PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**EOG Resources Incorporated**
LEASE NO.:	**NMNM026394**
WELL NAME & NO.:	**Green Drake 16 Fed Com 705H**
SURFACE HOLE FOOTAGE:	**2051'/S & 1583'/W**
BOTTOM HOLE FOOTAGE	**100'/S & 1644'/W**
LOCATION:	**Section 16, 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
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	○ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP

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

1. The **13-3/8** inch surface casing shall be set at approximately **1040** feet (a minimum of 25 feet 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 **9-5/8** inch 1st 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.

3. The minimum required fill of cement behind the **7-5/8** inch 2nd intermediate casing is: Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

4. The minimum required fill of cement behind the **5-1/2** inch production casing is:
   - Cement should tie-back 200' into the previous casing. 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. 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 approved to use a 5M annular. The annular must be tested to full working pressure (5000 psi.)

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 (one log per well pad is acceptable) 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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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: 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. 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.

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, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

    c. The tests shall be done by an independent service company utilizing a test plug. The results of the test shall be reported to the appropriate BLM office.

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. 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.

f. 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. This test shall be performed prior to the test at full stack pressure.

g. 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.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

ZS 111518

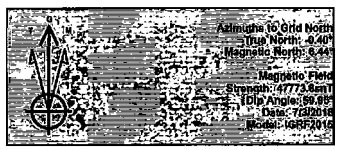
eog resources

Lea County, NM (NAD 83 NME)

Green Drake 16 Fed Com #705H

Plan #0.1

PROJECT DETAILS: Lea County, NM (NAD 83 NME)	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level



To convert a Magnetic Direction to a Grid Direction, Add 6.44°
To convert a Magnetic Direction to a True Direction, Add 6.84° East
To convert a True Direction to a Grid Direction, Subtract 0.40°

WELL DETAILS: #705H

3409.0

KB = 25 @ 3434.0usft

Northing	Easting	Latitude	Longitude
411468.00	774338.00	32° 7' 44.281 N	103° 34' 50.318 W

SECTION DETAILS

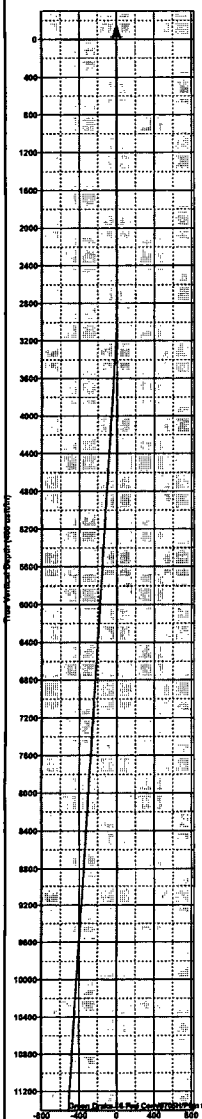
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	3000.0	0.00	0.00	3000.0	0.0	0.0	0.00	0.00	0.0	
3	3177.4	3.55	6.14	3177.3	5.5	0.6	2.00	6.14	-5.5	
4	11757.7	3.55	6.14	11741.2	533.5	57.4	0.00	0.00	-532.6	
5	11935.2	0.00	0.00	11918.5	539.0	58.0	2.00	180.00	-538.1	KOP(GD 16 FC #705H)
6	12685.2	90.00	179.63	12396.0	61.5	61.1	12.00	179.63	-60.6	
7	19978.9	90.00	179.63	12396.0	-7232.0	108.0	0.00	0.00	7232.8	PBHL(GD 16 FC #705H)

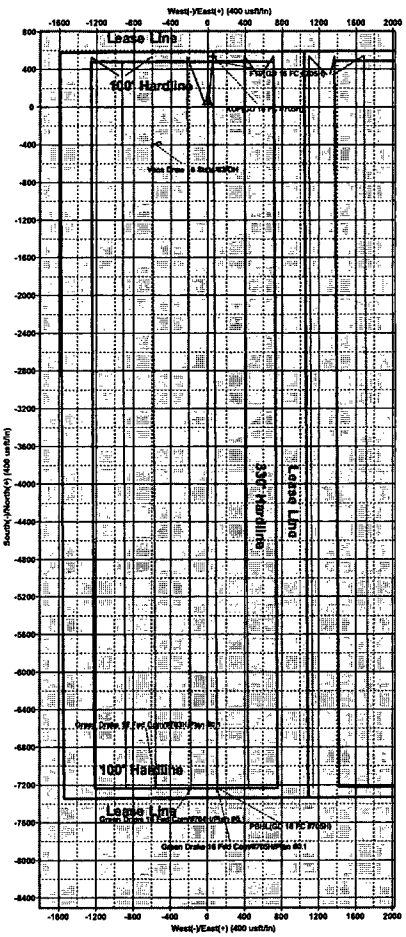
CASING DETAILS

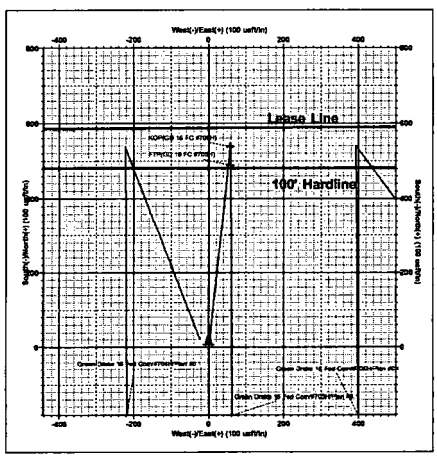
No casing data is available

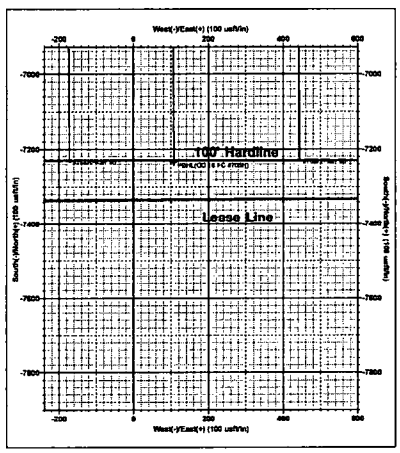
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

