

DATE IN <u>9.17.10</u>	SUSPENSE	ENGINEER <u>DB</u>	LOGGED IN <u>9.17.10</u>	TYPE <u>NSL</u>	APP NO. <u>1026048803</u>
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



C06

Miranda Fed #19

ADMINISTRATIVE APPLICATION CHECKLIST 30-015-38145

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication

☒ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement

☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery

☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify Amendment to NSL-6205 ✓

RECEIVED OCD
 2010 SEP 17 A 1:20

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☒ Does Not Apply

INTEREST ARE THE SAME

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

ROBYN M. ODOM
Print or Type Name

Robyn Odom
Signature

REGULATORY ANALYST
Title

9/16/10
Date

(432) 685-4385
Phone Number

rodomb@conchoresources.com
E-mail Address

Miranda Federal #19

Eddy County, NM

COG proposes to drill a Horizontal, North ½, 120 acre spacing
Loco Hills; Glorieta-Yeso oil well
TD of approximately 6000'

Non-Standard Location:

SHL: 150' FNL & 1675' FWL Sec 9, T17S, R30E, Unit C
BHL: 330' FNL & 330' FEL Sec 9, T17S, R30E, Unit A

This well had to be drilled at a non-standard location due to sand dunes.

**The Penetration Point of this well will be drilled directionally to a standard
location of:
386' FNL & 1782' FWL**

The plan for this well is to complete it in the Yeso formation.
We won't know the exact perms until we drill & log it, but it will be very similar to
the McIntyre DK Federal #17H which was recently drilled in July 2010 and is
located: SHL: 940' FSL 380' FWL, Sec 17, T17S, R30E, Unit M, BHL: 990' FSL &
660' FEL, Sec 17, T17S, R30E, Unit P.

The McIntyre DK Federal #17H completion divided the Yeso up into 18
port/stimulation intervals. McIntyre DK Federal #17H has perms from: 4857' –
9265' overall, with all intervals acidized and frac as follows:

All intervals: 4857' – 9265',
acidized w/ 11,000 gals,
frac'd w/ 2.3 million gals gel, 2.4 million #s white sand.

Attachment 1

Plat & Map

Attachment 2

Map & legend of offset wells.

Attachment 3

Updated land plat showing COG Operating LLC acreage.
The acreage we are encroaching on is the SE/4 SW/4 of Section 4.

Interests are the same.

COG Operating LLC respectfully requests permission to have this NSL
amendment approved.

District I
1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

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

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

Form C-102
Revised October 15, 2009
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-015-38145	2 Pool Code 96718	3 Pool Name LOCO HILLS; GLORIETA-YESO
4 Property Code 37868	5 Property Name MIRANDA FEDERAL	
6 Well Number 19		
7 OGRID No. 229137	8 Operator Name COG OPERATING LLC	9 Elevation 3699.2

10 Surface Location

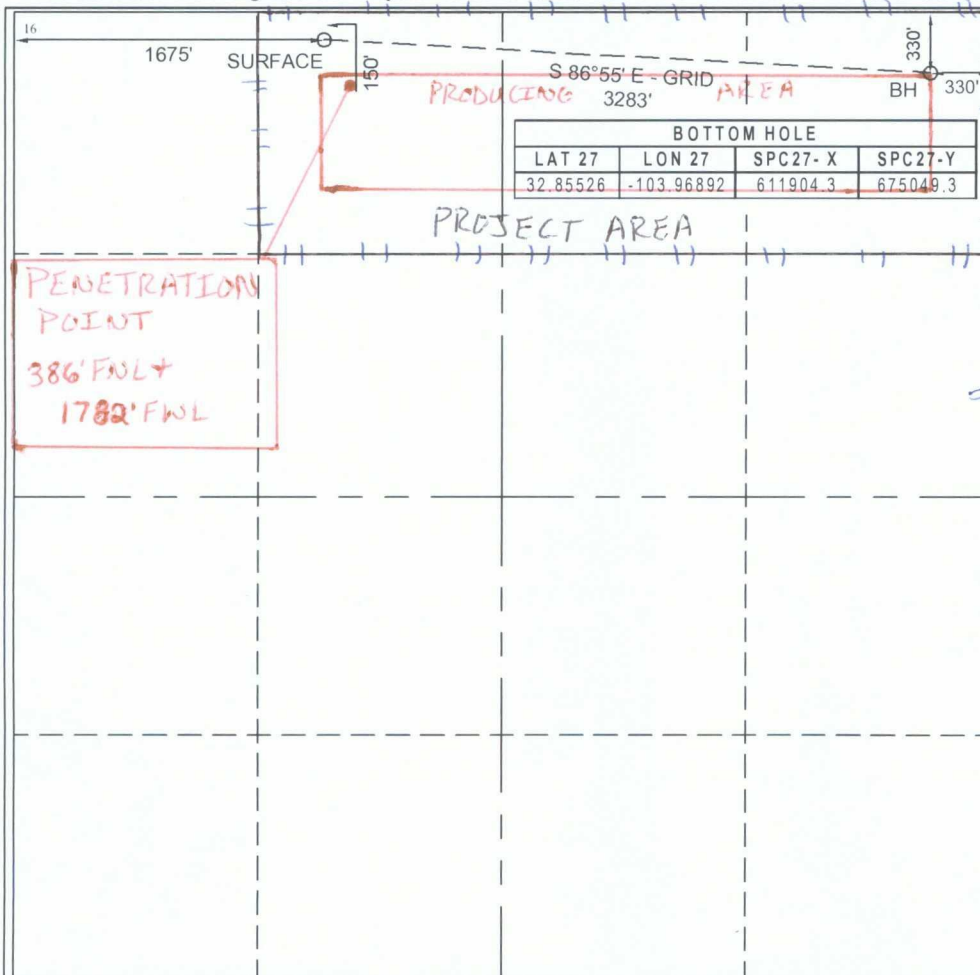
UL or lot C	Section 9	Township 17 S	Range 30 E	Lot Idn	Feet from the 150	North/South line NORTH	Feet from the 1675	East/West line WEST	County EDDY
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11 Bottom Hole Location If Different From Surface

