**General:**

All operations are to be conducted in a safe and professional manner. Maintain and practice complete pollution control. Promptly report any oil slicks, regardless of source and size.

**Drilling Rig Selection**

**Plan:** Devon Energy currently plans on using the Glomar Baltic I rig to drill and complete this well. The rig details and specifications are included.

**Wellhead Equipment**

<table>
<thead>
<tr>
<th>Cameron Standard Service Wellhead System</th>
</tr>
</thead>
</table>

1. 20-3/4" 3M x 20" SOW casing head with 30" OD base plate and a 2- 1/16" 5M flanged gate valve. Install 20 3/4" 3M x 21-1/4" 2M DSA (Double Studded Adaptor).


3. 11" 5M x 13-5/8" 5M casing head with secondary seal for 9-5/8" csg and one 1-13/16" 5M valves. Install 11" 5M x 13-5/8" 10M DSA

**Blowout Preventers and BOP Tests**

1. 22" Drive Pipe - Nipple up 21-1/4", 2M diverter stack consisting of a 21-1/4" annular preventer, and a spool with choke and kill line outlets. Function test diverter.

2. 18-5/8" Conductor Pipe - Nipple up 21-1/4", 2M diverter stack consisting of a 21-1/4" annular preventer, and a spool with choke and kill line outlets. Function test diverter.


4. 9 5/8" Casing - Nipple up 13-5/8" 10M BOP stack consisting of a 13-5/8" annular preventer, (2) pipe rams, (1) blind ram, and a spool with choke and kill line outlets.

5. While drilling, operate rams on each trip but no less than once weekly. Test all rams and lines to 250/3500 psi and annular preventer to 250/3500 psi (70% of rated working pressure). Each tour shall conduct BOP drill daily.

6. While completing, operate rams on each trip but no less than once weekly. Test all rams and lines to 250/5000 psi and annular preventer to 250/3500 psi (70% of rated working pressure). Each tour to conduct BOP drill daily.

7. Note all BOP openings and closings, each drill and all tests on the IADC and DVN reports.

**Other Safety Equipment**

Install and put in operations a Degasser, adjustable choke, gas detector, and barrel-o-graf flow show unit when the well is spudded. A Gray inside BOP and TIW safety valve will be maintained on the rig floor in the open position at all times while drilling operations are being conducted. These valves for all pipes sizes in use will be provided. A lower well control valve shall be used at the bottom of the top drive. Pump stroke counters will be maintained in good
order and utilized for determining accurate mud volume to fill the boring trips.

Mud Logging and Cuttings

A manned mud logging unit will be utilized on this project.

Zone Protection Statement

Devon Energy Production Company LC plans to protect all freshwater or hydrocarbon bearing zones with either a cement plug or cemented casing string as per Federal Register "30 CFR Parts 250.112".

Mud Disposal Statement

Devon Energy Production Company LC plans to use a water based mud system to drill this well. Devon also plans to dispose of liquid mud and drill cuttings on-site in compliance with Devon Energy's approved EPA permit.

Safe Drilling Margin

A safe drilling margin of 0.5 ppg will be maintained between the mud weight used and the equivalent mud weight of the previous casing seat test. Drilling operations will be suspended when the safe drilling margin is not maintained.

Mud and Chemicals

Mud and mud engineering services will be furnished by M-I Drilling Fluids.

Crewboat and Terminal Loading

Devon Energy's dock at Intracoastal City, Louisiana will be used for crewboats. Terminal loading will be at Devon Energy's dock and Service Truck Line's pipeyard in Intracoastal City, Louisiana.

Drilling Reports

1. Two (2) legible copies of the IADC Daily Drilling Report must be forwarded to Devon Energy's Houston office.

2. Make a detail on the IADC Daily Drilling Report of all tubular goods used.

3. Send in morning reports to the Houston office between 6:00 and 6:30 a.m. each morning.

In Case of Emergency - Call

<table>
<thead>
<tr>
<th>Joel Guichard</th>
<th>Barney Gary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Houston, Texas</td>
<td>Houston, Texas</td>
</tr>
<tr>
<td>Office: 713-286-5963</td>
<td>Office: 713-286-5964</td>
</tr>
<tr>
<td>Pager: 337-341-0334</td>
<td>Pager: 888-425-4189</td>
</tr>
<tr>
<td>Home: 281-873-5442</td>
<td>Home: 281-332-4492</td>
</tr>
<tr>
<td>Lafayette: 337-981-4174</td>
<td>Mobile: 281-382-2884</td>
</tr>
</tbody>
</table>
A. Drive Pipe: 22" x 1/2" driven to 635'.

B. Conductor Casing: 20" casing to be set @ 1105' MD

   Size O.D.: 18 5/8"   Weight: 87.5#   Grade: K55   Coupling: BTC

   Properties:
   - Internal Yield: 2250 psi
   - Collapse: 630 psi
   - Joint Strength: 1427 M-lbs
   - Body Yield: 1368 M-lbs

   Burst Safety Factor = 7.33
   Collapse Safety Factor = 2.87
   Axial Safety Factor = 2.21
   Triaxial Safety Factor = 2.20

C. Surface Casing: 13 3/8" casing to be set @ 4866'

   Size O.D.: 13 3/8"   Weight: 68#   Grade: J55   Coupling: BTC

   Properties:
   - Internal Yield: 3450 psi
   - Collapse: 1950 psi
   - Joint Strength: 1140 M-lbs
   - Body Yield: 1069 M-lbs

   Burst Safety Factor = 2.90
   Collapse Safety Factor = 4.52
   Axial Safety Factor = 2.01
   Triaxial Safety Factor = 2.00

D. Intermediate Casing: 9 5/8" casing to be set @ 10292'.

   Size O.D.: 9 5/8"   Weight: 53.5#   Grade: P110   Coupling: LT&C

   Properties:
   - Internal Yield: 10900 psi
   - Collapse: 7950 psi
   - Joint Strength: 1422 M-lbs
   - Body Yield: 1710 M-lbs

   Burst Safety Factor = 3.06
   Collapse Safety Factor = 9.27
   Axial Safety Factor = 2.51
   Triaxial Safety Factor = 3.00
E. Production Casing:

7" casing to be set @ 12486'.

Size O.D.: 7"  Weight: 32#  Grade: P110  Coupling: STL

Properties:
- Internal Yield: 12460 psi
- Collapse: 10780 psi
- Joint Strength: 687 M-lbs
- Body Yield: 1025 M-lbs

Burst Safety Factor = 23.01
Collapse Safety Factor = 1.63
Axial Safety Factor = 3.81
Triaxial Safety Factor = 1.92
A. 22" Drive Pipe to 635' MD/TVD

B. 18-5/8" Conductor Casing @ 1105' MD/1100' TVD - Drilling MASP

\[
\text{MASP} = (0.05195 \times (\text{FG at shoe} + \text{SF}) \times \text{Casing Seat Depth}) - (0.05195 \times \text{Fresh Water} \times \text{Casing Seat Depth})
\]

\[
\begin{align*}
\text{C-TVD (ft)} &= 1100 \\
\text{FG (ppg)} &= 12.00 \\
\text{SF (ppg)} &= 0.50 \\
\text{FW (ppg)} &= 8.33 \\
\text{MASP} &= (0.05195 \times (12 + 0.5) \times 1100) - (0.05195 \times 8.33 \times 1100)  \\
\end{align*}
\]

\[
\text{MASP} = 238 \text{ psi}
\]

MMS MASP = (0.05195 x FG at shoe x Casing Seat Depth) - (0.1 x Casing Seat Depth)

\[
\begin{align*}
\text{H-TVD (ft)} &= 3500 \\
\text{PP (ppg)} &= 9.20 \\
\text{Gas %} &= 70\% \\
\text{MW (ppg)} &= 9.70 \\
\text{MMS MASP} &= (0.05195 \times 12 \times 1100) - (0.1 \times 1100)  \\
\end{align*}
\]

\[
\text{MMS MASP} = 576 \text{ psi}
\]