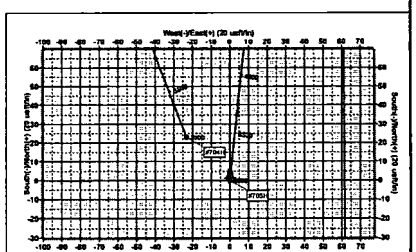
Name	TVD	+N/-S	+E/-W	Northing	Easting
KOP(GD 16 FC #705H)	11918.5	539.0	58.0	412007.00	774396.00
FTP(GD 16 FC #705H)	12396.0	489.0	58.0	411957.00	774396.00
PBHL(GD 16 FC #705H)	12396.0	-7232.0	108.0	404236.00	774446.00

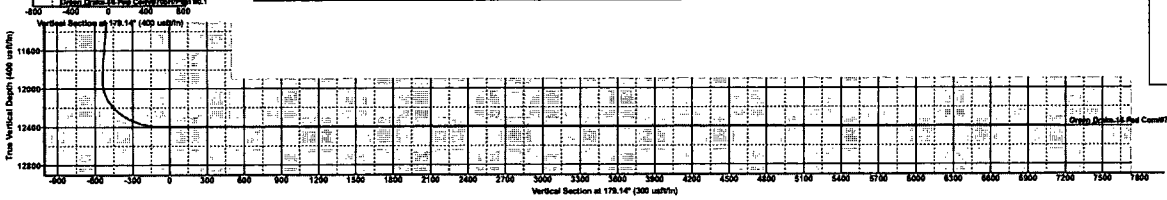


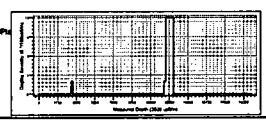












eog resources

EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Green Drake 16 Fed Com
#705H

OH

Plan: Plan #0.1

Standard Planning Report

25 July, 2018

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #705H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3434.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3434.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#705H	**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	Green Drake 16 Fed Com				
Site Position:		**Northing:**	411,802.00 usft	**Latitude:**	32° 7' 47.652 N
From:	Map	**Easting:**	773,380.00 usft	**Longitude:**	103° 35' 1.431 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.40 °

Well	#705H					
Well Position	**+N/-S**	-334.0 usft	**Northing:**	411,468.00 usft	**Latitude:**	32° 7' 44.281 N
	+E/-W	958.0 usft	**Easting:**	774,338.00 usft	**Longitude:**	103° 34' 50.318 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,409.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	7/3/2018	6.84	59.96	47,773.57454082

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	179.14	

Plan Survey Tool Program **Date** 7/24/2018

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	19,978.9	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	
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,177.4	3.55	6.14	3,177.3	5.5	0.6	2.00	2.00	0.00	6.14	
11,757.7	3.55	6.14	11,741.2	533.5	57.4	0.00	0.00	0.00	0.00	
11,935.2	0.00	0.00	11,918.5	539.0	58.0	2.00	-2.00	0.00	180.00	KOP(GD 16 FC #705I
12,685.2	90.00	179.63	12,396.0	61.5	61.1	12.00	12.00	23.95	179.63	
19,978.9	90.00	179.63	12,396.0	-7,232.0	108.0	0.00	0.00	0.00	0.00	PBHL(GD 16 FC #70

