

EOG RESOURCES, INC.
OPHELIA 22 FED COM NO. 706H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

| | |
|-----------------------------------|---------|
| Rustler | 814' |
| Top of Salt | 1,147' |
| Base of Salt / Top Anhydrite | 4,770' |
| Base Anhydrite | 5,020' |
| Lamar | 5,020' |
| Bell Canyon | 5,050' |
| Cherry Canyon | 6,100' |
| Brushy Canyon | 7,658' |
| Bone Spring Lime | 9,228' |
| 1 st Bone Spring Sand | 10,169' |
| 2 nd Bone Spring Shale | 10,358' |
| 2 nd Bone Spring Sand | 10,674' |
| 3 rd Bone Spring Carb | 11,249' |
| 3 rd Bone Spring Sand | 11,750' |
| Wolfcamp | 12,220' |
| TD | 12,395' |

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

| | | |
|-----------------------------------|---------|-------------|
| Upper Permian Sands | 0- 400' | Fresh Water |
| Cherry Canyon | 6,100' | Oil |
| Brushy Canyon | 7,658' | Oil |
| 1 st Bone Spring Sand | 10,169' | Oil |
| 2 nd Bone Spring Shale | 10,358' | Oil |
| 2 nd Bone Spring Sand | 10,674' | Oil |
| 3 rd Bone Spring Carb | 11,249' | Oil |
| 3 rd Bone Spring Sand | 11,750' | Oil |
| Wolfcamp | 12,220' | Oil |

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 10.75" casing at 840' and circulating cement back to surface.

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4. CASING PROGRAM - NEW

| Hole Size | Interval | Csg OD | Weight | Grade | Conn | DF _{min} Collapse | DF _{min} Burst | DF _{min} Tension |
|-----------|------------------|--------|--------|---------|--------------|----------------------------|-------------------------|---------------------------|
| 14.75" | 0 – 840' | 10.75" | 40.5# | J55 | STC | 1.125 | 1.25 | 1.60 |
| 9.875" | 0 – 1,000' | 7.625" | 29.7# | HCP-110 | LTC | 1.125 | 1.25 | 1.60 |
| 9.875" | 1,000' – 3,000' | 7.625" | 29.7# | P-110EC | SLIJ II | 1.125 | 1.25 | 1.60 |
| 8.75" | 3,000' – 11,400' | 7.625" | 29.7# | HCP-110 | FlushMax III | 1.125 | 1.25 | 1.60 |
| 6.75" | 0' – 10,900' | 5.5" | 20# | P-110EC | DWC/C-IS MS | 1.125 | 1.25 | 1.60 |
| 6.75" | 10,900'-19,835' | 5.5" | 20# | P-110EC | VAM SFC | 1.125 | 1.25 | 1.60 |

Variance is requested to wave the centralizer requirements for the 7-5/8" FJ casing in the 8-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 8-3/4" hole interval to maximize cement bond and zonal isolation.

Variance is also requested to wave any centralizer requirements for the 5-1/2" FJ casing in the 6-3/4" hole size. An expansion additive will be utilized, in the cement slurry, for the entire length of the 6-3/4" hole interval to maximize cement bond and zonal isolation.

Cementing Program:

| Depth | No. Sacks | Wt. ppg | Yld Ft ³ /ft | Mix Water Gal/sk | Slurry Description |
|-------------------|-----------|---------|-------------------------|------------------|---|
| 10-3/4" 840' | 325 | 13.5 | 1.73 | 9.13 | Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface) |
| | 200 | 14.8 | 1.34 | 6.34 | Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate |
| 7-5/8" 11,400' | 250 | 14.8 | 1.38 | 6.48 | Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead (TOC @ Surface) |
| | 2000 | 14.8 | 1.38 | 6.48 | Class C + 5% Gypsum + 3% CaCl ₂ pumped via Bradenhead |
| | 550 | 14.4 | 1.20 | 4.81 | 50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped Conventionally |
| 5-1/2" 19,835' | 850 | 14.1 | 1.26 | 5.80 | Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,900') |

Note: Cement volumes based on bit size plus at least 25% excess in the open hole plus 10% excess in the cased-hole overlap section.

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5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

Variance is requested to use a co-flex line between the BOP and choke manifold (instead of using a 4" OD steel line).

