Form 3160-3
(June 2015)

HOBBS OCD

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FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM122619

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
ICY 7 FED
710H (326335)

2. Name of Operator
EOG RESOURCES INCORPORATED (7377)

9. API Well No.
30-025-46507 (98180)

3a. Address
1111 Bagby Sky Lobby2 Houston TX 77002

3b. Phone No. *(include area code)*
(713)651-7000

10. Field and Pool, or Exploratory
~~PERMIAN / RED HILLS; LOWER BONE~~ S

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SESE / 795 FSL / 520 FEL / LAT 32.1400442 / LONG -103.6045185
At proposed prod. zone SENE / 2539 FNL / 989 FEL / LAT 32.116364 / LONG -103.6060357

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 7 / T25S / R33E / NMP

14. Distance in miles and direction from nearest town or post office*

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)
100 feet

16. No of acres in lease
1278.4

17. Spacing Unit dedicated to this well
480

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
500 feet

19. Proposed Depth
12398 feet / 20410 feet

20. BLM/BIA Bond No. in file
FED: NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3480 feet

22. Approximate date work will start*
07/15/2019

23. Estimated duration
25 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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 requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Jayna K. Hobby / Ph: (432)686-6997	04/18/2019
Title: Regulatory Specialist		
Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Cody Layton / Ph: (575)234-5959	Date 11/13/2019
Title: Assistant Field Manager Lands & Minerals	Office: CARLSBAD	

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.

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.

GCP Rec 11/14/19

KZ 11/15/19

SL

APPROVED WITH CONDITIONS

Approval Date: 11/13/2019

(Continued on page 2)

*(Instructions on page 2)

Additional Operator Remarks

Location of Well

1. SHL: SESE / 795 FSL / 520 FEL / TWSP: 25S / RANGE: 33E / SECTION: 7 / LAT: 32.1400442 / LONG: -103.6045185 (TVD: 0 feet, MD: 0 feet)
   PPP: NENE / 100 FNL / 990 FEL / TWSP: 25S / RANGE: 33E / SECTION: 18 / LAT: 32.1375839 / LONG: -103.6060362 (TVD: 12133 feet, MD: 12160 feet)
   BHL: SENE / 2539 FNL / 989 FEL / TWSP: 25S / RANGE: 33E / SECTION: 19 / LAT: 32.116364 / LONG: -103.6060357 (TVD: 12398 feet, MD: 20410 feet)

BLM Point of Contact

Name: Tanja Baca
Title: Admin Support Assistant
Phone: 5752345940
Email: tabaca@blm.gov

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**EOG RESOURCES, INC.**
LEASE NO.:	**NMNM110838**
WELL NAME & NO.:	**ICY 7 FED 710H**
SURFACE HOLE FOOTAGE:	**795'/S & 520'/E**
BOTTOM HOLE FOOTAGE	**2539'/N & 989'/E**
LOCATION:	**Section 7, T.25 S., R.33 E., NMPM**
COUNTY:	**Lea County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☑ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☐ Unit

A. HYDROGEN SULFIDE

Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

Primary Casing Design:

1. The **9-5/8** inch surface casing shall be set at approximately **1,040** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

5. The minimum required fill of cement behind the **9-5/8** inch first intermediate casing is:

    - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst or potash.**

6. The minimum required fill of cement behind the **7-5/8** inch second intermediate casing is:

Operator has proposed to cement in two stages by conventionally cementing the first stage and performing a bradenhead squeeze on the second stage.

First Stage

- Operator will cement to **7,825** feet with intent to reach the top of Brushy Canyon.

Second Stage

- Operator will perform bradenhead squeeze. Cement should tie-back at least **200 feet** into the previous casing string. If cement does not circulate see B.1.a, c-d above.

Operator has proposed to pump down 9-5/8" X 7-5/8" annulus. Operator must run Echo-meter to verify fluid top and the volume of displacement fluid above the cement slurry in the annulus.

7. The minimum required fill of cement behind the **5-1/2** inch production casing is:

    - Cement should tie-back **200 feet** into the previous casing string. Operator shall provide method of verification. **Excess cement calculates to 22%, additional cement might be required.**

GENERAL REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

a. Spudding well (minimum of 24 hours)
b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
c. BOPE tests (minimum of 4 hours)

☒ Eddy County
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

3. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
    e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
JJP11012019

Bottom Hole Location: 2540' FNL & 1980' FWL, Section 19, T. 25 S., R. 33 E.

Well Pad 3

Icy Fed Com #505H
Surface Hole Location: 260' FNL & 2497' FWL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 2590' FWL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #706H
Surface Hole Location: 200' FNL & 2557' FWL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2540' FNL & 2310' FWL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #722H
Surface Hole Location: 200' FNL & 2590' FWL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2540' FNL & 2590' FWL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #707H
Surface Hole Location: 200' FNL & 2623' FWL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2540' FNL & 2310' FEL, Section 19, T. 25 S., R. 33 E.

Well Pad 4

Icy Fed Com #506H
Surface Hole Location: 260' FNL & 1776' FEL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2540' FNL & 2060' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #507H
Surface Hole Location: 260' FNL & 1743' FEL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 1485' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #708H
Surface Hole Location: 200' FNL & 1683' FEL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2540' FNL & 1980' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #709H
Surface Hole Location: 200' FNL & 1650' FEL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 1650' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #723H
Surface Hole Location: 200' FNL & 1617' FEL, Section 18, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 1310' FEL, Section 19, T. 25 S., R. 33 E.

Well Pad 5

Icy Fed Com #508H
Surface Hole Location: 735' FSL & 613' FEL, Section 7, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 910' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #509H
Surface Hole Location: 735' FSL & 580' FEL, Section 7, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 330' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #710H
Surface Hole Location: 795' FSL & 520' FEL, Section 7, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 989' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #711H
Surface Hole Location: 795' FSL & 487' FEL, Section 7, T. 25 S., R. 33 E.
Bottom Hole Location: 2539' FNL & 660' FEL, Section 19, T. 25 S., R. 33 E.

Icy Fed Com #712H

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion. A power pole should not be placed in drainages, playas, wetlands, riparian areas, or floodplains and must span across the features at a distance away that would not promote further erosion.
Temporary Fresh Water Frac Line: once the temporary use exceeds the timeline of 180 days and/or with a 90 day extension status; further analysis will be required if the applicant pursues to turn the temporary ROW into a permanent ROW.

