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Form 3160-3
(June 2015)

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.
NMNM108504

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.
JAVELINA 30 FED
704H (315294)

2. Name of Operator
EOG RESOURCES INCORPORATED (7377)

9. API Well No.
30-025-46560

3a. Address
1111 Bagby Sky Lobby2 Houston TX 77002

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

10. Field and Pool, or Exploratory (98094)
~~PERMIAN / PURPLE SAGE~~; WOLFCAMP

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SENW / 2260 FNL / 2026 FWL / LAT 32.1025508 / LONG -103.5109815
At proposed prod. zone NENW / 100 FNL / 2297 FWL / LAT 32.1230062 / LONG -103.5100955

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 30 / T25S / R34E / 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
1518.4

17. Spacing Unit dedicated to this well
240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
1270 feet

19. Proposed Depth
12595 feet / 20171 feet

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

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3321 feet

22. Approximate date work will start*
12/15/2019

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	05/01/2019

Title
Regulatory Specialist

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Christopher Walls / Ph: (575)234-2234	11/26/2019

Title	Office
Petroleum Engineer	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 12/3/19

APPROVED WITH CONDITIONS

KA 12/04/19

Approval Date: 11/25/2019

(Continued on page 2)

*(Instructions on page 2)

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**EOG RESOURCES, INC.**
LEASE NO.:	**NMNM108504**
WELL NAME & NO.:	**JAVELINA 30FED 704H**
SURFACE HOLE FOOTAGE:	**2260' FNL & 2026' FWL**
BOTTOM HOLE FOOTAGE	**100' FNL & 2297' FWL**
LOCATION:	**Section 30, T. 25 S., R 34 E., NMPM**
COUNTY:	**Lea County, New Mexico**

COA

H2S	○ Yes	◉ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
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

1. 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 **1,205** 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 six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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.

2. The minimum required fill of cement behind the **7-5/8** inch 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 **7,919** feet with intent to reach the top of Brushy Canyon.

Second Stage

- Operator will perform bradenhead squeeze. Cement to surface. 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.

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

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

Alternate Casing Design

4. The **13-3/8** inch surface casing shall be set at approximately **1,205** 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 six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
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.

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 **7,919** 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 previous casing string. Operator shall provide method of verification.

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 at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2. **BOP Break Testing is not permitted.**

3. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5000 (5M) Annular which shall be tested to 5000 (5M) psi.**

    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. 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.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

JJP11252019

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)

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

☒ 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.

A. CASING

1. Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

4. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

5. No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

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: 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 lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

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.

EOG RESOURCES, INC.
JAVELINA 30 FED #704H

1. **GEOLOGIC NAME OF SURFACE FORMATION:**
   Permian

2. **ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:**

Rustler	1,039'
Tamarisk Anydrite	1,180
Top of Salt	1,424'
Base of Salt	5,034'
Lamar	5,281'
Bell Canyon	5,310'
Cherry Canyon	6,225'
Brushy Canyon	7,919'
Bone Spring Lime	9,410'
Leonard	9,432
1st Bone Spring Sand	10,393'
2nd Bone Spring Shale	10,601'
2nd Bone Spring Sand	10,908'
3rd Bone Spring Carb	11,424'
3rd Bone Spring Sand	11,961'
Wolfcamp	12,424'
TD	12,595'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,225'	Oil
Brushy Canyon	7,919'	Oil
Leonard	9,432	Oil
1st Bone Spring Sand	10,393'	Oil
2nd Bone Spring Shale	10,601'	Oil
2nd Bone Spring Sand	10,908'	Oil
3rd Bone Spring Carb	11,424'	Oil
3rd Bone Spring Sand	11,961'	Oil
Wolfcamp	12,424'	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 1,205' and circulating cement back to surface.

EOG RESOURCES, INC.
JAVELINA 30 FED #704H

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0' – 1,205'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' – 11,525'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 11,025'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	11,025'–11,525'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	11,525' – 20,171'	5.5"	20#	P-110EC	DWC/C-IS MS	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
1,205' 9-5/8"	1,070	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 @ 1,005')
11,525' 7-5/8"	460	14.2	1.11	1st Stage (Tail): Class C + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 7,900')
	1,000	12.7	2.30	2nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
20,171' 5-1/2"	740	14.2	1.31	Lead: Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 11,025')

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 (7,919') 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 – 1,205'	Fresh - Gel	8.6-8.8	28-34	N/c
1,205' – 11,525'	Brine	10.0-10.2	28-34	N/c
11,525' – 12,126'	Oil Base	8.7-9.4	58-68	N/c - 6
12,126' – 20,171' 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 9,159 psig and a maximum anticipated surface pressure of 6,388 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.
JAVELINA 30 FED #704H

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.

