982). The seafloor appears to be smooth to slightly undulating within 1,500ft of the well location.

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Time-to-depth conversion for the water column was derived using the Advocate and Hood (1993) polynomial.

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Sub-seabed Time-to-depth conversion was performed using a second order polynomial derived from checkshot data from well EW790-1 from library records:

Depth below seabed (ft) = 176.51X^2 + 2628.7X
Where X = two way time in seconds below seabed.

Depth below sea surface to any interface was therefore obtained by summing the results of the above equations.
3. SEABED CONDITIONS

3.1 Bathymetry

Water depth at the proposed EW834-F location is -1,253ft below sea surface (Figure 1). The seafloor deepens to the southeast at <1.0°.

3.2 Seafloor Morphology and Man Made Features

The proposed EW834-F location is in the northeast of the study area. At the proposed well location the seabed is smooth to slightly undulating (Figure 2). The proposed well is located 5,521ft to the NNW of a graben area. The nearest chemosynthetic community is located 5,500ft to the northeast of the proposed well. Soft clays and silts are predicted at seabed. Sediments appear conducive for jetting of seabed casing with no hard layers predicted.

There are no anomalous seabed amplitudes indicative of hydrocarbon macroseep observed within a 1,500ft radius of the proposed location (Figure 3).

No other features are observed within a 1,500ft radius that could affect well emplacement or jetting of casing.
4. SUBSEABED CONDITIONS

4.1 Geology and Lithology

The sedimentary sequence at the proposed well location has been subdivided into five units, A, B, C, D and E, separated by four horizons, H10, H20 H30 and H40 (Figures 5 through 7).

4.2 Unit A

Lithology in the upper interval of Unit A, from seabed to -1,478ft below sea surface (225ft below seabed), is interpreted as well-layered soft clays.

The stratigraphy from -1,478ft to -1,674ft below sea surface (225ft to 421ft below seabed) consists of clays and silts with the possibility of minor coarser-grained interbeds.

Seabed sediments and shallow soils are generally expected to be good for jetting or piling of the seabed casing.

No shallow gas hazards or shallow water flow risks are predicted in Unit A.

Horizon H10 marks the base of Unit A occurring at -1,674ft below sea-surface (421ft below seabed).

4.3 Unit B

The upper interval in Unit B, from -1,674ft to -2,148ft below sea surface (421ft to 895ft below seabed), is composed of clays and silts.

From -2,148ft to -2,523ft below sea surface (895ft to 1,270ft below seabed) the stratigraphy consists of mass transport clays and silts with possible fine sands. Minor fine sands in this interval could be the source of minor shallow water flow. Low severity shallow water flow has been recorded at this depth in the southeast of the Ewing Bank area (Blocks 1005 & 1006). As such a Slight Shallow Water Flow Risk is assigned to this interval.

The base of this unit is marked by an erosional surface, Horizon H20, and a predicted lithology change at -2,523ft below sea surface (1,270ft below seabed).

4.5 Unit C

Lithology within the upper part of Unit C, from -2,523ft to -2,572ft below sea surface (1,270ft to 1,319ft), is expected to be comprised of clays, silts, and fine sands deposited within a channel. This is possibly a favourable environment for shallow water flow and as such a Slight Shallow Water Flow Risk is assigned to this interval.
The stratigraphy in the lower part of Unit C, from 2,572ft to -2,850ft below sea surface (1,319ft to 1,597ft below seabed), consists of clays, silts, and minor coarser-grained interbeds.

No shallow gas hazards are predicted in Unit C.

The base of this unit is marked by Horizon H30 occurring at -2,850ft below sea surface (1,597ft below seabed).

4.5 Unit D

The upper interval within this unit, from -2,850ft to -2,882ft below sea surface (1,597ft to 1,629ft below seabed), is interpreted to consist of clays, silts, and minor sandy interbeds. Minor wellbore stability problems and a Slight Shallow Water Flow Risk are possible within this interval.

