

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-45793
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☒ FEE ☐
2. Name of Operator EOG Resources, Inc.		6. State Oil & Gas Lease No.
3. Address of Operator P.O. Box 2267, Midland, Texas 79702		7. Lease Name or Unit Agreement Name Quail 2 State Com
4. Well Location Unit Letter <u>C</u> : <u>300</u> feet from the <u>North</u> line and <u>2317</u> feet from the <u>West</u> line Section <u>2</u> <u>26S</u> Township <u>30E</u> Range <u>NMNM</u> Lea <u>County</u>		8. Well Number <u>723H</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3435'		9. OGRID Number 7377
		10. Pool name or Wildcat Purple Sage; Wolfcamp

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

EOG Resources Inc, respectfully requests to amend the APD to reflect the name change and SHL. Attached please find the following amended documents; C-102 and drill plan.

Well number changed to 707

Please change SHL to 300' FNL & 1,629' FWL

RECEIVED

APR 02 2019

DISTRICT II-ARTESIA O.C.D.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Star Harrell TITLE Sr Regulatory Specialist DATE 4/1/2019

Type or print name Star Harrell E-mail address: star_harrell@eogresources.com PHONE: 432-848-9161

For State Use Only

APPROVED BY Mike L... TITLE HOA DATE 04/02/2019
Conditions of Approval (if any):

EOG RESOURCES, INC.**Quail 2 State Com #707H****Revised Permit Information 3/29/2019:**

Well Name: Quail 2 State Com No. 707H

Location:

SHL: 300' FNL & 1629' FWL, Section 2, T-26-S, R-30-E, Eddy Co., N.M.

BHL: 230' FSL & 2610' FEL, Section 2, T-26-S, R-30-E, Eddy Co., N.M.

Design A**Casing Program:**

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
12.25"	0 – 1,255'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
8.75"	0' – 10,092'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-16,326'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. ppg	Yld Ft ³ /sk	Slurry Description
1,255'	547	13.5	1.73	Class C + 4.0% Bentonite + 0.6% CD-32 + 0.5% CaCl ₂ + 0.25 lb/sk Cello-Flake (TOC @ Surface)
	160	14.8	1.34	Class C + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate
10,092'	600	14.2	1.11	1 st Stage (Tail): Class C + 5% Salt + (TOC @ 7,000')
	1,000	12.7	2.30	2 nd Stage (Bradenhead squeeze): Class C + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (TOC @ surface)
16,326'	530	14.2	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 9,592')

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,255'	Fresh - Gel	8.6-8.8	28-34	N/c
1,255' – 10,092'	Brine	8.8-10.0	28-34	N/c
10,092' – 11,014'	Oil Base	10.0-11.5	58-68	3 - 6
11,014' – 16,326' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

EOG RESOURCES, INC.
Quail 2 State Com #707H

Design B

Casing Program:

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF _{min} Collapse	DF _{min} Burst	DF _{min} Tension
17.5"	0 – 1,255'	13.375"	54.5#	J-55	STC	1.125	1.25	1.60
12.25"	0-3,779'	9.625"	40#	J-55	LTC	1.125	1.25	1.60
12.25"	3,779' – 4,895'	9.625"	40#	HCL-80	LTC	1.125	1.25	1.60
8.75"	0 – 10,092'	7.625"	29.7#	HCP-110	FXL	1.125	1.25	1.60
6.75"	0'-16,326'	5.5"	17#	HCP-110	LTC	1.125	1.25	1.60

Cement Program:

Depth	No. Sacks	Wt. lb/gal	Yld Ft ³ /sk	Slurry Description
1,255'	547	13.5	1.74	Lead: Class 'C' + 4.00% Bentonite + 2.00% CaCl ₂ (TOC @ Surface)
	159.8	14.8	1.35	Tail: Class 'C' + 0.6% FL-62 + 0.25 lb/sk Cello-Flake + 0.2% Sodium Metasilicate + 2.0% KCl (1.06 lb/sk)
4,895'	341	12.7	2.22	Lead: Class C + 0.15% C-20 + 11.63 pps Salt + 0.1% C-51 + 0.75% C-41P (TOC @ Surface)
	288	14.8	1.32	Tail: Class C + 0.13% C-20
10,092'	276	10.8	3.67	Lead: Class C + 0.40% D013 + 0.20% D046 + 0.10% D065 + 0.20% D167 (TOC @ 3,279')
	152	14.8	2.38	Tail: Class H + 94.0 pps D909 + 0.25% D065 + 0.30% D167 + 0.02% D208 + 0.15% D800
16,326'	530	14.8	1.31	Class H + 0.1% C-20 + 0.05% CSA-1000 + 0.20% C-49 + 0.40% C-17 (TOC @ 9,592')

As a contingency, EOG requests to pump a two stage cement job on the 7-5/8" intermediate casing string with the first stage being pumped conventionally with the calculated top of cement at the Brushy Canyon (6,076') and the second stage performed as a bradenhead squeeze with planned cement from the Brushy Canyon to surface. If necessary, a top out consisting of 1,000 sacks of Class C cement + 3% Salt + 1% PreMag-M + 6% Bentonite Gel (2.30 yld, 12.91 ppg) will be executed.