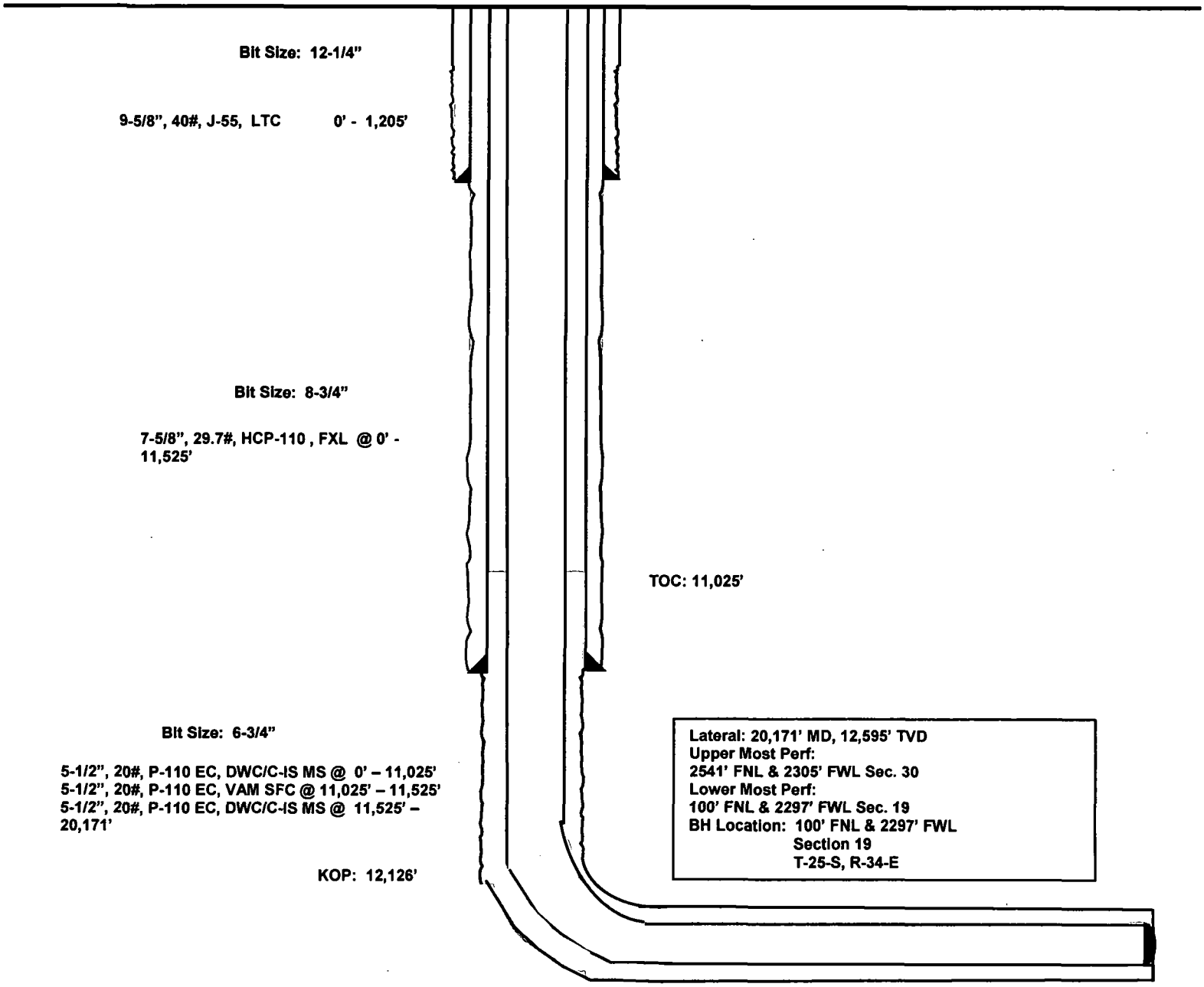
EOG RESOURCES, INC.
JAVELINA 30 FED #704H

2260' FNL
2026' FWL
Section 30
T-25-S, R-34-E

Proposed Wellbore
Design A

API: 30-025-***

KB: 3,346'
GL: 3,321'



