Form 3160-5
(June 2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Hobbs

HOBBS OCD
NOV 27 2017
RECEIVED

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

5. Lease Serial No.
NMNM30400

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
LUCKY 13 FED COM 702H

2. Name of Operator
EOG RESOURCES INCORPORATED

Contact: STAN WAGNER
E-Mail: stan_wagner@eogresources.com

9. API Well No.
30-025-42607-00-X1

3a. Address
MIDLAND, TX 79702

3b. Phone No. (include area code)
Ph: 432-686-3689

10. Field and Pool or Exploratory Area
RED HILLS-BONE SPRING, NORTH

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 13 T25S R33E NWSW 2100FSL 720FWL
32.128932 N Lat, 103.531808 W Lon

11. County or Parish, State
LEA COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Change to Original APD
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

EOG Resources requests an amendment to our approved APD for this well to reflect changes in BHL, casing, and well name/number.

Change BHL to: 1550' FNL & 907' FWL 12-25S-33E

Change TVD to: 12500' (19085' MD) Upper Wolfcamp Shale

Change well name to: Lucky 13 Fed Com 702H

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #384242 verified by the BLM Well Information System
For EOG RESOURCES INCORPORATED, sent to the Hobbs
Committed to AFMSS for processing by PRISCILLA PEREZ on 10/25/2017 (18PP0032SE)

Name *(Printed/Typed)* STAN WAGNER — Title REGULATORY ANALYST

Signature (Electronic Submission) — Date 08/09/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By CHARLES NIMMER — Title PETROLEUM ENGINEER — Date 11/15/2017

Conditions of approval, if any, are attached. Approval of this notice 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.

Office Hobbs

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.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

District I
1625 N. French Dr., Hobbs, NM 88240
Phone (575) 393-6161 Fax (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone (575) 748-1283 Fax (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone (505) 334-6178 Fax (505) 334-6170
District IV
1220 S. St. Francis Dr., Sante Fe, NM 87505
Phone (505) 476-3460 Fax (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources
Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Sante Fe, NM 87505

FORM C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ **AMENDED REPORT**

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1]API Number	[2]Pool Code	[3]Pool Name
30-025-42607	98094	~~BOBCAT DRAW WC-025 G-09 S253336D~~; Upper Wolfcamp

[4]Property Code	[5]Property Name	[6]Well Number
314875	LUCKY 13 FED COM	#702H

[7]OGRID No.	[8]Operator Name	[9]Elevation
7377	EOG RESOURCES, INC.	3350'

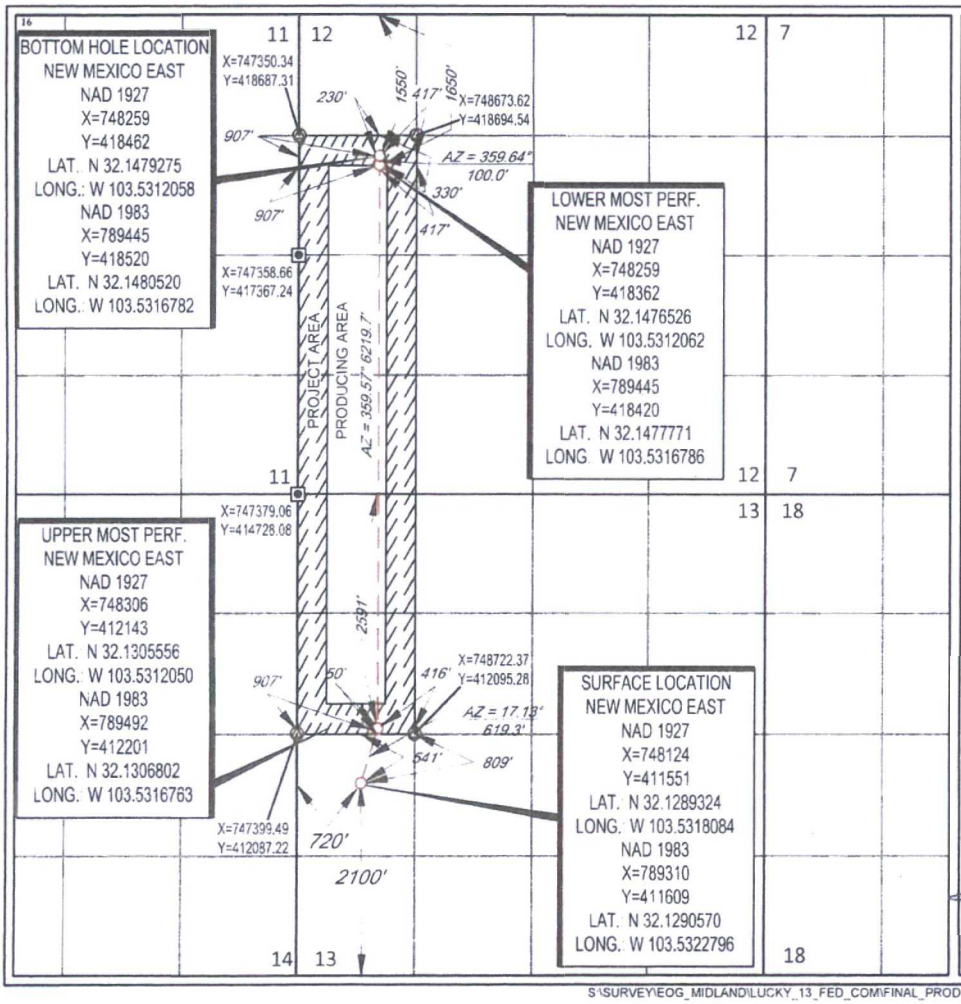
[10]Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	13	25-S	33-E	-	2100'	SOUTH	720'	WEST	LEA

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	12	25-S	33-E	-	1550'	NORTH	907'	WEST	LEA

[12]Dedicated Acres	[13]Joint or Infill	[14]Consolidation Code	[15]Order No.
200			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



[17]OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Stan Wagner 8/9/17
Signature Date

Stan Wagner
Printed Name

E-mail Address

[18]SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true to the best of my belief.

01/21/2014
Date of Survey
Signature and Seal of Professional Surveyor

MICHAEL BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Certificate Number

S:\SURVEY\EOG_MIDLAND\LUCKY_13_FED_COM\FINAL_PRODUCTS\LO_LUCKY13FEDCOM_702H DWG 3/20/2017 11:05:16 AM ccaston

EOG RESOURCES, INC.
LUCKY 13 FED COM NO. 702H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	1,105'
Top of Salt	1,350'
Base of Salt / Top Anhydrite	4,885'
Base Anhydrite	5,140'
Lamar	5,140'
Bell Canyon	5,160'
Cherry Canyon	6,150'
Brushy Canyon	7,805'
Bone Spring Lime	9,240'
1st Bone Spring Sand	10,168'
2nd Bone Spring Shale	10,380'
2nd Bone Spring Sand	10,729'
3rd Bone Spring Carb	11,212'
3rd Bone Spring Sand	11,787'
Wolfcamp	12,301'
TD	12,500'

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

Upper Permian Sands	0- 400'	Fresh Water
Cherry Canyon	6,150'	Oil
Brushy Canyon	7,805'	Oil
1st Bone Spring Sand	10,168'	Oil
2nd Bone Spring Shale	10,380'	Oil
2nd Bone Spring Sand	10,729'	Oil
3rd Bone Spring Carb	11,212'	Oil
3rd Bone Spring Sand	11,787'	Oil
Wolfcamp	12,301'	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 10.75" casing at 1,130' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
14.75"	0 – 1,130'	10.75"	40.5#	J55	STC	1.125	1.25	1.60
9.875"	0 – 1,000'	7.625"	29.7#	HCP-110	LTC	1.125	1.25	1.60
9.875"	1,000' - 3,000'	7.625"	29.7#	P-110EC	SLIJ II	1.125	1.25	1.60
8.75"	3,000' – 11,400'	7.625"	29.7#	HCP-110	FlushMax III	1.125	1.25	1.60
6.75"	0' – 10,900'	5.5"	20#	P-110EC	DWC/C-IS MS	1.125	1.25	1.60
6.75"	10,900'-19,085'	5.5"	20#	P-110EC	VAM SFC	1.125	1.25	1.60

Variance is requested to wave 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 wave 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.