Mud Program:

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 1,255'	Fresh - Gel	8.6-8.8	28-34	N/c
1,255' – 4,895'	Brine	10.0-10.2	28-34	N/c
4,895' – 10,092'	Oil Base	8.7-9.4	58-68	N/c - 6
10,092' – 16,326' Lateral	Oil Base	10.0-11.5	58-68	3 - 6

EOG RESOURCES, INC.
Quail 2 State Com #707H
Hydrogen Sulfide Plan Summary

- A. All personnel shall receive proper H₂S training in accordance with Onshore Order III.C.3.a.
- B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.
- C. Required Emergency Equipment:

- Well control equipment
 - a. Flare line 150' from wellhead to be ignited by flare gun.
 - b. Choke manifold with a remotely operated choke.
 - c. Mud/gas separator
- Protective equipment for essential personnel.

Breathing apparatus:

- a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
- b. Work/Escapes packs — 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
- c. Emergency Escape Packs — 4 packs shall be stored in the doghouse for emergency evacuation.

Auxiliary Rescue Equipment:

- a. Stretcher
- b. Two OSHA full body harness
- c. 100 ft 5/8 inch OSHA approved rope
- d. 1-20# class ABC fire extinguisher

- H₂S detection and monitoring equipment:
The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.
(Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
 - a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
 - b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
 - c. Two wind socks will be placed in strategic locations, visible from all angles.

- Mud program:

EOG RESOURCES, INC.

Quail 2 State Com #707H

The mud program has been designed to minimize the volume of H₂S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H₂S bearing zones.

- **Metallurgy:**
All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H₂S service.
- **Communication:**
Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
Quail 2 State Com #707H

Emergency Assistance Telephone List

PUBLIC SAFETY: **911 or**

Lea County Sheriff's Department (575) 396-3611

Rod Coffman

Fire Department:

Carlsbad (575) 885-3125

Artesia (575) 746-5050

Hospitals:

Carlsbad (575) 887-4121

Artesia (575) 748-3333

Hobbs (575) 392-1979

Dept. of Public Safety/Carlsbad (575) 748-9718

Highway Department (575) 885-3281

New Mexico Oil Conservation (575) 476-3440

U.S. Dept. of Labor (575) 887-1174

EOG Resources, Inc.

EOG / Midland Office (432) 686-3600

Company Drilling Consultants:

David Dominique Cell (985) 518-5839

Mike Vann Cell (817) 980-5507

Drilling Engineer

Steve Munsell Office (432) 686-3609

Cell (432) 894-1256

Drilling Manager

Aj Dach Office (432) 686-3751

Cell (817) 480-1167

Drilling Superintendent

Domingo Lopez Office (432) 686-3702

Cell (432) 215-9452

H&P Drilling

H&P Drilling Office (432) 563-5757

H&P 651 Drilling Rig Rig (903) 509-7131

Tool Pusher:

Johnathan Craig Cell (817) 760-6374

Brad Garrett

Safety

Brian Chandler (HSE Manager) Office (432) 686-3695

Cell (817) 239-0251

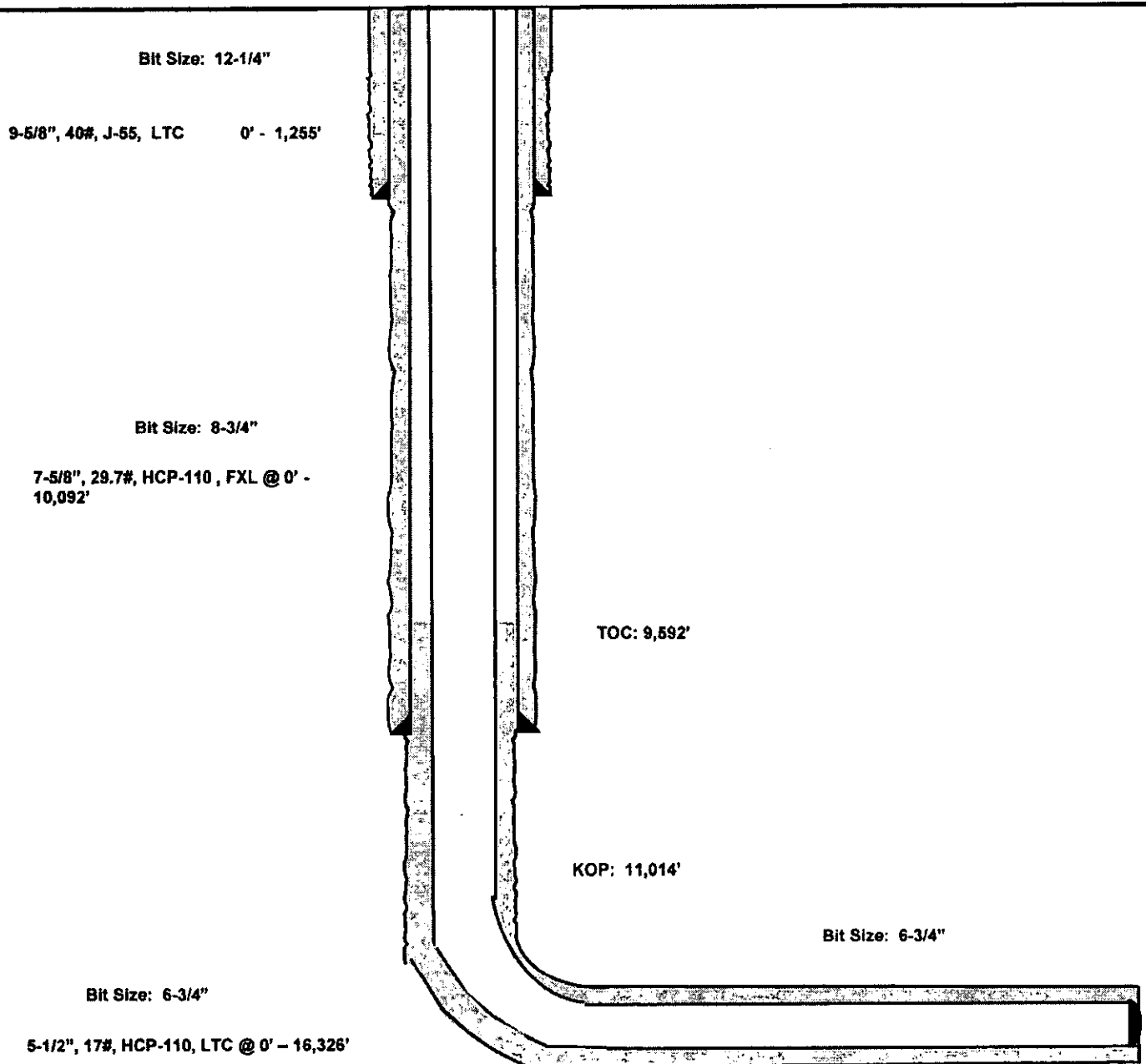
300' FNL
1629' FWL
Section 2
T-26-S, R-30-E

