

OCD Artesia

NM OIL CONSERVATION

ARTESIA DISTRICT

NOV 19 2015

ATS-15-842

Form 3160-3
(March 2012)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

APPLICATION FOR PERMIT TO DRILL OR REENTER

| | | |
|---|---|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | 5. Lease Serial No. NM 122622 BHL |
| 1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone | | 6. If Indian, Allottee or Tribe Name |
| 2. Name of Operator EOG Resources, Inc. (7377) | | 7. If Unit or CA Agreement, Name and No. |
| 3a. Address P. O. Box 2267 Midland, Texas 79702 | | 8. Lease Name and Well No. Rosewood 26 Fed Com #701H |
| 3b. Phone No. (include area code) 432-686-3684 | | 9. API Well No. 30-025- 43021 |
| 4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 2410' FNL & 417' FWL, SWNW (E), Sec 26, T26S, R33E At proposed prod. zone 230' FNL & 330' FWL, NWNW (D), Sec 23, T26S, R33E | | 10. Field and Pool, or Exploratory WC-025 G-09 S263327G; Upper Wolfcamp |
| 14. Distance in miles and direction from nearest town or post office* Approximately 30 +/- miles SW from Jal, NM | | 11. Sec., T. R. M. or Blk. and Survey or Area Sec 26, T26S, R33E |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) | 16. No. of acres in lease 1640 | 17. Spacing Unit dedicated to this well 240 |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. | 19. Proposed Depth 19,916' MD, 12,520' TVD | 20. BLM/BIA Bond No. on file NM 2308 |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3315' GL | 22. Approximate date work will start* 01/01/2016 | 23. Estimated duration 25 days |

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- | | |
|--|---|
| 1. Well plat certified by a registered surveyor. | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM. |

| | | |
|-----------------------------|---------------------------------------|--------------------|
| 25. Signature | Name (Printed/Typed) Renee Jarratt | Date 06/25/2015 |
| Title Regulatory Analyst | | |

| | | |
|-----------------------------|--------------------------------------|---------------------------------|
| Approved by (Signature) | Name (Printed/Typed) Steve Coffey | Date NOV 13 2015 |
| Title FIELD MANAGER | | Office CARLSBAD FIELD OFFICE |

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

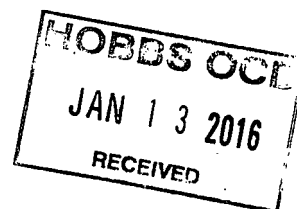
*(Instructions on page 2).

Carlsbad Controlled Water Basin

KZ
01/14/16Approval Subject to General Requirements
& Special Stipulations Attached.SEE ATTACHED FOR
CONDITIONS OF APPROVAL

JAN 14 2016

EOG RESOURCES, INC.
ROSEWOOD 26 FED COM NO. 701H



1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

| | |
|----------------------------------|---------|
| Rustler | 875' |
| Top of Salt | 1,230' |
| Base of Salt / Top Anhydrite | 4,865' |
| Base Anhydrite | 5,100' |
| Lamar | 5,100' |
| Bell Canyon | 5,126' |
| Cherry Canyon | 6,155' |
| Brushy Canyon | 7,860' |
| Bone Spring Lime | 9,310' |
| 1 st Bone Spring Sand | 10,225' |
| 2 nd Bone Spring Lime | 10,485' |
| 2 nd Bone Spring Sand | 10,845' |
| 3 rd Bone Spring Carb | 11,145' |
| 3 rd Bone Spring Sand | 11,860' |
| Wolfcamp | 12,290' |
| TD | 12,520' |

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

| | | |
|----------------------------------|---------|-------------|
| Upper Permian Sands | 0- 400' | Fresh Water |
| Cherry Canyon | 6,155' | Oil |
| Brushy Canyon | 7,860' | Oil |
| 1 st Bone Spring Sand | 10,225' | Oil |
| 2 nd Bone Spring Lime | 10,485' | Oil |
| 2 nd Bone Spring Sand | 10,845' | Oil |
| 3 rd Bone Spring Carb | 11,145' | Oil |
| 3 rd Bone Spring Sand | 11,860' | Oil |
| Wolfcamp | 12,290' | 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 13.375" casing at 900' and circulating cement back to surface.