Cementing Program:

Depth	No. Sacks	Wt. ppg	Yld Ft^3/ft	Mix Water Gal/sk	Slurry Description
10-3/4" 1,130'	325	13.5	1.73	9.13	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% $CaCl_2$ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	200	14.8	1.34	6.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
7-5/8" 11,400'	250	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2 pumped via Bradenhead (TOC @ Surface)
	2200	14.8	1.38	6.48	Class C + 5% Gypsum + 3% CaCl2 pumped via Bradenhead
	550	14.4	1.20	4.81	50:50 Class H:Poz + 0.25% CPT20A + 0.40% CPT49 + 0.20% CPT35 + 0.80% CPT16A + 0.25% CPT503P pumped Conventionally
5-1/2" 19,085'	1000	14.1	1.26	5.80	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 10,900')

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 (10,000-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. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5000/ 250 psig. The surface casing will be tested to 1500 psi for 30 minutes.

Before drilling out of the intermediate casing, the ram-type BOP and accessory equipment will be tested to 10,000/ 250 psig and the annular preventer to 5000/ 250 psig. The intermediate casing will be tested to 2000 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the intermediate casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,130'	Fresh - Gel	8.6-8.8	28-34	N/c
1,130' – 11,400'	Brine	8.8-10.0	28-34	N/c
11,400' – 19,085' 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 7475 psig (based on 11.5 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. 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 10-3/4" surface casing, a 13-5/8" 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 Stream Flo FBD100 Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

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.

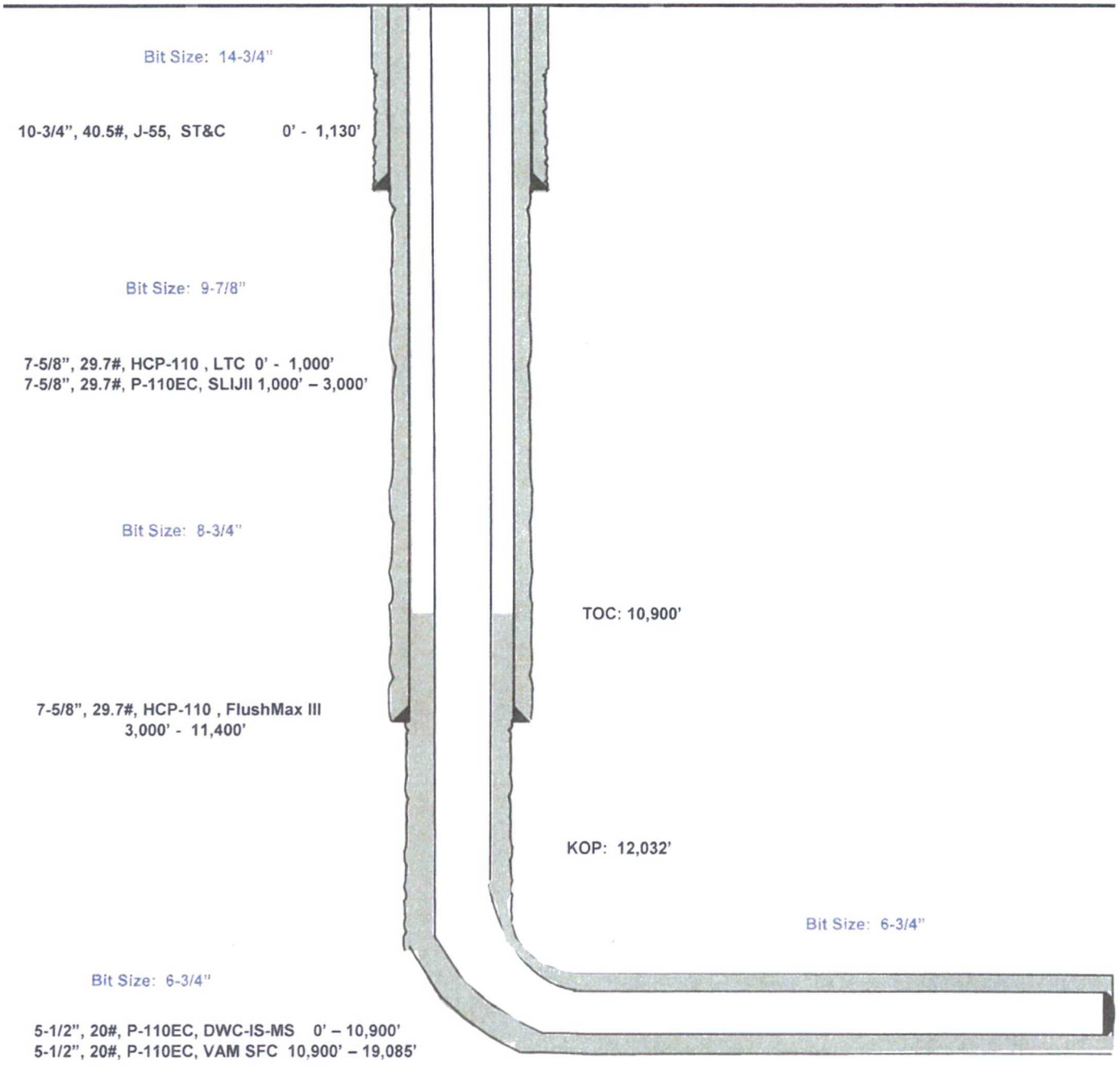
Both the surface and intermediate casing strings will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

Lucky 13 Fed Com #702H

2100' FSL
720' FWL
Section 13
T-25-S, R-33-E

Lea County, New Mexico
Proposed Wellbore
Revised 8/9/17
API: 30-025-42607

KB: 3,375'
GL: 3,350'



Lateral: 19,085' MD, 12,500' TVD
Upper Most Perf:
2591' FNL & 907' FWL Sec. 13
Lower Most Perf:
1650' FNL & 907' FWL Sec. 12
BH Location: 1550' FNL & 907' FWL
Section 12
T-25-S, R-33-E

eog resources

Lea County, NM (NAD 83 NME)

Lucky 13 Fed Com #702H

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

Azimuths to Grid North
True North: -0.43°
Magnetic North: 6.48°

Magnetic Field
Strength: 47872.6snT
Dip Angle: 59.98°
Date: 8/7/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.48°
To convert a Magnetic Direction to a True Direction, Add 6.91° East
To convert a True Direction to a Grid Direction, Subtract 0.43°