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Construction Steps 1. Salvage topsoil 2. Construct road 3. Redistribute topsoil 4. Revegetate slopes

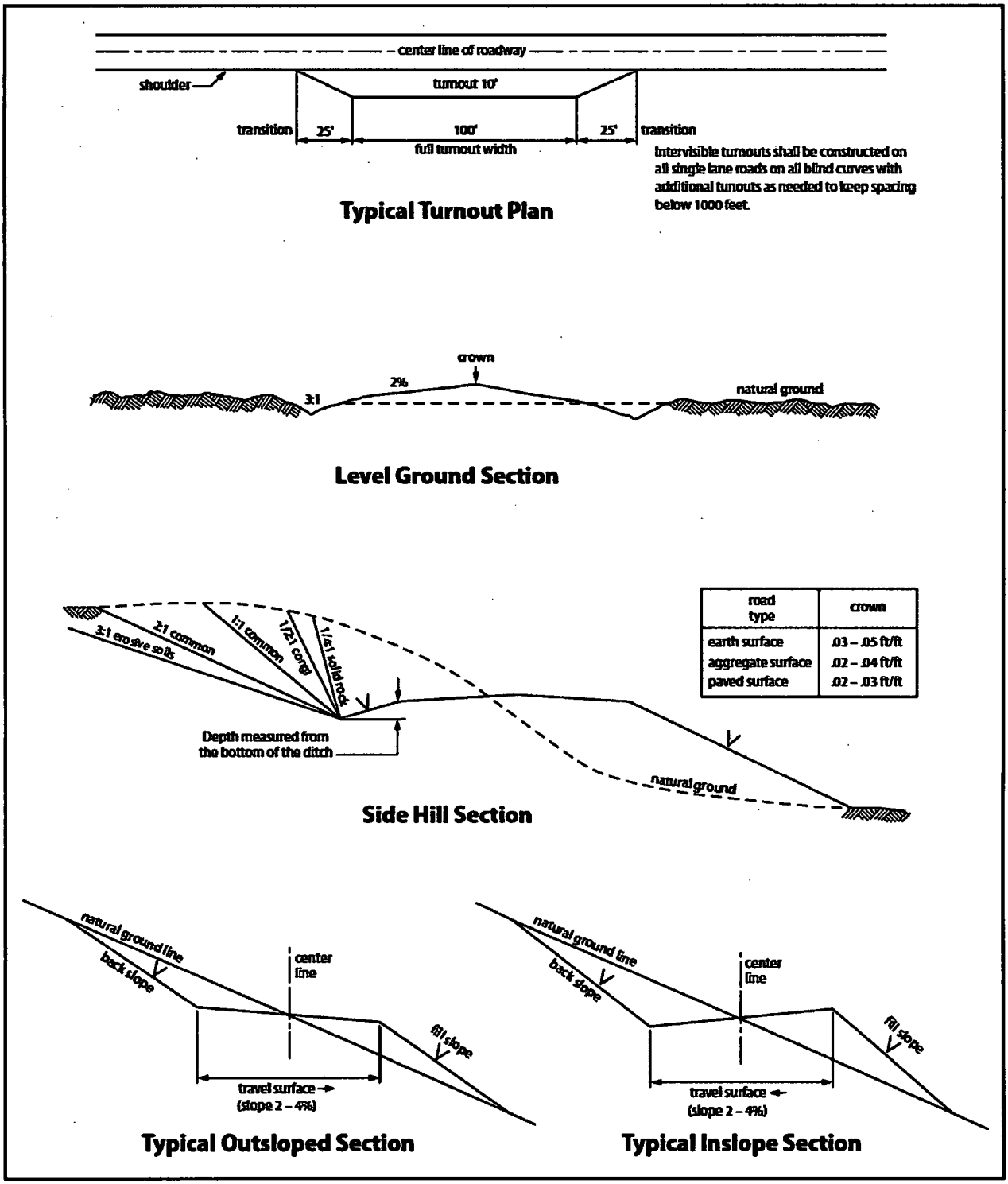

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

( ) seed mixture 1	( ) seed mixture 3
( ) seed mixture 2	( ) seed mixture 4
(X) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes associated roads, pipeline corridor and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

Timing Limitation Stipulation/Condition of Approval for Lesser Prairie-Chicken:

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture for LPC Sand/Shinnery Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains Bristlegrass	5lbs/A

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1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	939'
Tamarisk Anhydrite	1,013'
Top of Salt	1,352'
Base of Salt	4,778'
Lamar	5,012'
Bell Canyon	5,025'
Cherry Canyon	5,978'
Brushy Canyon	7,825'
Bone Spring Lime	9,153'
1st Bone Spring Sand	10,115'
2nd Bone Spring Shale	10,340'
2nd Bone Spring Sand	10,681'
3rd Bone Spring Carbonate	11,173'
3rd Bone Spring Sand	11,831'
Wolfcamp	12,281'
TD	12,398'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	5,978'	Oil
Brushy Canyon	7,825'	Oil
1st Bone Spring Sand	10,115'	Oil
2nd Bone Spring Shale	10,340'	Oil
2nd Bone Spring Sand	10,681'	Oil
3rd Bone Spring Carbonate	11,173'	Oil
3rd Bone Spring Sand	11,831'	Oil
Wolfcamp	12,281'	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 9.625" casing at 1,040' 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
12.25"	0' – 1,040'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' – 11,275'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 10,775'	5.5"	20#	P-110EC	LTC	1.125	1.25	1.60
6.75"	10,775'–11,275'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	11,275' – 20,410'	5.5"	20#	P-110EC	LTC	1.125	1.25	1.60

Variance is requested to waive 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 waive 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.

Variance is also requested to waive the annular clearance requirements for the 5-1/2" casing by 7-5/8" casing annulus to the proposed top of cement.

EOG requests permission to allow deviation from the 0.422'' annulus clearance requirement from Onshore Order #2 under the following conditions:

- Annular clearance to meet or exceed 0.422'' between intermediate casing ID and production casing coupling only on the first 500' overlap between both casing strings.
- Annular clearance less than 0.422'' is acceptable for the curve and lateral portions of the production open hole section.

EOG Resources also requests approval to implement Casing Design B (pg. 8-9). BLM will be notified of elected design at spud.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/sk	Slurry Description
1,040' 9-5/8"	890	13.5	1.73	Lead: Class C + 4.0% Bentonite Gel + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	80	14.8	1.34	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 840')
11,275' 7-5/8"	440	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 7,825')
	1,000	12.7	2.30	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
20,410' 5-1/2"	760	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,775')

Additive	Purpose
Bentonite Gel	Lightweight/Lost circulation prevention
Calcium Chloride	Accelerator
Cello-flake	Lost circulation prevention
Sodium Metasilicate	Accelerator
MagOx	Expansive agent
Pre-Mag-M	Expansive agent
Sodium Chloride	Accelerator
FL-62	Fluid loss control
Halad-344	Fluid loss control
Halad-9	Fluid loss control
HR-601	Retarder
Microbond	Expansive Agent

EOG requests to pump a two stage cement job on the 7-5/8'' intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,825') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed as a contingency. The final cement top will be verified by Echo-meter.