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #705H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3434.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3434.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#705H	**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	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	2.00	6.14	3,100.0	1.7	0.2	-1.7	2.00	2.00	0.00
3,177.4	3.55	6.14	3,177.3	5.5	0.6	-5.5	2.00	2.00	0.00
3,200.0	3.55	6.14	3,199.8	6.9	0.7	-6.8	0.00	0.00	0.00
3,300.0	3.55	6.14	3,299.7	13.0	1.4	-13.0	0.00	0.00	0.00
3,400.0	3.55	6.14	3,399.5	19.2	2.1	-19.1	0.00	0.00	0.00
3,500.0	3.55	6.14	3,499.3	25.3	2.7	-25.3	0.00	0.00	0.00
3,600.0	3.55	6.14	3,599.1	31.5	3.4	-31.4	0.00	0.00	0.00
3,700.0	3.55	6.14	3,698.9	37.6	4.0	-37.6	0.00	0.00	0.00
3,800.0	3.55	6.14	3,798.7	43.8	4.7	-43.7	0.00	0.00	0.00
3,900.0	3.55	6.14	3,898.5	49.9	5.4	-49.8	0.00	0.00	0.00
4,000.0	3.55	6.14	3,998.3	56.1	6.0	-56.0	0.00	0.00	0.00
4,100.0	3.55	6.14	4,098.1	62.2	6.7	-62.1	0.00	0.00	0.00
4,200.0	3.55	6.14	4,197.9	68.4	7.4	-68.3	0.00	0.00	0.00
4,300.0	3.55	6.14	4,297.7	74.6	8.0	-74.4	0.00	0.00	0.00
4,400.0	3.55	6.14	4,397.5	80.7	8.7	-80.6	0.00	0.00	0.00
4,500.0	3.55	6.14	4,497.4	86.9	9.3	-86.7	0.00	0.00	0.00
4,600.0	3.55	6.14	4,597.2	93.0	10.0	-92.9	0.00	0.00	0.00
4,700.0	3.55	6.14	4,697.0	99.2	10.7	-99.0	0.00	0.00	0.00
4,800.0	3.55	6.14	4,796.8	105.3	11.3	-105.1	0.00	0.00	0.00
4,900.0	3.55	6.14	4,896.6	111.5	12.0	-111.3	0.00	0.00	0.00
5,000.0	3.55	6.14	4,996.4	117.6	12.7	-117.4	0.00	0.00	0.00
5,100.0	3.55	6.14	5,096.2	123.8	13.3	-123.6	0.00	0.00	0.00
5,200.0	3.55	6.14	5,196.0	129.9	14.0	-129.7	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #705H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3434.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3434.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#705H	**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	3.55	6.14	5,295.8	136.1	14.6	-135.9	0.00	0.00	0.00
5,400.0	3.55	6.14	5,395.6	142.2	15.3	-142.0	0.00	0.00	0.00
5,500.0	3.55	6.14	5,495.4	148.4	16.0	-148.1	0.00	0.00	0.00
5,600.0	3.55	6.14	5,595.2	154.6	16.6	-154.3	0.00	0.00	0.00
5,700.0	3.55	6.14	5,695.0	160.7	17.3	-160.4	0.00	0.00	0.00
5,800.0	3.55	6.14	5,794.9	166.9	18.0	-166.6	0.00	0.00	0.00
5,900.0	3.55	6.14	5,894.7	173.0	18.6	-172.7	0.00	0.00	0.00
6,000.0	3.55	6.14	5,994.5	179.2	19.3	-178.9	0.00	0.00	0.00
6,100.0	3.55	6.14	6,094.3	185.3	19.9	-185.0	0.00	0.00	0.00
6,200.0	3.55	6.14	6,194.1	191.5	20.6	-191.2	0.00	0.00	0.00
6,300.0	3.55	6.14	6,293.9	197.6	21.3	-197.3	0.00	0.00	0.00
6,400.0	3.55	6.14	6,393.7	203.8	21.9	-203.4	0.00	0.00	0.00
6,500.0	3.55	6.14	6,493.5	209.9	22.6	-209.6	0.00	0.00	0.00
6,600.0	3.55	6.14	6,593.3	216.1	23.3	-215.7	0.00	0.00	0.00
6,700.0	3.55	6.14	6,693.1	222.3	23.9	-221.9	0.00	0.00	0.00
6,800.0	3.55	6.14	6,792.9	228.4	24.6	-228.0	0.00	0.00	0.00
6,900.0	3.55	6.14	6,892.7	234.6	25.2	-234.2	0.00	0.00	0.00
7,000.0	3.55	6.14	6,992.6	240.7	25.9	-240.3	0.00	0.00	0.00
7,100.0	3.55	6.14	7,092.4	246.9	26.6	-246.5	0.00	0.00	0.00
7,200.0	3.55	6.14	7,192.2	253.0	27.2	-252.6	0.00	0.00	0.00
7,300.0	3.55	6.14	7,292.0	259.2	27.9	-258.7	0.00	0.00	0.00
7,400.0	3.55	6.14	7,391.8	265.3	28.6	-264.9	0.00	0.00	0.00
7,500.0	3.55	6.14	7,491.6	271.5	29.2	-271.0	0.00	0.00	0.00
7,600.0	3.55	6.14	7,591.4	277.6	29.9	-277.2	0.00	0.00	0.00
7,700.0	3.55	6.14	7,691.2	283.8	30.5	-283.3	0.00	0.00	0.00
7,800.0	3.55	6.14	7,791.0	290.0	31.2	-289.5	0.00	0.00	0.00
7,900.0	3.55	6.14	7,890.8	296.1	31.9	-295.6	0.00	0.00	0.00