WELL DETAILS: #702H

3350.0
KB = 25' @ 3375.0usft

Northing	Easting	Latitude	Longitude
411609.00	789310.00	32° 7' 44.608 N	103° 31' 56.203 W

SECTION DETAILS

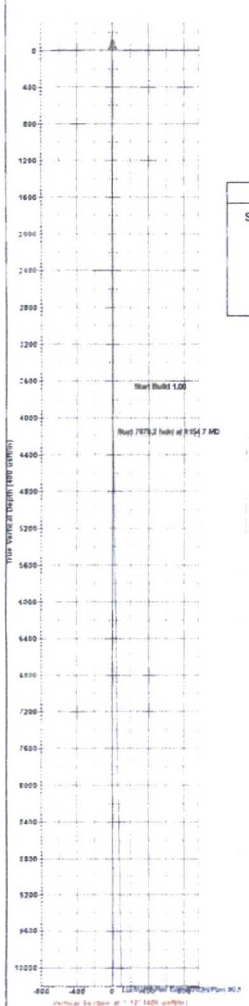
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0	
3	4154.7	1.55	54.82	4154.6	1.2	1.7	1.00	54.82	1.2	
4	12032.9	1.55	54.82	12030.0	123.7	175.5	0.00	0.00	127.1	
5	12775.5	90.00	359.57	12500.0	601.2	182.4	12.00	-55.26	604.6	
6	19085.5	90.00	359.57	12500.0	6911.0	135.0	0.00	0.00	6912.3	PBHL (Lucky 13 Fed Com #702H)

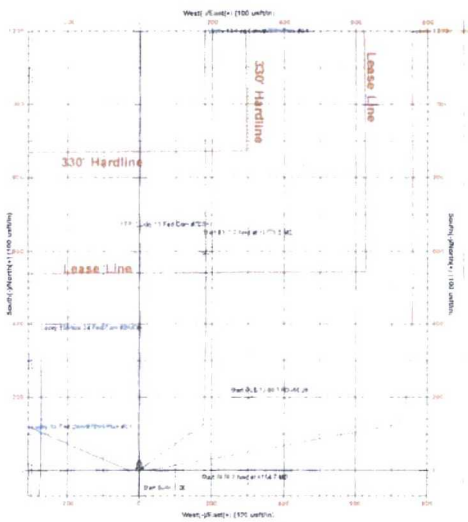
CASING DETAILS

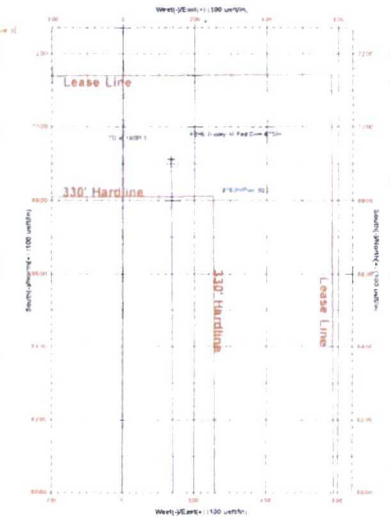
No casing data is available

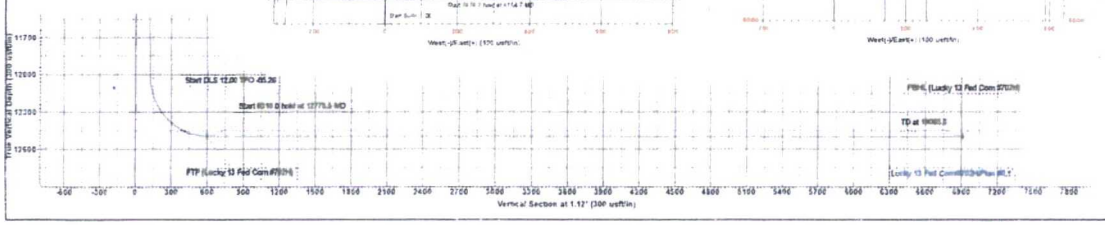
WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

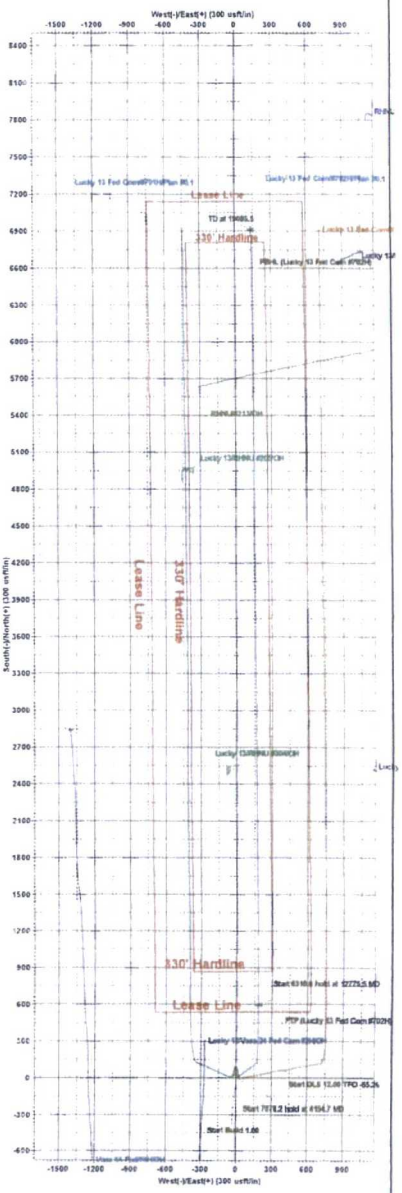
Name	TVD	+N/-S	+E/-W	Northing	Easting
FTP (Lucky 13 Fed Com #702H)	12500.0	592.0	182.0	412201.00	789492.00
PBHL (Lucky 13 Fed Com #702H)	12500.0	6911.0	135.0	418520.00	789445.00

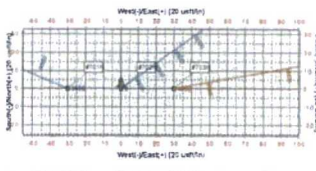


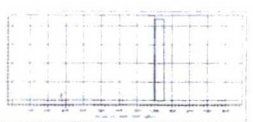












EOG Resources - Midland

Lea County, NM (NAD 83 NME)
Lucky 13 Fed Com
#702H

OH

Plan: Plan #0.1

Standard Planning Report

07 August, 2017

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well #702H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3375.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3375.0usft
Site:	Lucky 13 Fed Com	**North Reference:**	Grid
Well:	#702H	**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	Lucky 13 Fed Com				
Site Position:		**Northing:**	411,609.00 usft	**Latitude:**	32° 7' 44.610 N
From:	Map	**Easting:**	789,280.00 usft	**Longitude:**	103° 31' 56.552 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.43 °

Well	#702H					
Well Position	**+N/-S**	0.0 usft	**Northing:**	411,609.00 usft	**Latitude:**	32° 7' 44.608 N
	+E/-W	30.0 usft	**Easting:**	789,310.00 usft	**Longitude:**	103° 31' 56.203 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	3,350.0 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	8/7/2017	6.91	59.98	47,872.00764853