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a single ram, mud cross and double ram-type (10,000 psi WP) preventer and an annular preventer (5000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 5000/ 250 psig and the annular preventer to 3500/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

| Depth | Type | Weight (ppg) | Viscosity | Water Loss |
|------------------------------|-------------|--------------|-----------|------------|
| 0 – 840' | Fresh - Gel | 8.6-8.8 | 28-34 | N/c |
| 840' – 11,400' | Brine | 8.8-10.0 | 28-34 | N/c |
| 11,400' – 19,835' Lateral | Oil Base | 10.0-14.0 | 58-68 | 3 - 6 |

The highest mud weight needed to balance formation is expected to be 11.5 ppg. In order to maintain hole stability, mud weights up to 14.0 ppg may be utilized.

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An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

- (A) A kelly cock will be kept in the drill string at all times.
- (B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.
- (C) H₂S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR-CCL Will be run in cased hole during completions phase of operations.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 181 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 7412 psig (based on 11.5 ppg MW). No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from 7,300' to Intermediate casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

- (A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

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11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum working pressure of 5000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 5000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 5000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

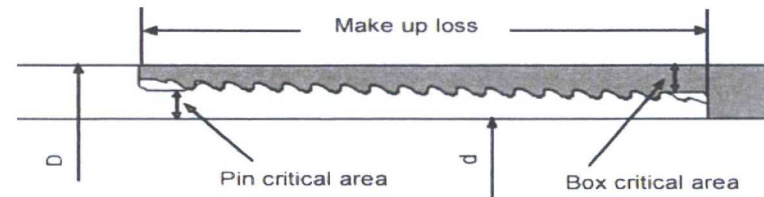
The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

A solid steel body pack-off will be utilized after running and cementing the intermediate casing. After installation the pack-off and lower flange will be pressure tested to 5000 psi.

Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

FLUSHMAX-III **Connection Data Sheet**

**Pipe Body****Imperial****S.I.**

| | | | | |
|-------------------------|-------|-----------------|--------|-----------------|
| Grade | P110 | | P110 | |
| Pipe OD (D) | 7 5/8 | in | 193.68 | mm |
| Weight | 29.7 | lb/ft | 44.25 | kg/m |
| Actual weight | 29.0 | lb/ft | 43.26 | kg/m |
| Wall thickness (t) | 0.375 | in | 9.53 | mm |
| Pipe ID (d) | 6.875 | in | 174.63 | mm |
| Pipe body cross section | 8.537 | in ² | 5,508 | mm ² |
| Drift Dia. | 6.750 | in | 171.45 | mm |

Connection

| | | | | |
|-----------------------|------------------------|-----------------|--------|-----------------|
| Box OD (W) | 7.625 | in | 193.68 | mm |
| PIN ID | 6.875 | in | 174.63 | mm |
| Pin critical area | 4.420 | in ² | 2,852 | mm ² |
| Box critical area | 4.424 | in ² | 2,854 | mm ² |
| Joint load efficiency | 60 | % | 60 | % |
| Make up loss | 3.040 | in | 77.22 | mm |
| Thread taper | 1/16 (3/4 in per ft) | | | |
| Number of threads | 5 thread per in. | | | |

Connection Performance Properties

| | | | | |
|--------------------|-------|------|-------|-----|
| Tensile Yield load | 563.4 | kips | 2,506 | kN |
| M.I.Y.P. | 7,574 | psi | 52.2 | MPa |
| Collapse strength | 5,350 | psi | 36.9 | MPa |

Note

M.I.Y.P. = Minimum Internal Yield Pressure of the connection

Torque Recommended

| | | | | |
|------------------|--------|-------|--------|-----|
| Min. | 8,700 | ft-lb | 11,700 | N-m |
| Opti. | 9,700 | ft-lb | 13,100 | N-m |
| Max. | 10,700 | ft-lb | 14,500 | N-m |
| Operational Max. | 23,600 | ft-lb | 32,000 | N-m |

Note : Operational Max. torque can be applied for high torque application

M I D W E S T
HOSE AND SPECIALTY INC.

