

**HOBBS OGD**  
**JAN 13 2016**  
**RECEIVED**

OCD Artesia  
**NM OIL CONSERVATION**  
**ARTESIA DISTRICT**  
**NOV 19 2015**

*ATS-15-842*

Form 3160-3  
 (March 2012)

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

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 BUREAU OF LAND MANAGEMENT

**RECEIVED**

**APPLICATION FOR PERMIT TO DRILL OR REENTER**

5. Lease Serial No.  
 NM 122622 BHL

6. If Indian, Allottee or Tribe Name

1a. Type of work:  DRILL  REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well:  Oil Well  Gas Well  Other  Single Zone  Multiple Zone

8. Lease Name and Well No.  
 Rosewood 26 Fed Com #701H *(315672)*

2. Name of Operator EOG Resources, Inc. *(7377)*

9. API Well No.  
 30-025- *43021*

3a. Address P. O. Box 2267  
 Midland, Texas 79702

3b. Phone No. (include area code)  
 432-686-3684

10. Field and Pool, or Exploratory  
 WC-025 G-09 S263327G; Upper Wolfcamp *(98097)*

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

**UNORTHODOX LOCATION**

11. Sec., T. R. M. or Blk. and Survey or Area  
 Sec 26, T26S, R33E

14. Distance in miles and direction from nearest town or post office\*  
 Approximately 30 +/- miles SW from Jal, NM

12. County or Parish  
 Lea

13. State  
 NM

15. Distance from proposed\* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)  
 230', 330' PP

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.  
 Stacked with 501H

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.
- 2. A Drilling Plan.
- 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).
- 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- 5. Operator certification
- 6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature *Renee Jarratt*  
 Title **Regulatory Analyst**

Name (Printed/Typed)  
 Renee' Jarratt

Date  
 06/25/2015

Approved by (Signature) *Ed Fernandez for Steve Coffey*  
 Title **FIELD MANAGER**

Name (Printed/Typed)  
 Office **CARLSBAD FIELD OFFICE**

Date **NOV 13 2015**

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).

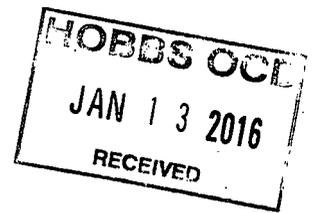
**Carlsbad Controlled Water Basin**

*KZ*  
*01/14/16*

Approval Subject to General Requirements & Special Stipulations Attached.

**SEE ATTACHED FOR CONDITIONS OF APPROVAL**

**JAN 14 2016**



**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 <sup>st</sup> Bone Spring Sand	10,225'
2 <sup>nd</sup> Bone Spring Lime	10,485'
2 <sup>nd</sup> Bone Spring Sand	10,845'
3 <sup>rd</sup> Bone Spring Carb	11,145'
3 <sup>rd</sup> 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 <sup>st</sup> Bone Spring Sand	10,225'	Oil
2 <sup>nd</sup> Bone Spring Lime	10,485'	Oil
2 <sup>nd</sup> Bone Spring Sand	10,845'	Oil
3 <sup>rd</sup> Bone Spring Carb	11,145'	Oil
3 <sup>rd</sup> 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.

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

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

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF <sub>min</sub> Collapse	DF <sub>min</sub> Burst	DF <sub>min</sub> Tension
17.5"	0 - <del>900</del>	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' - 5,100'	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

750  
JK

Per Robert Salaz  
Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft <sup>3</sup> /ft	Mix Water Gal/sk	Slurry Description
13-3/8" <del>900'</del>	400	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl <sub>2</sub> + 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

950

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:**

See  
COA

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.

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

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 - <del>900</del> '	Fresh - Gel	8.6-8.8	28-34	N/c
<del>900</del> ' - 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) H<sub>2</sub>S 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.