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	1.12	

Plan Survey Tool Program **Date** 8/7/2017

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.0	19,085.5	Plan #0 1 (OH)	MWD	
				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	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0 00	0.00	0.00	
4,154.7	1.55	54.82	4,154.6	1.2	1 7	1.00	1.00	0.00	54.82	
12,032.9	1.55	54.82	12,030.0	123.7	175.5	0.00	0 00	0.00	0.00	
12,775 5	90.00	359.57	12,500 0	601.2	182.4	12.00	11.91	-7.44	-55.26	
19,085.5	90.00	359.57	12,500.0	6,911.0	135.0	0.00	0.00	0.00	0.00	PBHL (Lucky 13 Fed

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well #702H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3375.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3375.0usft
Site:	Lucky 13 Fed Com	**North Reference:**	Grid
Well:	#702H	**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	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	1.00	54.82	4,100.0	0.5	0.7	0.5	1.00	1.00	0.00
4,154.7	1.55	54.82	4,154.6	1.2	1.7	1.2	1.00	1.00	0.00
4,200.0	1.55	54.82	4,200.0	1.9	2.7	2.0	0.00	0.00	0.00
4,300.0	1.55	54.82	4,299.9	3.5	4.9	3.6	0.00	0.00	0.00
4,400.0	1.55	54.82	4,399.9	5.0	7.1	5.2	0.00	0.00	0.00
4,500.0	1.55	54.82	4,499.9	6.6	9.3	6.8	0.00	0.00	0.00
4,600.0	1.55	54.82	4,599.8	8.1	11.5	8.4	0.00	0.00	0.00
4,700.0	1.55	54.82	4,699.8	9.7	13.7	9.9	0.00	0.00	0.00
4,800.0	1.55	54.82	4,799.7	11.2	15.9	11.5	0.00	0.00	0.00
4,900.0	1.55	54.82	4,899.7	12.8	18.1	13.1	0.00	0.00	0.00
5,000.0	1.55	54.82	4,999.7	14.3	20.4	14.7	0.00	0.00	0.00
5,100.0	1.55	54.82	5,099.6	15.9	22.6	16.3	0.00	0.00	0.00
5,200.0	1.55	54.82	5,199.6	17.5	24.8	17.9	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well #702H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3375.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3375.0usft
Site:	Lucky 13 Fed Com	**North Reference:**	Grid
Well:	#702H	**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	1.55	54.82	5,299.6	19.0	27.0	19.5	0.00	0.00	0.00
5,400.0	1.55	54.82	5,399.5	20.6	29.2	21.1	0.00	0.00	0.00
5,500.0	1.55	54.82	5,499.5	22.1	31.4	22.7	0.00	0.00	0.00
5,600.0	1.55	54.82	5,599.5	23.7	33.6	24.3	0.00	0.00	0.00
5,700.0	1.55	54.82	5,699.4	25.2	35.8	25.9	0.00	0.00	0.00
5,800.0	1.55	54.82	5,799.4	26.8	38.0	27.5	0.00	0.00	0.00
5,900.0	1.55	54.82	5,899.3	28.3	40.2	29.1	0.00	0.00	0.00
6,000.0	1.55	54.82	5,999.3	29.9	42.4	30.7	0.00	0.00	0.00
6,100.0	1.55	54.82	6,099.3	31.5	44.6	32.3	0.00	0.00	0.00
6,200.0	1.55	54.82	6,199.2	33.0	46.8	33.9	0.00	0.00	0.00
6,300.0	1.55	54.82	6,299.2	34.6	49.0	35.5	0.00	0.00	0.00
6,400.0	1.55	54.82	6,399.2	36.1	51.2	37.1	0.00	0.00	0.00
6,500.0	1.55	54.82	6,499.1	37.7	53.4	38.7	0.00	0.00	0.00
6,600.0	1.55	54.82	6,599.1	39.2	55.7	40.3	0.00	0.00	0.00
6,700.0	1.55	54.82	6,699.1	40.8	57.9	41.9	0.00	0.00	0.00
6,800.0	1.55	54.82	6,799.0	42.3	60.1	43.5	0.00	0.00	0.00
6,900.0	1.55	54.82	6,899.0	43.9	62.3	45.1	0.00	0.00	0.00
7,000.0	1.55	54.82	6,998.9	45.4	64.5	46.7	0.00	0.00	0.00
7,100.0	1.55	54.82	7,098.9	47.0	66.7	48.3	0.00	0.00	0.00
7,200.0	1.55	54.82	7,198.9	48.6	68.9	49.9	0.00	0.00	0.00
7,300.0	1.55	54.82	7,298.8	50.1	71.1	51.5	0.00	0.00	0.00
7,400.0	1.55	54.82	7,398.8	51.7	73.3	53.1	0.00	0.00	0.00
7,500.0	1.55	54.82	7,498.8	53.2	75.5	54.7	0.00	0.00	0.00
7,600.0	1.55	54.82	7,598.7	54.8	77.7	56.3	0.00	0.00	0.00
7,700.0	1.55	54.82	7,698.7	56.3	79.9	57.9	0.00	0.00	0.00
7,800.0	1.55	54.82	7,798.7	57.9	82.1	59.5	0.00	0.00	0.00
7,900.0	1.55	54.82	7,898.6	59.4	84.3	61.1	0.00	0.00	0.00
8,000.0	1.55	54.82	7,998.6	61.0	86.5	62.7	0.00	0.00	0.00
8,100.0	1.55	54.82	8,098.5	62.6	88.7	64.3	0.00	0.00	0.00
8,200.0	1.55	54.82	8,198.5	64.1	91.0	65.9	0.00	0.00	0.00
8,300.0	1.55	54.82	8,298.5	65.7	93.2	67.5	0.00	0.00	0.00
8,400.0	1.55	54.82	8,398.4	67.2	95.4	69.1	0.00	0.00	0.00
8,500.0	1.55	54.82	8,498.4	68.8	97.6	70.7	0.00	0.00	0.00
8,600.0	1.55	54.82	8,598.4	70.3	99.8	72.3	0.00	0.00	0.00
8,700.0	1.55	54.82	8,698.3	71.9	102.0	73.9	0.00	0.00	0.00
8,800.0	1.55	54.82	8,798.3	73.4	104.2	75.5	0.00	0.00	0.00
8,900.0	1.55	54.82	8,898.3	75.0	106.4	77.1	0.00	0.00	0.00
9,000.0	1.55	54.82	8,998.2	76.5	108.6	78.7	0.00	0.00	0.00
9,100.0	1.55	54.82	9,098.2	78.1	110.8	80.2	0.00	0.00	0.00
9,200.0	1.55	54.82	9,198.1	79.7	113.0	81.8	0.00	0.00	0.00