8,000.0	3.55	6.14	7,990.6	302.3	32.5	-301.7	0.00	0.00	0.00
8,100.0	3.55	6.14	8,090.4	308.4	33.2	-307.9	0.00	0.00	0.00
8,200.0	3.55	6.14	8,190.3	314.6	33.9	-314.0	0.00	0.00	0.00
8,300.0	3.55	6.14	8,290.1	320.7	34.5	-320.2	0.00	0.00	0.00
8,400.0	3.55	6.14	8,389.9	326.9	35.2	-326.3	0.00	0.00	0.00
8,500.0	3.55	6.14	8,489.7	333.0	35.8	-332.5	0.00	0.00	0.00
8,600.0	3.55	6.14	8,589.5	339.2	36.5	-338.6	0.00	0.00	0.00
8,700.0	3.55	6.14	8,689.3	345.3	37.2	-344.8	0.00	0.00	0.00
8,800.0	3.55	6.14	8,789.1	351.5	37.8	-350.9	0.00	0.00	0.00
8,900.0	3.55	6.14	8,888.9	357.7	38.5	-357.0	0.00	0.00	0.00
9,000.0	3.55	6.14	8,988.7	363.8	39.1	-363.2	0.00	0.00	0.00
9,100.0	3.55	6.14	9,088.5	370.0	39.8	-369.3	0.00	0.00	0.00
9,200.0	3.55	6.14	9,188.3	376.1	40.5	-375.5	0.00	0.00	0.00
9,300.0	3.55	6.14	9,288.1	382.3	41.1	-381.6	0.00	0.00	0.00
9,400.0	3.55	6.14	9,388.0	388.4	41.8	-387.8	0.00	0.00	0.00
9,500.0	3.55	6.14	9,487.8	394.6	42.5	-393.9	0.00	0.00	0.00
9,600.0	3.55	6.14	9,587.6	400.7	43.1	-400.1	0.00	0.00	0.00
9,700.0	3.55	6.14	9,687.4	406.9	43.8	-406.2	0.00	0.00	0.00
9,800.0	3.55	6.14	9,787.2	413.0	44.4	-412.3	0.00	0.00	0.00
9,900.0	3.55	6.14	9,887.0	419.2	45.1	-418.5	0.00	0.00	0.00
10,000.0	3.55	6.14	9,986.8	425.4	45.8	-424.6	0.00	0.00	0.00
10,100.0	3.55	6.14	10,086.6	431.5	46.4	-430.8	0.00	0.00	0.00
10,200.0	3.55	6.14	10,186.4	437.7	47.1	-436.9	0.00	0.00	0.00
10,300.0	3.55	6.14	10,286.2	443.8	47.8	-443.1	0.00	0.00	0.00
10,400.0	3.55	6.14	10,386.0	450.0	48.4	-449.2	0.00	0.00	0.00
10,500.0	3.55	6.14	10,485.8	456.1	49.1	-455.3	0.00	0.00	0.00
10,600.0	3.55	6.14	10,585.7	462.3	49.7	-461.5	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #705H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3434.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3434.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#705H	**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	3.55	6.14	10,685.5	468.4	50.4	-467.6	0.00	0.00	0.00
10,800.0	3.55	6.14	10,785.3	474.6	51.1	-473.8	0.00	0.00	0.00
10,900.0	3.55	6.14	10,885.1	480.7	51.7	-479.9	0.00	0.00	0.00
11,000.0	3.55	6.14	10,984.9	486.9	52.4	-486.1	0.00	0.00	0.00
11,100.0	3.55	6.14	11,084.7	493.1	53.1	-492.2	0.00	0.00	0.00
11,200.0	3.55	6.14	11,184.5	499.2	53.7	-498.4	0.00	0.00	0.00
11,300.0	3.55	6.14	11,284.3	505.4	54.4	-504.5	0.00	0.00	0.00
11,400.0	3.55	6.14	11,384.1	511.5	55.0	-510.6	0.00	0.00	0.00
11,500.0	3.55	6.14	11,483.9	517.7	55.7	-516.8	0.00	0.00	0.00
11,600.0	3.55	6.14	11,583.7	523.8	56.4	-522.9	0.00	0.00	0.00
11,700.0	3.55	6.14	11,683.5	530.0	57.0	-529.1	0.00	0.00	0.00
11,757.7	3.55	6.14	11,741.2	533.5	57.4	-532.6	0.00	0.00	0.00
11,800.0	2.70	6.14	11,783.4	535.8	57.7	-534.9	2.00	-2.00	0.00
11,900.0	0.70	6.14	11,883.3	538.8	58.0	-537.9	2.00	-2.00	0.00
11,935.2	0.00	0.00	11,918.5	539.0	58.0	-538.1	2.00	-2.00	0.00
KOP(GD 16 FC #705H)									
11,950.0	1.78	179.63	11,933.3	538.8	58.0	-537.8	12.00	12.00	0.00
11,975.0	4.78	179.63	11,958.3	537.3	58.0	-536.4	12.00	12.00	0.00
12,000.0	7.78	179.63	11,983.1	534.6	58.0	-533.7	12.00	12.00	0.00
12,025.0	10.78	179.63	12,007.8	530.6	58.1	-529.7	12.00	12.00	0.00
12,050.0	13.78	179.63	12,032.2	525.3	58.1	-524.3	12.00	12.00	0.00
12,075.0	16.78	179.63	12,056.3	518.7	58.1	-517.7	12.00	12.00	0.00
12,100.0	19.78	179.63	12,080.1	510.8	58.2	-509.9	12.00	12.00	0.00
12,125.0	22.78	179.63	12,103.4	501.8	58.2	-500.8	12.00	12.00	0.00
12,150.0	25.78	179.63	12,126.1	491.5	58.3	-490.6	12.00	12.00	0.00
12,175.0	28.78	179.63	12,148.4	480.0	58.4	-479.1	12.00	12.00	0.00
12,200.0	31.78	179.63	12,169.9	467.4	58.5	-466.5	12.00	12.00	0.00