| INTERNAL HYDROSTATIC TEST REPORT | | | |
|---|------------------------------------|--|-----------------------------------|
| Customer: CACTUS | | P.O. Number: RIG #123 Asset # M10761 | |
| HOSE SPECIFICATIONS | | | |
| Type: CHOKER LINE | | Length: 35' | |
| I.D. 4" INCHES | | O.D. 8" INCHES | |
| WORKING PRESSURE 10,000 PSI | TEST PRESSURE 15,000 PSI | BURST PRESSURE PSI | |
| COUPLINGS | | | |
| Type of End Fitting 4 1/16 10K FLANGE | | | |
| Type of Coupling: SWEDGED | | MANUFACTURED BY MIDWEST HOSE & SPECIALTY | |
| PROCEDURE | | | |
| <i>Hose assembly pressure tested with water at ambient temperature.</i> | | | |
| TIME HELD AT TEST PRESSURE 1 MIN. | | ACTUAL BURST PRESSURE: 0 PSI | |
| COMMENTS: SN#90067 M10761 Hose is covered with stainless steel armour cover and wrapped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes | | | |
| Date: 6/6/2011 | Tested By: BOBBY FINK | | Approved: MENDI JACKSON |

Manufacturer: Midwest Hose & Specialty

Serial Number: SN#90067

Length: 35'

Size: OD = 8" ID = 4"

Ends: Flanges Size: 4-1/16"

WP Rating: 10,000 psi Anchors required by manufacturer: No



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: CACTUS

SALES ORDER# 90067

Hose Specifications

Hose Type

C & K

I.D.

4"

Working Pressure

10000 PSI

Length

35'

O.D.

8"

Burst Pressure

Standard Safety Multiplier Applies

Verification

Type of Fitting

4 1/16 10K

Die Size

6.62"

Hose Serial #

Coupling Method

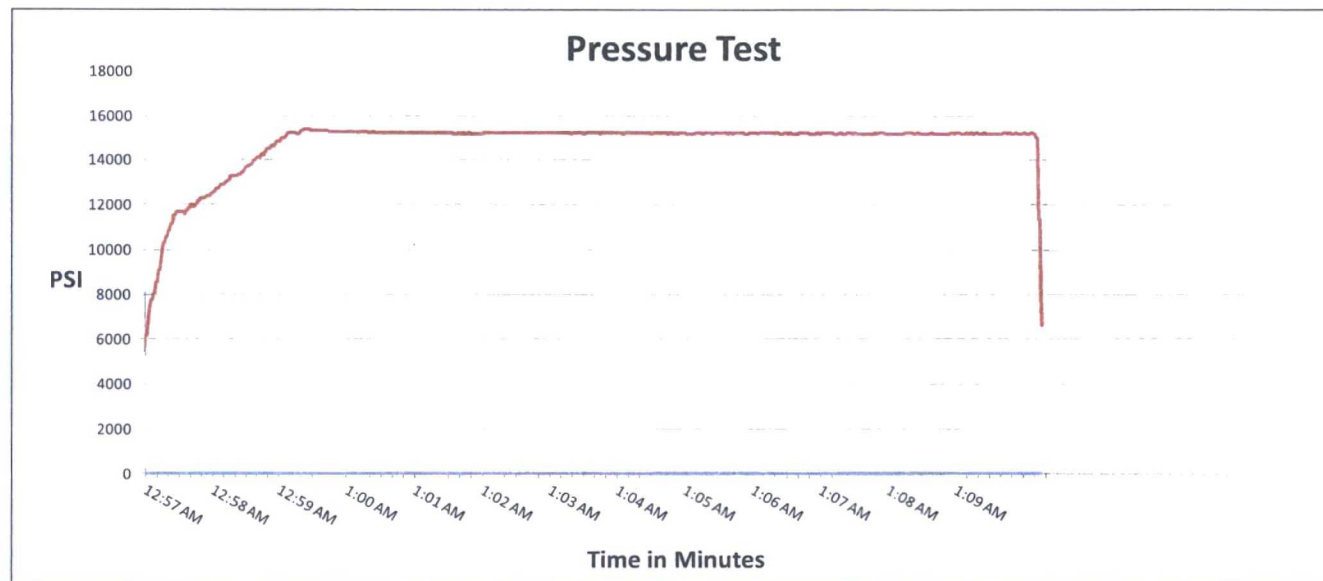
Swage

Final O.D.