Quail 2 State Com #707H
Eddy County, New Mexico

KB: 3,240'
GL: 3,215'

Revised Wellbore 3/29/2019
Design A

API: 30-015-45793



Lateral: 16,326' MD, 11,349' TVD
BH Location: 230' FSL & 2810' FEL
Section 2
T-26-S, R-30-E

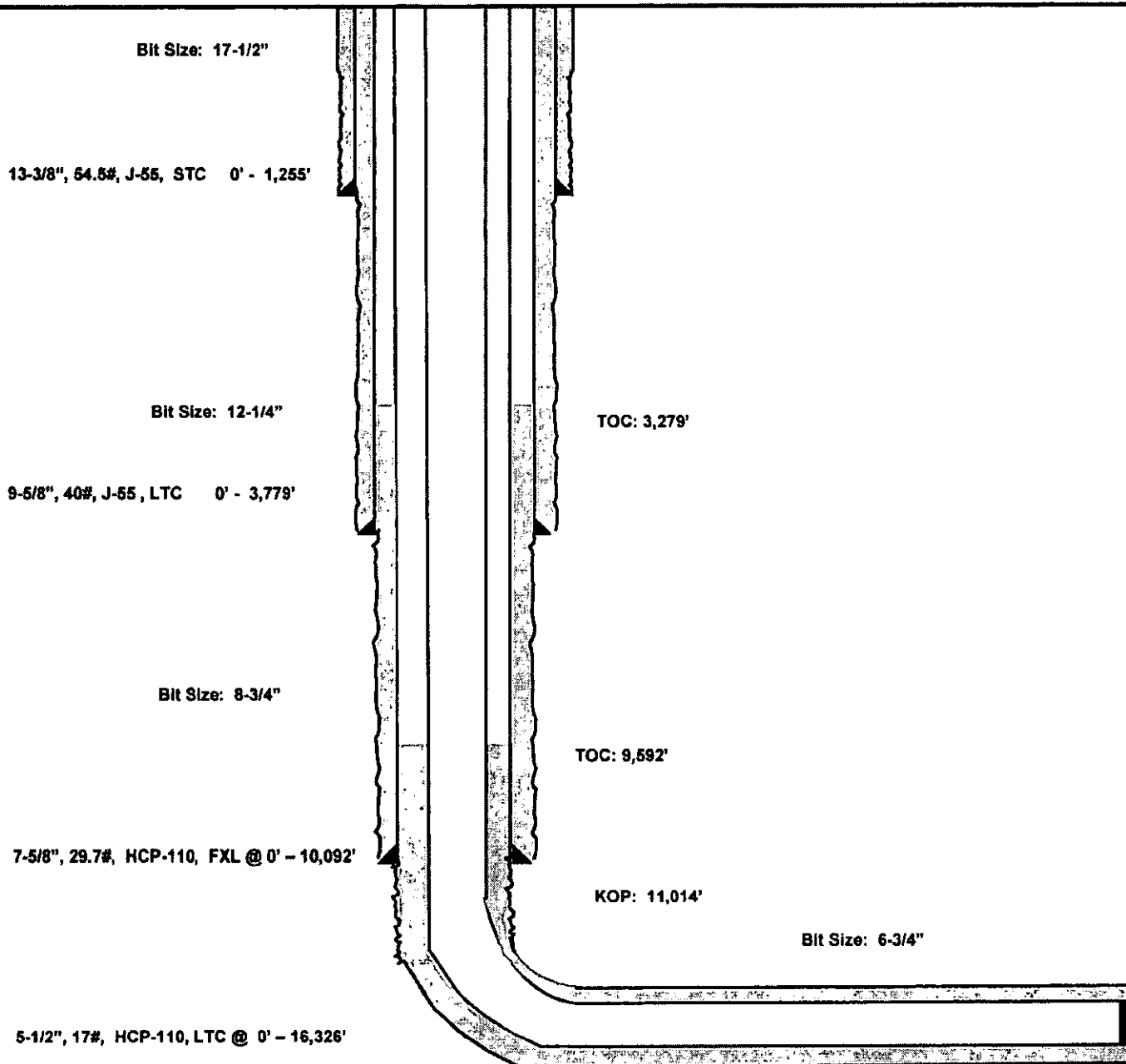
300' FNL
1629' FWL
Section 2
T-26-S, R-30-E

EOG RESOURCES, INC.
Quail 2 State Com #707H

KB: 3,240'
GL: 3,215'

Revised Wellbore 3/29/2019
Design B

API: 30-015-45793



Lateral: 16,326' MD, 11,349' TVD
BH Location: 230' FSL & 2610' FEL
Section 2
T-26-S, R-30-E

RECEIVED

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1220 S. St. Francis Dr., Santa 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.
Santa Fe, NM 87505

APR 02 2019

FORM C-102

Revised August 1, 2011

Submit one copy to appropriate

District Office

DISTRICT II-ARTESIA O.C.D.