12,225.0	34.78	179.63	12,190.8	453.7	58.5	-452.8	12.00	12.00	0.00
12,250.0	37.78	179.63	12,211.0	438.9	58.6	-438.0	12.00	12.00	0.00
12,275.0	40.78	179.63	12,230.3	423.1	58.7	-422.2	12.00	12.00	0.00
12,300.0	43.78	179.63	12,248.8	406.3	58.9	-405.4	12.00	12.00	0.00
12,325.0	46.78	179.63	12,266.4	388.5	59.0	-387.6	12.00	12.00	0.00
12,336.2	48.13	179.63	12,274.0	380.2	59.0	-379.3	12.00	12.00	0.00
FTP(GD 16 FC #705H)									
12,350.0	49.78	179.63	12,283.1	369.9	59.1	-368.9	12.00	12.00	0.00
12,375.0	52.78	179.63	12,298.7	350.4	59.2	-349.4	12.00	12.00	0.00
12,400.0	55.78	179.63	12,313.3	330.1	59.3	-329.1	12.00	12.00	0.00
12,425.0	58.78	179.63	12,326.8	309.0	59.5	-308.1	12.00	12.00	0.00
12,450.0	61.78	179.63	12,339.2	287.3	59.6	-286.4	12.00	12.00	0.00
12,475.0	64.78	179.63	12,350.4	265.0	59.8	-264.1	12.00	12.00	0.00
12,500.0	67.78	179.63	12,360.5	242.1	59.9	-241.2	12.00	12.00	0.00
12,525.0	70.78	179.63	12,369.3	218.7	60.1	-217.8	12.00	12.00	0.00
12,550.0	73.78	179.63	12,377.0	194.9	60.2	-194.0	12.00	12.00	0.00
12,575.0	76.78	179.63	12,383.3	170.7	60.4	-169.8	12.00	12.00	0.00
12,600.0	79.78	179.63	12,388.4	146.3	60.5	-145.4	12.00	12.00	0.00
12,625.0	82.78	179.63	12,392.2	121.6	60.7	-120.6	12.00	12.00	0.00
12,650.0	85.78	179.63	12,394.7	96.7	60.8	-95.8	12.00	12.00	0.00
12,675.0	88.78	179.63	12,395.9	71.7	61.0	-70.8	12.00	12.00	0.00
12,685.2	90.00	179.63	12,396.0	61.5	61.1	-60.6	12.00	12.00	0.00
12,700.0	90.00	179.63	12,396.0	46.7	61.2	-45.8	0.00	0.00	0.00
12,800.0	90.00	179.63	12,396.0	-53.3	61.8	54.2	0.00	0.00	0.00
12,900.0	90.00	179.63	12,396.0	-153.3	62.5	154.2	0.00	0.00	0.00
13,000.0	90.00	179.63	12,396.0	-253.3	63.1	254.2	0.00	0.00	0.00
13,100.0	90.00	179.63	12,396.0	-353.3	63.7	354.2	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #705H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3434.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3434.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#705H	**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)
13,200.0	90.00	179.63	12,396.0	-453.3	64.4	454.2	0.00	0.00	0.00
13,300.0	90.00	179.63	12,396.0	-553.3	65.0	554.2	0.00	0.00	0.00
13,400.0	90.00	179.63	12,396.0	-653.3	65.7	654.2	0.00	0.00	0.00
13,500.0	90.00	179.63	12,396.0	-753.3	66.3	754.2	0.00	0.00	0.00
13,600.0	90.00	179.63	12,396.0	-853.3	67.0	854.2	0.00	0.00	0.00
13,700.0	90.00	179.63	12,396.0	-953.3	67.6	954.2	0.00	0.00	0.00
13,800.0	90.00	179.63	12,396.0	-1,053.3	68.2	1,054.2	0.00	0.00	0.00
13,900.0	90.00	179.63	12,396.0	-1,153.2	68.9	1,154.1	0.00	0.00	0.00
14,000.0	90.00	179.63	12,396.0	-1,253.2	69.5	1,254.1	0.00	0.00	0.00
14,100.0	90.00	179.63	12,396.0	-1,353.2	70.2	1,354.1	0.00	0.00	0.00
14,200.0	90.00	179.63	12,396.0	-1,453.2	70.8	1,454.1	0.00	0.00	0.00
14,300.0	90.00	179.63	12,396.0	-1,553.2	71.5	1,554.1	0.00	0.00	0.00
14,400.0	90.00	179.63	12,396.0	-1,653.2	72.1	1,654.1	0.00	0.00	0.00
14,500.0	90.00	179.63	12,396.0	-1,753.2	72.7	1,754.1	0.00	0.00	0.00
14,600.0	90.00	179.63	12,396.0	-1,853.2	73.4	1,854.1	0.00	0.00	0.00
14,700.0	90.00	179.63	12,396.0	-1,953.2	74.0	1,954.1	0.00	0.00	0.00
14,800.0	90.00	179.63	12,396.0	-2,053.2	74.7	2,054.1	0.00	0.00	0.00
14,900.0	90.00	179.63	12,396.0	-2,153.2	75.3	2,154.1	0.00	0.00	0.00
15,000.0	90.00	179.63	12,396.0	-2,253.2	76.0	2,254.1	0.00	0.00	0.00
15,100.0	90.00	179.63	12,396.0	-2,353.2	76.6	2,354.1	0.00	0.00	0.00
15,200.0	90.00	179.63	12,396.0	-2,453.2	77.3	2,454.1	0.00	0.00	0.00
15,300.0	90.00	179.63	12,396.0	-2,553.2	77.9	2,554.1	0.00	0.00	0.00