UL or lot A	Section 9	Township 17 S	Range 30 E	Lot Idn	Feet from the 330	North/South line NORTH	Feet from the 330	East/West line EAST	County EDDY
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12 Dedicated Acres 120	13 Joint or Infill	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.



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 enter by the division.

Robyn Odom 9/14/2010
Signature Date

Robyn Odom
Printed Name

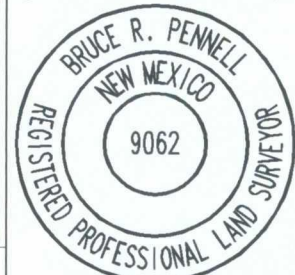
18 SURVEYOR CERTIFICATION

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 and correct to the best of my belief.

03/10/2010

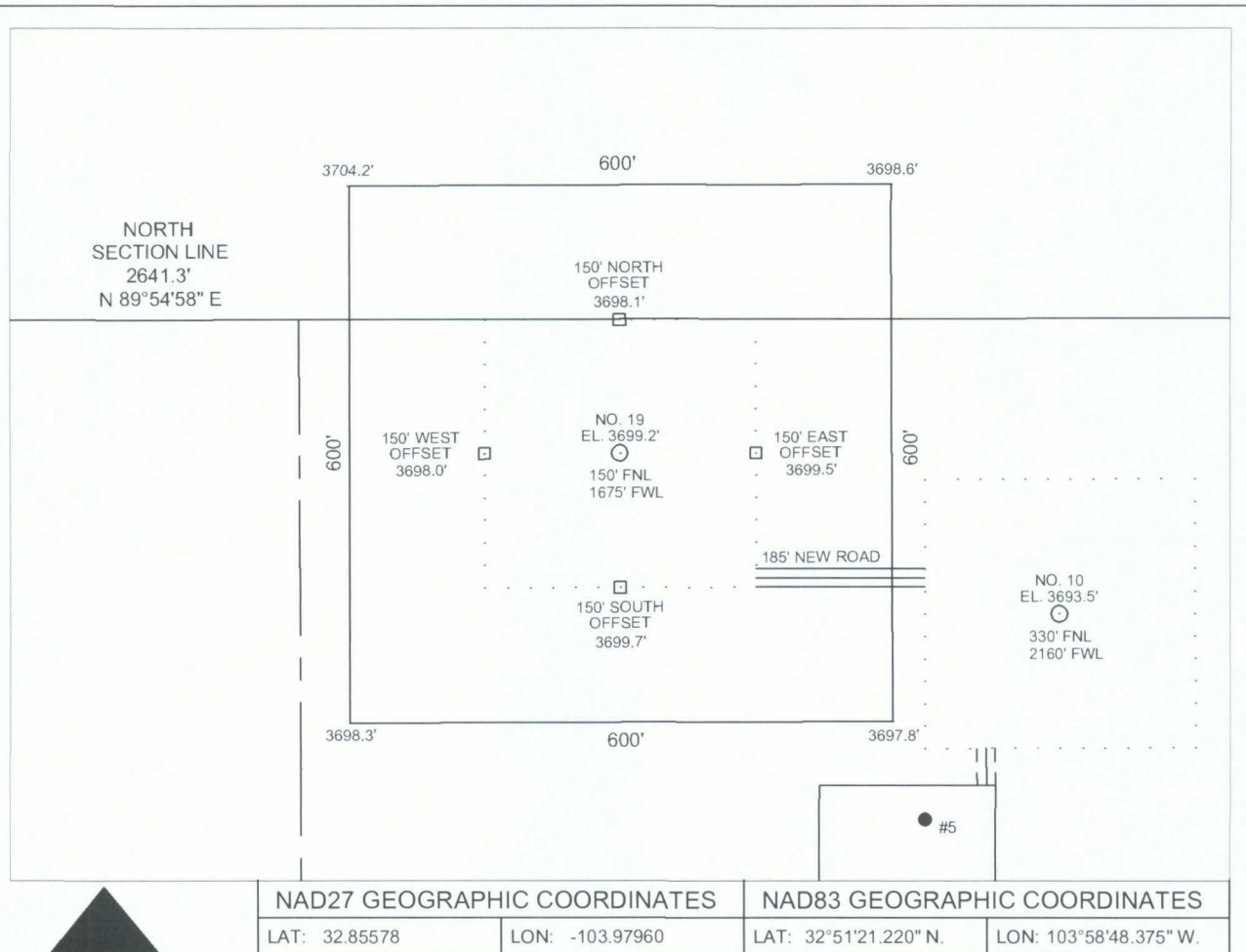
Date of Survey

Signature and Seal of Professional Surveyor

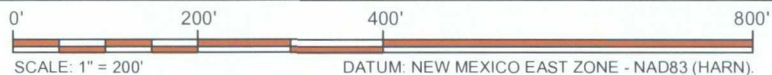


Bruce R. Pennell
Certificate Number 9062

NAD27 GEOGRAPHIC COORDINATES		NAD27 SPC - NM EAST	
LAT: 32.85578	LON: -103.97960	X = 608626.4	Y = 675225.4



DIRECTIONS TO LOCATION



1. FROM THE INTERSECTION OF U.S. HIGHWAY 82 AND CR 217 (HAGGERMAN CUTOFF RD.) AT LOCO HILLS, NEW MEXICO, 20.6 MILES EAST OF ARTESIA, NEW MEXICO;
2. THEN NORTH ON CR 217, 1.81 MILES TO A LEASE ROAD ON THE RIGHT;
3. THEN EAST ON THE LEASE ROAD, 0.48 MILES TO THE INTERSECTION OF CR 218 (GOAT ROPERS RD.);
4. THEN NORTH ON CR 218, AT 0.27 PASS THE SOUTH LINE OF THE MIRANDA FEDERAL LEASE, 0.65 MILES IN ALL TO A "T" INTERSECTION OF A LEASE ROAD TO THE LEFT.
5. THEN WESTERLY ON THE LEASE ROAD, 0.10 MILES TO THE NO. 5 WELL SITE ON THE RIGHT.
6. THEN NORTHERLY AT 120' CROSS THE NORTH LINE OF THE NO. 5 WELL SITE ENTERING A NEW LEASE ROAD, 0.07 MILES TO THE APPROXIMATE MID-POINT OF THE NO. 10 WELL SITE.
7. THEN WEST ON A NEW LEASE ROAD, 185' TO THE SOUTHEAST CORNER OF THE NO. 19 WELL SITE.

AEF A. E. FULLER & ASSOCIATES
LAND SURVEYORS
AL FULLER
Cell - (432) 559-6718
Email - al@aefuller.com
Fax: (817) 594-8437
3600 W. Baumann
Midland, TX 79703

COG OPERATING LLC
MIRANDA FEDERAL NO. 19
SECTION 9 - TOWNSHIP 17 S - RANGE 30 E