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45793		² Pool Code 98220	³ Pool Name Purple Sage; Wolfcamp
⁴ Property Code 325165	⁵ Property Name QUAIL 2 STATE COM		⁶ Well Number 707H
⁷ GRID No. 7377	⁸ Operator Name EOG RESOURCES, INC.		⁹ Elevation 3215'

¹⁰Surface Location

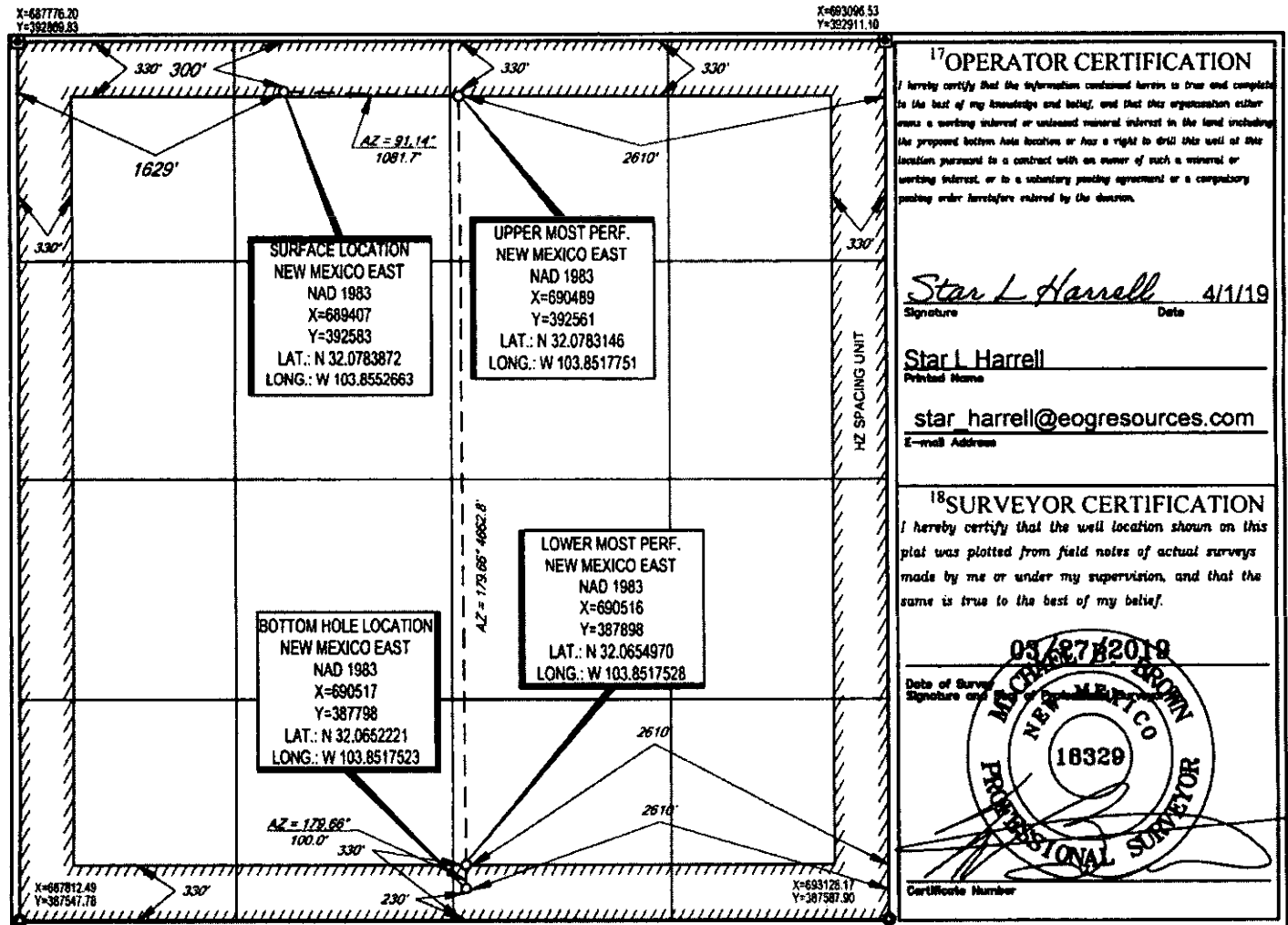
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	2	26-S	30-E	-	300'	NORTH	1629'	WEST	EDDY

¹¹Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	2	26-S	30-E	-	230'	SOUTH	2610'	EAST	EDDY

¹² Dedicated Acres 640.00	¹³ Joint or Tiffl	¹⁴ Consolidation Code	¹⁵ Order No.
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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.