9,300.0	1.55	54.82	9,298.1	81.2	115.2	83.4	0.00	0.00	0.00
9,400.0	1.55	54.82	9,398.1	82.8	117.4	85.0	0.00	0.00	0.00
9,500.0	1.55	54.82	9,498.0	84.3	119.6	86.6	0.00	0.00	0.00
9,600.0	1.55	54.82	9,598.0	85.9	121.8	88.2	0.00	0.00	0.00
9,700.0	1.55	54.82	9,698.0	87.4	124.0	89.8	0.00	0.00	0.00
9,800.0	1.55	54.82	9,797.9	89.0	126.3	91.4	0.00	0.00	0.00
9,900.0	1.55	54.82	9,897.9	90.5	128.5	93.0	0.00	0.00	0.00
10,000.0	1.55	54.82	9,997.9	92.1	130.7	94.6	0.00	0.00	0.00
10,100.0	1.55	54.82	10,097.8	93.6	132.9	96.2	0.00	0.00	0.00
10,200.0	1.55	54.82	10,197.8	95.2	135.1	97.8	0.00	0.00	0.00
10,300.0	1.55	54.82	10,297.7	96.8	137.3	99.4	0.00	0.00	0.00
10,400.0	1.55	54.82	10,397.7	98.3	139.5	101.0	0.00	0.00	0.00
10,500.0	1.55	54.82	10,497.7	99.9	141.7	102.6	0.00	0.00	0.00
10,600.0	1.55	54.82	10,597.6	101.4	143.9	104.2	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well #702H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3375.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3375.0usft
Site:	Lucky 13 Fed Com	**North Reference:**	Grid
Well:	#702H	**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	1.55	54.82	10,697.6	103.0	146.1	105.8	0.00	0.00	0.00
10,800.0	1.55	54.82	10,797.6	104.5	148.3	107.4	0.00	0.00	0.00
10,900.0	1.55	54.82	10,897.5	106.1	150.5	109.0	0.00	0.00	0.00
11,000.0	1.55	54.82	10,997.5	107.6	152.7	110.6	0.00	0.00	0.00
11,100.0	1.55	54.82	11,097.5	109.2	154.9	112.2	0.00	0.00	0.00
11,200.0	1.55	54.82	11,197.4	110.8	157.1	113.8	0.00	0.00	0.00
11,300.0	1.55	54.82	11,297.4	112.3	159.3	115.4	0.00	0.00	0.00
11,400.0	1.55	54.82	11,397.3	113.9	161.5	117.0	0.00	0.00	0.00
11,500.0	1.55	54.82	11,497.3	115.4	163.8	118.6	0.00	0.00	0.00
11,600.0	1.55	54.82	11,597.3	117.0	166.0	120.2	0.00	0.00	0.00
11,700.0	1.55	54.82	11,697.2	118.5	168.2	121.8	0.00	0.00	0.00
11,800.0	1.55	54.82	11,797.2	120.1	170.4	123.4	0.00	0.00	0.00
11,900.0	1.55	54.82	11,897.2	121.6	172.6	125.0	0.00	0.00	0.00
12,000.0	1.55	54.82	11,997.1	123.2	174.8	126.6	0.00	0.00	0.00
12,032.9	1.55	54.82	12,030.0	123.7	175.5	127.1	0.00	0.00	0.00
12,050.0	3.20	22.96	12,047.1	124.3	175.9	127.7	12.00	9.65	-186.16
12,075.0	6.07	11.61	12,072.0	126.2	176.4	129.6	12.00	11.48	-45.39
12,100.0	9.02	7.60	12,096.8	129.5	177.0	132.9	12.00	11.82	-16.05
12,125.0	12.00	5.56	12,121.4	134.0	177.5	137.4	12.00	11.91	-8.16
12,150.0	14.99	4.32	12,145.7	139.8	178.0	143.2	12.00	11.95	-4.95
12,175.0	17.98	3.49	12,169.6	146.9	178.4	150.3	12.00	11.96	-3.33
12,200.0	20.97	2.89	12,193.2	155.2	178.9	158.7	12.00	11.97	-2.41
12,225.0	23.97	2.43	12,216.3	164.7	179.3	168.2	12.00	11.98	-1.83
12,250.0	26.96	2.07	12,238.9	175.5	179.8	179.0	12.00	11.98	-1.44
12,275.0	29.96	1.78	12,260.9	187.4	180.2	190.9	12.00	11.99	-1.17
12,300.0	32.96	1.53	12,282.2	200.4	180.5	203.9	12.00	11.99	-0.98
12,325.0	35.95	1.32	12,302.8	214.6	180.9	218.1	12.00	11.99	-0.83
12,350.0	38.95	1.14	12,322.6	229.8	181.2	233.3	12.00	11.99	-0.72
12,375.0	41.95	0.98	12,341.7	246.0	181.5	249.5	12.00	11.99	-0.63
12,400.0	44.95	0.84	12,359.8	263.2	181.8	266.7	12.00	11.99	-0.56
12,425.0	47.95	0.72	12,377.0	281.3	182.0	284.8	12.00	11.99	-0.51
12,450.0	50.95	0.60	12,393.3	300.3	182.2	303.8	12.00	11.99	-0.46
12,475.0	53.95	0.50	12,408.5	320.1	182.4	323.6	12.00	12.00	-0.42
12,500.0	56.94	0.40	12,422.7	340.7	182.6	344.2	12.00	12.00	-0.39
12,525.0	59.94	0.31	12,435.8	362.0	182.7	365.5	12.00	12.00	-0.37
12,550.0	62.94	0.22	12,447.7	383.9	182.8	387.4	12.00	12.00	-0.35
12,575.0	65.94	0.14	12,458.5	406.5	182.9	410.0	12.00	12.00	-0.33
12,600.0	68.94	0.06	12,468.1	429.6	182.9	433.1	12.00	12.00	-0.31
12,625.0	71.94	359.98	12,476.5	453.1	182.9	456.6	12.00	12.00	-0.30
12,650.0	74.94	359.91	12,483.6	477.1	182.9	480.6	12.00	12.00	-0.29
12,675.0	77.94	359.84	12,489.5	501.4	182.9	504.9	12.00	12.00	-0.28
12,700.0	80.94	359.77	12,494.0	526.0	182.8	529.4	12.00	12.00	-0.28
12,725.0	83.94	359.71	12,497.3	550.7	182.7	554.2	12.00	12.00	-0.27
12,750.0	86.94	359.64	12,499.3	575.7	182.5	579.1	12.00	12.00	-0.27
12,766.4	88.90	359.59	12,499.9	592.0	182.4	595.5	12.00	12.00	-0.27
FTP (Lucky 13 Fed Com #702H)									
12,775.5	90.00	359.57	12,500.0	601.2	182.4	604.6	12.00	12.00	-0.27
12,800.0	90.00	359.57	12,500.0	625.6	182.2	629.1	0.00	0.00	0.00
12,900.0	90.00	359.57	12,500.0	725.6	181.4	729.0	0.00	0.00	0.00