C. 13 3/8" Surface Casing @ 4866' MD / 3500' TVD - Drilling MASP

\[
\text{MASP} = (0.05195 \times (\text{FG at shoe} + \text{SF}) \times \text{Casing Seat Depth}) - (0.05195 \times \text{Fresh Water} \times \text{Casing Seat Depth})
\]

\[
\begin{align*}
\text{C-TVD (ft)} &= 3500 \\
\text{FG (ppg)} &= 14.00 \\
\text{SF (ppg)} &= 0.50 \\
\text{FW (ppg)} &= 8.33 \\
\text{MASP} &= (0.05195 \times (14 + 0.5) \times 3500) - (0.05195 \times 8.33 \times 3500)  \\
\end{align*}
\]

\[
\text{MASP} = 1,122 \text{ psi}
\]

MMS MASP = (0.05195 x FG at shoe x Casing Seat Depth) - (0.1 x Casing Seat Depth)

\[
\begin{align*}
\text{H-TVD (ft)} &= 8000 \\
\text{PP (ppg)} &= 11.00 \\
\text{Gas %} &= 70\% \\
\text{MW (ppg)} &= 11.50 \\
\text{MMS MASP} &= (0.05195 \times 14 \times 3500) - (0.1 \times 3500)  \\
\end{align*}
\]

\[
\text{MMS MASP} = 2,196 \text{ psi}
\]

D. 9 5/8" Intermediate Casing @ 10292' MD / 8000' TVD - Drilling MASP

\[
\text{MASP} = (0.05195 \times (\text{FG at shoe} + \text{SF}) \times \text{Casing Seat Depth}) - (0.05195 \times \text{Fresh Water} \times \text{Casing Seat Depth})
\]

\[
\begin{align*}
\text{C-TVD (ft)} &= 8000 \\
\text{FG (ppg)} &= 15.50 \\
\text{SF (ppg)} &= 0.50 \\
\text{FW (ppg)} &= 8.33 \\
\text{MASP} &= (0.05195 \times (15.5 + 0.5) \times 8000) - (0.05195 \times 8.33 \times 8000)  \\
\end{align*}
\]

\[
\text{MASP} = 3,188 \text{ psi}
\]

MMS MASP = Hole Depth x \((0.05195 \times \text{Pore Pressure - 0.1} \times \text{Gas %} - 0.05195 \times \text{Mud Weight} \times (1 - \text{Gas %}))\)

\[
\begin{align*}
\text{H-TVD (ft)} &= 10150 \\
\text{PP (ppg)} &= 12.00 \\
\text{Gas %} &= 70\% \\
\text{MW (ppg)} &= 12.50 \\
\text{MMS MASP} &= 10150 \times ((0.05195 \times 12 - 0.1 \times 0.7 - 0.05195 \times 12.5 \times (1 - 0.7)))  \\
\end{align*}
\]

\[
\text{MMS MASP} = 3,640 \text{ psi}
\]
**Summary of MASP calculations**

1. **Production Load Case - Fully evacuated using gas gradient as calculated by Redlich-Kwong equation in StressCheck.** Or fully evacuated with 0.115 psi/ft gas gradient at depths < 15,000' and 0.15 psi/ft at depths > 15,000'.

2. **Intermediate and Deep Surface (>4500') - Frac at shoe with 0.5 ppg additional frac gradient and 8.33 ppg water inside casing.**

3. **Conductor and shallow surface (<4500') -** Same as above, however uncertainty in frac gradient may require use of 1.0 ppg increase in frac gradient in some cases.

**NOTE:** Calculations not valid when using a diverter.
A. 22" Drive Pipe @ 635' MD/TVD - Diverter in Place

B. 18-5/8" Conductor Casing @ 1105' MD / 1100' TVD - Diverter in Place

Test casing with 9.5 ppg mud to 200 psi surface pressure for 30 minutes and record on chart.

CTP = (0.7 x Internal Yield) - (0.05195 x (Mud Weight - Backup Mud Weight) x TVD)

\[
\begin{align*}
\text{TVD (ft)} & = 1100 \\
\text{MW (ppg)} & = 9.50 \\
\text{BMW (ppg)} & = 8.33 \\
\text{IYP (psi)} & = 2250 \\
\text{CTP} & = (0.7 \times 2250) - (0.05195 \times (9.5 - 8.33) \times 1100) \\
\text{MMS CTP} & = (0.7 \times 2250) - (0.05195 \times (9.5 - 9.0) \times 1100)
\end{align*}
\]

CTP = 1,508 psi
MMS CTP = 1,546 psi

C. 13 3/8" Surface Casing @ 4866' MD / 3500' TVD

Test casing with 10.0 ppg mud to 2,233 psi surface pressure for 30 minutes and record on chart.

Test casing shoe to leak off with 10.0 ppg mud to ± 818 psi surface pressure and record on chart.

CTP = (0.7 x Internal Yield) - (0.05195 x (Mud Weight - Backup Mud Weight) x TVD)

\[
\begin{align*}
\text{TVD (ft)} & = 3500 \\
\text{MW (ppg)} & = 10.00 \\
\text{BMW (ppg)} & = 8.33 \\
\text{IYP (psi)} & = 3450 \\
\text{CTP} & = (0.7 \times 3450) - (0.05195 \times (10 - 8.33) \times 3500) \\
\text{LOT P} & = (\text{Frac Gradient} - \text{Mud Weight}) \times 0.05195 \times \text{TVD} \\
\text{LOT P} & = (14.5 - 10) \times 0.05195 \times 3500 \\
\text{MMS CTP} & = (0.7 \times 3450) - (0.05195 \times (10 - 9.0) \times 3500)
\end{align*}
\]

CTP = 2,111 psi
LOT P = 818 psi
MMS CTP = 2,233 psi

D. 9 5/8" Intermediate Casing @ 10292' MD / 8000' TVD

Test casing with 11.5 ppg mud to 6,591 psi surface pressure for 30 minutes and record on chart.

Test casing shoe to leak off with 11.5 ppg mud to ± 1,870 psi surface pressure and record on chart.

CTP = (0.7 x Internal Yield) - (0.05195 x (Mud Weight - Backup Mud Weight) x TVD)

\[
\begin{align*}
\text{TVD (ft)} & = 8000 \\
\text{MW (ppg)} & = 11.50 \\
\text{BMW (ppg)} & = 8.33 \\
\text{IYP (psi)} & = 10900 \\
\text{CTP} & = (0.7 \times 10900) - (0.05195 \times (11.5 - 8.33) \times 8000) \\
\text{LOT P} & = (\text{Frac Gradient} - \text{Mud Weight}) \times 0.05195 \times \text{TVD} \\
\text{LOT P} & = (16 - 11.5) \times 0.05195 \times 8000
\end{align*}
\]

CTP = 6,313 psi
LOT P = 1,870 psi

MMS CTP = 2,233 psi

Test Pressures, WellProgram 9/11/00, 12:58 PM
E. 7" Production Liner @ 12486' MD / 10150' TVD w/ TOL @ 10042' MD

Test TOL with 12.3 ppg mud to 2,038 psi surface pressure for 30 minutes and record on chart.
Test casing with 12.3 ppg mud to 2,038 psi surface pressure for 30 minutes and record on chart.