PHOENIX
TECHNOLOGY SERVICES

COG Operating LLC

Eddy County, NM (NAD27 NME)

Myox 21 State Com

34H

30.015-45376

OH

Plan: Plan 3 03-07-19

Standard Planning Report

07 March, 2019





Planning Report



Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Corn
Well: 34H
Wellbore: OH
Design: Plan 3 03-07-19

Local Co-ordinate Reference: Well 34H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, NM (NAD27 NME)		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Myox 21 State Corn		
Site Position:		Northing:	403,335.40 usft
From:	Map	Easting:	577,031.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 6' 31.10711 N
		Longitude:	104° 5' 4.37007 W
		Grid Convergence:	0.13 °

Well	34H		
Well Position	+N-S	-11.10 usft	Northing:
	+E-W	-3,159.80 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			2,976.90 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	MVHD	4/30/2019	7.01	59.79	47,884.43719593

Design	Plan 3 03-07-19			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	2.87

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,799.94	6.00	114.42	2,799.39	-6.48	14.28	2.00	2.00	0.00	114.42	
6,229.94	6.00	114.42	6,210.61	-154.68	340.69	0.00	0.00	0.00	0.00	
6,529.88	0.00	0.00	6,510.00	-161.14	354.97	2.00	-2.00	0.00	180.00	
8,873.42	0.00	0.00	8,853.54	-161.14	354.97	0.00	0.00	0.00	0.00	
9,621.49	89.77	359.50	9,331.00	314.38	350.82	12.00	12.00	-0.07	359.50	
19,515.76	89.77	359.50	9,371.00	10,208.20	264.50	0.00	0.00	0.00	0.00	BHL v2 - Myox Stat

Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Com
Well: 34H
Wellbore: OH
Design: Plan 3 03-07-18

Local Co-ordinate Reference: Well 34H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	±N-S (usft)	±E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Bulld Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Begin 2.00°/100' Build									
2,600.00	2.00	114.42	2,599.98	-0.72	1.59	-0.64	2.00	2.00	0.00
2,700.00	4.00	114.42	2,699.84	-2.88	6.35	-2.68	2.00	2.00	0.00
2,799.94	6.00	114.42	2,799.39	-6.48	14.28	-5.76	2.00	2.00	0.00
Hold 6.00° Inc at 114.42° Azm									
2,800.00	6.00	114.42	2,799.45	-6.49	14.29	-5.76	0.00	0.00	0.00
2,900.00	6.00	114.42	2,898.90	-10.81	23.81	-9.60	0.00	0.00	0.00
3,000.00	6.00	114.42	2,998.36	-15.13	33.32	-13.44	0.00	0.00	0.00
3,100.00	6.00	114.42	3,097.81	-19.45	42.84	-17.28	0.00	0.00	0.00
3,200.00	6.00	114.42	3,197.26	-23.77	52.35	-21.12	0.00	0.00	0.00
3,300.00	6.00	114.42	3,296.71	-28.09	61.87	-24.96	0.00	0.00	0.00
3,400.00	6.00	114.42	3,396.17	-32.41	71.39	-28.79	0.00	0.00	0.00
3,500.00	6.00	114.42	3,495.62	-36.73	80.90	-32.63	0.00	0.00	0.00
3,600.00	6.00	114.42	3,595.07	-41.05	90.42	-36.47	0.00	0.00	0.00
3,700.00	6.00	114.42	3,694.52	-45.37	99.93	-40.31	0.00	0.00	0.00
3,800.00	6.00	114.42	3,793.98	-49.69	109.45	-44.15	0.00	0.00	0.00
3,900.00	6.00	114.42	3,893.43	-54.01	118.97	-47.98	0.00	0.00	0.00
4,000.00	6.00	114.42	3,992.88	-58.33	128.48	-51.82	0.00	0.00	0.00
4,100.00	6.00	114.42	4,092.33	-62.65	138.00	-55.66	0.00	0.00	0.00
4,200.00	6.00	114.42	4,191.79	-66.97	147.52	-59.50	0.00	0.00	0.00
4,300.00	6.00	114.42	4,291.24	-71.28	157.03	-63.34	0.00	0.00	0.00
4,400.00	6.00	114.42	4,390.69	-75.60	166.55	-67.18	0.00	0.00	0.00
4,500.00	6.00	114.42	4,490.14	-79.92	176.06	-71.01	0.00	0.00	0.00
4,600.00	6.00	114.42	4,589.60	-84.24	185.58	-74.85	0.00	0.00	0.00
4,700.00	6.00	114.42	4,689.05	-88.56	195.10	-78.69	0.00	0.00	0.00
4,800.00	6.00	114.42	4,788.50	-92.88	204.61	-82.53	0.00	0.00	0.00
4,900.00	6.00	114.42	4,887.95	-97.20	214.13	-86.37	0.00	0.00	0.00
5,000.00	6.00	114.42	4,987.41	-101.52	223.64	-90.21	0.00	0.00	0.00
5,100.00	6.00	114.42	5,086.86	-105.84	233.16	-94.04	0.00	0.00	0.00
5,200.00	6.00	114.42	5,186.31	-110.16	242.68	-97.88	0.00	0.00	0.00
5,300.00	6.00	114.42	5,285.76	-114.48	252.19	-101.72	0.00	0.00	0.00
5,400.00	6.00	114.42	5,385.21	-118.80	261.71	-105.56	0.00	0.00	0.00
5,500.00	6.00	114.42	5,484.67	-123.12	271.22	-109.40	0.00	0.00	0.00
5,600.00	6.00	114.42	5,584.12	-127.44	280.74	-113.24	0.00	0.00	0.00
5,700.00	6.00	114.42	5,683.57	-131.76	290.26	-117.07	0.00	0.00	0.00
5,800.00	6.00	114.42	5,783.02	-136.08	299.77	-120.91	0.00	0.00	0.00
5,900.00	6.00	114.42	5,882.48	-140.40	309.29	-124.75	0.00	0.00	0.00
6,000.00	6.00	114.42	5,981.93	-144.72	318.80	-128.59	0.00	0.00	0.00
6,100.00	6.00	114.42	6,081.38	-149.04	328.32	-132.43	0.00	0.00	0.00
6,200.00	6.00	114.42	6,180.83	-153.36	337.84	-136.26	0.00	0.00	0.00
6,229.94	6.00	114.42	6,210.61	-154.66	340.69	-137.41	0.00	0.00	0.00
Begin 2.00°/100' Drop									
6,300.00	4.60	114.42	6,280.37	-157.33	346.58	-139.79	2.00	-2.00	0.00
6,400.00	2.60	114.42	6,380.17	-159.92	352.29	-142.09	2.00	-2.00	0.00
6,500.00	0.60	114.42	6,480.12	-161.08	354.83	-143.12	2.00	-2.00	0.00
6,529.88	0.00	0.00	6,510.00	-161.14	354.97	-143.18	2.00	-2.00	0.00
Begin Vertical Hold									
8,873.42	0.00	0.00	8,853.54	-161.14	354.97	-143.18	0.00	0.00	0.00
KOP2, Begin 12.00°/100' Build									
8,900.00	3.19	359.50	8,880.11	-160.40	354.96	-142.44	12.00	12.00	0.00
9,000.00	15.19	359.50	8,978.65	-144.46	354.82	-126.52	12.00	12.00	0.00
9,100.00	27.19	359.50	9,071.71	-108.38	354.51	-90.51	12.00	12.00	0.00

Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Corn
Well: 34H
Wellbore: OH
Design: Plan 3 03-07-19

Local Co-ordinate Reference: Well 34H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
9,200.00	39.19	359.50	9,155.25	-53.74	354.03	-35.96	12.00	12.00	0.00
9,300.00	51.19	359.50	9,225.59	17.07	353.42	34.73	12.00	12.00	0.00
9,400.00	63.19	359.50	9,279.68	100.96	352.68	118.48	12.00	12.00	0.00
9,500.00	75.19	359.50	9,315.14	194.26	351.87	211.63	12.00	12.00	0.00
9,600.00	87.19	359.50	9,330.43	292.90	351.01	310.10	12.00	12.00	0.00
9,621.49	89.77	359.50	9,331.00	314.38	350.82	331.54	12.00	12.00	0.00
LP, Hold 89.77° Inc at 359.50° Azm									
9,700.00	89.77	359.50	9,331.32	392.89	350.14	409.91	0.00	0.00	0.00
9,800.00	89.77	359.50	9,331.72	492.88	349.26	509.74	0.00	0.00	0.00
9,900.00	89.77	359.50	9,332.13	592.88	348.39	609.57	0.00	0.00	0.00
10,000.00	89.77	359.50	9,332.53	692.87	347.52	709.39	0.00	0.00	0.00
10,100.00	89.77	359.50	9,332.94	792.87	346.65	809.22	0.00	0.00	0.00
10,200.00	89.77	359.50	9,333.34	892.86	345.77	909.05	0.00	0.00	0.00
10,300.00	89.77	359.50	9,333.74	992.86	344.90	1,008.87	0.00	0.00	0.00
10,400.00	89.77	359.50	9,334.15	1,092.85	344.03	1,108.70	0.00	0.00	0.00
10,500.00	89.77	359.50	9,334.55	1,192.85	343.16	1,208.53	0.00	0.00	0.00
10,600.00	89.77	359.50	9,334.96	1,292.84	342.28	1,308.35	0.00	0.00	0.00
10,700.00	89.77	359.50	9,335.36	1,392.84	341.41	1,408.18	0.00	0.00	0.00
10,800.00	89.77	359.50	9,335.77	1,492.83	340.54	1,508.01	0.00	0.00	0.00
10,900.00	89.77	359.50	9,336.17	1,592.83	339.67	1,607.83	0.00	0.00	0.00
11,000.00	89.77	359.50	9,336.57	1,692.83	338.79	1,707.66	0.00	0.00	0.00
11,100.00	89.77	359.50	9,336.98	1,792.82	337.92	1,807.48	0.00	0.00	0.00
11,200.00	89.77	359.50	9,337.38	1,892.82	337.05	1,907.31	0.00	0.00	0.00
11,300.00	89.77	359.50	9,337.79	1,992.81	336.18	2,007.14	0.00	0.00	0.00
11,400.00	89.77	359.50	9,338.19	2,092.81	335.30	2,106.96	0.00	0.00	0.00
11,500.00	89.77	359.50	9,338.60	2,192.80	334.43	2,206.79	0.00	0.00	0.00
11,600.00	89.77	359.50	9,339.00	2,292.80	333.56	2,306.62	0.00	0.00	0.00
11,700.00	89.77	359.50	9,339.40	2,392.79	332.69	2,406.44	0.00	0.00	0.00
11,800.00	89.77	359.50	9,339.81	2,492.79	331.82	2,506.27	0.00	0.00	0.00
11,900.00	89.77	359.50	9,340.21	2,592.78	330.94	2,606.10	0.00	0.00	0.00
12,000.00	89.77	359.50	9,340.62	2,692.78	330.07	2,705.92	0.00	0.00	0.00
12,100.00	89.77	359.50	9,341.02	2,792.77	329.20	2,805.75	0.00	0.00	0.00
12,200.00	89.77	359.50	9,341.43	2,892.77	328.33	2,905.58	0.00	0.00	0.00
12,300.00	89.77	359.50	9,341.83	2,992.77	327.45	3,005.40	0.00	0.00	0.00
12,400.00	89.77	359.50	9,342.23	3,092.76	326.58	3,105.23	0.00	0.00	0.00
12,500.00	89.77	359.50	9,342.64	3,192.76	325.71	3,205.05	0.00	0.00	0.00
12,600.00	89.77	359.50	9,343.04	3,292.75	324.84	3,304.88	0.00	0.00	0.00
12,700.00	89.77	359.50	9,343.45	3,392.75	323.96	3,404.71	0.00	0.00	0.00
12,800.00	89.77	359.50	9,343.85	3,492.74	323.09	3,504.53	0.00	0.00	0.00
12,900.00	89.77	359.50	9,344.26	3,592.74	322.22	3,604.36	0.00	0.00	0.00
13,000.00	89.77	359.50	9,344.66	3,692.73	321.35	3,704.19	0.00	0.00	0.00
13,100.00	89.77	359.50	9,345.06	3,792.73	320.47	3,804.01	0.00	0.00	0.00
13,200.00	89.77	359.50	9,345.47	3,892.72	319.60	3,903.84	0.00	0.00	0.00
13,300.00	89.77	359.50	9,345.87	3,992.72	318.73	4,003.67	0.00	0.00	0.00
13,400.00	89.77	359.50	9,346.28	4,092.71	317.86	4,103.49	0.00	0.00	0.00
13,500.00	89.77	359.50	9,346.68	4,192.71	316.98	4,203.32	0.00	0.00	0.00
13,600.00	89.77	359.50	9,347.08	4,292.71	316.11	4,303.15	0.00	0.00	0.00
13,700.00	89.77	359.50	9,347.49	4,392.70	315.24	4,402.97	0.00	0.00	0.00
13,800.00	89.77	359.50	9,347.89	4,492.70	314.37	4,502.80	0.00	0.00	0.00
13,900.00	89.77	359.50	9,348.30	4,592.69	313.49	4,602.63	0.00	0.00	0.00
14,000.00	89.77	359.50	9,348.70	4,692.69	312.62	4,702.45	0.00	0.00	0.00
14,100.00	89.77	359.50	9,349.11	4,792.68	311.75	4,802.28	0.00	0.00	0.00
14,200.00	89.77	359.50	9,349.51	4,892.68	310.88	4,902.10	0.00	0.00	0.00