EDDY COUNTY, NM
N 87 E - 24.6 MILES FROM ARTESIA, NM

DATE: 03/10/2010

USGS
QUAD LOCO HILLS

www.aefuller.com



COG Operating LLC

Eddy County, NM (NAN27 NME)

Miranda Federal #19H

Miranda Federal #19H

OH

Plan: Plan #1 - 8-3/4" & 6-1/8"

SHL = 150' FNL & 1675' FWL

BHL = 380' FNL & 340' FEL

Standard Planning Report

14 September, 2010





Scientific Drilling

Planning Report



Database: EDM-Julio
Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Miranda Federal #19H
Well: Miranda Federal #19H
Wellbore: OH
Design: Plan #1 - 8-3/4" & 6-1/8"

Local Co-ordinate Reference: Site Miranda Federal #19H
TVD Reference: GL Elev @ 3699.20usft
MD Reference: GL Elev @ 3699.20usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project	Eddy County, NM (NAN27 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	Miranda Federal #19H		
Site Position:		Northing:	675,225.40 usft
From:	Map	Easting:	608,626.40 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 51' 20.802 N
		Longitude:	103° 58' 46.545 W
		Grid Convergence:	0.19 °

Well	Miranda Federal #19H		
Well Position	+N/-S	0.00 usft	Latitude: 32° 51' 20.802 N
	+E/-W	0.00 usft	Longitude: 103° 58' 46.545 W
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level: 3,699.20 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
	BGGM2010	2010/09/14	(°)
			7.98
			Dip Angle (°)
			60.73
			Field Strength (nT)
			49,062

Design	Plan #1 - 8-3/4" & 6-1/8"		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction (°)
			93.78

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth (usft)	(°)	(°)	Depth (usft)	(usft)	(usft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,744.00	4.88	180.00	1,743.71	-10.38	0.00	2.00	2.00	0.00	180.00	
4,108.87	4.88	180.00	4,100.00	-211.56	0.00	0.00	0.00	0.00	0.00	
4,841.33	87.05	89.40	4,580.00	-245.71	457.42	11.89	11.22	-12.37	-90.85	
7,655.70	87.05	89.40	4,725.00	-216.10	3,267.90	0.00	0.00	0.00	0.00	PBHL-MF #19H