13,000.0	90.00	359.57	12,500.0	825.6	180.7	829.0	0.00	0.00	0.00
13,100.0	90.00	359.57	12,500.0	925.6	179.9	929.0	0.00	0.00	0.00
13,200.0	90.00	359.57	12,500.0	1,025.6	179.2	1,028.9	0.00	0.00	0.00
13,300.0	90.00	359.57	12,500.0	1,125.6	178.4	1,128.9	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well #702H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3375.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3375.0usft
Site:	Lucky 13 Fed Com	**North Reference:**	Grid
Well:	#702H	**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	359.57	12,500.0	1,225.6	177.7	1,228.9	0.00	0.00	0.00
13,500.0	90.00	359.57	12,500.0	1,325.6	176.9	1,328.8	0.00	0.00	0.00
13,600.0	90.00	359.57	12,500.0	1,425.6	176.2	1,428.8	0.00	0.00	0.00
13,700.0	90.00	359.57	12,500.0	1,525.6	175.4	1,528.7	0.00	0.00	0.00
13,800.0	90.00	359.57	12,500.0	1,625.6	174.7	1,628.7	0.00	0.00	0.00
13,900.0	90.00	359.57	12,500.0	1,725.6	173.9	1,728.7	0.00	0.00	0.00
14,000.0	90.00	359.57	12,500.0	1,825.6	173.2	1,828.6	0.00	0.00	0.00
14,100.0	90.00	359.57	12,500.0	1,925.6	172.4	1,928.6	0.00	0.00	0.00
14,200.0	90.00	359.57	12,500.0	2,025.6	171.7	2,028.6	0.00	0.00	0.00
14,300.0	90.00	359.57	12,500.0	2,125.6	170.9	2,128.5	0.00	0.00	0.00
14,400.0	90.00	359.57	12,500.0	2,225.6	170.2	2,228.5	0.00	0.00	0.00
14,500.0	90.00	359.57	12,500.0	2,325.6	169.4	2,328.5	0.00	0.00	0.00
14,600.0	90.00	359.57	12,500.0	2,425.6	168.7	2,428.4	0.00	0.00	0.00
14,700.0	90.00	359.57	12,500.0	2,525.6	167.9	2,528.4	0.00	0.00	0.00
14,800.0	90.00	359.57	12,500.0	2,625.6	167.2	2,628.3	0.00	0.00	0.00
14,900.0	90.00	359.57	12,500.0	2,725.6	166.4	2,728.3	0.00	0.00	0.00
15,000.0	90.00	359.57	12,500.0	2,825.6	165.7	2,828.3	0.00	0.00	0.00
15,100.0	90.00	359.57	12,500.0	2,925.6	164.9	2,928.2	0.00	0.00	0.00
15,200.0	90.00	359.57	12,500.0	3,025.6	164.2	3,028.2	0.00	0.00	0.00
15,300.0	90.00	359.57	12,500.0	3,125.6	163.4	3,128.2	0.00	0.00	0.00
15,400.0	90.00	359.57	12,500.0	3,225.6	162.7	3,228.1	0.00	0.00	0.00
15,500.0	90.00	359.57	12,500.0	3,325.6	161.9	3,328.1	0.00	0.00	0.00
15,600.0	90.00	359.57	12,500.0	3,425.6	161.2	3,428.1	0.00	0.00	0.00
15,700.0	90.00	359.57	12,500.0	3,525.6	160.4	3,528.0	0.00	0.00	0.00
15,800.0	90.00	359.57	12,500.0	3,625.6	159.7	3,628.0	0.00	0.00	0.00
15,900.0	90.00	359.57	12,500.0	3,725.6	158.9	3,727.9	0.00	0.00	0.00
16,000.0	90.00	359.57	12,500.0	3,825.5	158.2	3,827.9	0.00	0.00	0.00
16,100.0	90.00	359.57	12,500.0	3,925.5	157.4	3,927.9	0.00	0.00	0.00
16,200.0	90.00	359.57	12,500.0	4,025.5	156.7	4,027.8	0.00	0.00	0.00
16,300.0	90.00	359.57	12,500.0	4,125.5	155.9	4,127.8	0.00	0.00	0.00
16,400.0	90.00	359.57	12,500.0	4,225.5	155.2	4,227.8	0.00	0.00	0.00
16,500.0	90.00	359.57	12,500.0	4,325.5	154.4	4,327.7	0.00	0.00	0.00
16,600.0	90.00	359.57	12,500.0	4,425.5	153.7	4,427.7	0.00	0.00	0.00
16,700.0	90.00	359.57	12,500.0	4,525.5	152.9	4,527.7	0.00	0.00	0.00
16,800.0	90.00	359.57	12,500.0	4,625.5	152.2	4,627.6	0.00	0.00	0.00
16,900.0	90.00	359.57	12,500.0	4,725.5	151.4	4,727.6	0.00	0.00	0.00
17,000.0	90.00	359.57	12,500.0	4,825.5	150.7	4,827.5	0.00	0.00	0.00
17,100.0	90.00	359.57	12,500.0	4,925.5	149.9	4,927.5	0.00	0.00	0.00
17,200.0	90.00	359.57	12,500.0	5,025.5	149.2	5,027.5	0.00	0.00	0.00
17,300.0	90.00	359.57	12,500.0	5,125.5	148.4	5,127.4	0.00	0.00	0.00
17,400.0	90.00	359.57	12,500.0	5,225.5	147.6	5,227.4	0.00	0.00	0.00
17,500.0	90.00	359.57	12,500.0	5,325.5	146.9	5,327.4	0.00	0.00	0.00
17,600.0	90.00	359.57	12,500.0	5,425.5	146.1	5,427.3	0.00	0.00	0.00
17,700.0	90.00	359.57	12,500.0	5,525.5	145.4	5,527.3	0.00	0.00	0.00
17,800.0	90.00	359.57	12,500.0	5,625.5	144.6	5,627.2	0.00	0.00	0.00
17,900.0	90.00	359.57	12,500.0	5,725.5	143.9	5,727.2	0.00	0.00	0.00
18,000.0	90.00	359.57	12,500.0	5,825.5	143.1	5,827.2	0.00	0.00	0.00
18,100.0	90.00	359.57	12,500.0	5,925.5	142.4	5,927.1	0.00	0.00	0.00
18,200.0	90.00	359.57	12,500.0	6,025.5	141.6	6,027.1	0.00	0.00	0.00
18,300.0	90.00	359.57	12,500.0	6,125.5	140.9	6,127.1	0.00	0.00	0.00
18,400.0	90.00	359.57	12,500.0	6,225.5	140.1	6,227.0	0.00	0.00	0.00
18,500.0	90.00	359.57	12,500.0	6,325.5	139.4	6,327.0	0.00	0.00	0.00
18,600.0	90.00	359.57	12,500.0	6,425.5	138.6	6,427.0	0.00	0.00	0.00
18,700.0	90.00	359.57	12,500.0	6,525.5	137.9	6,526.9	0.00	0.00	0.00