Database: USA Compass
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Myox 21 State Com
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Local Co-ordinate Reference: Well 34H
TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
14,300.00	89.77	359.50	9,349.91	4,992.67	310.00	5,001.93	0.00	0.00	0.00
14,400.00	89.77	359.50	9,350.32	5,092.67	309.13	5,101.76	0.00	0.00	0.00
14,500.00	89.77	359.50	9,350.72	5,192.66	308.26	5,201.58	0.00	0.00	0.00
14,600.00	89.77	359.50	9,351.13	5,292.66	307.39	5,301.41	0.00	0.00	0.00
14,700.00	89.77	359.50	9,351.53	5,392.65	306.51	5,401.24	0.00	0.00	0.00
14,800.00	89.77	359.50	9,351.94	5,492.65	305.64	5,501.06	0.00	0.00	0.00
14,900.00	89.77	359.50	9,352.34	5,592.65	304.77	5,600.89	0.00	0.00	0.00
15,000.00	89.77	359.50	9,352.74	5,692.64	303.90	5,700.72	0.00	0.00	0.00
15,100.00	89.77	359.50	9,353.15	5,792.64	303.02	5,800.54	0.00	0.00	0.00
15,200.00	89.77	359.50	9,353.55	5,892.63	302.15	5,900.37	0.00	0.00	0.00
15,300.00	89.77	359.50	9,353.96	5,992.63	301.28	6,000.20	0.00	0.00	0.00
15,400.00	89.77	359.50	9,354.36	6,092.62	300.41	6,100.02	0.00	0.00	0.00
15,500.00	89.77	359.50	9,354.77	6,192.62	299.53	6,199.85	0.00	0.00	0.00
15,600.00	89.77	359.50	9,355.17	6,292.61	298.66	6,299.67	0.00	0.00	0.00
15,700.00	89.77	359.50	9,355.57	6,392.61	297.79	6,399.50	0.00	0.00	0.00
15,800.00	89.77	359.50	9,355.98	6,492.60	296.92	6,499.33	0.00	0.00	0.00
15,900.00	89.77	359.50	9,356.38	6,592.60	296.05	6,599.15	0.00	0.00	0.00
16,000.00	89.77	359.50	9,356.79	6,692.59	295.17	6,698.98	0.00	0.00	0.00
16,100.00	89.77	359.50	9,357.19	6,792.59	294.30	6,798.81	0.00	0.00	0.00
16,200.00	89.77	359.50	9,357.60	6,892.59	293.43	6,898.63	0.00	0.00	0.00
16,300.00	89.77	359.50	9,358.00	6,992.58	292.56	6,998.46	0.00	0.00	0.00
16,400.00	89.77	359.50	9,358.40	7,092.58	291.68	7,098.29	0.00	0.00	0.00
16,500.00	89.77	359.50	9,358.81	7,192.57	290.81	7,198.11	0.00	0.00	0.00
16,600.00	89.77	359.50	9,359.21	7,292.57	289.94	7,297.94	0.00	0.00	0.00
16,700.00	89.77	359.50	9,359.62	7,392.56	289.07	7,397.77	0.00	0.00	0.00
16,800.00	89.77	359.50	9,360.02	7,492.56	288.19	7,497.59	0.00	0.00	0.00
16,900.00	89.77	359.50	9,360.43	7,592.55	287.32	7,597.42	0.00	0.00	0.00
17,000.00	89.77	359.50	9,360.83	7,692.55	286.45	7,697.25	0.00	0.00	0.00
17,100.00	89.77	359.50	9,361.23	7,792.54	285.58	7,797.07	0.00	0.00	0.00
17,200.00	89.77	359.50	9,361.64	7,892.54	284.70	7,896.90	0.00	0.00	0.00
17,300.00	89.77	359.50	9,362.04	7,992.53	283.83	7,996.72	0.00	0.00	0.00
17,400.00	89.77	359.50	9,362.45	8,092.53	282.96	8,096.55	0.00	0.00	0.00
17,500.00	89.77	359.50	9,362.85	8,192.53	282.09	8,196.38	0.00	0.00	0.00
17,600.00	89.77	359.50	9,363.26	8,292.52	281.21	8,296.20	0.00	0.00	0.00
17,700.00	89.77	359.50	9,363.66	8,392.52	280.34	8,396.03	0.00	0.00	0.00
17,800.00	89.77	359.50	9,364.06	8,492.51	279.47	8,495.86	0.00	0.00	0.00
17,900.00	89.77	359.50	9,364.47	8,592.51	278.60	8,595.68	0.00	0.00	0.00
18,000.00	89.77	359.50	9,364.87	8,692.50	277.72	8,695.51	0.00	0.00	0.00
18,100.00	89.77	359.50	9,365.28	8,792.50	276.85	8,795.34	0.00	0.00	0.00
18,200.00	89.77	359.50	9,365.68	8,892.49	275.98	8,895.16	0.00	0.00	0.00
18,300.00	89.77	359.50	9,366.09	8,992.49	275.11	8,994.99	0.00	0.00	0.00
18,400.00	89.77	359.50	9,366.49	9,092.48	274.23	9,094.82	0.00	0.00	0.00
18,500.00	89.77	359.50	9,366.89	9,192.48	273.36	9,194.64	0.00	0.00	0.00
18,600.00	89.77	359.50	9,367.30	9,292.47	272.49	9,294.47	0.00	0.00	0.00
18,700.00	89.77	359.50	9,367.70	9,392.47	271.62	9,394.29	0.00	0.00	0.00
18,800.00	89.77	359.50	9,368.11	9,492.47	270.74	9,494.12	0.00	0.00	0.00
18,900.00	89.77	359.50	9,368.51	9,592.46	269.87	9,593.95	0.00	0.00	0.00
19,000.00	89.77	359.50	9,368.92	9,692.46	269.00	9,693.77	0.00	0.00	0.00
19,100.00	89.77	359.50	9,369.32	9,792.45	268.13	9,793.60	0.00	0.00	0.00
19,200.00	89.77	359.50	9,369.72	9,892.45	267.25	9,893.43	0.00	0.00	0.00
19,300.00	89.77	359.50	9,370.13	9,992.44	266.38	9,993.25	0.00	0.00	0.00
19,400.00	89.77	359.50	9,370.53	10,092.44	265.51	10,093.08	0.00	0.00	0.00
19,500.00	89.77	359.50	9,370.94	10,192.43	264.64	10,192.91	0.00	0.00	0.00
19,515.76	89.77	359.50	9,371.00	10,208.19	264.50	10,208.64	0.00	0.00	0.00