Scientific Drilling
Planning Report



Database: EDM-Julio
Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Miranda Federal #19H
Well: Miranda Federal #19H
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Design: Plan #1 - 8-3/4" & 6-1/8"

Local Co-ordinate Reference: Site Miranda Federal #19H
TVD Reference: GL Elev @ 3699.20usft
MD Reference: GL Elev @ 3699.20usft
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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
North HL-MF #19H - East HL-MF #19H									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9-5/8" Casing									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00 °/100'									
1,525.00	0.50	180.00	1,525.00	-0.11	0.00	0.01	2.00	2.00	0.00
1,550.00	1.00	180.00	1,550.00	-0.44	0.00	0.03	2.00	2.00	0.00
1,575.00	1.50	180.00	1,574.99	-0.98	0.00	0.06	2.00	2.00	0.00
1,600.00	2.00	180.00	1,599.98	-1.75	0.00	0.12	2.00	2.00	0.00
1,625.00	2.50	180.00	1,624.96	-2.73	0.00	0.18	2.00	2.00	0.00
1,650.00	3.00	180.00	1,649.93	-3.93	0.00	0.26	2.00	2.00	0.00
1,675.00	3.50	180.00	1,674.89	-5.34	0.00	0.35	2.00	2.00	0.00
1,700.00	4.00	180.00	1,699.84	-6.98	0.00	0.46	2.00	2.00	0.00
1,725.00	4.50	180.00	1,724.77	-8.83	0.00	0.58	2.00	2.00	0.00
1,744.00	4.88	180.00	1,743.71	-10.38	0.00	0.69	2.00	2.00	0.00
EOC hold 4.88°									
1,750.00	4.88	180.00	1,749.68	-10.90	0.00	0.72	0.00	0.00	0.00
1,775.00	4.88	180.00	1,774.59	-13.02	0.00	0.86	0.00	0.00	0.00
1,800.00	4.88	180.00	1,799.50	-15.15	0.00	1.00	0.00	0.00	0.00
1,825.00	4.88	180.00	1,824.41	-17.28	0.00	1.14	0.00	0.00	0.00
1,850.00	4.88	180.00	1,849.32	-19.40	0.00	1.28	0.00	0.00	0.00
1,875.00	4.88	180.00	1,874.23	-21.53	0.00	1.42	0.00	0.00	0.00
1,900.00	4.88	180.00	1,899.14	-23.66	0.00	1.56	0.00	0.00	0.00
1,925.00	4.88	180.00	1,924.05	-25.78	0.00	1.70	0.00	0.00	0.00
1,950.00	4.88	180.00	1,948.96	-27.91	0.00	1.84	0.00	0.00	0.00
1,975.00	4.88	180.00	1,973.87	-30.04	0.00	1.98	0.00	0.00	0.00
2,000.00	4.88	180.00	1,998.78	-32.16	0.00	2.12	0.00	0.00	0.00
2,025.00	4.88	180.00	2,023.69	-34.29	0.00	2.26	0.00	0.00	0.00
2,050.00	4.88	180.00	2,048.60	-36.42	0.00	2.40	0.00	0.00	0.00
2,075.00	4.88	180.00	2,073.51	-38.54	0.00	2.54	0.00	0.00	0.00
2,100.00	4.88	180.00	2,098.41	-40.67	0.00	2.68	0.00	0.00	0.00
2,125.00	4.88	180.00	2,123.32	-42.80	0.00	2.82	0.00	0.00	0.00
2,150.00	4.88	180.00	2,148.23	-44.92	0.00	2.96	0.00	0.00	0.00
2,175.00	4.88	180.00	2,173.14	-47.05	0.00	3.10	0.00	0.00	0.00
2,200.00	4.88	180.00	2,198.05	-49.18	0.00	3.24	0.00	0.00	0.00
2,225.00	4.88	180.00	2,222.96	-51.30	0.00	3.39	0.00	0.00	0.00
2,250.00	4.88	180.00	2,247.87	-53.43	0.00	3.53	0.00	0.00	0.00
2,275.00	4.88	180.00	2,272.78	-55.56	0.00	3.67	0.00	0.00	0.00
2,300.00	4.88	180.00	2,297.69	-57.68	0.00	3.81	0.00	0.00	0.00
2,325.00	4.88	180.00	2,322.60	-59.81	0.00	3.95	0.00	0.00	0.00
2,350.00	4.88	180.00	2,347.51	-61.94	0.00	4.09	0.00	0.00	0.00
2,375.00	4.88	180.00	2,372.42	-64.06	0.00	4.23	0.00	0.00	0.00
2,400.00	4.88	180.00	2,397.33	-66.19	0.00	4.37	0.00	0.00	0.00
2,425.00	4.88	180.00	2,422.24	-68.32	0.00	4.51	0.00	0.00	0.00
2,450.00	4.88	180.00	2,447.15	-70.44	0.00	4.65	0.00	0.00	0.00
2,475.00	4.88	180.00	2,472.06	-72.57	0.00	4.79	0.00	0.00	0.00
2,500.00	4.88	180.00	2,496.96	-74.70	0.00	4.93	0.00	0.00	0.00
2,525.00	4.88	180.00	2,521.87	-76.82	0.00	5.07	0.00	0.00	0.00
2,550.00	4.88	180.00	2,546.78	-78.95	0.00	5.21	0.00	0.00	0.00
2,575.00	4.88	180.00	2,571.69	-81.08	0.00	5.35	0.00	0.00	0.00
2,600.00	4.88	180.00	2,596.60	-83.20	0.00	5.49	0.00	0.00	0.00
2,625.00	4.88	180.00	2,621.51	-85.33	0.00	5.63	0.00	0.00	0.00
2,650.00	4.88	180.00	2,646.42	-87.46	0.00	5.77	0.00	0.00	0.00