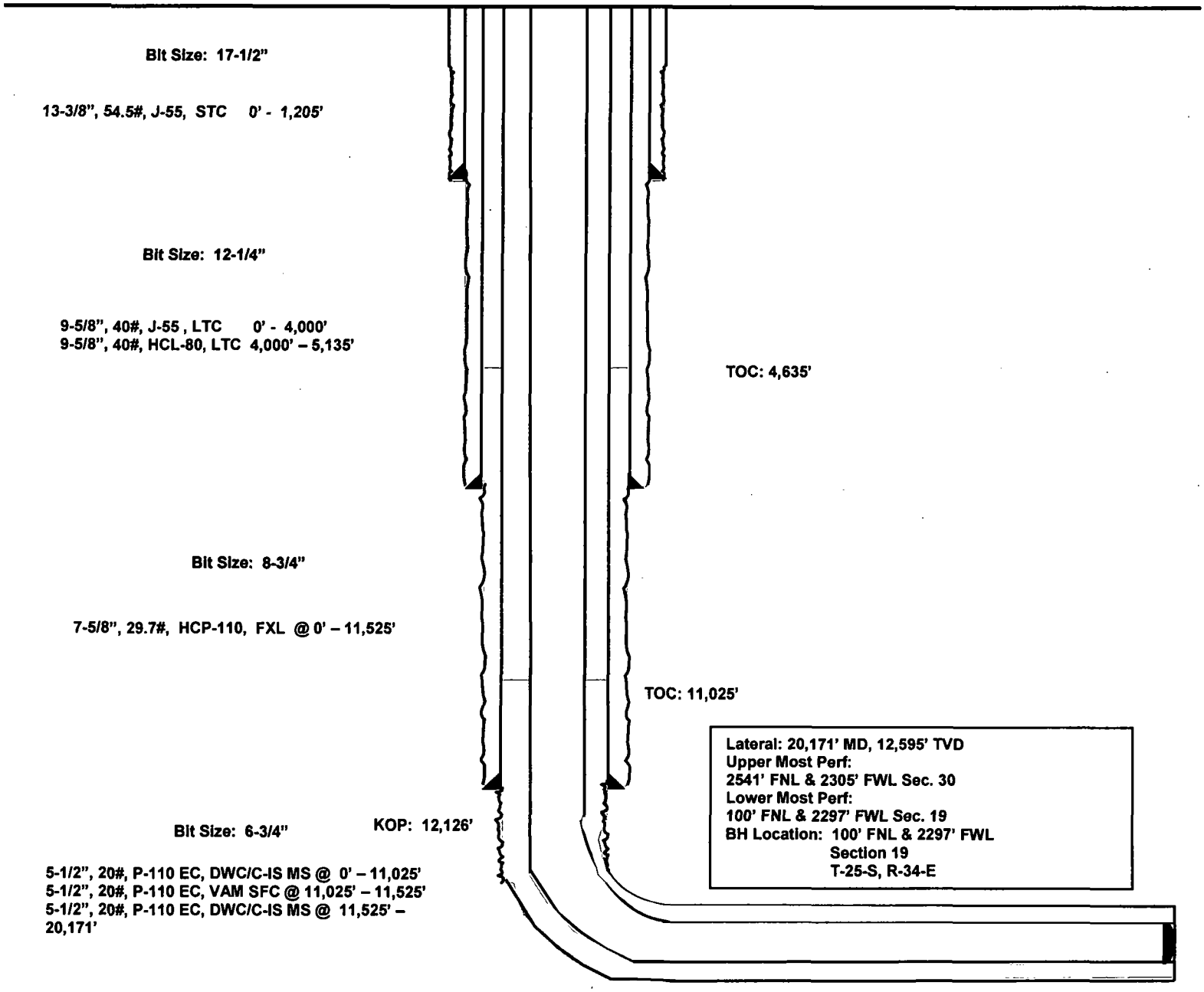
EOG RESOURCES, INC.
JAVELINA 30 FED #704H

2260' FNL
2026' FWL
Section 30
T-25-S, R-34-E

Proposed Wellbore
Design B

API: 30-025-*****

KB: 3,346'
GL: 3,321'



EOG RESOURCES, INC.
JAVELINA 30 FED #704H

Design B

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
17.5"	0 – 1,205'	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' – 5,135'	9.625"	40#	HCL-80	LTC	1.125	1.25	1.60
8.75"	0 – 11,525'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0' – 11,025'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	11,025'–11,525'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60
6.75"	11,525' – 20,171'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/sk	Slurry Description
1,205' 13-3/8"	730	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 @ 1,005')
5,135' 9-5/8"	810	12.7	2.22	Lead: Class C + 10% NaCl + 6% Bentonite Gel + 3% MagOx (TOC @ Surface)
	320	14.8	1.32	Tail: Class C + 10% NaCl + 3% MagOx (TOC @ 4,110')
11,525' 7-5/8"	200	10.8	3.67	Lead: Class C + 3% CaCl2 + 3% Microbond (TOC @ 4,635')
	100	14.8	2.38	Tail: Class H + 0.6% Halad-9 + 0.45% HR-601 + 3% Microbond (TOC @ 10,025')
20,171' 5-1/2"	740	14.8	1.31	Class H + 0.4% Halad-344 + 0.35% HR-601 + 3% Microbond (TOC @ 11,025')

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 (7,919') 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 – 1,205'	Fresh - Gel	8.6-8.8	28-34	N/c
1,205' – 5,135'	Brine	10.0-10.2	28-34	N/c
5,135'– 11,525'	Oil Base	8.7-9.4	58-68	N/c - 6
11,525'– 20,171' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

eog resources

EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Javelina 30 Fed
#704H

OH

Plan: Plan #0.1

Standard Planning Report

10 April, 2019

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3346.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3346.0usft
Site:	Javelina 30 Fed	**North Reference:**	Grid
Well:	#704H	**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	Javelina 30 Fed				
Site Position:		**Northing:**	401,179.00 usft	**Latitude:**	32° 6' 1.013 N
From:	Map	**Easting:**	794,522.00 usft	**Longitude:**	103° 30' 56.515 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.43 °

Well	#704H					
Well Position	**+N/-S**	837.0 usft	**Northing:**	402,016.00 usft	**Latitude:**	32° 6' 9.186 N
	+E/-W	1,454.0 usft	**Easting:**	795,976.00 usft	**Longitude:**	103° 30' 39.539 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,321.0 usft

Wellbore	OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	4/9/2019	6.72	59.94	47,687.04415945

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	1.68

Plan Survey Tool Program **Date** 4/10/2019

	Depth From (usft)	**Depth To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Remarks**
1	0.0	20,171.0	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	
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,415.8	2.32	139.50	1,415.7	-1.8	1.5	2.00	2.00	0.00	139.50	
12,010.5	2.32	139.50	12,001.8	-327.2	279.5	0.00	0.00	0.00	0.00	
12,126.2	0.00	0.00	12,117.5	-329.0	281.0	2.00	-2.00	0.00	180.00	KOP(Javelina 30 fed ;
12,876.2	90.00	359.54	12,595.0	148.4	277.1	12.00	12.00	-0.06	359.54	
20,171.0	90.00	359.54	12,595.0	7,443.0	218.0	0.00	0.00	0.00	0.00	PBHL(Javelina 30 fed