CTP = (0.7 x Internal Yield) - (0.05195 x (Mud Weight - Backup Mud Weight) x TVD)

$$\text{TVD (ft)} = 10150 \quad \text{MW (ppg)} = 12.30 \quad \text{BMW (ppg)} = 9.00 \quad \text{IYP (psi)} = 12460$$

CTP = (0.7 x 12460) - (0.05195 x (12.3 - 9) x 10150)

$$\text{CTP} = 6,982 \text{ psi}$$

TOL TP = 500 + (0.05195 x (9-5/8" LOT - MW) x TVD)

TOL TP = 500 + (0.05195 x (16 - 12.3) x 8000)

$$\text{TOL TP} = 2,038 \text{ psi}$$
A. Drive Pipe - No Planned Cement Behind Pipe

B. Conductor Casing

Set 18-5/8" Conductor casing in 24" hole at 1105'. Cement back to surface, then wash out to mud line. Use 75% excess in this hole section.

18-5/8", 87.5#, K55, BTC casing set at 1105'.

<table>
<thead>
<tr>
<th>Inside Prev. Casing</th>
<th>BOC (ft)</th>
<th>635'</th>
<th>0'</th>
<th>0%</th>
<th>400 cuft</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Hole (Lead)</td>
<td></td>
<td>1.2496</td>
<td>75%</td>
<td></td>
<td>0 cuft</td>
</tr>
<tr>
<td>Open Hole (Tail)</td>
<td></td>
<td>1105'</td>
<td>635'</td>
<td>1.2496</td>
<td>75%</td>
</tr>
<tr>
<td>Shoe Joint</td>
<td></td>
<td>1105'</td>
<td>1065'</td>
<td>1.7193</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total = 1,497 cuft

Lead Slurry Yield = 3.07 cuft/sack
Tail Slurry Yield = 1.09 cuft/sack

Lead Slurry Density = 11.4 ppg
Tail Slurry Density = 16.4 ppg

Cement with 130 sacks of Class H cement mixed at 11.4 ppg.
Cement with 1,006 sacks of Class H cement mixed at 16.4 ppg.

C. Surface Casing

Set 13 3/8" Surface casing in 17 1/2" hole at 4866'. Cement back to surface, then wash out to mud line. Use 75% excess in this hole section.

13 3/8", 68#, N80, BTC casing set at 4866'.

<table>
<thead>
<tr>
<th>Inside Prev. Casing</th>
<th>BOC (ft)</th>
<th>TOC (ft)</th>
<th>VF (cuft/ft)</th>
<th>Excess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Hole (Lead)</td>
<td>1105'</td>
<td>0'</td>
<td>0.7437</td>
<td>0%</td>
</tr>
<tr>
<td>Open Hole (Tail)</td>
<td>4366'</td>
<td>1105'</td>
<td>0.6946</td>
<td>75%</td>
</tr>
<tr>
<td>Shoe Joint</td>
<td>4866'</td>
<td>4786'</td>
<td>0.8406</td>
<td>0%</td>
</tr>
</tbody>
</table>

Total = 5,461 cuft

Lead Slurry Yield = 3.07 cuft/sack
Tail Slurry Yield = 1.08 cuft/sack

Lead Slurry Density = 11.4 ppg
Tail Slurry Density = 16.4 ppg

Cement with 1,559 sacks of Class H cement mixed at 11.4 ppg.
Cement with 625 sacks of Class H cement mixed at 16.4 ppg.
**D. Intermediate Casing**

Set 9 5/8" Intermediate casing in 12 1/4" hole at 10292'. Cement back to 4600'.
Use 50% excess in this hole section.

9 5/8", 53.5#, P-110, LT&C casing set at 10292'.

<table>
<thead>
<tr>
<th>Inside Prev. Casing</th>
<th>BOC (ft)</th>
<th>TOC (ft)</th>
<th>VF (cuft/ft)</th>
<th>Excess</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead</td>
<td>4866'</td>
<td>4600'</td>
<td>0.3354</td>
<td>0%</td>
<td>89 cuft</td>
</tr>
<tr>
<td>Tail</td>
<td>9792'</td>
<td>9792'</td>
<td>0.3132</td>
<td>50%</td>
<td>2,314 cuft</td>
</tr>
<tr>
<td>Shoe Joint</td>
<td>10292'</td>
<td>10292'</td>
<td>0.3132</td>
<td>50%</td>
<td>235 cuft</td>
</tr>
</tbody>
</table>

**Total**

= 2,670 cuft

= 476 bbl

Lead Slurry Yield = 2.21 cuft/sack
Tail Slurry Yield = 1.14 cuft/sack

Lead Slurry Density = 12.5 ppg
Tail Slurry Density = 16.4 ppg

Cement with 1,087 sacks of Class H cement mixed at 12.5 ppg.
Cement with 234 sacks of Class H cement mixed at 16.4 ppg.

**E. Production Liner**

Set 7" Production liner in 8 1/2" hole at 12486'. Cement back to TOL @ 10042'.
Use 25% excess in this hole section.

7", 32#, P-110, STL casing set at 12486'.

<table>
<thead>
<tr>
<th>Inside Prev. Casing</th>
<th>BOC (ft)</th>
<th>TOC (ft)</th>
<th>VF (cuft/ft)</th>
<th>Excess</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liner Lap</td>
<td>10042'</td>
<td>9792'</td>
<td>0.3973</td>
<td>0%</td>
<td>99 cuft</td>
</tr>
<tr>
<td>Open Hole</td>
<td>10292'</td>
<td>10042'</td>
<td>0.1301</td>
<td>0%</td>
<td>33 cuft</td>
</tr>
<tr>
<td>Shoe Joint</td>
<td>12486'</td>
<td>10292'</td>
<td>0.1268</td>
<td>25%</td>
<td>348 cuft</td>
</tr>
</tbody>
</table>

**Total**

= 496 cuft

= 88 bbl

Tail Slurry Yield = 1.14 cuft/sack
Tail Slurry Density = 16.4 ppg

Cement with 435 sacks of Class H cement mixed at 16.4 ppg.
**A. Minimum Mud Quantities**

<table>
<thead>
<tr>
<th>Depth Range (Feet - MD)</th>
<th>Hole Volume (Barrels)</th>
<th>Surface Volume (Barrels)</th>
<th>Barite (Sacks)</th>
<th>Gel (Sacks)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0' - 1105'</td>
<td>370</td>
<td>263</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>0' - 4866'</td>
<td>338</td>
<td>1119</td>
<td>500</td>
<td>1000</td>
</tr>
<tr>
<td>0' - 10292'</td>
<td>729</td>
<td>791</td>
<td>500</td>
<td>1000</td>
</tr>
<tr>
<td>0' - 12486'</td>
<td>728</td>
<td>154</td>
<td>500</td>
<td>1000</td>
</tr>
</tbody>
</table>

**B. Drilling Mud Additives**

Devon Energy plans to use both water based mud and synthetic oil based mud to drill the OCS G 2433 A-10ST well. Mud additives which could be used during the drilling of this well are as follows:

- M-I BAR
- M-I GEL
- CAUSTIC SODA
- TANNATHIN
- DEFOAM-X
- DRIL-KLEEN
- SALT GEL
- LIME
- MIX II
- XCD POLYMER
- POLYPLUS
- KWIK SEAL M
- CALCIUM CARBONATE
- SODIUM BICARBONATE
- LUBRIGLUIDE
- LUBE167
- NOVAMUL
- NOVAWET
- NOVATHIN
- NOVAMOD
- HRP
- VG69
- ECOTROL
- SYNTHETIC BASE OIL

**C. Minimum Barite Requirements**

Based on maximum mud weight of 12.3 ppg to weight up 0.5 ppg, need 52,030 lbs of barite or 520 sacks at 100# per sack.

\[
\text{Volume} = 1520 \quad \text{MW2} = 12.8 \quad \text{MW1} = 12.3
\]

\[
\text{PPB} = \frac{\text{Volume} \times (\text{MW2} - \text{MW1})}{(35 - \text{MW2})}
\]

\[
\text{PPB} = 1520 \times (12.8 - 12.3)/(35 - 12.8)
\]

\[
\text{PPB} = 34.23
\]
NOTES:

1. ALL COMPONENTS ARE SUITABLE FOR SOUR GAS (H2S) SERVICE IN ACCORDANCE WITH API SPEC. 6A AND NACE MR-01-75.

2. ALL FLANGE BOLTS ARE ASHTM A-193. GRADE 87 MATERIAL. ALL FLANGE NUTS ARE ASTM A-194. GRADE 2H MATERIAL.

3. ALL RAM PREVENTERS ARE FITTED WITH MANUAL LOCKING DEVICES.

4. LOCATION OF CHOKE AND KILL LINES OFF OF SIDE OUTLETS OF RAM PREVENTERS MAY BE DIFFERENT THAN WHAT IS SHOWN ON DRAWING.
NOTES:
1. RATED WORKING PRESSURE OF DIVERTER PIPING IS 1250 PSI @ 1000 PSI (ANSI B 36.10). NOMINAL LD. OF LINE IS 11.94".
2. DIVERTER SYSTEM IS OPERATED BY THE B.O.P. CONTROL SYSTEM. PRIMARY POWER IS ELECTRIC-HYDRAULIC. SECONDARY POWER IS PNEUMATIC-HYDRAULIC.
3. OPTIONS FOR CLOSING: (A) SELECT EITHER PORT OR STARBOARD LINES BEFORE CLOSING THE ANNUAL PREVENTER. OR (B) SELECT BOTH BEFORE CLOSING THE ANNUAL PREVENTER. DIVERTER VALVES CAN BE MANUALLY SELECTED AFTER CLOSING SEQUENCE IS COMPLETED.
TEMPORARY CERTIFICATE OF INSPECTION

This Temporary Certificate of Inspection is issued under the provisions of Title 46 United States Code, Section 398, in lieu of the regular certificate of inspection, and shall be in force only until the receipt on board said vessel of the original certificate of inspection; this certificate in no case to be valid after one year from the date of inspection.

VEssel: GLOMAR BALTIC
Class: MODU
Gross Tons: 10529
Home Port: NAVAL JESSEA DEP WH.

The following complement of licensed officers and crew is required to be carried; included in which there must be:

- Master
- Chief Mate
- 2nd Mate
- Master & 1st Class Pilot
- Class Pilot
- Radio Officer
- Able Seaman
- Ordinary Seaman
- Deckhands
- Chief Engineer
- 1st Asst. Engineer
- 2nd Asst. Engineer
- Fireman/Waterhand
- Certificated Lifesaver
- Certificated Lifesaving Aboard
- Certificated Tankermen
- Operators

In addition the vessel may carry—

- Other persons in the crew, 0 passengers,
- persons in addition to the crew, and
- 15 industrial persons. Total persons allowed 70

Maximum steam pressure allowed: 750 p.s.i.

DATE DRYDOCKED: 24 AUG 1982

ROUTE PERMITTED AND CONDITIONS OF OPERATION:
OCEANS LIMITED TO THE GULF OF MEXICO, NOT ON AN INTERNATIONAL VOYAGE. SPECIFIC TENSION STEELS USED IN CONSTRUCTION.

INSPECTED AND APPROVED FOR THE CARRIAGE OF:

Inspection of the above vessel was completed on 20 MAY 1982. I HEREBY CERTIFY that on this date the vessel was in all respects in conformity with applicable vessel inspection laws and regulations prescribed thereunder.

Richard M. Kasel
OFFICER IN CHARGE, MARINE INSPECTION
RICHARD M. KASEL, CDR, USCG, BYDIR

INSPECTION ZONE: HOUSTON-GALVESTON, TEXAS

DEPT. OF TRANSP. USCG - CG-664 (Rev: 2/79)
PREVIOUS EDITIONS ARE OBSOLETE

Original
# Certificate of Inspection

**Vessel Name:** GLOMAR BALTIC I  
**Home Port:** NATL VESSEL DOC CTR  
**Place Built:** BROWNSVILLE TX  
**Owner:** GLOBAL MARINE BALTIC INC  
**Address:** 777 N ELDRIDGE PARKWAY, HOUSTON, TX 77079  
**Operator:** GLOBAL MARINE DRILLING CO  
**Address:** 777 N ELDRIDGE PARKWAY, HOUSTON, TX 77079

### Vessel Details
- **Official Number:** D663783  
- **Call Sign:** KMHG  
- **Service:** MODU  
- **Hull Material:** STEEL  
- **Date Built:** 24FEB84  
- **Gross Tons:** 10529  
- **Net Tons:** 10529  
- **DWT:** 270.00  
- **Length:** 270.00  
- **Owner:** GLOBAL MARINE BALTIC INC  
- **Address:** 777 N ELDRIDGE PARKWAY, HOUSTON, TX 77079

### Personnel
- **Master**  
- **Chief Engineer**  
- **Chief Mate**  
- **Deckhands**  
- **Chief Officer(s)**  
- **Engineers**  
- **First Assistant Engineer**  
- **Second Assistant Engineer**  
- **Firesmen-Watertenders**  
- **Oiliers**  
- **Able Seamen**  
- **Ordinary Seamen**  
- **Licensees in Crew**

### Additional Information
- **Other Required Crew:** 1 Offshore Installation Manager  
- **Other Persons in Crew:** 8 Industrial Personnel  
- **Persons in addition to Crew:** 85  
- **Total Persons Allowed:** 89

### Permitted and Conditions of Operation
- **Location:** Limited to the Gulf of Mexico, not on an international voyage.  
- **Special Tensile Steels Used:** See Construction Portfolio prior to commencing repairs.

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*** See next page for additional certificate information ***

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**Gulf of Mexico (GI 116)**  
**Location:** MORGAN CITY, LOUISIANA  
**Signed:** 20MAY98

---

**Periodic Reinspections**

<table>
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**Dept. of Transp., USCG, CG-841 (Rev. 3-91)**

---

**SN 7336-00-F01-0570**
Certificate of Inspection

--- HULL EXAMS ---

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--- INSPECTION STATUS ---

*PRESSURE VESSELS*

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LIFESAVING

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<tr>
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<td>LIFEBOATS (PORT)</td>
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<td>LIFE PREServers (CHILD) 0</td>
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<td>RING BUOYS (TOTAL) 8</td>
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--- FIRE FIGHTING EQUIPMENT ---

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<th>NUMBER OF FIRE PUMPS</th>
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<tr>
<td>1250</td>
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</table>
## Certificate of Inspection

**DEPARTMENT OF TRANSPORTATION**  
**UNITED STATES COAST GUARD**

**Certificate of Inspection**

**WAR BALTIC I**

**PAGE 2**

**CERTIFICATION DATE: 20 MAY 98**

### FIXED EXTINGUISHING SYSTEMS

<table>
<thead>
<tr>
<th>SPACE PROTECTED</th>
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<td>DECK LOCKER</td>
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<td>SCR ROOM</td>
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<td>ENGINE ROOM</td>
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<td>CONTROL ROOM</td>
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### FIRE EXTINGUISHERS - HAND PORTABLE AND SEMI-PORTABLE

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<tr>
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<tr>
<td>C-II</td>
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### CERTIFICATE AMENDMENTS

1. **PORT AMENDING: WORMS**

--- AMENDMENT ---

- REINSPECTION COMPLETED. CHANGED VESSEL MANNING.