Database:	EDM 5000.14 Single User Db	**Local Co-ordinate Reference:**	Well #702H
Company:	EOG Resources - Midland	**TVD Reference:**	KB = 25' @ 3375.0usft
Project:	Lea County, NM (NAD 83 NME)	**MD Reference:**	KB = 25' @ 3375.0usft
Site:	Lucky 13 Fed Com	**North Reference:**	Grid
Well:	#702H	**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	359.57	12,500.0	6,625.5	137.1	6,626.9	0.00	0.00	0.00
18,900.0	90.00	359.57	12,500.0	6,725.5	136.4	6,726.8	0.00	0.00	0.00
19,000.0	90.00	359.57	12,500.0	6,825.5	135.6	6,826.8	0.00	0.00	0.00
19,085.5	90.00	359.57	12,500.0	6,911.0	135.0	6,912.3	0.00	0.00	0.00
PBHL (Lucky 13 Fed Com #702H)									

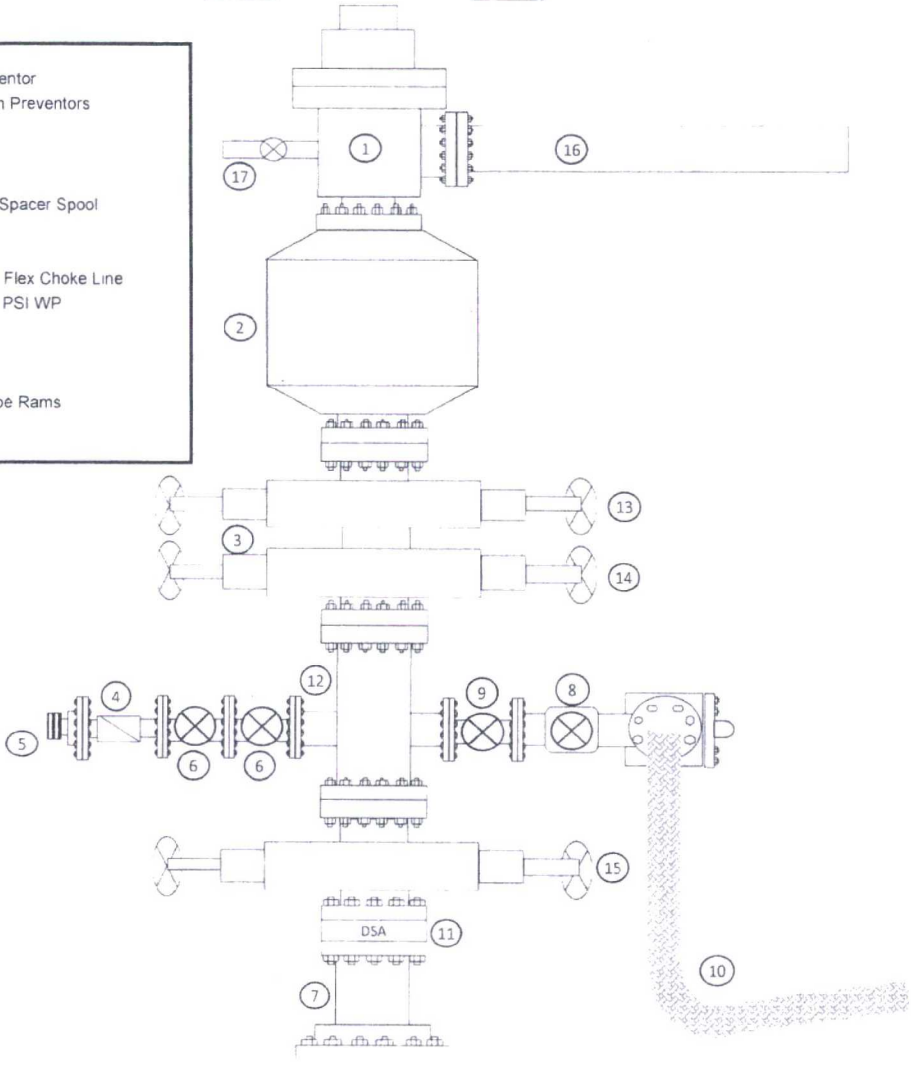
Design Targets

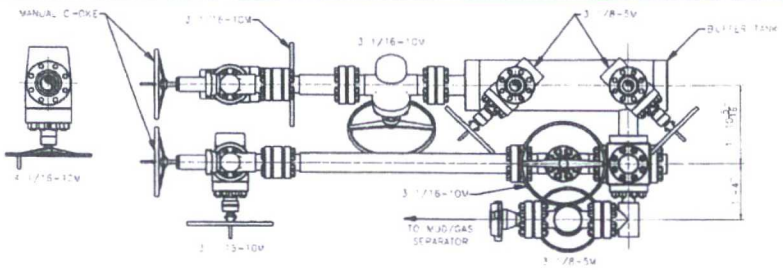
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP (Lucky 13 Fed Com	0.00	0.00	12,500.0	592.0	182.0	412,201.00	789,492.00	32° 7' 50.452 N	103° 31' 54.035 W
- plan misses target center by 0.4usft at 12766.4usft MD (12499.9 TVD, 592.0 N, 182.4 E)									
- Point									
PBHL (Lucky 13 Fed Co	0.00	0.00	12,500.0	6,911.0	135.0	418,520.00	789,445.00	32° 8' 52.984 N	103° 31' 54.035 W
- plan hits target center									
- Point									

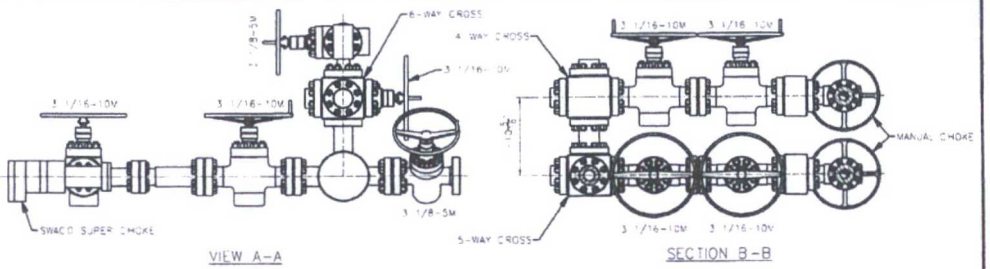
Exhibit 1
EOG Resources
10M BOPE

Rig Floor

1. 13 5/8" Rotating Head
2. Hydril 13 5/8" 10,000 PSI WP GK Annular Preventor
3. 13 5/8" Cameron Type "U" 10,000 PSI WP Ram Preventors
4. 2 1/16" - 10,000 PSI WP Check Valve
5. 10,000 PSI WP - 1502 Union to kill line
6. 2 1/16" - 10,000 PSI WP Manual Valves
7. 13 5/8" 3,000 PSI WP x 13 5/8" 5,000 PSI WP Spacer Spool
8. 4 1/16" 10,000 PSI WP HCR Valve
9. 4 1/16" 10,000 PSI WP Manual Valve
10. 6" OD x 3" ID 10,000 PSI WP Steel Armoured Flex Choke Line
11. DSA - 13 5/8" 10,000 PSI WP x 13 5/8" 5,000 PSI WP
12. Mud Cross - 13 5/8" 10,000 PSI WP
13. Blind Rams
14. Pipe Rams
15. 13 5/8" Cameron Type "U" 10,000 PSI WP Pipe Rams
16. Flow Line
17. 2" Fill Line