EOG will include the Echo-meter verified fluid top and the volume of displacement fluid above the cement slurry in the annulus in all post-drill sundries on wells utilizing this cement program.

EOG will report to the BLM the volume of fluid (limited to 5 bbls) used to flush intermediate casing valves following backside cementing procedures.

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 (5,000-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.

Variance is requested to use a 5,000 psi annular BOP with the 10,000 psi BOP stack.

Pipe rams and 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 – 1,040'	Fresh - Gel	8.6-8.8	28-34	N/c
1,040' – 11,275'	Brine	10.0-10.2	28-34	N/c
11,275' – 11,940'	Oil Base	8.7-9.4	58-68	N/c - 6
11,940' – 20,410' 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.

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_2S 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 9,016 psig and a maximum anticipated surface pressure of 6,288 psig (based on 14.0 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. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1000 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). 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.

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 9-5/8" surface casing, a 9-5/8" BOP/BOPE system with a minimum working pressure of 10,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 10,000 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 10,000 psi.

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

EOG RESOURCES, INC.
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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.

Casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

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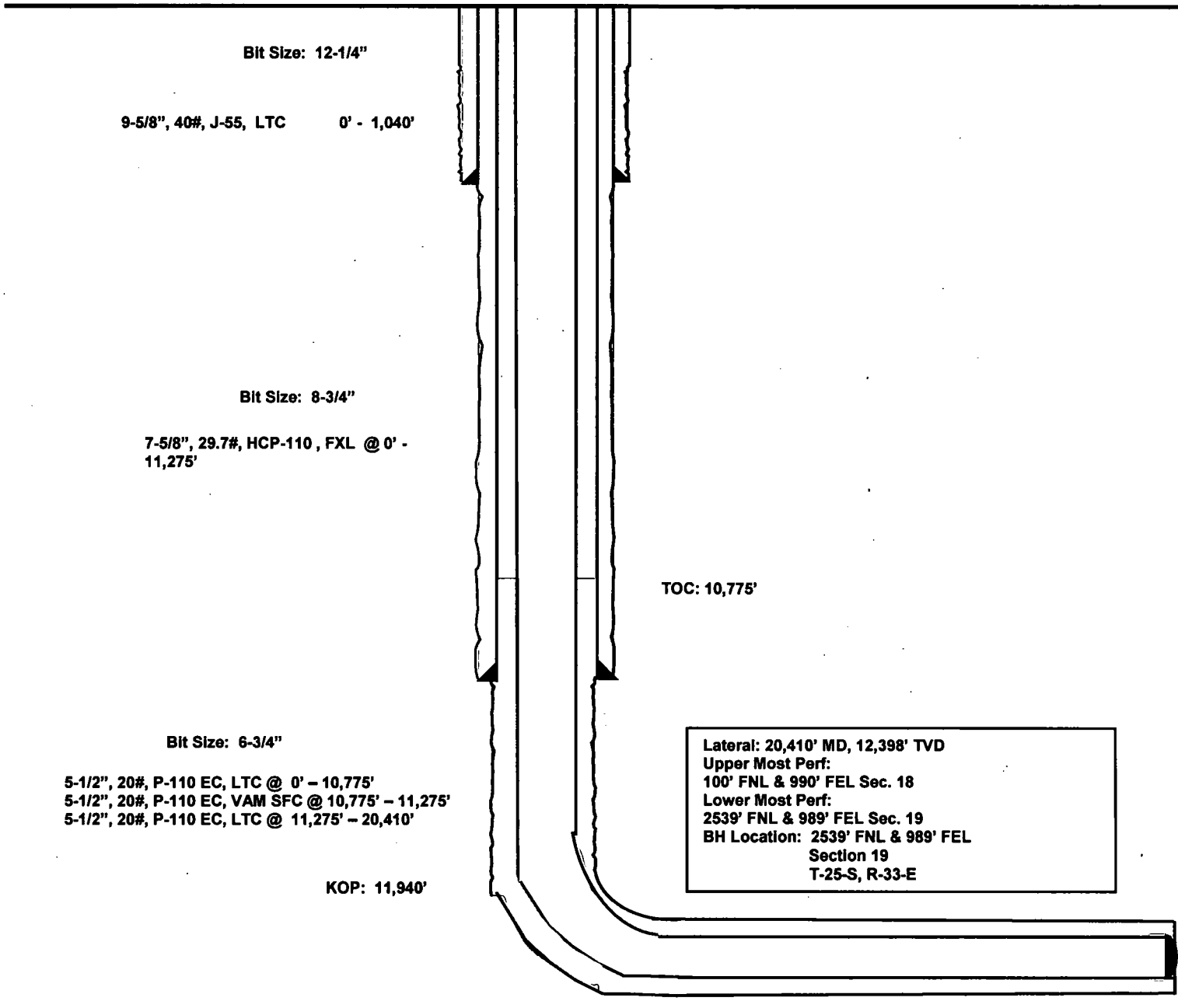
795' FSL
520' FEL
Section 7
T-25-S, R-33-E

Proposed Wellbore
Design A

API: 30-025-*****

KB: 3,505'
GL: 3,480'