*** END ***
**INTERNATIONAL LOAD LINE CERTIFICATE (1966)**

Issued under the provisions of the International Convention on Load Lines, 1966, under the authority of the Government of the

**UNITED STATES OF AMERICA,**

Commandant, U.S. Coast Guard,

by the American Bureau of Shipping
duly authorized for assigning purposes under the provisions of the Convention

<table>
<thead>
<tr>
<th>Name of Ship</th>
<th>Official Number or Distinctive Letters</th>
<th>Port of Registry</th>
<th>Length (L) as defined in Article 2(8): i.e., 46 CFR 42.13-15</th>
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<tbody>
<tr>
<td>GLOMAR BALTIC I</td>
<td>663783</td>
<td>HOUSTON</td>
<td>259.2'</td>
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**Freeboard**

- Tropical N/A feet N/A inches (T)
- Summer N/A feet N/A inches (S) - Upper edge of line through center of ring
- Winter N/A feet N/A inches (W)
- Winter North Atlantic N/A feet N/A inches (WNA)

**Load Line**

- N/A inches above (S)
- N/A inches below (S)

**Type of Ship**: *{Type "A"}*

- {Type "B"}
- {Type "B" with reduced freeboard}
- {Type "B" with increased freeboard}

**Freeboard from Deck Line to Center of Ring 12'-1-1/8"**

Allowance for fresh water for all freeboards N/A inches.

Date of initial or periodical survey 31 DECEMBER 1998

**THIS IS TO CERTIFY** that this ship has been surveyed and that the freeboards have been assigned and load lines shown above have been marked in accordance with the International Convention on Load Lines, 1966.

This certificate is valid until 31 DECEMBER 2003 **subject to annual surveys in accordance with article 14(1)(c) of the Convention, and endorsement thereof on the reverse side of the Certificate.

**THIS CERTIFICATE IS VALID ONLY SO LONG AS OPERATING RESTRICTIONS IN THE UNIT'S STABILITY LETTER ISSUED BY THE COAST GUARD MARINE SAFETY CENTER AND DATED 21 JUNE 1994 ARE OBSERVED.**

**Issued at** Houston, Texas 17 AUGUST 1999.

The undersigned declares that he is duly authorized by the said Government to issue this Certificate.

M. J. Davison, Supervisor

American Bureau of Shipping
BY THE DIRECTION OF MANAGER CLASSIFICATION AND DOCUMENTATION CENTER
ANNUAL SURVEY

THIS IS TO CERTIFY that at a periodical inspection required by article 14(1)(c) of the Convention, the ship was found to comply with the relevant provisions of the Convention.

Place: ___________________________ Date: ___________________________

(Signature)

Surveyor to the American Bureau of Shipping

Place: ___________________________ Date: ___________________________

(Signature)

Surveyor to the American Bureau of Shipping

Place: ___________________________ Date: ___________________________

(Signature)

Surveyor to the American Bureau of Shipping

EXTENSION OF LOAD LINE CERTIFICATE

The provisions of the Convention being fully complied with by this ship, the validity of this Certificate is, in accordance with Article 19(2) of the Convention, extended until

Place: ___________________________ Date: ___________________________

(Signature)

Surveyor to the American Bureau of Shipping

Notes:

1. When a ship departs from a port situated on a river or inland waters, deeper loading shall be permitted corresponding to the weight of fuel and all other materials required for consumption between the point of departure and the sea.

2. When a ship is in fresh water of unit density the appropriate load line may be submerged by the amount of the fresh water allowance. When the density is other than unity, an allowance shall be made proportional to the difference between 1.025 and the actual density.

3. It is the owner's responsibility to furnish the master with approved information and instructions for loading and ballasting this vessel to provide guidance as to stability of the vessel under varying conditions of service and to avoid unacceptable stresses in the vessel's structure, as defined in 46 CFR 42.09-1.

4. The Winter North Atlantic Load Line applies only to vessels of 328 ft. or less, which enter any part of the North Atlantic Ocean during the winter month as defined by the Load Line Regulations in 46 CFR 42.30-5 and 42.30-35. The periods during which the other seasonal load lines apply in different parts of the world are stated in the Load Line Regulations 46 CFR 42.30-5 to 42.30-30, inclusive.

5. This Load Line Certificate will be canceled by the Commandant, U.S. Coast Guard, if...
   (a) The annual surveys have not been carried out within three months either way of each anniversary date of the certificate.
   (b) The certificate is not endorsed to show that the ship has been surveyed as indicated in (a).
   (c) Material alterations have been made to the hull or superstructures such as would necessitate the assignment of an increased freeboard.
   (d) The fittings and appliances for the protection of the openings, guardrails, freeing ports, or the means of access to the crew's quarters have not been in as effective a condition as they were when the Certificate was issued.
   (e) The structural strength of the ship is lowered to such an extent that the ship is unsafe.

6. When this Certificate has expired or been canceled, it must be delivered to the Assigning Authority.
CERTIFICATE OF CLASSIFICATION

GLOMAR BALTIC I

of Houston, TX, U.S.A.

Description Steel Barge Drilling Platform

Dimensions: Length 270.00'  Breadth 268.00'  Depth 28.75'

Tonnage, Gross 10,529  Net 10,529

Owner GLOBAL MARINE DEEPWATER DRILLING, INC.

Shipbuilder MARATHON LETOURNEAU INC.

Engine Builder

Year of Build 1983  Hull Number 212

This is to Certify that the above has been surveyed in accordance with the Rules of this Bureau and entered in the Record with the Class

*Al Self Elevating Drilling Unit

19 May 1993  31 December 2003

Issue Date  Expiration Date

Chief Surveyor/Director of Classification

Assistant Secretary

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of American Bureau of Shipping and is issued solely for the use of the Bureau, its committees, its clients or other authorized entities. The classification certificate is a representation only that the vessel, structure, item of material, equipment or machinery or any other item covered by this certificate has met one or more of the Rules of American Bureau of Shipping. The certificate is governed by the terms and conditions on the reverse side hereof, and governed by the Rules and standards of American Bureau of Shipping who shall remain the sole judge thereof.
SCHEDULE C
EQUIPMENT FURNISHED
GLOMAR BALTIC I

1. **DRILLING UNIT DESCRIPTION AND SPECIFICATIONS:**
The self-elevating drilling unit, the GLOMAR BALTIC I, will be as described in Appendix I attached hereto and made a part of this Schedule C.

2. **DRILLING UNIT MOORING SYSTEM:**
   a. Four (4) point anchor system.
   b. Moorings: Four (4) 2,100' x 1-1/2", 6 x 36 IPS, IWRC wire lines.
   c. Anchors: Four (4) 10,000 lb. Danforth anchors.
   d. Mooring Winches: Four (4) Marathon LeTourneau Series W-1500 TS single drum winches each driven by an electric motor.
   e. Four (4) anchor buoys.
   f. Pendant wires, shackles and associated jewelry and wireline for crown lines.
   g. Workboat mooring line (replacement line furnished by Operator).

3. **DRILLING EQUIPMENT:**
   a. Drawworks: National 1625 DE drawworks fitted with Elmagco 7838 electric brake, powered by three (3) GE 752 Series electric motors.
   b. Drill Line: 1-1/2" - 6 x 19 IPS IWRC.
   c. Wire Line Anchor: National type EB.
   d. Sandline: 9/16" - 6 x 7.
   e. Derrick: Brown Services 160' high, 30' x 30' base with 1,300,000 lbs. static hook load capacity.
   f. Mud Pumps: Two (2) National 12-P-160, triplex pumps, 1,600 total continuous horsepower each, powered by two (2) GE 752 Series electric motors. Equipped with 6-1/2" liners.
   g. Rotary Table: National C-495 rotary table independently driven by GE 752 Series electric motor with National two-speed transmission.
Global Marine Drilling Company

h. Top Drive: Varco TDS-4H with 650 ton capacity driven by one (1) GE 752 Hi-torque series motor.
   (1) Two (2) Varco 6-5/8" regular, upper safety valves, air actuated 15,000 psi WP.
   (2) Two (2) Varco 6-5/8" regular, lower safety valves, 15,000 psi WP.

i. Crown Block: Brown Services type 860-C with 740 tons rated capacity with 60" sheaves.

j. Traveling Block and Hook: National Universal hook block with 650 ton capacity.

k. Swivel: National P-650 with 650 ton capacity.

l. Rotary Hose: Two (2) 3-1/2" x 70', 5,000 psi WP with 4" male thread coupling.

m. Weight Indicator: Martin-Decker.

n. Spinning Wrench: Spinmaster 950H hydraulic powered left and right hand rotation for 2-7/8" - 9-1/2" O.D.

o. Mathey wireline measuring assembly with 20,000' of .092" steel line.

p. Drilling Recorder: Petron IDS 2000 data acquisition system and drilling recorder located on rig floor. Remote stations located in Toolpusher's and Company Man's office. System displays and records drilling data such as hookload, depth, pump pressure and SPM, ROP, rotary torque and RPM, flow in and out, pit volume totalizer, and mud gain and loss.