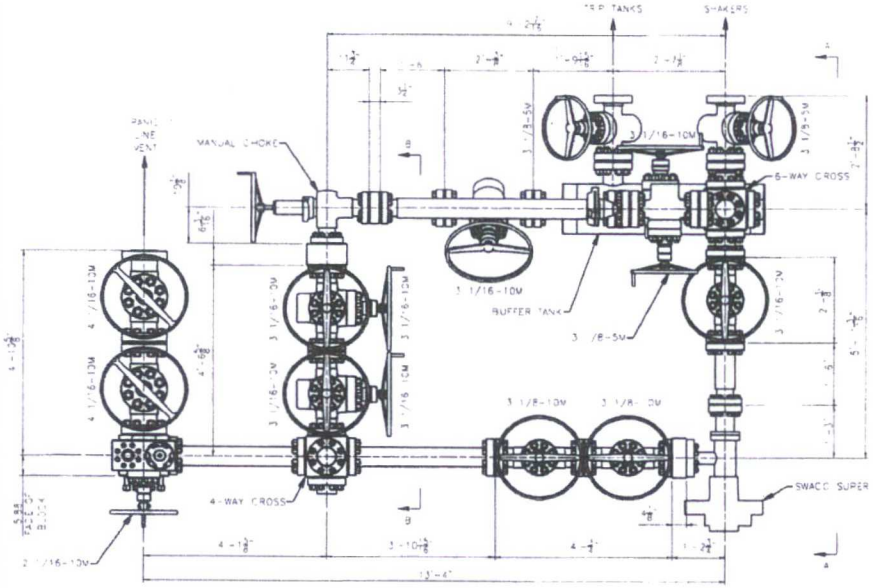




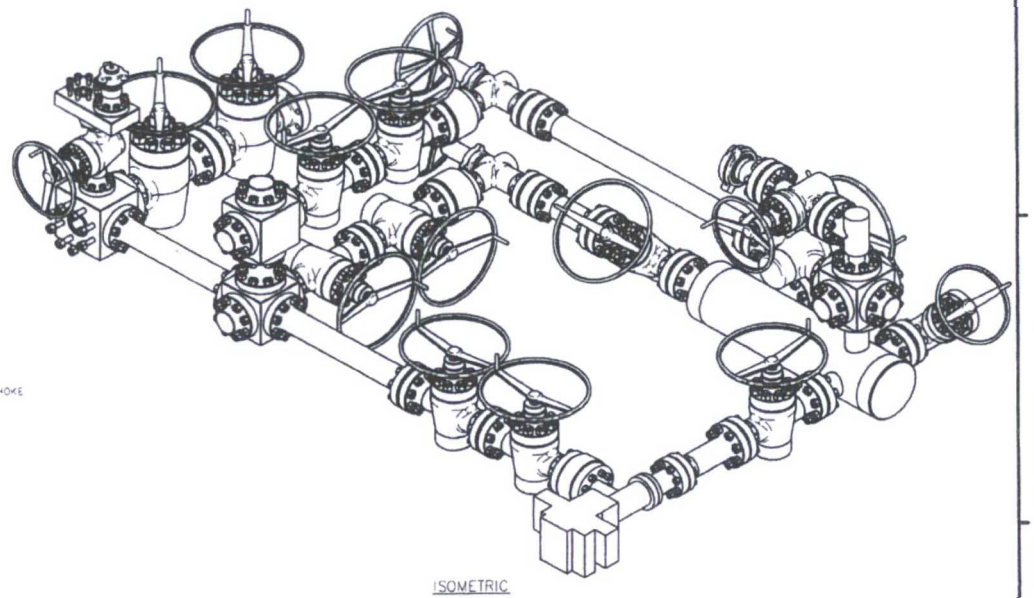


VIEW A-A

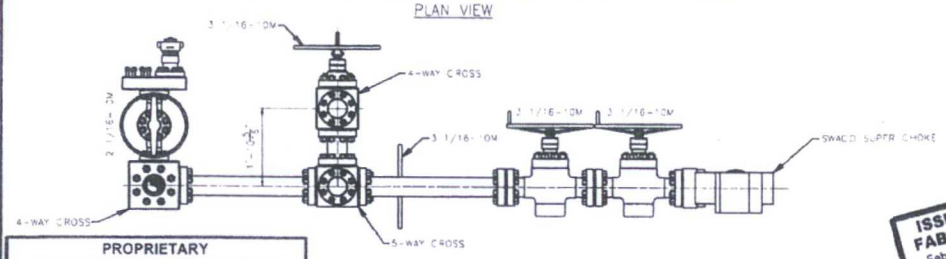
SECTION B-B



PLAN VIEW



ISOMETRIC



ISSUED FOR FABRICATION
February-10-2014
DRAFTSMAN MWL
ENGINEER

STANDARD TOLERANCES

		UNLESS NOTED
1. FABRICATION DIMENSIONS	A-0° TO 24°	± 1/16"
	B-24° TO 120°	± 1/8"
	C-OVER 120°	± 1/4"
2. MACHINED DIMENSIONS	A-ANGULAR	± .30
	B-LINEAR (EXPRESSED AS FRACTION)	± 1/16
	LINEAR (EXPRESSED TO ONE DECIMAL)	± .1
	LINEAR (EXPRESSED TO TWO DECIMALS)	± .015
	LINEAR (EXPRESSED TO THREE DECIMALS)	± .005

REV	DATE	DESCRIPTION	BY

HELMERICH & PAYNE INTERNATIONAL DRILLING CO.

TITLE: 3 CHOKE, 3 LEVEL, 10M CHOKE MANIFOLD G.A.

CUSTOMER: H&P

PROJECT:

DRAWN: MWL | DATE: 3/10/2014 | DWG NO.: HP-D1254 | REV: —

SCALE: 3/4"=1'-0" | SHEET: OF 1

PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources Inc
LEASE NO.:	NMNM19623
WELL NAME & NO.:	Lucky 13 Fed Com – 702H
SURFACE HOLE FOOTAGE:	2100'/S & 720/W
BOTTOM HOLE FOOTAGE	1550'/N & 907'/W, sec. 31
LOCATION:	Sec. 13, T. 25 S, R. 33 E
COUNTY:	Lea County

I.DRILLING OPERATIONS 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)

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

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.

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. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

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 is 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.

II.CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. 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.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

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. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE.

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.

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

Possibility of water flows in the Castile and in the Salado.
Possibility of lost circulation in the Rustler, in the Red Beds and in the Delaware.
Abnormal pressures may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

A. The **10-3/4** inch surface casing shall be set at approximately **1190** feet (in a competent bed below the Magenta Dolomite, which is a Member of the Rustler, and if salt is encountered, set casing at least 25 feet above the salt) and cemented to the surface.

    1. 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.

2. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**

3. 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.

4. If cement falls back, remedial cementing will be done prior to drilling out that string.

Formation below the 10-3/4 inch shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

The intermediate casing shall be kept fluid filled to avoid approaching the minimum collapse pressure rating of the casing.

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

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.

Formation below the 9 5/8 inch shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

C. 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.

D. 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.

III.PRESSURE CONTROL

A. 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.

B. Variance approved to use flex line from BOP to choke manifold. 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.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

C. 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 approved to use a 5M annular. The annular must be tested to full working pressure (5000 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. **Operator shall perform the intermediate casing integrity test to 70% of the casing burst. This will test the multi-bowl seals.**
   e. **If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be Acut off, cementing operations performed and another wellhead installed.**

10M 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.

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

   1. 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).

2. 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).

3. 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.

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

5. 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.**

6. 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.

7. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **3rd Bone Spring Sandstone** 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.

IV.DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **3rd Bone Spring Sandstone** and **Wolfcamp** formation, and shall be used until production casing is run and cemented.

V.DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

VI.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.

VII.SPECIAL REQUIREMENT(S)

Communitization Agreement:

1. 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.

2. 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.

3. 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.

CLN 11152017