From -2,882ft to -3,076ft below sea surface (1,629ft to 1,823ft below seabed) is a complex of interbedded clays, silts, and minor sands.

Lithology within Unit D from -3,076ft to -3,266ft below sea surface (1,823ft to 2,013ft below seabed) consists of clays, silts, and sandy interbeds. Minor wellbore stability problems and a Slight Shallow Water Flow Risk are possible within this interval.

From -3,266ft to -3,618ft below sea surface (2,013ft to 2,365ft below seabed) the stratigraphy consists of clays, silts, and minor sandy interbeds. No problems or hazards are predicted in this sub-interval of Unit D.

The lower portion of Unit D, from -3,618ft to 3,744ft below sea surface (2,365ft to 2,491ft below seabed), is composed of clays, silts, and sandy interbeds. A Slight Risk of Gas and a Slight Shallow Water Flow Risk is assigned to this interval based on the lithology, reflection amplitudes, seismic character, and depositional environment within this lower interval.

A vertical borehole will not penetrate any identified risk of gas anomalies. The nearest risk of gas area is located 3,115ft to the southwest of the proposed well.

The base of this unit is marked by an erosional surface and a predicted lithology change. Horizon H40 represents this boundary at -3,744ft below sea surface (2,491ft below seabed).

4.6 Unit E

The upper interval of Unit E, from -3,744ft to -3,862ft below sea surface (2,491ft to -2,609ft below seabed), consists of clays and silts.
The lower interval of Unit E, from -3,862ft to Horizon H50 at -5,028ft below sea surface (2,609ft to 3,775ft below seabed), is interpreted as clay and silt sediments with sandy interbeds. Minor wellbore stability issues are possible throughout this interval.

Three <12ft thick sand interbeds are identified at -3,981ft, -4,370ft, and -4,542ft below sea surface (2,728ft, 3,117ft, and 3,289ft below seabed).

A vertical borehole will not penetrate any identified risk of gas anomalies. The nearest anomaly with a high risk of gas occurs 200ft to the south of the proposed well. This anomaly is associated with numerous sands which are continuous and encroach on the well path.

The shallowest sand interbed at -3,981ft below sea surface (2,728ft below seabed) is associated with an amplitude anomaly located approximately 1,020ft to the north classed as a high risk of gas. This sand appears to continue to the proposed well path, but with much reduced amplitudes, however a Slight Risk of Gas is still assigned to this interbed.

A Slight Risk of Gas is assigned to the two deeper <12ft thick sand interbeds at -4,370ft and -4,542ft below sea surface (3,117ft and 3,289ft below seabed), as there is some connectivity towards the well location from the nearest anomalies to the south of the well, though amplitude character is much reduced.

The possibility of minor sandy interbeds and lenses leads to a Slight Shallow Water Flow Risk from -3,862ft to -5,028ft below sea surface (2,609ft to 3,775ft below seabed).

A vertical borehole will penetrate a fault at -4,482ft below sea surface (3,229ft below seabed). Minor drilling fluid circulation problems may occur if pressure over hydrostatic are exerted by the drilling fluid column at the level of this fault.

Horizon H50 marks the base of this Unit and the base of this shallow hazards study. Horizon H50 occurs at -5,028ft below sea surface (3,775ft below seabed).

4.7 Shallow Gas Assessment

Within Unit D, a Slight Risk of Gas is assigned to the lower interval from -3,618ft to 3,744ft below sea surface (2,365ft to 2,491ft below seabed).

Within Unit E, a Slight Risk of Gas is assigned to the three <12ft sand interbeds at -3,981ft, -4,370ft, and -4,542ft below sea surface (2,728ft, 3,117ft, and 3,289ft below seabed).

4.8 Shallow Water Flow Assessment

Within Unit B, a Slight Shallow Water Flow Risk is predicted within the interval from
-2,148ft to -2,523ft below sea surface (895ft to 1,270ft below seabed).