Scientific Drilling
Planning Report



Database: EDM-Julio
Company: COG Operating LLC
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Site: Miranda Federal #19H
Well: Miranda Federal #19H
Wellbore: OH
Design: Plan #1 - 8-3/4" & 6-1/8"

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TVD Reference: GL Elev @ 3699.20usft
MD Reference: GL Elev @ 3699.20usft
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)
2,675.00	4.88	180.00	2,671.33	-89.58	0.00	5.91	0.00	0.00	0.00
2,700.00	4.88	180.00	2,696.24	-91.71	0.00	6.05	0.00	0.00	0.00
2,725.00	4.88	180.00	2,721.15	-93.84	0.00	6.19	0.00	0.00	0.00
2,750.00	4.88	180.00	2,746.06	-95.96	0.00	6.33	0.00	0.00	0.00
2,775.00	4.88	180.00	2,770.97	-98.09	0.00	6.47	0.00	0.00	0.00
2,800.00	4.88	180.00	2,795.88	-100.22	0.00	6.61	0.00	0.00	0.00
2,825.00	4.88	180.00	2,820.79	-102.34	0.00	6.75	0.00	0.00	0.00
2,850.00	4.88	180.00	2,845.70	-104.47	0.00	6.89	0.00	0.00	0.00
2,875.00	4.88	180.00	2,870.61	-106.60	0.00	7.03	0.00	0.00	0.00
2,900.00	4.88	180.00	2,895.51	-108.72	0.00	7.17	0.00	0.00	0.00
2,925.00	4.88	180.00	2,920.42	-110.85	0.00	7.31	0.00	0.00	0.00
2,950.00	4.88	180.00	2,945.33	-112.98	0.00	7.45	0.00	0.00	0.00
2,975.00	4.88	180.00	2,970.24	-115.10	0.00	7.60	0.00	0.00	0.00
3,000.00	4.88	180.00	2,995.15	-117.23	0.00	7.74	0.00	0.00	0.00
3,025.00	4.88	180.00	3,020.06	-119.36	0.00	7.88	0.00	0.00	0.00
3,050.00	4.88	180.00	3,044.97	-121.48	0.00	8.02	0.00	0.00	0.00
3,075.00	4.88	180.00	3,069.88	-123.61	0.00	8.16	0.00	0.00	0.00
3,100.00	4.88	180.00	3,094.79	-125.74	0.00	8.30	0.00	0.00	0.00
3,125.00	4.88	180.00	3,119.70	-127.87	0.00	8.44	0.00	0.00	0.00
3,150.00	4.88	180.00	3,144.61	-129.99	0.00	8.58	0.00	0.00	0.00
3,175.00	4.88	180.00	3,169.52	-132.12	0.00	8.72	0.00	0.00	0.00
3,200.00	4.88	180.00	3,194.43	-134.25	0.00	8.86	0.00	0.00	0.00
3,225.00	4.88	180.00	3,219.34	-136.37	0.00	9.00	0.00	0.00	0.00
3,250.00	4.88	180.00	3,244.25	-138.50	0.00	9.14	0.00	0.00	0.00
3,275.00	4.88	180.00	3,269.16	-140.63	0.00	9.28	0.00	0.00	0.00
3,300.00	4.88	180.00	3,294.06	-142.75	0.00	9.42	0.00	0.00	0.00
3,325.00	4.88	180.00	3,318.97	-144.88	0.00	9.56	0.00	0.00	0.00
3,350.00	4.88	180.00	3,343.88	-147.01	0.00	9.70	0.00	0.00	0.00
3,375.00	4.88	180.00	3,368.79	-149.13	0.00	9.84	0.00	0.00	0.00
3,400.00	4.88	180.00	3,393.70	-151.26	0.00	9.98	0.00	0.00	0.00
3,425.00	4.88	180.00	3,418.61	-153.39	0.00	10.12	0.00	0.00	0.00
3,450.00	4.88	180.00	3,443.52	-155.51	0.00	10.26	0.00	0.00	0.00
3,475.00	4.88	180.00	3,468.43	-157.64	0.00	10.40	0.00	0.00	0.00
3,500.00	4.88	180.00	3,493.34	-159.77	0.00	10.54	0.00	0.00	0.00
3,525.00	4.88	180.00	3,518.25	-161.89	0.00	10.68	0.00	0.00	0.00
3,550.00	4.88	180.00	3,543.16	-164.02	0.00	10.82	0.00	0.00	0.00
3,575.00	4.88	180.00	3,568.07	-166.15	0.00	10.96	0.00	0.00	0.00
3,600.00	4.88	180.00	3,592.98	-168.27	0.00	11.10	0.00	0.00	0.00
3,625.00	4.88	180.00	3,617.89	-170.40	0.00	11.24	0.00	0.00	0.00
3,650.00	4.88	180.00	3,642.80	-172.53	0.00	11.38	0.00	0.00	0.00
3,675.00	4.88	180.00	3,667.71	-174.65	0.00	11.52	0.00	0.00	0.00
3,700.00	4.88	180.00	3,692.61	-176.78	0.00	11.66	0.00	0.00	0.00
3,725.00	4.88	180.00	3,717.52	-178.91	0.00	11.80	0.00	0.00	0.00
3,750.00	4.88	180.00	3,742.43	-181.03	0.00	11.95	0.00	0.00	0.00
3,775.00	4.88	180.00	3,767.34	-183.16	0.00	12.09	0.00	0.00	0.00
3,800.00	4.88	180.00	3,792.25	-185.29	0.00	12.23	0.00	0.00	0.00
3,825.00	4.88	180.00	3,817.16	-187.41	0.00	12.37	0.00	0.00	0.00
3,850.00	4.88	180.00	3,842.07	-189.54	0.00	12.51	0.00	0.00	0.00
3,875.00	4.88	180.00	3,866.98	-191.67	0.00	12.65	0.00	0.00	0.00
3,900.00	4.88	180.00	3,891.89	-193.79	0.00	12.79	0.00	0.00	0.00
3,925.00	4.88	180.00	3,916.80	-195.92	0.00	12.93	0.00	0.00	0.00
3,950.00	4.88	180.00	3,941.71	-198.05	0.00	13.07	0.00	0.00	0.00
3,975.00	4.88	180.00	3,966.62	-200.17	0.00	13.21	0.00	0.00	0.00
4,000.00	4.88	180.00	3,991.53	-202.30	0.00	13.35	0.00	0.00	0.00