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TVD Reference: KB @ 3000.90usft (Ensign 155)
MD Reference: KB @ 3000.90usft (Ensign 155)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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)
TD at 19515.76									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FTP v2 - Myox State (	0.00	0.00	9,331.50	113.10	353.00	403,437.40	574,224.60	32° 6' 32.17950 N	104° 5' 37.00133 W
- hit/miss target									
- Shape									
- plan misses target center by 41.94usft at 9429.80usft MD (9292.28 TVD, 127.96 N, 352.45 E)									
- Point									
LTP v2 - Myox State (	0.00	0.00	9,370.47	10,078.20	265.60	413,402.50	574,137.20	32° 8' 10.80060 N	104° 5' 37.75997 W
- plan misses target center by 0.03usft at 19385.76usft MD (9370.47 TVD, 10078.20 N, 265.63 E)									
- Point									
BHL v2 - Myox State (	0.00	0.00	9,371.00	10,208.20	264.50	413,532.50	574,136.10	32° 8' 12.08716 N	104° 5' 37.76940 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,500.00	2,500.00	0.00	0.00	KOP, Begin 2.00°/100' Build
2,799.94	2,799.39	-6.48	14.28	Hold 6.00° Inc at 114.42° Azm
6,229.94	6,210.61	-154.66	340.69	Begin 2.00°/100' Drop
6,529.88	6,510.00	-161.14	354.97	Begin Vertical Hold
8,873.42	8,853.54	-161.14	354.97	KOP2, Begin 12.00°/100' Build
9,621.49	9,331.00	314.38	350.82	LP, Hold 89.77° Inc at 359.50° Azm
19,515.76	9,371.00	10,208.19	264.50	TD at 19515.76



100% **Quality**
 100% **Customer**
 100% **Satisfaction**

Project: Eddy County, NM (NAD27 NME)
Site: Mayes 21 State Cor
WFE: 34H
Wellbore: OH
Design: Plan 3 03-07-19
Rlg: Ensign 155



Admission to Child Health
Free March 4, 11
Margaret Martin, R.N.

Immunization Records
March 7-8, 10, April
29 People 12.30
People 6:00-8:00
March 10-11