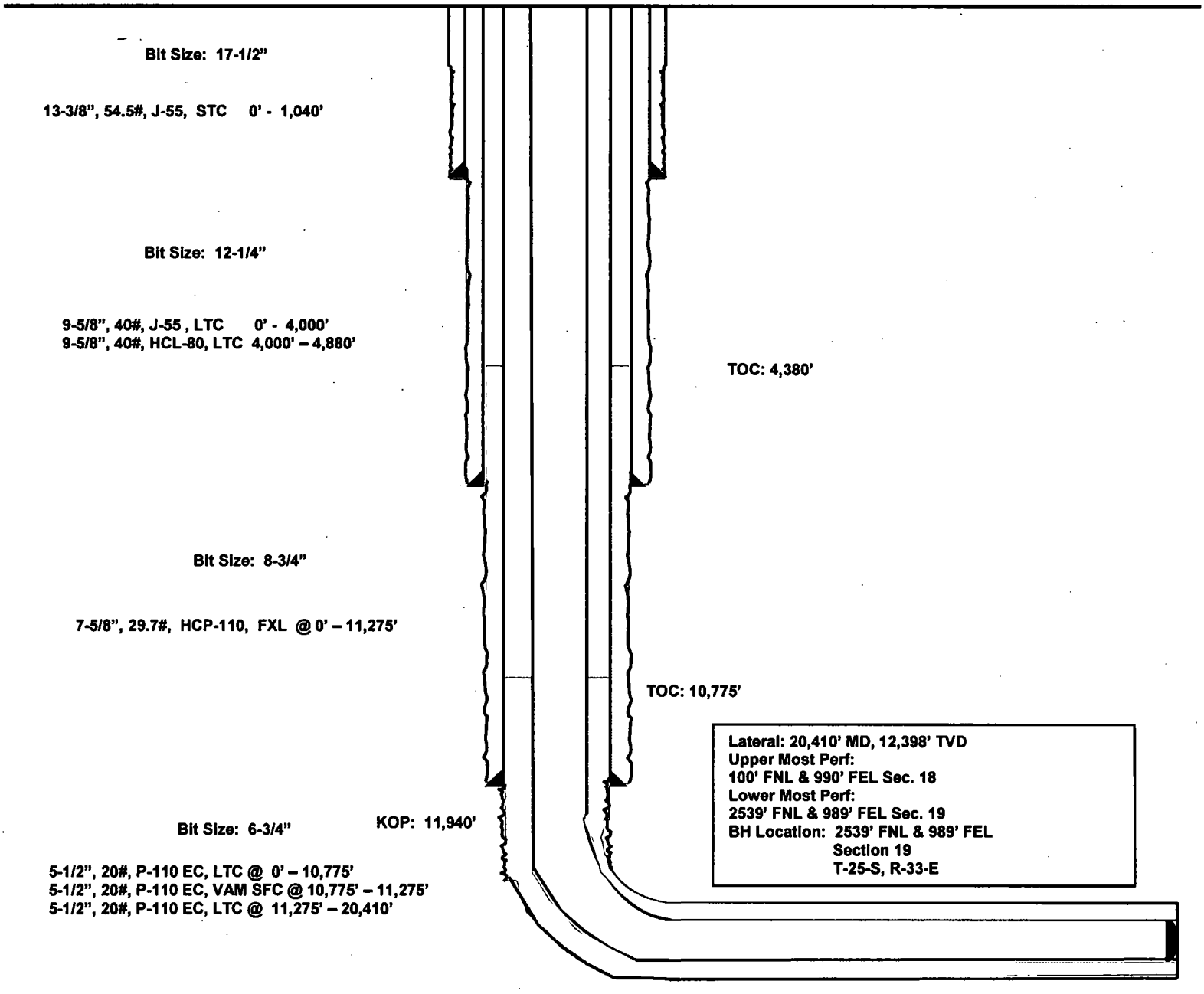
EOG RESOURCES, INC.
ICY 7 FED #710H

795' FSL
520' FEL
Section 7
T-25-S, R-33-E

Proposed Wellbore
Design B

API: 30-025-*****

KB: 3,505'
GL: 3,480'



EOG RESOURCES, INC.
ICY 7 FED #710H

Design B

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 1,040'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0 – 4,000'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	4,000' – 4,880'	9.625"	40#	HCL-80	LTC	1.125	1.25	1.60
8.75"	0 – 11,275'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 10,775'	5.5"	20#	P-110EC	LTC	1.125	1.25	1.60
6.75"	10,775'–11,275'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	11,275' – 20,410'	5.5"	20#	P-110EC	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/sk	Slurry Description
1,040' 13-3/8"	610	13.5	1.74	Lead: Class C + 4.0% Bentonite Gel + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.35	Tail: Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate (TOC @ 840')
4,880' 9-5/8"	780	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	310	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 3,900')
11,275' 7-5/8"	200	10.8	3.67	Lead: Class C + 3% CaCl2 + 3% Microbond (TOC @ 4,380')
	100	14.8	2.38	Tail: Class H + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 9,775')
20,410' 5-1/2"	760	14.8	1.31	Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 10,775')

As a contingency, EOG requests to pump a two stage cement job on the 7-5/8'' intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (7,825') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed.

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,040'	Fresh - Gel	8.6-8.8	28-34	N/c
1,040' – 4,880'	Brine	10.0-10.2	28-34	N/c
4,880'– 11,275'	Oil Base	8.7-9.4	58-68	N/c - 6
11,275'– 20,410' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

eog resources

EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Icy 7 Fed
#710H

OH

Plan: Plan #0.1

Standard Planning Report

04 March, 2019

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #710H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3505.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3505.0usft
Site:	Icy 7 Fed	**North Reference:**	Grid
Well:	#710H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Project	Lea County, NM (NAD 83 NME)		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Icy 7 Fed				
Site Position:		**Northing:**	415,386.00 usft	**Latitude:**	32.1398783°N
From:	Map	**Easting:**	766,827.00 usft	**Longitude:**	103.6048202°W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.39 °

Well	#710H					
Well Position	**+N/-S**	61.0 usft	**Northing:**	415,447.00 usft	**Latitude:**	32.1400443°N
	+E/-W	93.0 usft	**Easting:**	766,920.00 usft	**Longitude:**	103.6045185°W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,480.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	2/22/2019	6.78	59.96	47,711.31402529

Design	Plan #0.1				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.0
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.0	0.0	0.0	182.73	

Plan Survey Tool Program **Date**

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	20,409.7	Plan #0.1 (OH)	MWD	
				OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,674.9	3.50	227.82	1,674.8	-3.6	-4.0	2.00	2.00	0.00	227.82	
11,764.6	3.50	227.82	11,745.7	-416.9	-460.0	0.00	0.00	0.00	0.00	
11,939.5	0.00	0.01	11,920.5	-420.5	-464.0	2.00	-2.00	0.00	180.00	KOP(ICY 18 Fed #71(
12,689.5	90.00	179.63	12,398.0	-898.0	-460.9	12.00	12.00	23.95	179.63	
20,409.7	90.00	179.63	12,398.0	-8,618.0	-411.0	0.00	0.00	0.00	0.00	PBHL(ICY 18 Fed #7'