15,400.0	90.00	179.63	12,396.0	-2,653.2	78.5	2,654.1	0.00	0.00	0.00
15,500.0	90.00	179.63	12,396.0	-2,753.2	79.2	2,754.1	0.00	0.00	0.00
15,600.0	90.00	179.63	12,396.0	-2,853.2	79.8	2,854.1	0.00	0.00	0.00
15,700.0	90.00	179.63	12,396.0	-2,953.2	80.5	2,954.1	0.00	0.00	0.00
15,800.0	90.00	179.63	12,396.0	-3,053.2	81.1	3,054.1	0.00	0.00	0.00
15,900.0	90.00	179.63	12,396.0	-3,153.2	81.8	3,154.1	0.00	0.00	0.00
16,000.0	90.00	179.63	12,396.0	-3,253.2	82.4	3,254.1	0.00	0.00	0.00
16,100.0	90.00	179.63	12,396.0	-3,353.2	83.0	3,354.1	0.00	0.00	0.00
16,200.0	90.00	179.63	12,396.0	-3,453.2	83.7	3,454.1	0.00	0.00	0.00
16,300.0	90.00	179.63	12,396.0	-3,553.2	84.3	3,554.1	0.00	0.00	0.00
16,400.0	90.00	179.63	12,396.0	-3,653.2	85.0	3,654.1	0.00	0.00	0.00
16,500.0	90.00	179.63	12,396.0	-3,753.2	85.6	3,754.1	0.00	0.00	0.00
16,600.0	90.00	179.63	12,396.0	-3,853.2	86.3	3,854.1	0.00	0.00	0.00
16,700.0	90.00	179.63	12,396.0	-3,953.2	86.9	3,954.0	0.00	0.00	0.00
16,800.0	90.00	179.63	12,396.0	-4,053.2	87.5	4,054.0	0.00	0.00	0.00
16,900.0	90.00	179.63	12,396.0	-4,153.2	88.2	4,154.0	0.00	0.00	0.00
17,000.0	90.00	179.63	12,396.0	-4,253.2	88.8	4,254.0	0.00	0.00	0.00
17,100.0	90.00	179.63	12,396.0	-4,353.2	89.5	4,354.0	0.00	0.00	0.00
17,200.0	90.00	179.63	12,396.0	-4,453.2	90.1	4,454.0	0.00	0.00	0.00
17,300.0	90.00	179.63	12,396.0	-4,553.2	90.8	4,554.0	0.00	0.00	0.00
17,400.0	90.00	179.63	12,396.0	-4,653.2	91.4	4,654.0	0.00	0.00	0.00
17,500.0	90.00	179.63	12,396.0	-4,753.2	92.1	4,754.0	0.00	0.00	0.00
17,600.0	90.00	179.63	12,396.0	-4,853.2	92.7	4,854.0	0.00	0.00	0.00
17,700.0	90.00	179.63	12,396.0	-4,953.2	93.3	4,954.0	0.00	0.00	0.00
17,800.0	90.00	179.63	12,396.0	-5,053.2	94.0	5,054.0	0.00	0.00	0.00
17,900.0	90.00	179.63	12,396.0	-5,153.2	94.6	5,154.0	0.00	0.00	0.00
18,000.0	90.00	179.63	12,396.0	-5,253.2	95.3	5,254.0	0.00	0.00	0.00
18,100.0	90.00	179.63	12,396.0	-5,353.2	95.9	5,354.0	0.00	0.00	0.00
18,200.0	90.00	179.63	12,396.0	-5,453.2	96.6	5,454.0	0.00	0.00	0.00
18,300.0	90.00	179.63	12,396.0	-5,553.2	97.2	5,554.0	0.00	0.00	0.00
18,400.0	90.00	179.63	12,396.0	-5,653.2	97.8	5,654.0	0.00	0.00	0.00
18,500.0	90.00	179.63	12,396.0	-5,753.2	98.5	5,754.0	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well #705H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25 @ 3434.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25 @ 3434.0usft
Site:	Green Drake 16 Fed Com	**North Reference:**	Grid
Well:	#705H	**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)
18,600.0	90.00	179.63	12,396.0	-5,853.2	99.1	5,854.0	0.00	0.00	0.00
18,700.0	90.00	179.63	12,396.0	-5,953.1	99.8	5,954.0	0.00	0.00	0.00
18,800.0	90.00	179.63	12,396.0	-6,053.1	100.4	6,054.0	0.00	0.00	0.00
18,900.0	90.00	179.63	12,396.0	-6,153.1	101.1	6,154.0	0.00	0.00	0.00
19,000.0	90.00	179.63	12,396.0	-6,253.1	101.7	6,254.0	0.00	0.00	0.00
19,100.0	90.00	179.63	12,396.0	-6,353.1	102.3	6,354.0	0.00	0.00	0.00
19,200.0	90.00	179.63	12,396.0	-6,453.1	103.0	6,454.0	0.00	0.00	0.00
19,300.0	90.00	179.63	12,396.0	-6,553.1	103.6	6,554.0	0.00	0.00	0.00
19,400.0	90.00	179.63	12,396.0	-6,653.1	104.3	6,654.0	0.00	0.00	0.00
19,500.0	90.00	179.63	12,396.0	-6,753.1	104.9	6,753.9	0.00	0.00	0.00
19,600.0	90.00	179.63	12,396.0	-6,853.1	105.6	6,853.9	0.00	0.00	0.00
19,700.0	90.00	179.63	12,396.0	-6,953.1	106.2	6,953.9	0.00	0.00	0.00
19,800.0	90.00	179.63	12,396.0	-7,053.1	106.8	7,053.9	0.00	0.00	0.00
19,900.0	90.00	179.63	12,396.0	-7,153.1	107.5	7,153.9	0.00	0.00	0.00
19,978.9	90.00	179.63	12,396.0	-7,232.0	108.0	7,232.8	0.00	0.00	0.00
PBHL(GD 16 FC #705H)									