6.68"

Hose Assembly Serial #

90067



Test Pressure

15000 PSI

Time Held at Test Pressure

11 1/4 Minutes

Actual Burst Pressure

Peak Pressure

15439 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Bobby Fink

Approved By: Mendi Jackson

Bobby Fink

Mendi Jackson

| OD | Weight | Wall Th. | Grade | API Drift | Connection |
|-----------|-------------|-----------|-----------|-----------|--------------|
| 7 5/8 in. | 29.70 lb/ft | 0.375 in. | VM 110 HC | 6.750 in. | VAM® SLIJ-II |

| PIPE PROPERTIES | |
|--------------------------------|---------------|
| Nominal OD | 7.625 in. |
| Nominal ID | 6.875 in. |
| Nominal Cross Section Area | 8.541 sqin. |
| Grade Type | High Collapse |
| Min. Yield Strength | 110 ksi |
| Max. Yield Strength | 140 ksi |
| Min. Ultimate Tensile Strength | 125 ksi |

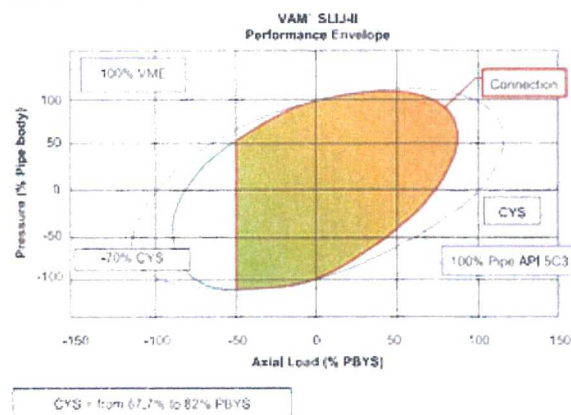
| CONNECTION PROPERTIES | |
|------------------------------|-----------------------------|
| Connection Type | Premium integral semi-flush |
| Connection OD (nom) | 7.711 in. |
| Connection ID (nom) | 6.820 in. |
| Make-up Loss | 4.822 in. |
| Critical Cross Section | 5.912 sqin. |
| Tension Efficiency | 69.2 % of pipe |
| Compression Efficiency | 48.5 % of pipe |
| Internal Pressure Efficiency | 100 % of pipe |
| External Pressure Efficiency | 100 % of pipe |

| CONNECTION PERFORMANCES | |
|------------------------------|-------------|
| Tensile Yield Strength | 651 klb |
| Compression Resistance | 455 klb |
| Internal Yield Pressure | 9470 psi |
| Uniaxial Collapse Pressure | 7890 psi |
| Max. Bending Capacity | TDB |
| Max Bending with Sealability | 20 °/100 ft |

| FIELD TORQUE VALUES | |
|----------------------|-------------|
| Min. Make-up torque | 11300 ft.lb |
| Opti. Make-up torque | 12600 ft.lb |
| Max. Make-up torque | 13900 ft.lb |

VAM® SLIJ-II is a semi-flush integral premium connection for all casing applications. It combines a near flush design with high performances in tension, compression and gas sealability.

VAM® SLIJ-II has been validated according to the most stringent tests protocols, and has an excellent performance history in the world's most prolific HPHT wells.



Do you need help on this product? - Remember no one knows VAM® like VAM

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brazil@vamfieldservice.com

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china@vamfieldservice.com
baku@vamfieldservice.com
singapore@vamfieldservice.com
australia@vamfieldservice.com