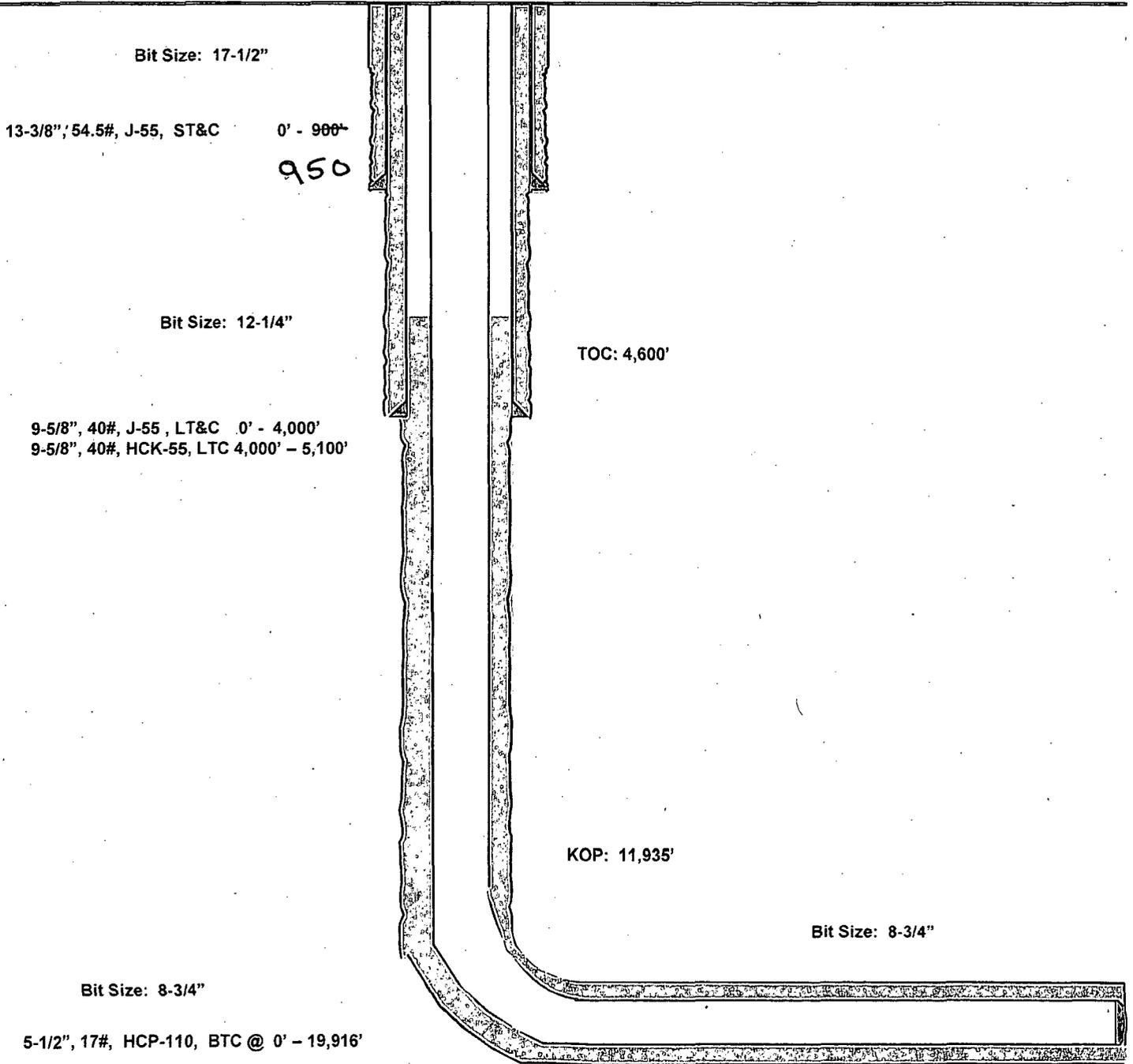
Rosewood 26 Fed Com #701H

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'

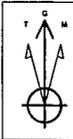


Lateral: 19,916' MD, 12,520' TVD  
Upper Most Perf:  
2309' FNL & 330' FWL Sec. 26  
Lower Most Perf:  
330' FNL & 330' FWL Sec. 23  
BH Location: 230' FNL & 330' FWL  
Section 23  
T-26-S, R-33-E



**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

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



Azimuths to Grid North  
 True North: -0.41°  
 Magnetic North: 6.73°  
 Magnetic Field  
 Strength: 48021.7snT  
 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**