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See COA **4. CASING PROGRAM - NEW**

| Hole Size | Interval | Csg OD | Weight | Grade | Conn | DF _{min} Collapse | DF _{min} Burst | DF _{min} Tension |
|-----------|-------------------------|---------|--------|---------|------|----------------------------|-------------------------|---------------------------|
| 17.5" | 0 - 900 | 13.375" | 54.5# | J55 | STC | 1.125 | 1.25 | 1.60 |
| 12.25" | 0-4,000' | 9.625" | 40# | J55 | LTC | 1.125 | 1.25 | 1.60 |
| 12.25" | 4,000' - <u>5,100</u> ' | 9.625" | 40# | HCK55 | LTC | 1.125 | 1.25 | 1.60 |
| 8.75" | 0'-19,916' | 5.5" | 17# | HCP-110 | BTC | 1.125 | 1.25 | 1.60 |

Per Robert Salaz
Cementing Program:

| Depth | No. Sacks | Wt. ppg | Yld Ft ³ /ft | Mix Water Gal/sk | Slurry Description |
|----------------------------|-----------|---------|-------------------------|------------------|--|
| 13-3/8" 900' | 400 | 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) |
| | 300 | 14.8 | 1.34 | 6.34 | Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate |
| 9-5/8" 5,100' | 1000 | 12.7 | 2.22 | 12.38 | Lead: Class 'C' + 1.50% R-3 + 0.25 lb/sk Cello-Flake + 2.0% Sodium Metasilicate + 10% Salt + 0.005 lb/sk Static Free (TOC @ surface) |
| | 200 | 14.8 | 1.32 | 6.33 | Tail: Class 'C' + 0.25 lb/sk Cello Flake + 0.005 lb/sk Static Free |
| 5-1/2" 19,916' | 775 | 9.0 | 2.79 | 10.12 | Lead: LiteCRETE + 0.10% D-065 + 0.20% D-046 + 0.40% D-167 + 0.20% D-198 + 0.04% D-208 + 2.0% D-174 (TOC @ 4,600') |
| | 2100 | 14.4 | 1.28 | 5.69 | Tail: Class H + 47.01 pps D-909 + 37.01 pps + 5.0% D-020 + 0.30% D-013 + 0.20% D-046 + 0.10% D-065 + 0.50% D-167 + 2.0% D-174 |

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.

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.

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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 5000/ 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 5000/ 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 - 900 ' | Fresh - Gel | 8.6-8.8 | 28-34 | N/c |
| 900 ' - 5,100' | Oil Base | 8.7-9.4 | 58-68 | N/c - 6 |
| 5,100' - 11,935' | Oil Base | 8.7-9.4 | 58-68 | N/c - 6 |
| 11,935' - 19,916' Lateral | Oil Base | 10.0-10.5 | 58-68 | N/c - 6 |

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 5421 psig. No hydrogen sulfide or other hazardous gases or fluids have been encountered, reported or are known to exist at this depth in this area. No major loss circulation zones have been reported in offsetting wells.

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.