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #710H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3505.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3505.0usft
Site:	Icy 7 Fed	**North Reference:**	Grid
Well:	#710H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	2.00	227.82	1,600.0	-1.2	-1.3	1.2	2.00	2.00	0.00
1,674.9	3.50	227.82	1,674.8	-3.6	-4.0	3.8	2.00	2.00	0.00
1,700.0	3.50	227.82	1,699.8	-4.6	-5.1	4.8	0.00	0.00	0.00
1,800.0	3.50	227.82	1,799.7	-8.7	-9.6	9.2	0.00	0.00	0.00
1,900.0	3.50	227.82	1,899.5	-12.8	-14.1	13.5	0.00	0.00	0.00
2,000.0	3.50	227.82	1,999.3	-16.9	-18.7	17.8	0.00	0.00	0.00
2,100.0	3.50	227.82	2,099.1	-21.0	-23.2	22.1	0.00	0.00	0.00
2,200.0	3.50	227.82	2,198.9	-25.1	-27.7	26.4	0.00	0.00	0.00
2,300.0	3.50	227.82	2,298.7	-29.2	-32.2	30.7	0.00	0.00	0.00
2,400.0	3.50	227.82	2,398.5	-33.3	-36.7	35.0	0.00	0.00	0.00
2,500.0	3.50	227.82	2,498.4	-37.4	-41.3	39.3	0.00	0.00	0.00
2,600.0	3.50	227.82	2,598.2	-41.5	-45.8	43.6	0.00	0.00	0.00
2,700.0	3.50	227.82	2,698.0	-45.6	-50.3	47.9	0.00	0.00	0.00
2,800.0	3.50	227.82	2,797.8	-49.7	-54.8	52.2	0.00	0.00	0.00
2,900.0	3.50	227.82	2,897.6	-53.8	-59.3	56.5	0.00	0.00	0.00
3,000.0	3.50	227.82	2,997.4	-57.9	-63.9	60.8	0.00	0.00	0.00
3,100.0	3.50	227.82	3,097.2	-62.0	-68.4	65.2	0.00	0.00	0.00
3,200.0	3.50	227.82	3,197.1	-66.1	-72.9	69.5	0.00	0.00	0.00
3,300.0	3.50	227.82	3,296.9	-70.2	-77.4	73.8	0.00	0.00	0.00
3,400.0	3.50	227.82	3,396.7	-74.3	-81.9	78.1	0.00	0.00	0.00
3,500.0	3.50	227.82	3,496.5	-78.4	-86.5	82.4	0.00	0.00	0.00
3,600.0	3.50	227.82	3,596.3	-82.4	-91.0	86.7	0.00	0.00	0.00
3,700.0	3.50	227.82	3,696.1	-86.5	-95.5	91.0	0.00	0.00	0.00
3,800.0	3.50	227.82	3,795.9	-90.6	-100.0	95.3	0.00	0.00	0.00
3,900.0	3.50	227.82	3,895.7	-94.7	-104.5	99.6	0.00	0.00	0.00
4,000.0	3.50	227.82	3,995.6	-98.8	-109.1	103.9	0.00	0.00	0.00
4,100.0	3.50	227.82	4,095.4	-102.9	-113.6	108.2	0.00	0.00	0.00
4,200.0	3.50	227.82	4,195.2	-107.0	-118.1	112.5	0.00	0.00	0.00
4,300.0	3.50	227.82	4,295.0	-111.1	-122.6	116.8	0.00	0.00	0.00
4,400.0	3.50	227.82	4,394.8	-115.2	-127.1	121.1	0.00	0.00	0.00
4,500.0	3.50	227.82	4,494.6	-119.3	-131.7	125.5	0.00	0.00	0.00
4,600.0	3.50	227.82	4,594.4	-123.4	-136.2	129.8	0.00	0.00	0.00
4,700.0	3.50	227.82	4,694.3	-127.5	-140.7	134.1	0.00	0.00	0.00
4,800.0	3.50	227.82	4,794.1	-131.6	-145.2	138.4	0.00	0.00	0.00
4,900.0	3.50	227.82	4,893.9	-135.7	-149.7	142.7	0.00	0.00	0.00
5,000.0	3.50	227.82	4,993.7	-139.8	-154.3	147.0	0.00	0.00	0.00
5,100.0	3.50	227.82	5,093.5	-143.9	-158.8	151.3	0.00	0.00	0.00
5,200.0	3.50	227.82	5,193.3	-148.0	-163.3	155.6	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #710H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3505.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3505.0usft
Site:	Icy 7 Fed	**North Reference:**	Grid
Well:	#710H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.0	3.50	227.82	5,293.1	-152.1	-167.8	159.9	0.00	0.00	0.00
5,400.0	3.50	227.82	5,393.0	-156.2	-172.3	164.2	0.00	0.00	0.00
5,500.0	3.50	227.82	5,492.8	-160.3	-176.9	168.5	0.00	0.00	0.00
5,600.0	3.50	227.82	5,592.6	-164.4	-181.4	172.8	0.00	0.00	0.00
5,700.0	3.50	227.82	5,692.4	-168.5	-185.9	177.1	0.00	0.00	0.00
5,800.0	3.50	227.82	5,792.2	-172.6	-190.4	181.4	0.00	0.00	0.00
5,900.0	3.50	227.82	5,892.0	-176.7	-194.9	185.8	0.00	0.00	0.00
6,000.0	3.50	227.82	5,991.8	-180.8	-199.5	190.1	0.00	0.00	0.00
6,100.0	3.50	227.82	6,091.6	-184.9	-204.0	194.4	0.00	0.00	0.00
6,200.0	3.50	227.82	6,191.5	-189.0	-208.5	198.7	0.00	0.00	0.00
6,300.0	3.50	227.82	6,291.3	-193.1	-213.0	203.0	0.00	0.00	0.00
6,400.0	3.50	227.82	6,391.1	-197.2	-217.5	207.3	0.00	0.00	0.00
6,500.0	3.50	227.82	6,490.9	-201.2	-222.1	211.6	0.00	0.00	0.00
6,600.0	3.50	227.82	6,590.7	-205.3	-226.6	215.9	0.00	0.00	0.00
6,700.0	3.50	227.82	6,690.5	-209.4	-231.1	220.2	0.00	0.00	0.00
6,800.0	3.50	227.82	6,790.3	-213.5	-235.6	224.5	0.00	0.00	0.00
6,900.0	3.50	227.82	6,890.2	-217.6	-240.1	228.8	0.00	0.00	0.00
7,000.0	3.50	227.82	6,990.0	-221.7	-244.7	233.1	0.00	0.00	0.00
7,100.0	3.50	227.82	7,089.8	-225.8	-249.2	237.4	0.00	0.00	0.00