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3346.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3346.0usft
Site:	Javelina 30 Fed	**North Reference:**	Grid
Well:	#704H	**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	2.00	139.50	1,400.0	-1.3	1.1	-1.3	2.00	2.00	0.00
1,415.8	2.32	139.50	1,415.7	-1.8	1.5	-1.7	2.00	2.00	0.00
1,500.0	2.32	139.50	1,499.9	-4.4	3.7	-4.3	0.00	0.00	0.00
1,600.0	2.32	139.50	1,599.8	-7.4	6.4	-7.2	0.00	0.00	0.00
1,700.0	2.32	139.50	1,699.7	-10.5	9.0	-10.2	0.00	0.00	0.00
1,800.0	2.32	139.50	1,799.7	-13.6	11.6	-13.2	0.00	0.00	0.00
1,900.0	2.32	139.50	1,899.6	-16.7	14.2	-16.2	0.00	0.00	0.00
2,000.0	2.32	139.50	1,999.5	-19.7	16.8	-19.2	0.00	0.00	0.00
2,100.0	2.32	139.50	2,099.4	-22.8	19.5	-22.2	0.00	0.00	0.00
2,200.0	2.32	139.50	2,199.3	-25.9	22.1	-25.2	0.00	0.00	0.00
2,300.0	2.32	139.50	2,299.2	-28.9	24.7	-28.2	0.00	0.00	0.00
2,400.0	2.32	139.50	2,399.2	-32.0	27.3	-31.2	0.00	0.00	0.00
2,500.0	2.32	139.50	2,499.1	-35.1	30.0	-34.2	0.00	0.00	0.00
2,600.0	2.32	139.50	2,599.0	-38.2	32.6	-37.2	0.00	0.00	0.00
2,700.0	2.32	139.50	2,698.9	-41.2	35.2	-40.2	0.00	0.00	0.00
2,800.0	2.32	139.50	2,798.8	-44.3	37.8	-43.2	0.00	0.00	0.00
2,900.0	2.32	139.50	2,898.8	-47.4	40.5	-46.2	0.00	0.00	0.00
3,000.0	2.32	139.50	2,998.7	-50.4	43.1	-49.2	0.00	0.00	0.00
3,100.0	2.32	139.50	3,098.6	-53.5	45.7	-52.2	0.00	0.00	0.00
3,200.0	2.32	139.50	3,198.5	-56.6	48.3	-55.1	0.00	0.00	0.00
3,300.0	2.32	139.50	3,298.4	-59.7	51.0	-58.1	0.00	0.00	0.00
3,400.0	2.32	139.50	3,398.3	-62.7	53.6	-61.1	0.00	0.00	0.00
3,500.0	2.32	139.50	3,498.3	-65.8	56.2	-64.1	0.00	0.00	0.00
3,600.0	2.32	139.50	3,598.2	-68.9	58.8	-67.1	0.00	0.00	0.00
3,700.0	2.32	139.50	3,698.1	-71.9	61.4	-70.1	0.00	0.00	0.00
3,800.0	2.32	139.50	3,798.0	-75.0	64.1	-73.1	0.00	0.00	0.00
3,900.0	2.32	139.50	3,897.9	-78.1	66.7	-76.1	0.00	0.00	0.00
4,000.0	2.32	139.50	3,997.9	-81.2	69.3	-79.1	0.00	0.00	0.00
4,100.0	2.32	139.50	4,097.8	-84.2	71.9	-82.1	0.00	0.00	0.00
4,200.0	2.32	139.50	4,197.7	-87.3	74.6	-85.1	0.00	0.00	0.00
4,300.0	2.32	139.50	4,297.6	-90.4	77.2	-88.1	0.00	0.00	0.00
4,400.0	2.32	139.50	4,397.5	-93.4	79.8	-91.1	0.00	0.00	0.00
4,500.0	2.32	139.50	4,497.5	-96.5	82.4	-94.1	0.00	0.00	0.00
4,600.0	2.32	139.50	4,597.4	-99.6	85.1	-97.1	0.00	0.00	0.00
4,700.0	2.32	139.50	4,697.3	-102.7	87.7	-100.1	0.00	0.00	0.00
4,800.0	2.32	139.50	4,797.2	-105.7	90.3	-103.0	0.00	0.00	0.00
4,900.0	2.32	139.50	4,897.1	-108.8	92.9	-106.0	0.00	0.00	0.00
5,000.0	2.32	139.50	4,997.0	-111.9	95.6	-109.0	0.00	0.00	0.00
5,100.0	2.32	139.50	5,097.0	-114.9	98.2	-112.0	0.00	0.00	0.00
5,200.0	2.32	139.50	5,196.9	-118.0	100.8	-115.0	0.00	0.00	0.00