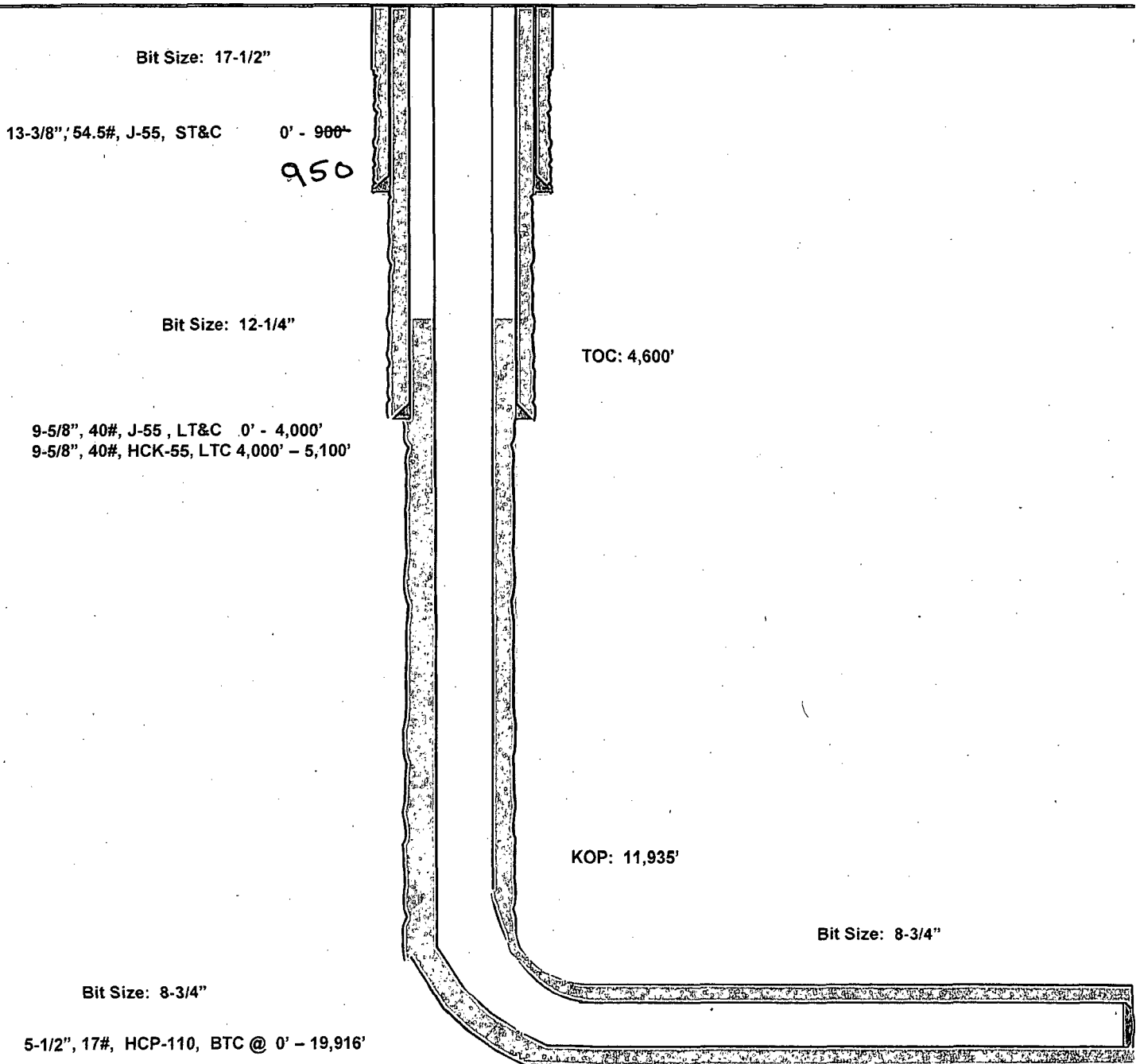
Rosewood 26 Fed Com #701H

Lea County, New Mexico
Proposed Wellbore

2410' FNL
417' FWL
Section 26
T-26-S, R-33-E

API: 30-025-

KB: 3,345'
GL: 3,315'



Lateral: 19,916' MD, 12,520' TVD
Upper Most Perf:
2309' FNL & 330' FWL Sec. 26
Lower Most Perf:
330' FNL & 330' FWL Sec. 23
BH Location: 230' FNL & 330' FWL
Section 23
T-26-S, R-33-E



Lea County, NM (NAD 27 NME)

Rosewood 26 Fed Com

#701H

Plan #1

PROJECT DETAILS: Lea County, NM (NAD 27 NME)

Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level



Azimuths to Grid North
True North: -0.41°
Magnetic North: 6.73°
Magnetic Field
Strength: 48021.7 nT
Dip Angle: 59.90°
Date: 6/18/2015
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.73°
To convert a Magnetic Direction to a True Direction, Add 7.14° East
To convert a True Direction to a Grid Direction, Subtract 0.42°