7,200.0	3.50	227.82	7,189.6	-229.9	-253.7	241.7	0.00	0.00	0.00
7,300.0	3.50	227.82	7,289.4	-234.0	-258.2	246.1	0.00	0.00	0.00
7,400.0	3.50	227.82	7,389.2	-238.1	-262.7	250.4	0.00	0.00	0.00
7,500.0	3.50	227.82	7,489.0	-242.2	-267.3	254.7	0.00	0.00	0.00
7,600.0	3.50	227.82	7,588.9	-246.3	-271.8	259.0	0.00	0.00	0.00
7,700.0	3.50	227.82	7,688.7	-250.4	-276.3	263.3	0.00	0.00	0.00
7,800.0	3.50	227.82	7,788.5	-254.5	-280.8	267.6	0.00	0.00	0.00
7,900.0	3.50	227.82	7,888.3	-258.6	-285.4	271.9	0.00	0.00	0.00
8,000.0	3.50	227.82	7,988.1	-262.7	-289.9	276.2	0.00	0.00	0.00
8,100.0	3.50	227.82	8,087.9	-266.8	-294.4	280.5	0.00	0.00	0.00
8,200.0	3.50	227.82	8,187.7	-270.9	-298.9	284.8	0.00	0.00	0.00
8,300.0	3.50	227.82	8,287.6	-275.0	-303.4	289.1	0.00	0.00	0.00
8,400.0	3.50	227.82	8,387.4	-279.1	-308.0	293.4	0.00	0.00	0.00
8,500.0	3.50	227.82	8,487.2	-283.2	-312.5	297.7	0.00	0.00	0.00
8,600.0	3.50	227.82	8,587.0	-287.3	-317.0	302.0	0.00	0.00	0.00
8,700.0	3.50	227.82	8,686.8	-291.4	-321.5	306.4	0.00	0.00	0.00
8,800.0	3.50	227.82	8,786.6	-295.5	-326.0	310.7	0.00	0.00	0.00
8,900.0	3.50	227.82	8,886.4	-299.6	-330.6	315.0	0.00	0.00	0.00
9,000.0	3.50	227.82	8,986.2	-303.7	-335.1	319.3	0.00	0.00	0.00
9,100.0	3.50	227.82	9,086.1	-307.8	-339.6	323.6	0.00	0.00	0.00
9,200.0	3.50	227.82	9,185.9	-311.9	-344.1	327.9	0.00	0.00	0.00
9,300.0	3.50	227.82	9,285.7	-316.0	-348.6	332.2	0.00	0.00	0.00
9,400.0	3.50	227.82	9,385.5	-320.0	-353.2	336.5	0.00	0.00	0.00
9,500.0	3.50	227.82	9,485.3	-324.1	-357.7	340.8	0.00	0.00	0.00
9,600.0	3.50	227.82	9,585.1	-328.2	-362.2	345.1	0.00	0.00	0.00
9,700.0	3.50	227.82	9,684.9	-332.3	-366.7	349.4	0.00	0.00	0.00
9,800.0	3.50	227.82	9,784.8	-336.4	-371.2	353.7	0.00	0.00	0.00
9,900.0	3.50	227.82	9,884.6	-340.5	-375.8	358.0	0.00	0.00	0.00
10,000.0	3.50	227.82	9,984.4	-344.6	-380.3	362.4	0.00	0.00	0.00
10,100.0	3.50	227.82	10,084.2	-348.7	-384.8	366.7	0.00	0.00	0.00
10,200.0	3.50	227.82	10,184.0	-352.8	-389.3	371.0	0.00	0.00	0.00
10,300.0	3.50	227.82	10,283.8	-356.9	-393.8	375.3	0.00	0.00	0.00
10,400.0	3.50	227.82	10,383.6	-361.0	-398.4	379.6	0.00	0.00	0.00
10,500.0	3.50	227.82	10,483.5	-365.1	-402.9	383.9	0.00	0.00	0.00
10,600.0	3.50	227.82	10,583.3	-369.2	-407.4	388.2	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #710H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3505.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3505.0usft
Site:	Icy 7 Fed	**North Reference:**	Grid
Well:	#710H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,700.0	3.50	227.82	10,683.1	-373.3	-411.9	392.5	0.00	0.00	0.00
10,800.0	3.50	227.82	10,782.9	-377.4	-416.4	396.8	0.00	0.00	0.00
10,900.0	3.50	227.82	10,882.7	-381.5	-421.0	401.1	0.00	0.00	0.00
11,000.0	3.50	227.82	10,982.5	-385.6	-425.5	405.4	0.00	0.00	0.00
11,100.0	3.50	227.82	11,082.3	-389.7	-430.0	409.7	0.00	0.00	0.00
11,200.0	3.50	227.82	11,182.2	-393.8	-434.5	414.0	0.00	0.00	0.00
11,300.0	3.50	227.82	11,282.0	-397.9	-439.0	418.3	0.00	0.00	0.00
11,400.0	3.50	227.82	11,381.8	-402.0	-443.6	422.7	0.00	0.00	0.00
11,500.0	3.50	227.82	11,481.6	-406.1	-448.1	427.0	0.00	0.00	0.00
11,600.0	3.50	227.82	11,581.4	-410.2	-452.6	431.3	0.00	0.00	0.00
11,700.0	3.50	227.82	11,681.2	-414.3	-457.1	435.6	0.00	0.00	0.00
11,764.6	3.50	227.82	11,745.7	-416.9	-460.0	438.4	0.00	0.00	0.00
11,800.0	2.79	227.82	11,781.0	-418.2	-461.5	439.7	2.00	-2.00	0.00
11,900.0	0.79	227.82	11,881.0	-420.3	-463.8	441.9	2.00	-2.00	0.00
11,939.5	0.00	0.01	11,920.5	-420.5	-464.0	442.1	2.00	-2.00	0.00
KOP(ICY 18 Fed #710H)									
11,950.0	1.26	179.63	11,931.0	-420.6	-464.0	442.2	12.00	12.00	0.00
11,975.0	4.26	179.63	11,956.0	-421.8	-464.0	443.4	12.00	12.00	0.00
12,000.0	7.26	179.63	11,980.8	-424.3	-464.0	445.9	12.00	12.00	0.00
12,025.0	10.26	179.63	12,005.5	-428.1	-464.0	449.7	12.00	12.00	0.00
12,050.0	13.26	179.63	12,030.0	-433.2	-463.9	454.8	12.00	12.00	0.00
12,075.0	16.26	179.63	12,054.2	-439.6	-463.9	461.2	12.00	12.00	0.00
12,100.0	19.26	179.63	12,078.0	-447.2	-463.8	468.8	12.00	12.00	0.00
12,125.0	22.26	179.63	12,101.4	-456.1	-463.8	477.7	12.00	12.00	0.00
12,150.0	25.26	179.63	12,124.2	-466.1	-463.7	487.7	12.00	12.00	0.00