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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)
4,025.00	4.88	180.00	4,016.44	-204.43	0.00	13.49	0.00	0.00	0.00
4,050.00	4.88	180.00	4,041.35	-206.55	0.00	13.63	0.00	0.00	0.00
4,075.00	4.88	180.00	4,066.26	-208.68	0.00	13.77	0.00	0.00	0.00
4,100.00	4.88	180.00	4,091.16	-210.81	0.00	13.91	0.00	0.00	0.00
4,108.87	4.88	180.00	4,100.00	-211.56	0.00	13.96	0.00	0.00	0.00
Start DLS 11.89°/100'									
4,125.00	5.22	158.39	4,116.07	-212.93	0.27	14.32	11.89	2.08	-133.95
4,150.00	6.85	134.40	4,140.94	-215.03	1.75	15.94	11.89	6.55	-95.98
4,175.00	9.19	121.01	4,165.69	-217.10	4.53	18.85	11.89	9.33	-53.56
4,200.00	11.81	113.25	4,190.27	-219.14	8.59	23.03	11.89	10.49	-31.05
4,225.00	14.56	108.33	4,214.61	-221.14	13.93	28.49	11.89	11.02	-19.68
4,250.00	17.39	104.96	4,238.64	-223.09	20.52	35.20	11.89	11.31	-13.46
4,275.00	20.26	102.52	4,262.31	-225.00	28.36	43.14	11.89	11.47	-9.77
4,300.00	23.15	100.66	4,285.53	-226.84	37.41	52.30	11.89	11.57	-7.43
4,325.00	26.06	99.20	4,308.26	-228.63	47.67	62.65	11.89	11.64	-5.85
4,350.00	28.98	98.01	4,330.43	-230.35	59.09	74.16	11.89	11.69	-4.75
4,375.00	31.91	97.02	4,351.98	-232.00	71.65	86.80	11.89	11.72	-3.95
4,400.00	34.85	96.19	4,372.85	-233.58	85.31	100.54	11.89	11.75	-3.35
4,425.00	37.79	95.46	4,392.99	-235.08	100.04	115.33	11.89	11.77	-2.89
4,450.00	40.74	94.83	4,412.34	-236.50	115.80	131.15	11.89	11.78	-2.53
4,475.00	43.69	94.27	4,430.86	-237.83	132.54	147.95	11.89	11.80	-2.24
4,500.00	46.64	93.77	4,448.48	-239.07	150.22	165.67	11.89	11.81	-2.01
4,502.21	46.90	93.73	4,450.00	-239.18	151.83	167.28	11.89	11.81	-1.91
7" Casing									
4,525.00	49.59	93.31	4,465.17	-240.22	168.80	184.28	11.89	11.82	-1.82
4,550.00	52.55	92.89	4,480.88	-241.27	188.22	203.73	11.89	11.82	-1.67
4,575.00	55.51	92.51	4,495.56	-242.22	208.42	223.95	11.89	11.83	-1.55
4,600.00	58.46	92.15	4,509.18	-243.07	229.37	244.91	11.89	11.83	-1.44
4,625.00	61.42	91.81	4,521.70	-243.82	250.99	266.53	11.89	11.84	-1.35
4,650.00	64.38	91.49	4,533.09	-244.46	273.23	288.77	11.89	11.84	-1.28
4,675.00	67.34	91.19	4,543.31	-244.99	296.04	311.56	11.89	11.84	-1.22
4,700.00	70.30	90.90	4,552.34	-245.41	319.35	334.84	11.89	11.84	-1.16
4,725.00	73.26	90.61	4,560.16	-245.72	343.09	358.55	11.89	11.84	-1.12
4,750.00	76.23	90.34	4,566.73	-245.92	367.20	382.63	11.89	11.85	-1.09
4,775.00	79.19	90.08	4,572.06	-246.01	391.63	407.01	11.89	11.85	-1.06
4,800.00	82.15	89.82	4,576.11	-245.99	416.29	431.62	11.89	11.85	-1.04
4,825.00	85.11	89.56	4,578.88	-245.86	441.14	456.40	11.89	11.85	-1.02
4,841.33	87.05	89.40	4,580.00	-245.71	457.43	472.64	11.89	11.85	-1.02
EOC hold 87.05°									
4,850.00	87.05	89.40	4,580.44	-245.62	466.08	481.28	0.00	0.00	0.00
4,875.00	87.05	89.40	4,581.73	-245.36	491.05	506.17	0.00	0.00	0.00
4,900.00	87.05	89.40	4,583.02	-245.09	516.02	531.06	0.00	0.00	0.00
4,925.00	87.05	89.40	4,584.31	-244.83	540.98	555.96	0.00	0.00	0.00
4,950.00	87.05	89.40	4,585.60	-244.57	565.95	580.85	0.00	0.00	0.00
4,975.00	87.05	89.40	4,586.88	-244.30	590.91	605.74	0.00	0.00	0.00
5,000.00	87.05	89.40	4,588.17	-244.04	615.88	630.64	0.00	0.00	0.00
5,025.00	87.05	89.40	4,589.46	-243.78	640.84	655.53	0.00	0.00	0.00
5,050.00	87.05	89.40	4,590.75	-243.51	665.81	680.42	0.00	0.00	0.00
5,075.00	87.05	89.40	4,592.04	-243.25	690.77	705.32	0.00	0.00	0.00
5,100.00	87.05	89.40	4,593.32	-242.99	715.74	730.21	0.00	0.00	0.00
5,125.00	87.05	89.40	4,594.61	-242.72	740.70	755.11	0.00	0.00	0.00
5,150.00	87.05	89.40	4,595.90	-242.46	765.67	780.00	0.00	0.00	0.00
5,175.00	87.05	89.40	4,597.19	-242.20	790.63	804.89	0.00	0.00	0.00