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(GD 16 FC #705H) - plan hits target center - Point	0.00	0.00	11,918.5	539.0	58.0	412,007.00	774,396.00	32° 7' 49.610 N	103° 34' 49.600 W
FTP(GD 16 FC #705H) - plan misses target center by 163.4usft at 12336.2usft MD (12274.0 TVD, 380.2 N, 59.0 E) - Point	0.00	0.00	12,396.0	489.0	58.0	411,957.00	774,396.00	32° 7' 49.116 N	103° 34' 49.604 W
PBHL(GD 16 FC #705H - plan hits target center - Point	0.00	0.00	12,396.0	-7,232.0	108.0	404,236.00	774,446.00	32° 6' 32.710 N	103° 34' 49.650 W

Surface Use Plan of Operations

Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soils storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

1. Existing Roads

a. The existing access road route to the proposed project is depicted on Green Drake 16 Fed Com 705H vicinity. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of this surface use plan..

b. The existing access road route to the proposed project does cross lease boundaries and a BLM road right-of-way will be acquired from the BLM prior to construction activities.

c. The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.

d. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

2. New or Reconstructed Access Roads

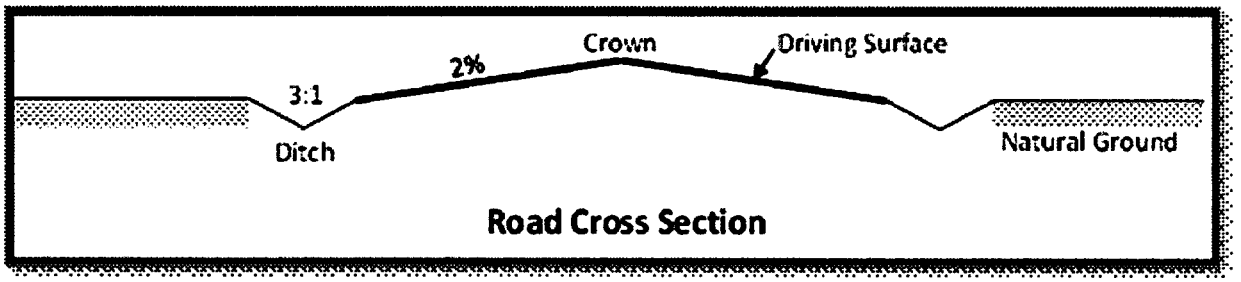
a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.

b. The length of access road needed to be constructed for this proposed project is about 595 feet.

c. The maximum driving width of the access road will be 24 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.

d. The access road will be constructed with 6 inches of compacted caliche.

e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.



f. The access road will be constructed with a ditch on each side of the road.

g. The maximum grade for the access road will be 2 percent.

h. No turnouts will be constructed on the proposed access road.

i. No cattleguards will be installed for this proposed access road.

j. No BLM right-of-way grant is needed for the construction of this access road.

k. No culverts will be constructed for this proposed access road.

l. No low water crossings will be constructed for the access road.

m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.

n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.

3. Location of Existing Wells

a. Green Drake 16 FC 705H radius of the APD depicts all known wells within a one mile radius of the proposed well.

b. There is no other information regarding wells within a one mile radius.

4. Location of Existing and/or Proposed Production Facilities

a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.

b. If any type of production facilities are located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.

c. A production facility is proposed to be installed off the proposed well location. Production from the well will be processed at this production facility. Green Drake 16 FC infrastructure depicts the location of the production facilities.

d. The proposed production facility will have a secondary containment structure that is constructed to hold the capacity of 1-1/2 times the largest tank, plus freeboard to account for percipitation, unless more stringent protective requirements are deemed necessary.

e. Green Drake 16 FC CTB depicts the production facility as well.

f. A pipeline to transport production from the proposed well to the production facility will be installed.

i. We plan to install a 4 inch buried flex steel pipeline from the proposed well to the offsite production facility. The proposed length of the pipeline will be 1189 feet. The working pressure of the pipeline will be about 1440 psi. A 50 feet wide work area will be needed to install the buried pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

ii. Green Drake 16 FC Infrastructure depicts the proposed production pipeline route from the well to the existing production facility.

iii. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.

Additional Pipeline(s)

We propose to install 3 additional pipeline(s):

1. Buried gas lift gas pipeline:

   a. We plan to install a 8 inch buried flex steel pipeline from the proposed well to the central battery. The proposed length of the pipeline will be 15 feet. The working pressure of the pipeline will be about 1440 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

   b. Green Drake 16 FC infrastructure depicts the proposed gas lift gas pipeline route.

   c. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

2. Buried gas sales pipeline:

   a. We plan to install a 16 inch buried steel pipeline from the central battery to the gas sales tie-in. The proposed length of the pipeline will be 5609 feet. The working pressure of the pipeline will be about 1440 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

   b. Green Drake 16 FC infrastructure depicts the proposed gas sales pipeline route.

   c. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

3. Buried produced water pipeline:

a. We plan to install a 16 inch buried poly pipeline from the central battery to the water disposal tie-in. The proposed length of the pipeline will be 5640 feet. The working pressure of the pipeline will be about 225 psi. A 50 feet wide work area will be needed to install the buried pipeline. We will need an extra 10 foot wide area near corners to safely install the pipeline. In areas where blading is allowed, topsoil will be stockpiled and separated from the excavated trench mineral material. Final reclamation procedures will match the procedures in Plans for Surface Reclamation. When the excavated soil is backfilled, it will be compacted to prevent subsidence. No berm over the pipeline will be evident.

b. Green Drake 16 FC infrastructure depicts the proposed produced water pipeline route.

c. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

Electric Line(s)

a. We plan to install an overhead electric line for the proposed well. The proposed length of the electric line will be 5647 feet. Green Drake 16 Fed Com Infrastructure depicts the location of the proposed electric line route. The electric line will be construction to provide protection from raptor electrocution.

b. Since the proposed electric line crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed electric line.