12,175.0	28.26	179.63	12,146.6	-477.4	-463.6	498.9	12.00	12.00	0.00
12,200.0	31.26	179.63	12,168.3	-489.8	-463.6	511.3	12.00	12.00	0.00
12,225.0	34.26	179.63	12,189.3	-503.3	-463.5	524.8	12.00	12.00	0.00
12,250.0	37.26	179.63	12,209.6	-517.9	-463.4	539.4	12.00	12.00	0.00
12,275.0	40.26	179.63	12,229.1	-533.6	-463.3	555.1	12.00	12.00	0.00
12,300.0	43.26	179.63	12,247.7	-550.2	-463.2	571.7	12.00	12.00	0.00
12,325.0	46.26	179.63	12,265.5	-567.8	-463.0	589.3	12.00	12.00	0.00
12,350.0	49.26	179.63	12,282.3	-586.3	-462.9	607.7	12.00	12.00	0.00
12,375.0	52.26	179.63	12,298.1	-605.7	-462.8	627.1	12.00	12.00	0.00
12,400.0	55.26	179.63	12,312.8	-625.9	-462.7	647.2	12.00	12.00	0.00
12,425.0	58.26	179.63	12,326.6	-646.8	-462.5	668.1	12.00	12.00	0.00
12,450.0	61.26	179.63	12,339.1	-668.4	-462.4	689.6	12.00	12.00	0.00
12,475.0	64.26	179.63	12,350.6	-690.6	-462.3	711.8	12.00	12.00	0.00
12,500.0	67.26	179.63	12,360.8	-713.4	-462.1	734.6	12.00	12.00	0.00
12,525.0	70.26	179.63	12,369.9	-736.7	-462.0	757.9	12.00	12.00	0.00
12,550.0	73.26	179.63	12,377.7	-760.4	-461.8	781.6	12.00	12.00	0.00
12,575.0	76.26	179.63	12,384.3	-784.5	-461.6	805.6	12.00	12.00	0.00
12,600.0	79.26	179.63	12,389.6	-809.0	-461.5	830.0	12.00	12.00	0.00
12,625.0	82.26	179.63	12,393.6	-833.6	-461.3	854.7	12.00	12.00	0.00
12,650.0	85.26	179.63	12,396.3	-858.5	-461.2	879.5	12.00	12.00	0.00
12,675.0	88.26	179.63	12,397.7	-883.4	-461.0	904.4	12.00	12.00	0.00
12,689.5	90.00	179.63	12,398.0	-898.0	-460.9	918.9	11.98	11.98	0.00
FTP(ICY 18 Fed #710H)									
12,700.0	90.00	179.63	12,398.0	-908.4	-460.8	929.4	0.00	0.00	0.00
12,800.0	90.00	179.63	12,398.0	-1,008.4	-460.2	1,029.2	0.00	0.00	0.00
12,900.0	90.00	179.63	12,398.0	-1,108.4	-459.6	1,129.1	0.00	0.00	0.00
13,000.0	90.00	179.63	12,398.0	-1,208.4	-458.9	1,228.9	0.00	0.00	0.00
13,100.0	90.00	179.63	12,398.0	-1,308.4	-458.3	1,328.8	0.00	0.00	0.00
13,200.0	90.00	179.63	12,398.0	-1,408.4	-457.6	1,428.6	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #710H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3505.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3505.0usft
Site:	Icy 7 Fed	**North Reference:**	Grid
Well:	#710H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,300.0	90.00	179.63	12,398.0	-1,508.4	-457.0	1,528.5	0.00	0.00	0.00
13,400.0	90.00	179.63	12,398.0	-1,608.4	-456.3	1,628.3	0.00	0.00	0.00
13,500.0	90.00	179.63	12,398.0	-1,708.4	-455.7	1,728.2	0.00	0.00	0.00
13,600.0	90.00	179.63	12,398.0	-1,808.4	-455.0	1,828.0	0.00	0.00	0.00
13,700.0	90.00	179.63	12,398.0	-1,908.4	-454.4	1,927.9	0.00	0.00	0.00
13,800.0	90.00	179.63	12,398.0	-2,008.4	-453.7	2,027.8	0.00	0.00	0.00
13,900.0	90.00	179.63	12,398.0	-2,108.4	-453.1	2,127.6	0.00	0.00	0.00
14,000.0	90.00	179.63	12,398.0	-2,208.4	-452.4	2,227.5	0.00	0.00	0.00
14,100.0	90.00	179.63	12,398.0	-2,308.4	-451.8	2,327.3	0.00	0.00	0.00
14,200.0	90.00	179.63	12,398.0	-2,408.4	-451.1	2,427.2	0.00	0.00	0.00
14,300.0	90.00	179.63	12,398.0	-2,508.4	-450.5	2,527.0	0.00	0.00	0.00
14,400.0	90.00	179.63	12,398.0	-2,608.4	-449.9	2,626.9	0.00	0.00	0.00
14,500.0	90.00	179.63	12,398.0	-2,708.4	-449.2	2,726.7	0.00	0.00	0.00
14,600.0	90.00	179.63	12,398.0	-2,808.4	-448.6	2,826.6	0.00	0.00	0.00
14,700.0	90.00	179.63	12,398.0	-2,908.4	-447.9	2,926.4	0.00	0.00	0.00
14,800.0	90.00	179.63	12,398.0	-3,008.4	-447.3	3,026.3	0.00	0.00	0.00
14,900.0	90.00	179.63	12,398.0	-3,108.4	-446.6	3,126.1	0.00	0.00	0.00
15,000.0	90.00	179.63	12,398.0	-3,208.4	-446.0	3,226.0	0.00	0.00	0.00
15,100.0	90.00	179.63	12,398.0	-3,308.4	-445.3	3,325.9	0.00	0.00	0.00
15,200.0	90.00	179.63	12,398.0	-3,408.4	-444.7	3,425.7	0.00	0.00	0.00
15,300.0	90.00	179.63	12,398.0	-3,508.4	-444.0	3,525.6	0.00	0.00	0.00
15,400.0	90.00	179.63	12,398.0	-3,608.4	-443.4	3,625.4	0.00	0.00	0.00
15,500.0	90.00	179.63	12,398.0	-3,708.4	-442.7	3,725.3	0.00	0.00	0.00
15,600.0	90.00	179.63	12,398.0	-3,808.4	-442.1	3,825.1	0.00	0.00	0.00
15,700.0	90.00	179.63	12,398.0	-3,908.4	-441.4	3,925.0	0.00	0.00	0.00
15,800.0	90.00	179.63	12,398.0	-4,008.4	-440.8	4,024.8	0.00	0.00	0.00