Over 140 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

Other Connection Data Sheets are available at www.vamservices.com

Vallourec Group



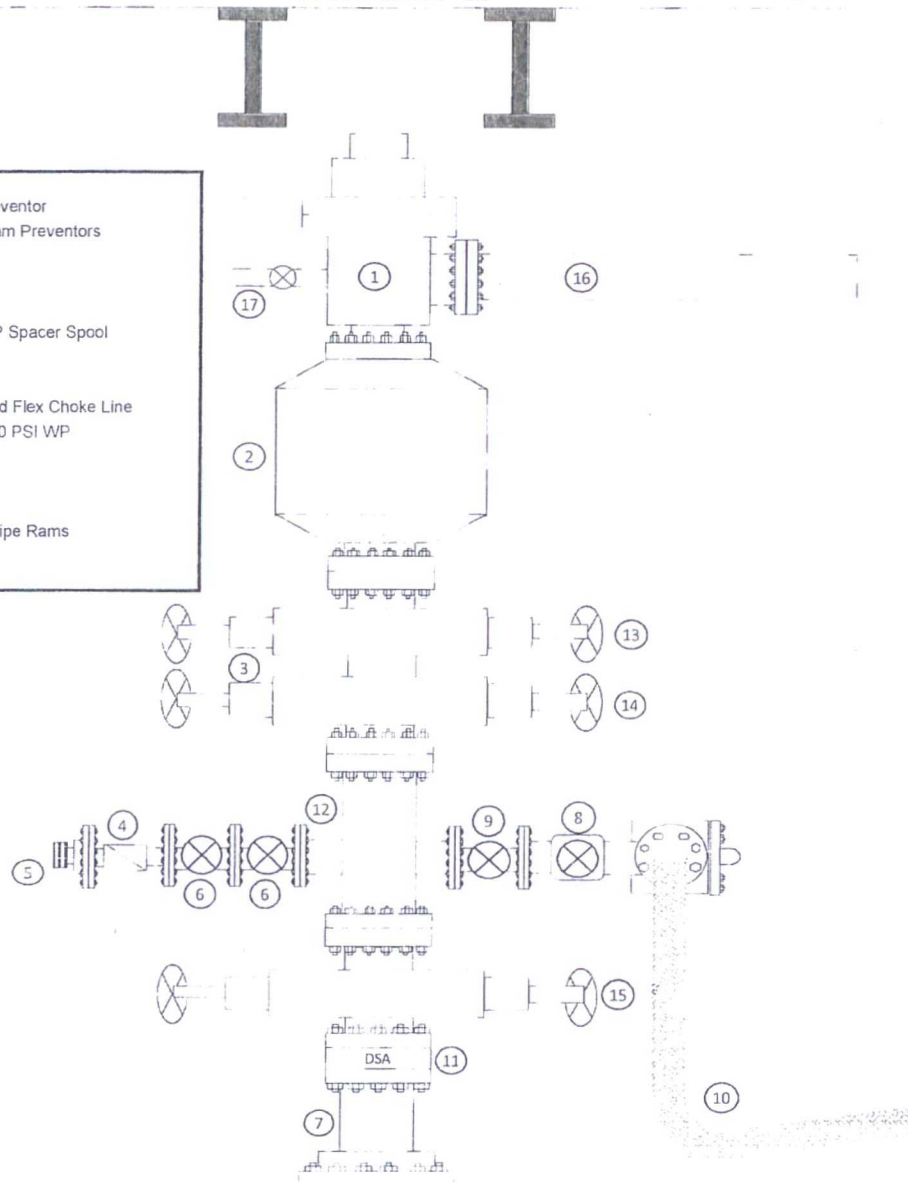
Exhibit 1

EOG Resources

10M BOPE

Rig Floor

1. 13 5/8" Rotating Head
2. Hydril 13 5/8" 10,000 PSI WP GK Annular Preventor
3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors
4. 2 1/16" - 10,000 PSI WP Check Valve
5. 10,000 PSI WP - 1502 Union to kill line
6. 2 1/16" - 10,000 PSI WP Manual Valves
7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool
8. 4 1/16" 10,000 PSI WP HCR Valve
9. 4 1/16" 10,000 PSI WP Manual Valve
10. 6" OD x 3" ID 10,000 PSI WP Steel Armoured Flex Choke Line
11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP
12. Mud Cross - 13 5/8" 10,000 PSI WP
13. Blind Rams
14. Pipe Rams
15. 13 5/8" Cameron Type "U" 10,000 PSI WP Pipe Rams
16. Flow Line
17. 2" Fill Line