WELL DETAILS: #701H

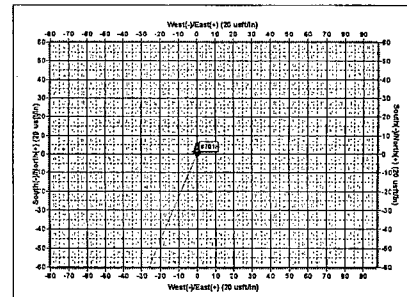
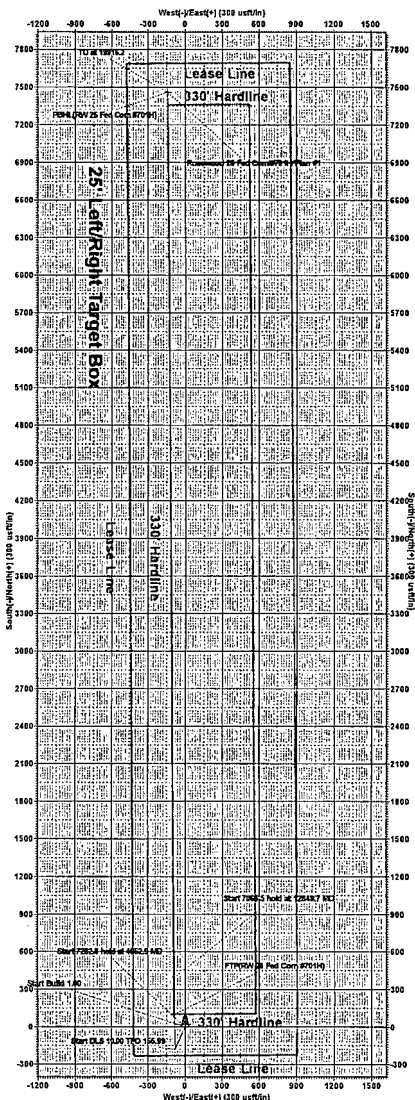
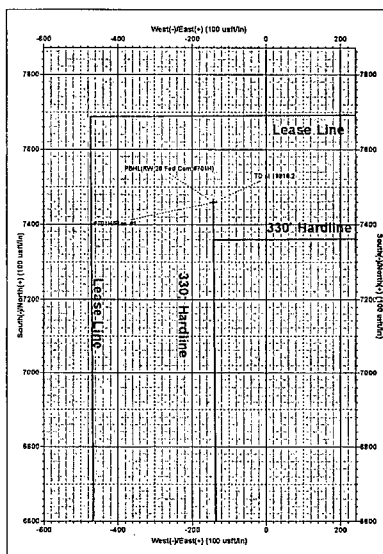
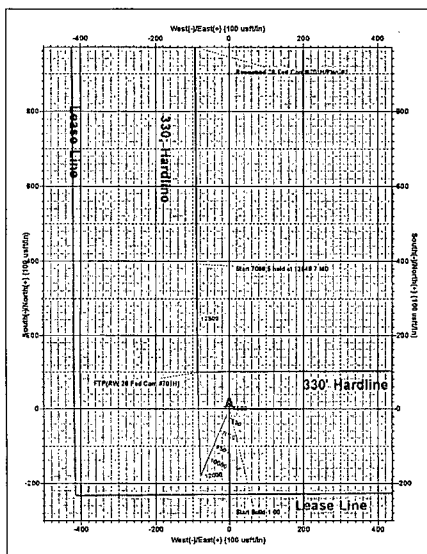
| | | |
|--------------------|-----------------|-------------------|
| Ground Level: | 3315.0 | |
| KB 25 @ 3340 Depth | | |
| Eastings | Latitude | Longitude |
| 742846.00 | 32° 0' 53.802 N | 103° 32' 59.368 W |
| Slot | | |

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N-S | +E-W | Dleg | TFace | VSec | Target |
|-----|---------|-------|--------|---------|--------|--------|-------|--------|--------|---------------------------|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 4500.0 | 0.00 | 0.00 | 4500.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 4652.9 | 1.53 | 203.57 | 4652.9 | -1.9 | -0.8 | 1.00 | 203.57 | -1.9 | |
| 4 | 11935.7 | 1.53 | 203.57 | 11933.1 | -180.0 | -78.5 | 0.00 | 0.00 | -178.5 | |
| 5 | 12849.7 | 90.00 | 359.57 | 12520.0 | 392.7 | -89.2 | 10.00 | 155.99 | 394.3 | |
| 6 | 19916.2 | 90.00 | 359.57 | 12520.0 | 7459.0 | -142.0 | 0.00 | 0.00 | 7460.4 | PBHL(RW 26 Fed Com #701H) |

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

| Name | TVD | +N-S | +E-W | Northings | Eastings | Shape |
|---------------------------|---------|--------|--------|-----------|-----------|-------|
| FTPRW 26 Fed Com #701H | 12520.0 | 99.0 | -87.0 | 379143.00 | 742759.00 | Point |
| PBHL(RW 26 Fed Com #701H) | 12520.0 | 7459.0 | -142.0 | 377503.00 | 742704.00 | Point |



Lea County, NM (NAD 27 NME)
Rosewood 26 Fed Com
#701H
Plan #1