5. Location and Types of Water

a. The source and location of the water supply are as follows: Water will be supplied from the frac pond as shown on the attached water source map This location will be drilled using a combination of water mud systems (outlined in the drilling program) The water will be obtained from commercial water stations in the area or recycled treated water and hauled to location by trucks or poly pipelines using existing and proposed roads depicted on the proposed existing access road maps In these cases where a poly pipeline is used to transport fresh water for drilling purposes_ proper authorizations will be secured by the contractor.

b. Green Drake 16 FC water and caliche map depicts the proposed route for a 12 inch poly temporary (<90 days) water pipeline supplying water for drilling operations.

6. Construction Material

a. Caliche will be supplied from pits shown on the attached caliche source map.
Caliche utilized for the drilling pad will be obtained either from an existing approved mineral pit, or by benching into a hill, which will allow the pad to be level with existing caliche from the cut, or extracted by "Flipping" the well location. A mineral material permit will be obtained from BLM prior to excavating any caliche on Federal Lands. Amount will vary for each pad. The procedure for "Flipping" a well location is as follows:
*□
-An adequate amount of topsoil/root zone (usually top 6 inches of soil) will be stripped from the proposed well location and stockpiled along the side of the well location as depicted on the well site diagram/survey plat.
-An area will be used within the proposed well site dimensions to excavate caliche.
Subsoil will be removed and stockpiled within the surveyed well pad dimensions.
-Once caliche/surfacing mineral is found, the mineral material will be excavated and stock piled within the approved drilling pad dimensions.
-Then, subsoil will be pushed back in the excavated hole and caliche will be spread accordingly across the entire well pad and road (if available).
-Neither caliche, nor subsoil will be stock piled outside of the well pad dimensions. Topsoil will be stockpiled

along the edge of the pad as depicted in the Well Site Layout or survey plat.
*□
In the event that no caliche is found onsite, caliche will be hauled in from a BLM approved caliche pit or other established mineral pit. A BLM mineral material permit will be acquired prior to obtaining any mineral material from BLM pits or federal land.

7. Methods for Handling Waste

a. Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.

b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.

d. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.

e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel tanks and taken to an NMOCD approved disposal facility.

8. Ancillary Facilities

a. No ancillary facilities will be needed for this proposed project.

9. Well Site Layout

a. The following information is presented in the well site survey plat or diagram:

i. reasonable scale (near 1":50')
ii. well pad dimensions
iii. well pad orientation
iv. drilling rig components
v. proposed access road
vi. elevations of all points
vii. topsoil stockpile
viii. reserve pit location/dimensions if applicable
ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)
x. existing structures within the 600' x 600' archaeoligical surveyed area (pipelines, electric lines, well pads, etc

b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.

c. A title of a well site diagram is Green Drake 16 FC 705H rig layout. This diagram depicts the rig layout.

d. Topsoil Salvaging

i. Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed.

Large woody vegetation will be stripped and stored separately and respread evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

10. Plans for Surface Reclamation

Reclamation Objectives

i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.

ii. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.

iii. The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.

iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.

v. Interim reclamation will be performed on the well site after the well is drilled and completed. Green Drake 16 FC 705H reclamation depicts the location and dimensions of the planned interim reclamation for the well site.

Interim Reclamation Procedures (If performed)

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.

2. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

4. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the

surrounding area.

6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Final Reclamation (well pad, buried pipelines, etc.)

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.

2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.

6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.

7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

11. Surface Ownership

a. The surface ownership of the proposed project is State.

12. Other Information

a. An onsite meeting was conducted 05/03/18.
We plan to use 2, 12-inch lay flat hoses to transport water with an option to use 7, 4-inch poly lines for drilling and frac operations.
We are asking for 4 associated pipelines all depicted on the attached Green Drake 16 Fed Com infrastructure sketch:
One 8-inch flex steel gas lift line servicing all wells
One 4-inch flex steel production flowline per well
One 16-inch poly produced water disposal line from the CTB to the existing disposal line.
One 16-inch steel gas sales line from the CTB to the gas sales tie-in.
The well is planned to be produced using gas lift as the artificial lift method.
Produced water will be transported via pipeline to the EOG produced water gathering system.

13. Maps and Diagrams

Green Drake 16 Fed Com 705H vicinity - Existing Road

Green Drake 16 FC 705H radius - Wells Within One Mile
Green Drake 16 FC infrastructure - Production Facilities Diagram
Green Drake 16 FC CTB - Additional Production Facilities Diagram
Green Drake 16 FC Infrastructure - Production Pipeline
Green Drake 16 FC infrastructure - gas lift gas Pipeline
Green Drake 16 FC infrastructure - gas sales Pipeline
Green Drake 16 FC infrastructure - produced water Pipeline
Green Drake 16 Fed Com Infrastructure - Electric Line
Green Drake 16 FC water and caliche map - Drilling Water Pipeline
Green Drake 16 FC 705H rig layout - Well Site Diagram
Green Drake 16 FC 705H reclamation - Interim Reclamation