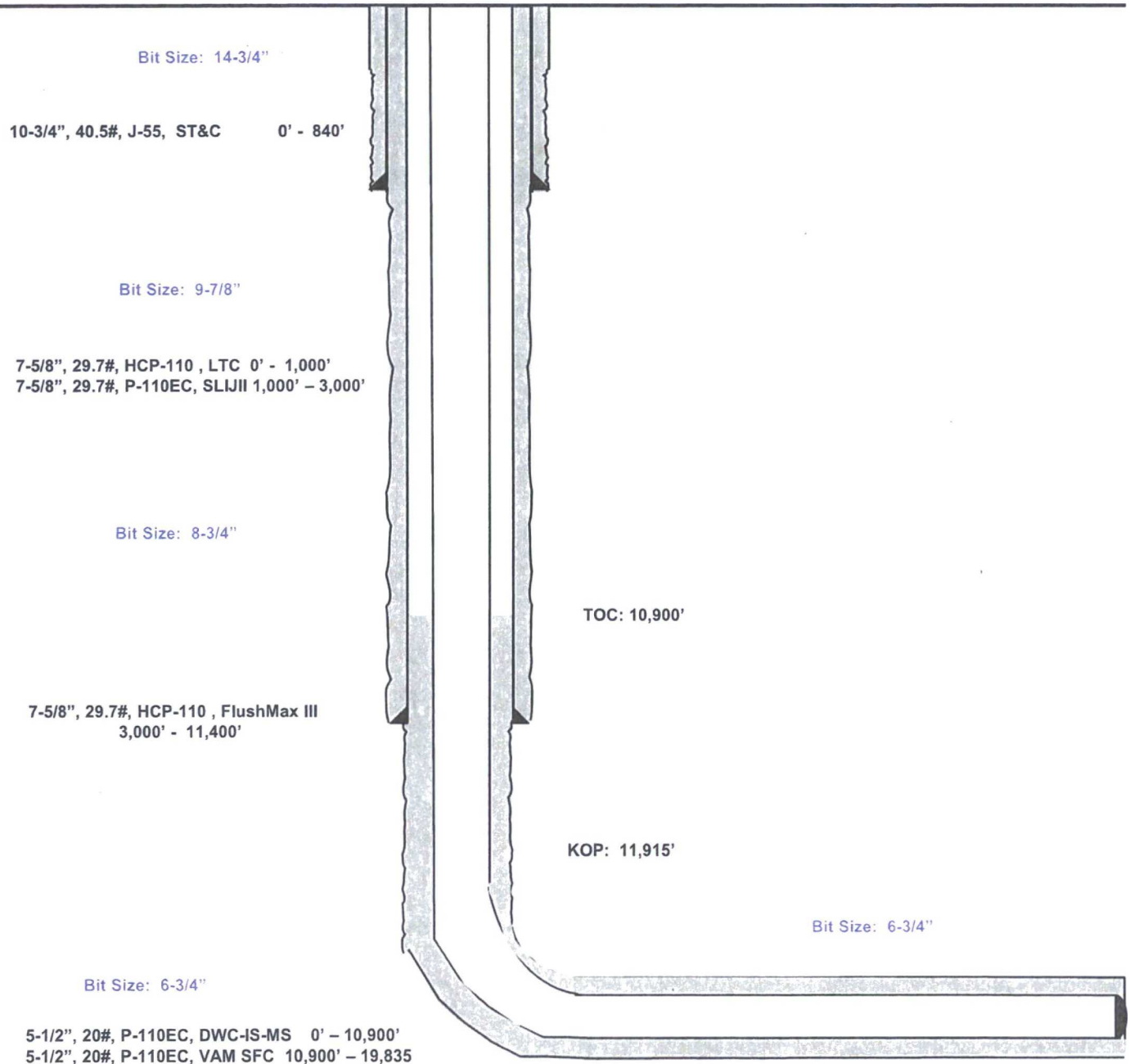
Ophelia 22 Fed Com #706H

Lea County, New Mexico
Proposed Wellbore

200' FNL
1966' FWL
Section 22
T-26-S, R-33-E

API: 30-025-*****

KB: 3,327'
GL: 3,302'



Lateral: 19,835' MD, 12,395' TVD
Upper Most Perf:
330' FNL & 1653' FWL Sec. 22
Lower Most Perf:
2311' FNL & 1653' FWL Sec. 27
BH Location: 2411' FNL & 1653' FWL
Section 27
T-26-S, R-33-E