15,900.0	90.00	179.63	12,398.0	-4,108.4	-440.2	4,124.7	0.00	0.00	0.00
16,000.0	90.00	179.63	12,398.0	-4,208.4	-439.5	4,224.5	0.00	0.00	0.00
16,100.0	90.00	179.63	12,398.0	-4,308.4	-438.9	4,324.4	0.00	0.00	0.00
16,200.0	90.00	179.63	12,398.0	-4,408.4	-438.2	4,424.2	0.00	0.00	0.00
16,300.0	90.00	179.63	12,398.0	-4,508.4	-437.6	4,524.1	0.00	0.00	0.00
16,400.0	90.00	179.63	12,398.0	-4,608.4	-436.9	4,623.9	0.00	0.00	0.00
16,500.0	90.00	179.63	12,398.0	-4,708.4	-436.3	4,723.8	0.00	0.00	0.00
16,600.0	90.00	179.63	12,398.0	-4,808.4	-435.6	4,823.7	0.00	0.00	0.00
16,700.0	90.00	179.63	12,398.0	-4,908.4	-435.0	4,923.5	0.00	0.00	0.00
16,800.0	90.00	179.63	12,398.0	-5,008.4	-434.3	5,023.4	0.00	0.00	0.00
16,900.0	90.00	179.63	12,398.0	-5,108.4	-433.7	5,123.2	0.00	0.00	0.00
17,000.0	90.00	179.63	12,398.0	-5,208.4	-433.0	5,223.1	0.00	0.00	0.00
17,100.0	90.00	179.63	12,398.0	-5,308.4	-432.4	5,322.9	0.00	0.00	0.00
17,200.0	90.00	179.63	12,398.0	-5,408.4	-431.8	5,422.8	0.00	0.00	0.00
17,300.0	90.00	179.63	12,398.0	-5,508.3	-431.1	5,522.6	0.00	0.00	0.00
17,400.0	90.00	179.63	12,398.0	-5,608.3	-430.5	5,622.5	0.00	0.00	0.00
17,500.0	90.00	179.63	12,398.0	-5,708.3	-429.8	5,722.3	0.00	0.00	0.00
17,600.0	90.00	179.63	12,398.0	-5,808.3	-429.2	5,822.2	0.00	0.00	0.00
17,700.0	90.00	179.63	12,398.0	-5,908.3	-428.5	5,922.0	0.00	0.00	0.00
17,800.0	90.00	179.63	12,398.0	-6,008.3	-427.9	6,021.9	0.00	0.00	0.00
17,900.0	90.00	179.63	12,398.0	-6,108.3	-427.2	6,121.8	0.00	0.00	0.00
18,000.0	90.00	179.63	12,398.0	-6,208.3	-426.6	6,221.6	0.00	0.00	0.00
18,100.0	90.00	179.63	12,398.0	-6,308.3	-425.9	6,321.5	0.00	0.00	0.00
18,200.0	90.00	179.63	12,398.0	-6,408.3	-425.3	6,421.3	0.00	0.00	0.00
18,300.0	90.00	179.63	12,398.0	-6,508.3	-424.6	6,521.2	0.00	0.00	0.00
18,400.0	90.00	179.63	12,398.0	-6,608.3	-424.0	6,621.0	0.00	0.00	0.00
18,500.0	90.00	179.63	12,398.0	-6,708.3	-423.3	6,720.9	0.00	0.00	0.00
18,600.0	90.00	179.63	12,398.0	-6,808.3	-422.7	6,820.7	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #710H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3505.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3505.0usft
Site:	Icy 7 Fed	**North Reference:**	Grid
Well:	#710H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #0.1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
18,700.0	90.00	179.63	12,398.0	-6,908.3	-422.1	6,920.6	0.00	0.00	0.00
18,800.0	90.00	179.63	12,398.0	-7,008.3	-421.4	7,020.4	0.00	0.00	0.00
18,900.0	90.00	179.63	12,398.0	-7,108.3	-420.8	7,120.3	0.00	0.00	0.00
19,000.0	90.00	179.63	12,398.0	-7,208.3	-420.1	7,220.1	0.00	0.00	0.00
19,100.0	90.00	179.63	12,398.0	-7,308.3	-419.5	7,320.0	0.00	0.00	0.00
19,200.0	90.00	179.63	12,398.0	-7,408.3	-418.8	7,419.9	0.00	0.00	0.00
19,300.0	90.00	179.63	12,398.0	-7,508.3	-418.2	7,519.7	0.00	0.00	0.00
19,400.0	90.00	179.63	12,398.0	-7,608.3	-417.5	7,619.6	0.00	0.00	0.00
19,500.0	90.00	179.63	12,398.0	-7,708.3	-416.9	7,719.4	0.00	0.00	0.00
19,600.0	90.00	179.63	12,398.0	-7,808.3	-416.2	7,819.3	0.00	0.00	0.00
19,700.0	90.00	179.63	12,398.0	-7,908.3	-415.6	7,919.1	0.00	0.00	0.00
19,800.0	90.00	179.63	12,398.0	-8,008.3	-414.9	8,019.0	0.00	0.00	0.00
19,900.0	90.00	179.63	12,398.0	-8,108.3	-414.3	8,118.8	0.00	0.00	0.00
20,000.0	90.00	179.63	12,398.0	-8,208.3	-413.6	8,218.7	0.00	0.00	0.00
20,100.0	90.00	179.63	12,398.0	-8,308.3	-413.0	8,318.5	0.00	0.00	0.00
20,200.0	90.00	179.63	12,398.0	-8,408.3	-412.4	8,418.4	0.00	0.00	0.00
20,300.0	90.00	179.63	12,398.0	-8,508.3	-411.7	8,518.2	0.00	0.00	0.00
20,409.7	90.00	179.63	12,398.0	-8,618.0	-411.0	8,627.8	0.00	0.00	0.00
PBHL(ICY 18 Fed #710H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
KOP(ICY 18 Fed #710H - plan hits target center - Point	0.00	0.01	11,920.5	-420.5	-464.0	415,026.50	766,456.00	32.1388970°N	103.6060266°W
PBHL(ICY 18 Fed #710I - plan hits target center - Point	0.00	0.00	12,398.0	-8,618.0	-411.0	406,829.00	766,509.00	32.1163634°N	103.6060342°W
FTP(ICY 18 Fed #710H) - plan misses target center by 3.1usft at 12689.5usft MD (12398.0 TVD, -898.0 N, -460.9 E) - Point	0.00	0.00	12,398.0	-898.0	-464.0	414,549.00	766,456.00	32.1375845°N	103.6060370°W