4. DRILL STRING:

   a. Drill Pipe:
      (1) 10,000', 5" OD Grade S135 19.5 lb./ft. Range 2 drill pipe with 5" XH x 6-1/2" OD tool joints.
      (2) 5,000', 5" OD Grade G 19.5 lb/ft Range 2 drill pipe with 5" XH x 6-1/2" OD tool joints.

   b. Drill Collars:
      (1) Twelve (12) 8" OD nominal x 2-13/16" ID x 31' long with 6-5/8" API Reg. connections, grooved for "zip" handling.
      (2) Twelve (12) 6-1/2" OD nominal x 2-13/16" ID x 30' long with 4" IF tool joints, grooved for "zip" handling.

   c. Subs: Sufficient for Contractor-furnished drill pipe, drill collars; and drill tools including kellys.
d. Drill pipe wipers for 5" drill pipe.

e. Thread Protectors: Sufficient for Contractor-furnished drill string.

5. BLOWOUT PREVENTERS:

a. Diverter System: Hydril type MSP-2000, 21-1/4" annular used with drilling spool between wellhead and Hydril. Spool has two (2) 12" outlets for port and starboard diverter lines.

b. 13-5/8", 10,000 psi WP Blowout Preventer System consisting of the following:

(1) One (1) CIW double "U" ram preventer with four flanged outlets fitted with one set of pipe rams for 5" drill pipe and one set of blind rams.

(2) One (1) CIW double "U" ram preventer with four flanged outlets fitted with two sets of pipe rams for 5" drill pipe.

(3) One (1) 13-5/8" - 5,000 psi WP Cameron annular blowout preventer.

(4) Blowout preventers are trimmed for H₂S service.

(5) A 100-ton blowout preventer handling system, including air-powered hoists and trolleys.

c. BOP Choke and Kill Line System:

(1) Two (2) 3-1/16", 10,000 psi WP hydraulic valves.

(2) Two (2) 3-1/16", 10,000 psi WP manual valves.

d. Blowout Preventer Control System:

(1) 262-gallon accumulator capacity.

(2) 450-gallon fluid reservoir.

(3) Two (2) 30-hp, 3,000 psi, 14.2 gpm electric triplex pumps.

(4) Two (2) air-powered pumps, capacity 7.8 gpm at 3,000 psi.

(5) Manifolding valves and regulators for functioning following:

(a) Hydril.

(b) Four (4) ram type BOP's.

(c) Two (2) hydraulically-operated choke and kill valves.

(d) Two (2) spare.

(f) Diverter control system.

(6) Electric control panel on drill floor.

(7) Electric remote control panel in toolpusher's office.
a. **Choke Manifold**: 3-1/16" - 15,000 psi WP, suitable for H₂S service, with:

   (1) Two (2) 3" automatic 15,000 psi WP Cameron chokes with remote control panel.

   (2) One (1) 3" manual adjustable choke.

   (3) Full opening by-pass line - 3".

6. **DOWNHOLE TOOLS AND EQUIPMENT**:

   a. **Inside BOP**: Two (2) Gray inside blowout preventers for 5" drill pipe, 15,000 psi WP.

   b. **Float Valve**: Baker model G full-flow for Contractor's drill string.

   c. **Drift Indicator**: Totco, 0-8 degrees and 0-16 degrees, for Contractor-furnished equipment.

   d. **Safety Valves**: Two (2) Omsco full opening drill string valves.

7. **DRILL STRING HANDLING TOOLS**:

   a. **Slips, Drill Pipe**:

      (1) Varco type SDXL-5"; two sets.

      (2) Varco type PS15 power slips-5"; one set.

   b. **Slips, Drill Collar**: two sets each:

      (1) Varco type DCS-L: 6-3/4" - 8-1/4".

      (2) Varco type DCS-R: 5-1/2" - 7".

   c. **Elevators, Drill Pipe**: 350 ton - 5", two sets.

   d. **Links, Elevators**:

      (1) Varco 2-3/4" x 132" - 350-ton; one set.

      (2) BJ 3-1/2" x 144" - 500 ton; one set.

   e. **Elevator, Zip Lift**: BJ type SLX-150. Side door for 8" and 6-1/2" drill collars; one set each.

   f. **Tongs, Drill Pipe**: BJ type "DB" Range 3-1/2" - 8-1/4"; two sets.

   g. **Lug Jaws for 8" - 11-1/4"; 11-3/4" - 14-3/8"; 16" - 17"; two sets each.

   h. **Hinge Jaw**: 8-1/4" - 17"; one set.
i. Safety Clamps:
   (1) Varco type MP-R Range 5-1/2" - 7".
   (2) Varco type MP-R Range 6-3/4" - 8-1/4".


k. Air Tuggers: Four (4) air tuggers.

8. MUD FACILITIES AND EQUIPMENT:

a. Mud Storage Tanks: Total 2600 BBLS

   Mud Tank No. 1: 495 bbls
   Mud Tank No. 2: 495 bbls
   Mud Tank No. 3: 430 bbls
   Mud Tank No. 4: 455 bbls
   Mud Processing Tanks: 625 bbls
   Slugging Pit: 100 bbls

b. Shale Shakers: Three (3) Derrick Flo-Line cleaners cascading into two (2) Thule VSM 300 flowline cleaners (Replacement screens to be provided by Operator).

c. Desander: Brandt SRS-3 desander unit charged by Mission 8 x 6R centrifugal pump driven by 100-hp explosion-proof electric motor.

d. Desilter: Brandt SE-16 desilter unit charged by Mission 8 x 6R centrifugal pump driven by 100-hp explosion-proof electric motor.

e. Mud Agitators:
   (1) One (1) 5-hp explosion-proof electric mud mixer mounted on slugging pit.
   (2) Four (4) 25-hp explosion-proof electric mud mixers mounted on main mud tanks.

f. Mud-Gas Separator: Global Marine design.

g. Degasser: Brandt model DG-10, charged by Mission 8 x 6R centrifugal pump driven by 100-hp explosion-proof electric motor.

h. Mud Testing Facilities: Basic kit for viscosity, filtration, weight, and titration.

i. Mud Mixing Pumps: Two (2) Mission 8 x 6R centrifugal pumps driven by 100-hp electric motor.

j. Pit level indicator on active tank with totalizer at drilling position.

k. Manifolding to cement surge tank to permit mixing barite plug at cementing unit.
I. Gas Detection System: Seigar fixed combustible eight-point monitor gas detection system with sensors strategically located on the rig.
APPENDIX I
DESCRIPTION
GLOMAR BALTIC I

A. GENERAL:

1. Type: Self-Elevating Drilling Unit — Cantilever
2. Design: Marathon LeTouneau Super 300 — Cantilever (Slotilever)
3. Classification: ABS Maltese Cross Al
4. Country of Registry: U.S.A.