Within Unit C, a **Slight Shallow Water Flow Risk** is assigned to the interval from -2,523ft to 2,572ft below sea surface (1,270ft to 1,319ft below seabed).

Within Unit D, a **Slight Shallow Water Flow Risk** is assigned to the intervals from -2,850ft to 2,882ft below sea surface (1,597ft to 1,629ft below seabed), from -3,076ft to -3,266ft below sea surface (1,823ft to 2,013ft below seabed), and from -3,618ft to -3,744ft below sea surface (2,365ft to 2,491ft below seabed).

Within Unit E, a **Slight Shallow Water Flow Risk** is assigned from -3,862ft to -5,028ft below sea surface (2,609ft to 3,775ft below seabed).
5. CONCLUSIONS AND RECOMMENDATIONS

- **Seabed**
  
  No significant problems are anticipated at seabed. Shallow soils are expected to be conducive to the jetting of seabed casing with no hardgrounds predicted.

- **Unit A**
  
  No hazards or problems are predicted.

- **Unit B**
  
  A [Slight Shallow Water Flow Risk](#) is interpreted within the interval from -2,148ft to -2,523ft below sea surface (895ft to 1,270ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

- **Unit C**
  
  A [Slight Shallow Water Flow Risk](#) is interpreted within the interval from -2,523ft to -2,572ft below sea surface (1,270ft to 1,319ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

- **Unit D**
  
  Minor wellbore stability problems are possible within the intervals from -2,850ft to -2,882ft below sea surface (1,597ft to 1,629ft below seabed) and from -3,076ft to -3,266ft below sea surface (1,823ft to 2,013ft below seabed).

  A [Slight Risk of Gas](#) is assigned to the interval from 3,618ft to 3,744ft below sea surface (2,365ft to 2,491ft below seabed). [Drilling Caution](#) is advised.

  A [Slight Shallow Water Flow Risk](#) is assigned to the intervals from -2,850ft to -2,882ft below sea surface (1,597ft to 1,629ft below seabed), -3,076ft to -3,266ft below sea surface (1,823ft to 2,013ft below seabed), and -3,618ft to 3,744ft below sea surface (2,365ft to 2,491ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

- **Unit E**
  
  Minor wellbore stability problems are possible from -3,862ft to -5,028ft below sea surface (2,609ft to 3,775ft below seabed).

  A [Slight Risk of Gas](#) is assigned at the level of the three <12ft thick sand interbeds at -3,981ft, -4,370ft, and -4,542ft below sea surface (2,728ft, 3,117ft, and 3,289ft below seabed). [Drilling Caution](#) is advised.
A **Slight Shallow Water Flow Risk** is assigned from -3,862ft to -5,028ft below sea surface (2,609ft to 3,775ft below seabed). Appropriate drilling methods should be applied to contain a non-persistent, low volume flow event.

A vertical borehole will penetrate a fault at -4,482ft below sea surface (3,229ft below seabed). Minor drilling fluid circulation problems may occur if pressure over hydrostatic are exerted by the drilling fluid column at the level of this fault.
We appreciate the opportunity to work with you on this project, and look forward to continuing as your geohazards consultants. Please contact us if you have any questions or if we can be of further assistance.

Sincerely,

Gardline Surveys Inc.

Andrew Haigh
Geophysical Manager

Julie White
Quality Assurance

Copies Submitted: 6 copies to Mr. Pete Hetherington at Walter Oil & Gas Company

Attachments:

**Proposed EW834-F Well Location**
- Seabed Depth Extract
- Seabed Morphology Extract
- Seabed Amplitude Extract
- Geohazard Summary Extract
- Inline Data Example
- Crossline Data Example
- Top Hole Prognosis
- ROV Plat
- Power Spectrum
- Bathymetry Plat
- Public Information Plat
- Proprietary Information Plat
- Vicinity Map
- 10-Mile Radius Plat

The undersigned has reviewed the information contained in this report and concurs with the findings.

Pete Hetherington, Geologist
Walter Oil & Gas Corporation

10/7/09 Date