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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)
5,200.00	87.05	89.40	4,598.48	-241.94	815.60	829.79	0.00	0.00	0.00
5,225.00	87.05	89.40	4,599.77	-241.67	840.57	854.68	0.00	0.00	0.00
5,250.00	87.05	89.40	4,601.05	-241.41	865.53	879.57	0.00	0.00	0.00
5,275.00	87.05	89.40	4,602.34	-241.15	890.50	904.47	0.00	0.00	0.00
5,300.00	87.05	89.40	4,603.63	-240.88	915.46	929.36	0.00	0.00	0.00
5,325.00	87.05	89.40	4,604.92	-240.62	940.43	954.25	0.00	0.00	0.00
5,350.00	87.05	89.40	4,606.21	-240.36	965.39	979.15	0.00	0.00	0.00
5,375.00	87.05	89.40	4,607.49	-240.09	990.36	1,004.04	0.00	0.00	0.00
5,400.00	87.05	89.40	4,608.78	-239.83	1,015.32	1,028.94	0.00	0.00	0.00
5,425.00	87.05	89.40	4,610.07	-239.57	1,040.29	1,053.83	0.00	0.00	0.00
5,450.00	87.05	89.40	4,611.36	-239.31	1,065.25	1,078.72	0.00	0.00	0.00
5,475.00	87.05	89.40	4,612.65	-239.04	1,090.22	1,103.62	0.00	0.00	0.00
5,500.00	87.05	89.40	4,613.93	-238.78	1,115.19	1,128.51	0.00	0.00	0.00
5,525.00	87.05	89.40	4,615.22	-238.52	1,140.15	1,153.40	0.00	0.00	0.00
5,550.00	87.05	89.40	4,616.51	-238.25	1,165.12	1,178.30	0.00	0.00	0.00
5,575.00	87.05	89.40	4,617.80	-237.99	1,190.08	1,203.19	0.00	0.00	0.00
5,600.00	87.05	89.40	4,619.09	-237.73	1,215.05	1,228.08	0.00	0.00	0.00
5,625.00	87.05	89.40	4,620.37	-237.46	1,240.01	1,252.98	0.00	0.00	0.00
5,650.00	87.05	89.40	4,621.66	-237.20	1,264.98	1,277.87	0.00	0.00	0.00
5,675.00	87.05	89.40	4,622.95	-236.94	1,289.94	1,302.77	0.00	0.00	0.00
5,700.00	87.05	89.40	4,624.24	-236.68	1,314.91	1,327.66	0.00	0.00	0.00
5,725.00	87.05	89.40	4,625.53	-236.41	1,339.87	1,352.55	0.00	0.00	0.00
5,750.00	87.05	89.40	4,626.81	-236.15	1,364.84	1,377.45	0.00	0.00	0.00
5,775.00	87.05	89.40	4,628.10	-235.89	1,389.80	1,402.34	0.00	0.00	0.00
5,800.00	87.05	89.40	4,629.39	-235.62	1,414.77	1,427.23	0.00	0.00	0.00
5,825.00	87.05	89.40	4,630.68	-235.36	1,439.74	1,452.13	0.00	0.00	0.00
5,850.00	87.05	89.40	4,631.97	-235.10	1,464.70	1,477.02	0.00	0.00	0.00
5,875.00	87.05	89.40	4,633.25	-234.83	1,489.67	1,501.92	0.00	0.00	0.00
5,900.00	87.05	89.40	4,634.54	-234.57	1,514.63	1,526.81	0.00	0.00	0.00
5,925.00	87.05	89.40	4,635.83	-234.31	1,539.60	1,551.70	0.00	0.00	0.00