B. DESIGN CRITERIA:

1. Maximum Drilling Depth (Rated): 25,000 feet.
2. Maximum Storm (with 515 ft. of leg installed):

<table>
<thead>
<tr>
<th>Water Depth</th>
<th>Maximum Wind Including Gusts</th>
<th>Maximum Wave Trough To Crests</th>
<th>Assumed Air Gap</th>
<th>Assumed Penetration</th>
</tr>
</thead>
<tbody>
<tr>
<td>375 ft.</td>
<td>100 kts</td>
<td>60 ft. 15 sec.</td>
<td>50 ft.</td>
<td>25 ft.</td>
</tr>
<tr>
<td>350 ft.</td>
<td>100 kts</td>
<td>61 ft. 15 sec.</td>
<td>50 ft.</td>
<td>25 ft.</td>
</tr>
<tr>
<td>325 ft.</td>
<td>100 kts</td>
<td>62 ft. 15 sec.</td>
<td>50 ft.</td>
<td>25 ft.</td>
</tr>
<tr>
<td>300 ft.</td>
<td>100 kts</td>
<td>64 ft. 15 sec.</td>
<td>50 ft.</td>
<td>25 ft.</td>
</tr>
<tr>
<td>250 ft.</td>
<td>100 kts</td>
<td>66 ft. 15 sec.</td>
<td>50 ft.</td>
<td>25 ft.</td>
</tr>
<tr>
<td>200 ft.</td>
<td>100 kts</td>
<td>68 ft. 15 sec.</td>
<td>50 ft.</td>
<td>25 ft.</td>
</tr>
<tr>
<td>150 ft.</td>
<td>100 kts</td>
<td>66 ft. 15 sec.</td>
<td>50 ft.</td>
<td>25 ft.</td>
</tr>
</tbody>
</table>

NOTE: Any increase in penetration will result in corresponding decrease in water depth — any decrease in penetration does not increase the water depth.

3. Minimum Water Depth: 25 ft. Shallower locations possible under certain conditions. All drilling locations are subject to Insurance Surveyor's approval.

5. Minimum Design Air Temperature: -20°C.

C. CANTILEVER (SLOTILEVER) CAPABILITY:

Cantilever can be skidded 60 ft. from the stern of the jackup to the centerline of the rotary, and the drill floor can be maneuvered 12 ft. each side of center. Slot allows drilling 10 feet forward of the stern.
D. **PRINCIPAL DIMENSIONS:**

1. Length Overall: 270 ft.
2. Breadth: 268 ft.
4. Distance between centers of two aft legs: 180 ft.
5. Distance between center of bow leg and centerline of aft legs: 171 ft.
6. Diameter of Spud Can: (Across the flats) 55 ft.
7. Height of Spud Can: 32 ft.
8. Total Length of each leg: 515 ft.

E. **LOADING AND TOWING DATA:**

1. Average Towing Speed: 4.0 knots with 16,000 hp ocean going tug.
2. Displacement at the Loadline: (16.5 ft. of draft on the hull) 18,489 S. Tons
3. Minimum Draft: 12 ft. 9 in.
4. Maximum Leg Length for location tows: 515 ft.
5. Maximum Leg Length for ocean tows: 498 ft.
6. Maximum variable drilling load: (excluding 750 S. Tons cantilever load) 4,200 S. Tons

Variable load is the weight of supplies that are expendable, readily removable, or consumed during drilling operations.
Variable load consists of such items as:

a) Liquid Mud  h) Lube Oil
b) Bulk Mud  i) Casing
c) Bulk Cement  j) Drill Pipe
d) Chemicals  k) Drill Collars
e) Diesel Fuel  l) Supplies
f) Potable Water  m) Sack Materials
g) Drill Water  n) Spare Parts

7. Preload Capacity: 11,548 S. Tons

F. STORAGE CAPACITY:

1. Drill Water: 18,384 bbls.
2. Potable Water: 2,192 bbls.
3. Fuel Oil: 5,933 bbls.
5. Bulk Mud: Surge Tank:
   6,800 cu. ft.
   70 cu. ft.
6. Liquid Mud:
   (includes mud processing tanks)
   2,600 bbls.
8. Brine: 1,100 bbls.
9. Tubular Storage Area:
   (approximate)
   5,728 sq. ft.
10. Sack Storage:
    (approximate)
    2,400 sq. ft.

Note: Any combination of the above cannot exceed the maximum allowable variable load.

G. JACKING DATA:

1. Marathon LeTourneau Rack and Pinion Type Jacking System driven by 600 volt AC electric motors.
2. Approximate Jacking Speed: 1-1/2 fpm
3. Marathon LeTourneau Out-of-Level Warning Devices are provided.
4. Maximum Jacking Load: 12,100 S. Tons.
5. All jacking operations and conditions are subject to Insurance Surveyor’s approval.

H. SUBSTRUCTURE:
1. Marathon LeToumeau type with transverse skidding of drill floor and longitudinal skidding of substructure, driven by AC electric motors.
2. Rotary Load (maximum): 650 S. Tons
3. Setback Load (maximum): 400 S. Tons
4. Cantilever is designed for the combined rotary and setback loads not to exceed: 750 S. Tons
5. Center of rotary can be positioned a maximum of 12 feet either side of hull centerline, and a maximum of 60 feet aft of the hull.

I. HELIPORT:
1. 83 feet in diameter. Designed to support an S-61 helicopter in accordance with Sikorsky specifications.
2. Perimeter lighting system with alternating blue and amber lights.
3. Foam fire-fighting system.

J. LIVING QUARTERS:
1. Air conditioned quarters for 96 persons, including six (6) hospital berths.
2. Single galley and double mess rooms.

K. METEOROLOGICAL INSTRUMENTS:
1. Anemometer.
2. Barometer.
3. Thermometer.
L. **COMMUNICATIONS EQUIPMENT:**
   1. Single side band radio (Marine Frequencies, 2-24 MHz).
   2. VHF-FM Transceiver (Marine Frequencies, 156 MHz).
   3. Gaitronics paging/telephone system.

M. **POWER GENERATING EQUIPMENT:**
   1. Diesel Engines: Three (3) EMD Model MD16E8. Cost of increased lube oil change frequency due to use of diesel fuel with greater than 0.5% sulfur content for Operator's account.
   2. Generators: Three (3) 1400 kw, 600 volt AC.
   3. DC Power: Ross-Hill SCR system with controls for eight (8) DC drilling motors.
   4. AC Distribution: Two (2) 1,000 KVA 600V/480V transformers. 480V motor control center and distribution panels.

N. **AIR COMPRESSORS:**
   1. Three (3) 350 CFM, 125 psi air compressors with after coolers and air dryer.
   2. One (1) 650 CFM, 40 psi air compressor for bulk handling.

O. **WATER DISTILLATION UNIT:**
   One (1) waste heat unit, 8,000 gpd, Atlas-Denmark model AFGV-2SE-61-H1-MC.

P. **SERVICE PUMPS:**
   For fuel, drill water, fire, bilge, potable water, and sanitary water. Three (3) raw water pumps.

Q. **FIRE-FIGHTING AND SAFETY EQUIPMENT:**
   1. Halon system in engine room, paint locker, and mud pit room.
   2. Salt water hose system.
   3. Portable dry chemical fire extinguishers.
   4. Portable CO₂ fire extinguishers.
5. Adequate first aid facilities.
6. Foam fire-fighting system on helideck.

R. **LIFESAVING EQUIPMENT:**
   1. Life Rafts: Sufficient U.S.C.G. approved inflatable life rafts to accommodate all personnel on board.
   3. Life Jackets: Sufficient to furnish all personnel with one (1) each plus excess as required by U.S.C.G.

S. **MEDICAL FACILITIES:**
   1. First Aid supplies and equipment.
   2. Hospital with six (6) berths.

T. **CRANES:**
   Three (3) Marathon LeTourneau Series PCM-220SS cranes, two with 140 ft. booms and one with 100 ft. boom, rated at 55 S. tons at 51 ft. radius.