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Site:	Javelina 30 Fed	**North Reference:**	Grid
Well:	#704H	**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	2.32	139.50	5,296.8	-121.1	103.4	-118.0	0.00	0.00	0.00
5,400.0	2.32	139.50	5,396.7	-124.2	106.0	-121.0	0.00	0.00	0.00
5,500.0	2.32	139.50	5,496.6	-127.2	108.7	-124.0	0.00	0.00	0.00
5,600.0	2.32	139.50	5,596.6	-130.3	111.3	-127.0	0.00	0.00	0.00
5,700.0	2.32	139.50	5,696.5	-133.4	113.9	-130.0	0.00	0.00	0.00
5,800.0	2.32	139.50	5,796.4	-136.5	116.5	-133.0	0.00	0.00	0.00
5,900.0	2.32	139.50	5,896.3	-139.5	119.2	-136.0	0.00	0.00	0.00
6,000.0	2.32	139.50	5,996.2	-142.6	121.8	-139.0	0.00	0.00	0.00
6,100.0	2.32	139.50	6,096.1	-145.7	124.4	-142.0	0.00	0.00	0.00
6,200.0	2.32	139.50	6,196.1	-148.7	127.0	-145.0	0.00	0.00	0.00
6,300.0	2.32	139.50	6,296.0	-151.8	129.7	-147.9	0.00	0.00	0.00
6,400.0	2.32	139.50	6,395.9	-154.9	132.3	-150.9	0.00	0.00	0.00
6,500.0	2.32	139.50	6,495.8	-158.0	134.9	-153.9	0.00	0.00	0.00
6,600.0	2.32	139.50	6,595.7	-161.0	137.5	-156.9	0.00	0.00	0.00
6,700.0	2.32	139.50	6,695.7	-164.1	140.2	-159.9	0.00	0.00	0.00
6,800.0	2.32	139.50	6,795.6	-167.2	142.8	-162.9	0.00	0.00	0.00
6,900.0	2.32	139.50	6,895.5	-170.2	145.4	-165.9	0.00	0.00	0.00
7,000.0	2.32	139.50	6,995.4	-173.3	148.0	-168.9	0.00	0.00	0.00
7,100.0	2.32	139.50	7,095.3	-176.4	150.7	-171.9	0.00	0.00	0.00
7,200.0	2.32	139.50	7,195.2	-179.5	153.3	-174.9	0.00	0.00	0.00
7,300.0	2.32	139.50	7,295.2	-182.5	155.9	-177.9	0.00	0.00	0.00
7,400.0	2.32	139.50	7,395.1	-185.6	158.5	-180.9	0.00	0.00	0.00
7,500.0	2.32	139.50	7,495.0	-188.7	161.1	-183.9	0.00	0.00	0.00
7,600.0	2.32	139.50	7,594.9	-191.7	163.8	-186.9	0.00	0.00	0.00
7,700.0	2.32	139.50	7,694.8	-194.8	166.4	-189.9	0.00	0.00	0.00
7,800.0	2.32	139.50	7,794.8	-197.9	169.0	-192.9	0.00	0.00	0.00
7,900.0	2.32	139.50	7,894.7	-201.0	171.6	-195.8	0.00	0.00	0.00
8,000.0	2.32	139.50	7,994.6	-204.0	174.3	-198.8	0.00	0.00	0.00
8,100.0	2.32	139.50	8,094.5	-207.1	176.9	-201.8	0.00	0.00	0.00
8,200.0	2.32	139.50	8,194.4	-210.2	179.5	-204.8	0.00	0.00	0.00
8,300.0	2.32	139.50	8,294.3	-213.2	182.1	-207.8	0.00	0.00	0.00
8,400.0	2.32	139.50	8,394.3	-216.3	184.8	-210.8	0.00	0.00	0.00
8,500.0	2.32	139.50	8,494.2	-219.4	187.4	-213.8	0.00	0.00	0.00
8,600.0	2.32	139.50	8,594.1	-222.5	190.0	-216.8	0.00	0.00	0.00
8,700.0	2.32	139.50	8,694.0	-225.5	192.6	-219.8	0.00	0.00	0.00
8,800.0	2.32	139.50	8,793.9	-228.6	195.3	-222.8	0.00	0.00	0.00
8,900.0	2.32	139.50	8,893.9	-231.7	197.9	-225.8	0.00	0.00	0.00
9,000.0	2.32	139.50	8,993.8	-234.7	200.5	-228.8	0.00	0.00	0.00
9,100.0	2.32	139.50	9,093.7	-237.8	203.1	-231.8	0.00	0.00	0.00
9,200.0	2.32	139.50	9,193.6	-240.9	205.7	-234.8	0.00	0.00	0.00
9,300.0	2.32	139.50	9,293.5	-244.0	208.4	-237.8	0.00	0.00	0.00
9,400.0	2.32	139.50	9,393.5	-247.0	211.0	-240.8	0.00	0.00	0.00
9,500.0	2.32	139.50	9,493.4	-250.1	213.6	-243.7	0.00	0.00	0.00
9,600.0	2.32	139.50	9,593.3	-253.2	216.2	-246.7	0.00	0.00	0.00
9,700.0	2.32	139.50	9,693.2	-256.3	218.9	-249.7	0.00	0.00	0.00
9,800.0	2.32	139.50	9,793.1	-259.3	221.5	-252.7	0.00	0.00	0.00
9,900.0	2.32	139.50	9,893.0	-262.4	224.1	-255.7	0.00	0.00	0.00
10,000.0	2.32	139.50	9,993.0	-265.5	226.7	-258.7	0.00	0.00	0.00
10,100.0	2.32	139.50	10,092.9	-268.5	229.4	-261.7	0.00	0.00	0.00