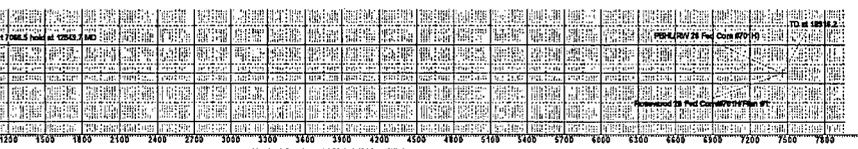
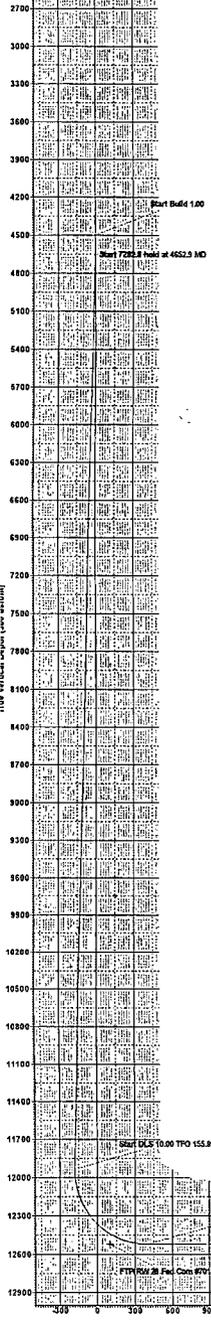
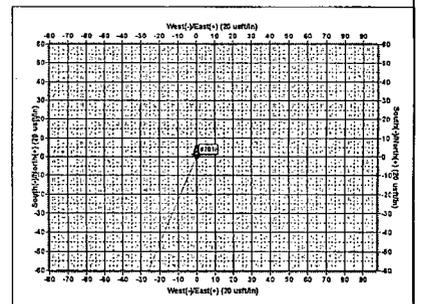
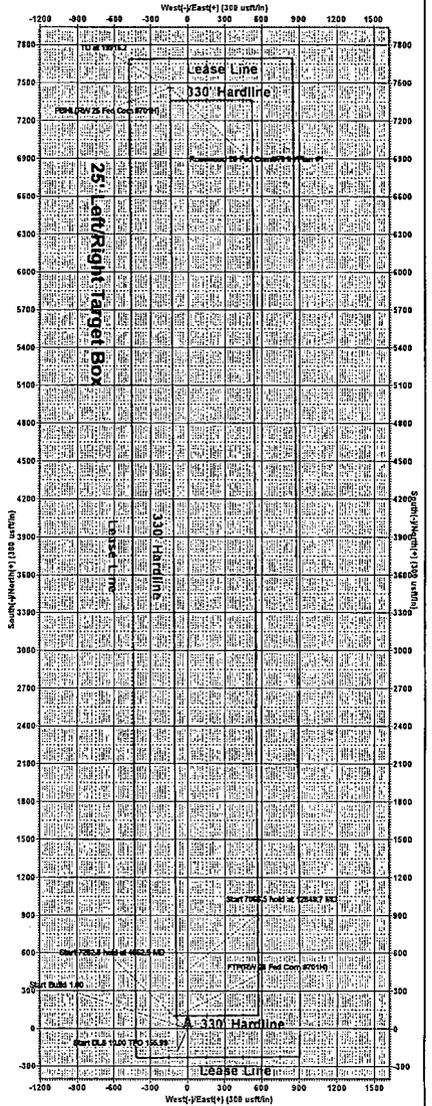
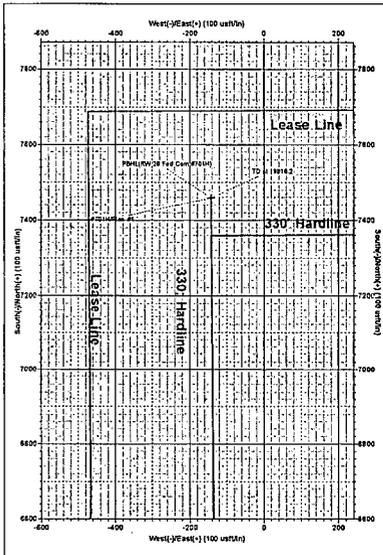
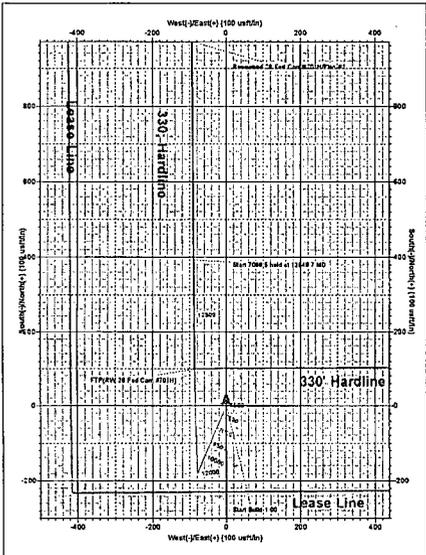
Ground Level:	3315.0				
KB 25 @ 3240.00ft					
Easting	742846.00	32.0'	53.802 N	103° 32'	59.368 W
Longitude					
Slot					

**SECTION DETAILS**

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFact	VSect	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	Northing	Easting	Shape
FTR(RW 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