U. **WELDING MACHINES:**
   Three (3) 600-amp Miller electrically driven.

V. **LIGHTING, WIRING, AND CONTROLS:**
   Vapor-proof or explosion-proof, as required.

W. **SEWAGE TREATMENT PLANT:**
   Omnipure, 120-man unit.
API NUMBER: 427114056401
APD APPROVAL DATE: 09/12/2000

LEASE OPERATOR: Coastal Oil & Gas Corporation
LEASE NUMBER: G02429
AREA/BLOCK: HIA 351
WELL: A010
APD Checklist

RIG INFO:

RIG NAME: GLOMAR BALTIC I
RIG ID NUM: 90820
RIG TYPE: JU

WATER DEPTH: 314 ft.
RKB ELEVATION: 124 ft.

WELL: AOIO ST: 01
DRIVE SIZE: 22 in.
DRIVE DEPTH: 635 ft.

PLAN NUMBER: S - 4694
PLAN APPROVAL DATE: 6/7/1999

Remarks:

A. CASING INFORMATION

1. Casing Production: MASP = 5319 psi

<table>
<thead>
<tr>
<th>Size (in)</th>
<th>Casing Type</th>
<th>Casing Burst (psi)</th>
<th>Casing Test (psi)</th>
<th>70% Casing (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>Production Liner</td>
<td>10860</td>
<td>2038</td>
<td>5755</td>
</tr>
</tbody>
</table>

2. Casing Burst Pressure (Surface MASP from next Drilling Interval)

<table>
<thead>
<tr>
<th>Size (in)</th>
<th>Casing Type</th>
<th>Casing Burst (psi)</th>
<th>BHP (psi)</th>
<th>FG at Shoe (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.625</td>
<td>Conductor Casing</td>
<td>2250</td>
<td>938</td>
<td>576</td>
</tr>
<tr>
<td>13.325</td>
<td>Surface Casing</td>
<td>3450</td>
<td>2581</td>
<td>2198</td>
</tr>
<tr>
<td>9.625</td>
<td>Interm 1 Casing</td>
<td>10900</td>
<td>3400</td>
<td>5648</td>
</tr>
</tbody>
</table>

3. Casing Test Pressure

<table>
<thead>
<tr>
<th>Size (in)</th>
<th>Casing Type</th>
<th>Test Pressure</th>
<th>70% MIYP (psi)</th>
<th>Test Pressure Req'd Casing / Liner Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.325</td>
<td>Surface Casing</td>
<td>2233</td>
<td>2233</td>
<td>2198 N/A</td>
</tr>
<tr>
<td>9.625</td>
<td>Interm 1 Casing</td>
<td>4000</td>
<td>6590</td>
<td>3400 N/A</td>
</tr>
<tr>
<td>7</td>
<td>Production Liner</td>
<td>2038</td>
<td>5755</td>
<td>N/A 1748</td>
</tr>
</tbody>
</table>
4. Size of Casings

<table>
<thead>
<tr>
<th>Size (in)</th>
<th>Casing Type</th>
<th>Preventer Size (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.33</td>
<td>Surface Casing</td>
<td>21.25</td>
</tr>
<tr>
<td>9.625</td>
<td>Interm 1 Casing</td>
<td>13.625</td>
</tr>
<tr>
<td>7</td>
<td>Production Liner</td>
<td>13.625</td>
</tr>
</tbody>
</table>

B. CEMENT PROGRAM

<table>
<thead>
<tr>
<th>Size (in)</th>
<th>Casing Type</th>
<th>Cement in cu. ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.625</td>
<td>Conductor Casing</td>
<td>Operator 1497 vs. MMS 688</td>
</tr>
<tr>
<td>13.325</td>
<td>Surface Casing</td>
<td>5461 vs. 2825</td>
</tr>
</tbody>
</table>

C. FORMATION INTEGRITY TEST

<table>
<thead>
<tr>
<th>Size (in)</th>
<th>Casing Type</th>
<th>MW (ppg)</th>
<th>FIT (ppg)</th>
<th>FIT - MW (ppg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.625</td>
<td>Interm 1 Casing</td>
<td>11.5</td>
<td>14.5</td>
<td>3.0</td>
</tr>
<tr>
<td>7</td>
<td>Production Liner</td>
<td>12.5</td>
<td>16.</td>
<td>3.5</td>
</tr>
</tbody>
</table>

D. MUD PROGRAM

- Minimum mud requirements
  - 1000 sx Barite
  - 200 sx Gel
  - Number sx to raise system weight by 0.5 ppg

- Mud disposal statement
  - Will oil base mud be used

E. PLAT INFORMATION

- Drawn to scale of 2000 feet to the inch
- Show surface and subsurface location of well to be drilled
- Show surface and subsurface location of previously drilled well
- Locations indicated in feet from block line
- Producing zone 500 feet from property line

F. RIG INFORMATION

- If already on file proceed to Part G.
- Mobile units
  - 12/31/2003 ABS or other appropriate classification society documentation of operational limitations Load Line Certificate
Either USGS Certificate of Inspection or letter of compliance
Identification of the maximum environmental and operational conditions the rig is designated to withstand

All Units

Rated capacities of the proposed drilling unit and of major drilling equipment

G. DIVERTER DRAWING

Plan View

Elevation

Spool Outlet

10-inch Platform or Jack-up Rig
12-inch Semi-Submersible

Diverter Lines

Test diverter to 200 psi
Length
Diameter
Burst Strength
Radius of Curvature
Are 90 degree turns targeted
One 90 degree turn on a jack-up

Valves
Type (no manual or butterfly valves allowed)
Size
Working pressure rating
Valve location
Control instrumentation logic
Operating procedure

H. BOP STACK INFORMATION

BOP Working Pressure vs. ASP

<table>
<thead>
<tr>
<th>Casing Type</th>
<th>Working Pressure (psi)</th>
<th>Surface Pressure (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annular / Ram / Wellhd</td>
<td>BHP / FG at Shoe</td>
</tr>
<tr>
<td>Surface Casing</td>
<td>5000 / 10000 / 5000</td>
<td>2581 / 2198</td>
</tr>
<tr>
<td>Interm 1 Casing</td>
<td>5000 / 10000 / 5000</td>
<td>3400 / 5648</td>
</tr>
<tr>
<td>Production Liner</td>
<td>5000 / 10000 / 5000</td>
<td>N/A / N/A</td>
</tr>
</tbody>
</table>

Well control procedure for annular where ASP > WP annular prevente
Description of BOP accumulator system or other type of closing system proposed for use (activation)

Schematic of BOP stack

Does BOP stack have one annular?

Does BOP stack have two pipe rams?

If using a tapered drillstring, does the stack have two sets of pipe rams capable of sealing around the larger size drillstring and one set of pipe rams capable of sealing around the smaller drillstring or a variable bore pipe ram in lieu of one of the larger pipe rams?

Does the stack have one blind ram for a surface stack?

Does the stack have one blind ram/shear ram for a subsea stack?

Kill line with a remote controlled valve or two manual valves

Fillup line above uppermost preventer

Choke line with remote controlled valve

BOP Test Pressures

<table>
<thead>
<tr>
<th>Casing Type</th>
<th>Test Pressures (psi)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annular / Ram</td>
</tr>
<tr>
<td>Surface Casing</td>
<td>3500 / 3500</td>
</tr>
<tr>
<td>Interim 1 Casing</td>
<td>3500 / 5000</td>
</tr>
<tr>
<td>Production Liner</td>
<td>3500 / 5000</td>
</tr>
<tr>
<td></td>
<td>MASP +500 (psi)</td>
</tr>
<tr>
<td></td>
<td>2698</td>
</tr>
<tr>
<td></td>
<td>3900</td>
</tr>
<tr>
<td></td>
<td>3900</td>
</tr>
</tbody>
</table>

OTHER

Pore pressure, mud weight, and fracture gradient plot

Logging program

Coring program

Zone protection statement

Directional program

Floater evacuation plan

H2S Contingency Plan, if applicable

PUBLIC INFORMATION COPY

Do they have one?

8G Lease?

Reviewed by: ________________________________