10,200.0	2.32	139.50	10,192.8	-271.6	232.0	-264.7	0.00	0.00	0.00
10,300.0	2.32	139.50	10,292.7	-274.7	234.6	-267.7	0.00	0.00	0.00
10,400.0	2.32	139.50	10,392.6	-277.8	237.2	-270.7	0.00	0.00	0.00
10,500.0	2.32	139.50	10,492.6	-280.8	239.9	-273.7	0.00	0.00	0.00
10,600.0	2.32	139.50	10,592.5	-283.9	242.5	-276.7	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3346.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3346.0usft
Site:	Javelina 30 Fed	**North Reference:**	Grid
Well:	#704H	**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	2.32	139.50	10,692.4	-287.0	245.1	-279.7	0.00	0.00	0.00
10,800.0	2.32	139.50	10,792.3	-290.0	247.7	-282.7	0.00	0.00	0.00
10,900.0	2.32	139.50	10,892.2	-293.1	250.3	-285.7	0.00	0.00	0.00
11,000.0	2.32	139.50	10,992.1	-296.2	253.0	-288.7	0.00	0.00	0.00
11,100.0	2.32	139.50	11,092.1	-299.3	255.6	-291.6	0.00	0.00	0.00
11,200.0	2.32	139.50	11,192.0	-302.3	258.2	-294.6	0.00	0.00	0.00
11,300.0	2.32	139.50	11,291.9	-305.4	260.8	-297.6	0.00	0.00	0.00
11,400.0	2.32	139.50	11,391.8	-308.5	263.5	-300.6	0.00	0.00	0.00
11,500.0	2.32	139.50	11,491.7	-311.5	266.1	-303.6	0.00	0.00	0.00
11,600.0	2.32	139.50	11,591.7	-314.6	268.7	-306.6	0.00	0.00	0.00
11,700.0	2.32	139.50	11,691.6	-317.7	271.3	-309.6	0.00	0.00	0.00
11,800.0	2.32	139.50	11,791.5	-320.8	274.0	-312.6	0.00	0.00	0.00
11,900.0	2.32	139.50	11,891.4	-323.8	276.6	-315.6	0.00	0.00	0.00
12,000.0	2.32	139.50	11,991.3	-326.9	279.2	-318.6	0.00	0.00	0.00
12,010.5	2.32	139.50	12,001.8	-327.2	279.5	-318.9	0.00	0.00	0.00
12,100.0	0.52	139.50	12,091.3	-328.9	280.9	-320.5	2.00	-2.00	0.00
12,126.2	0.00	0.00	12,117.5	-329.0	281.0	-320.6	2.00	-2.00	0.00
KOP(Javelina 30 fed #704H)									
12,150.0	2.85	359.54	12,141.3	-328.4	281.0	-320.0	12.00	12.00	0.00
12,175.0	5.85	359.54	12,166.2	-326.5	281.0	-318.1	12.00	12.00	0.00
12,200.0	8.85	359.54	12,191.0	-323.3	281.0	-314.9	12.00	12.00	0.00
12,225.0	11.85	359.54	12,215.6	-318.8	280.9	-310.5	12.00	12.00	0.00
12,250.0	14.85	359.54	12,239.9	-313.0	280.9	-304.7	12.00	12.00	0.00
12,275.0	17.85	359.54	12,263.9	-306.0	280.8	-297.7	12.00	12.00	0.00
12,300.0	20.85	359.54	12,287.5	-297.7	280.7	-289.4	12.00	12.00	0.00
12,325.0	23.85	359.54	12,310.6	-288.2	280.7	-279.9	12.00	12.00	0.00
12,350.0	26.85	359.54	12,333.2	-277.5	280.6	-269.2	12.00	12.00	0.00
12,375.0	29.85	359.54	12,355.2	-265.6	280.5	-257.3	12.00	12.00	0.00
12,400.0	32.85	359.54	12,376.5	-252.6	280.4	-244.3	12.00	12.00	0.00
12,425.0	35.85	359.54	12,397.2	-238.5	280.3	-230.2	12.00	12.00	0.00
12,450.0	38.85	359.54	12,417.0	-223.4	280.1	-215.1	12.00	12.00	0.00
12,475.0	41.85	359.54	12,436.1	-207.2	280.0	-198.9	12.00	12.00	0.00
12,500.0	44.85	359.54	12,454.3	-190.0	279.9	-181.7	12.00	12.00	0.00
12,525.0	47.85	359.54	12,471.5	-171.9	279.7	-163.7	12.00	12.00	0.00
FTP(Javelina 30 fed #704H)									
12,550.0	50.85	359.54	12,487.8	-153.0	279.6	-144.7	12.00	12.00	0.00
12,575.0	53.85	359.54	12,503.1	-133.2	279.4	-124.9	12.00	12.00	0.00
12,600.0	56.85	359.54	12,517.3	-112.6	279.2	-104.4	12.00	12.00	0.00
12,625.0	59.85	359.54	12,530.4	-91.3	279.1	-83.1	12.00	12.00	0.00
12,650.0	62.85	359.54	12,542.4	-69.4	278.9	-61.2	12.00	12.00	0.00
12,675.0	65.85	359.54	12,553.2	-46.9	278.7	-38.7	12.00	12.00	0.00
12,700.0	68.85	359.54	12,562.8	-23.8	278.5	-15.6	12.00	12.00	0.00
12,725.0	71.85	359.54	12,571.2	-0.2	278.3	7.9	12.00	12.00	0.00
12,750.0	74.85	359.54	12,578.4	23.7	278.1	31.8	12.00	12.00	0.00
12,775.0	77.85	359.54	12,584.3	48.0	277.9	56.1	12.00	12.00	0.00
12,800.0	80.85	359.54	12,588.9	72.6	277.7	80.7	12.00	12.00	0.00
12,825.0	83.85	359.54	12,592.2	97.3	277.5	105.4	12.00	12.00	0.00
12,850.0	86.85	359.54	12,594.2	122.3	277.3	130.3	12.00	12.00	0.00
12,876.2	90.00	359.54	12,595.0	148.4	277.1	156.5	12.00	12.00	0.00
12,900.0	90.00	359.54	12,595.0	172.2	276.9	180.3	0.00	0.00	0.00
13,000.0	90.00	359.54	12,595.0	272.2	276.1	280.2	0.00	0.00	0.00
13,100.0	90.00	359.54	12,595.0	372.2	275.3	380.1	0.00	0.00	0.00
13,200.0	90.00	359.54	12,595.0	472.2	274.5	480.1	0.00	0.00	0.00
13,300.0	90.00	359.54	12,595.0	572.2	273.7	580.0	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3346.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3346.0usft
Site:	Javelina 30 Fed	**North Reference:**	Grid
Well:	#704H	**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)
13,400.0	90.00	359.54	12,595.0	672.2	272.9	679.9	0.00	0.00	0.00
13,500.0	90.00	359.54	12,595.0	772.2	272.1	779.9	0.00	0.00	0.00
13,600.0	90.00	359.54	12,595.0	872.2	271.3	879.8	0.00	0.00	0.00
13,700.0	90.00	359.54	12,595.0	972.2	270.5	979.7	0.00	0.00	0.00
13,800.0	90.00	359.54	12,595.0	1,072.2	269.6	1,079.6	0.00	0.00	0.00
13,900.0	90.00	359.54	12,595.0	1,172.2	268.8	1,179.6	0.00	0.00	0.00
14,000.0	90.00	359.54	12,595.0	1,272.2	268.0	1,279.5	0.00	0.00	0.00
14,100.0	90.00	359.54	12,595.0	1,372.2	267.2	1,379.4	0.00	0.00	0.00
14,200.0	90.00	359.54	12,595.0	1,472.2	266.4	1,479.4	0.00	0.00	0.00
14,300.0	90.00	359.54	12,595.0	1,572.2	265.6	1,579.3	0.00	0.00	0.00
14,400.0	90.00	359.54	12,595.0	1,672.2	264.8	1,679.2	0.00	0.00	0.00
14,500.0	90.00	359.54	12,595.0	1,772.2	264.0	1,779.2	0.00	0.00	0.00
14,600.0	90.00	359.54	12,595.0	1,872.2	263.2	1,879.1	0.00	0.00	0.00
14,700.0	90.00	359.54	12,595.0	1,972.2	262.3	1,979.0	0.00	0.00	0.00
14,800.0	90.00	359.54	12,595.0	2,072.2	261.5	2,078.9	0.00	0.00	0.00
14,900.0	90.00	359.54	12,595.0	2,172.2	260.7	2,178.9	0.00	0.00	0.00
15,000.0	90.00	359.54	12,595.0	2,272.2	259.9	2,278.8	0.00	0.00	0.00
15,100.0	90.00	359.54	12,595.0	2,372.2	259.1	2,378.7	0.00	0.00	0.00
15,200.0	90.00	359.54	12,595.0	2,472.2	258.3	2,478.7	0.00	0.00	0.00
15,300.0	90.00	359.54	12,595.0	2,572.2	257.5	2,578.6	0.00	0.00	0.00
15,400.0	90.00	359.54	12,595.0	2,672.2	256.7	2,678.5	0.00	0.00	0.00
15,500.0	90.00	359.54	12,595.0	2,772.2	255.9	2,778.5	0.00	0.00	0.00
15,600.0	90.00	359.54	12,595.0	2,872.1	255.1	2,878.4	0.00	0.00	0.00
15,700.0	90.00	359.54	12,595.0	2,972.1	254.2	2,978.3	0.00	0.00	0.00
15,800.0	90.00	359.54	12,595.0	3,072.1	253.4	3,078.2	0.00	0.00	0.00
15,900.0	90.00	359.54	12,595.0	3,172.1	252.6	3,178.2	0.00	0.00	0.00
16,000.0	90.00	359.54	12,595.0	3,272.1	251.8	3,278.1	0.00	0.00	0.00
16,100.0	90.00	359.54	12,595.0	3,372.1	251.0	3,378.0	0.00	0.00	0.00
16,200.0	90.00	359.54	12,595.0	3,472.1	250.2	3,478.0	0.00	0.00	0.00
16,300.0	90.00	359.54	12,595.0	3,572.1	249.4	3,577.9	0.00	0.00	0.00
16,400.0	90.00	359.54	12,595.0	3,672.1	248.6	3,677.8	0.00	0.00	0.00
16,500.0	90.00	359.54	12,595.0	3,772.1	247.8	3,777.8	0.00	0.00	0.00
16,600.0	90.00	359.54	12,595.0	3,872.1	246.9	3,877.7	0.00	0.00	0.00
16,700.0	90.00	359.54	12,595.0	3,972.1	246.1	3,977.6	0.00	0.00	0.00
16,800.0	90.00	359.54	12,595.0	4,072.1	245.3	4,077.5	0.00	0.00	0.00
16,900.0	90.00	359.54	12,595.0	4,172.1	244.5	4,177.5	0.00	0.00	0.00
17,000.0	90.00	359.54	12,595.0	4,272.1	243.7	4,277.4	0.00	0.00	0.00
17,100.0	90.00	359.54	12,595.0	4,372.1	242.9	4,377.3	0.00	0.00	0.00
17,200.0	90.00	359.54	12,595.0	4,472.1	242.1	4,477.3	0.00	0.00	0.00
17,300.0	90.00	359.54	12,595.0	4,572.1	241.3	4,577.2	0.00	0.00	0.00
17,400.0	90.00	359.54	12,595.0	4,672.1	240.5	4,677.1	0.00	0.00	0.00
17,500.0	90.00	359.54	12,595.0	4,772.1	239.7	4,777.1	0.00	0.00	0.00
17,600.0	90.00	359.54	12,595.0	4,872.1	238.8	4,877.0	0.00	0.00	0.00
17,700.0	90.00	359.54	12,595.0	4,972.1	238.0	4,976.9	0.00	0.00	0.00
17,800.0	90.00	359.54	12,595.0	5,072.1	237.2	5,076.8	0.00	0.00	0.00
17,900.0	90.00	359.54	12,595.0	5,172.1	236.4	5,176.8	0.00	0.00	0.00
18,000.0	90.00	359.54	12,595.0	5,272.1	235.6	5,276.7	0.00	0.00	0.00
18,100.0	90.00	359.54	12,595.0	5,372.1	234.8	5,376.6	0.00	0.00	0.00
18,200.0	90.00	359.54	12,595.0	5,472.1	234.0	5,476.6	0.00	0.00	0.00
18,300.0	90.00	359.54	12,595.0	5,572.1	233.2	5,576.5	0.00	0.00	0.00
18,400.0	90.00	359.54	12,595.0	5,672.1	232.4	5,676.4	0.00	0.00	0.00
18,500.0	90.00	359.54	12,595.0	5,772.1	231.5	5,776.4	0.00	0.00	0.00
18,600.0	90.00	359.54	12,595.0	5,872.0	230.7	5,876.3	0.00	0.00	0.00
18,700.0	90.00	359.54	12,595.0	5,972.0	229.9	5,976.2	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #704H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3346.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3346.0usft
Site:	Javelina 30 Fed	**North Reference:**	Grid
Well:	#704H	**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)
18,800.0	90.00	359.54	12,595.0	6,072.0	229.1	6,076.1	0.00	0.00	0.00
18,900.0	90.00	359.54	12,595.0	6,172.0	228.3	6,176.1	0.00	0.00	0.00
19,000.0	90.00	359.54	12,595.0	6,272.0	227.5	6,276.0	0.00	0.00	0.00
19,100.0	90.00	359.54	12,595.0	6,372.0	226.7	6,375.9	0.00	0.00	0.00
19,200.0	90.00	359.54	12,595.0	6,472.0	225.9	6,475.9	0.00	0.00	0.00
19,300.0	90.00	359.54	12,595.0	6,572.0	225.1	6,575.8	0.00	0.00	0.00
19,400.0	90.00	359.54	12,595.0	6,672.0	224.2	6,675.7	0.00	0.00	0.00
19,500.0	90.00	359.54	12,595.0	6,772.0	223.4	6,775.7	0.00	0.00	0.00
19,600.0	90.00	359.54	12,595.0	6,872.0	222.6	6,875.6	0.00	0.00	0.00
19,700.0	90.00	359.54	12,595.0	6,972.0	221.8	6,975.5	0.00	0.00	0.00
19,800.0	90.00	359.54	12,595.0	7,072.0	221.0	7,075.4	0.00	0.00	0.00
19,900.0	90.00	359.54	12,595.0	7,172.0	220.2	7,175.4	0.00	0.00	0.00
20,000.0	90.00	359.54	12,595.0	7,272.0	219.4	7,275.3	0.00	0.00	0.00
20,100.0	90.00	359.54	12,595.0	7,372.0	218.6	7,375.2	0.00	0.00	0.00
20,171.0	90.00	359.54	12,595.0	7,443.0	218.0	7,446.2	0.00	0.00	0.00
PBHL(Javelina 30 fed #704H)									

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(Javelina 30 fed #7(	0.00	0.00	12,117.5	-329.0	281.0	401,687.00	796,257.00	32° 6' 5.909 N	103° 30' 36.301 W
- plan hits target center - Point									
FTP(Javelina 30 fed #70	0.00	0.00	12,595.0	-279.0	281.0	401,737.00	796,257.00	32° 6' 6.404 N	103° 30' 36.297 W
- plan misses target center by 163.4usft at 12525.0usft MD (12471.5 TVD, -171.9 N, 279.7 E) - Point									
PBHL(Javelina 30 fed #7	0.00	0.00	12,595.0	7,443.0	218.0	409,459.00	796,194.00	32° 7' 22.819 N	103° 30' 36.343 W
- plan hits target center - Point									