5,950.00	87.05	89.40	4,637.12	-234.05	1,564.56	1,576.60	0.00	0.00	0.00
5,975.00	87.05	89.40	4,638.41	-233.78	1,589.53	1,601.49	0.00	0.00	0.00
6,000.00	87.05	89.40	4,639.69	-233.52	1,614.49	1,626.38	0.00	0.00	0.00
6,025.00	87.05	89.40	4,640.98	-233.26	1,639.46	1,651.28	0.00	0.00	0.00
6,050.00	87.05	89.40	4,642.27	-232.99	1,664.42	1,676.17	0.00	0.00	0.00
6,075.00	87.05	89.40	4,643.56	-232.73	1,689.39	1,701.06	0.00	0.00	0.00
6,100.00	87.05	89.40	4,644.85	-232.47	1,714.35	1,725.96	0.00	0.00	0.00
6,125.00	87.05	89.40	4,646.14	-232.20	1,739.32	1,750.85	0.00	0.00	0.00
6,150.00	87.05	89.40	4,647.42	-231.94	1,764.29	1,775.75	0.00	0.00	0.00
6,175.00	87.05	89.40	4,648.71	-231.68	1,789.25	1,800.64	0.00	0.00	0.00
6,200.00	87.05	89.40	4,650.00	-231.42	1,814.22	1,825.53	0.00	0.00	0.00
6,225.00	87.05	89.40	4,651.29	-231.15	1,839.18	1,850.43	0.00	0.00	0.00
6,250.00	87.05	89.40	4,652.58	-230.89	1,864.15	1,875.32	0.00	0.00	0.00
6,275.00	87.05	89.40	4,653.86	-230.63	1,889.11	1,900.21	0.00	0.00	0.00
6,300.00	87.05	89.40	4,655.15	-230.36	1,914.08	1,925.11	0.00	0.00	0.00
6,325.00	87.05	89.40	4,656.44	-230.10	1,939.04	1,950.00	0.00	0.00	0.00
6,350.00	87.05	89.40	4,657.73	-229.84	1,964.01	1,974.89	0.00	0.00	0.00
6,375.00	87.05	89.40	4,659.02	-229.57	1,988.97	1,999.79	0.00	0.00	0.00
6,400.00	87.05	89.40	4,660.30	-229.31	2,013.94	2,024.68	0.00	0.00	0.00
6,425.00	87.05	89.40	4,661.59	-229.05	2,038.91	2,049.58	0.00	0.00	0.00
6,450.00	87.05	89.40	4,662.88	-228.78	2,063.87	2,074.47	0.00	0.00	0.00
6,475.00	87.05	89.40	4,664.17	-228.52	2,088.84	2,099.36	0.00	0.00	0.00
6,500.00	87.05	89.40	4,665.46	-228.26	2,113.80	2,124.26	0.00	0.00	0.00
6,525.00	87.05	89.40	4,666.74	-228.00	2,138.77	2,149.15	0.00	0.00	0.00



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6,550.00	87.05	89.40	4,668.03	-227.73	2,163.73	2,174.04	0.00	0.00	0.00
6,575.00	87.05	89.40	4,669.32	-227.47	2,188.70	2,198.94	0.00	0.00	0.00
6,600.00	87.05	89.40	4,670.61	-227.21	2,213.66	2,223.83	0.00	0.00	0.00
6,625.00	87.05	89.40	4,671.90	-226.94	2,238.63	2,248.72	0.00	0.00	0.00
6,650.00	87.05	89.40	4,673.18	-226.68	2,263.59	2,273.62	0.00	0.00	0.00
6,675.00	87.05	89.40	4,674.47	-226.42	2,288.56	2,298.51	0.00	0.00	0.00
6,700.00	87.05	89.40	4,675.76	-226.15	2,313.52	2,323.41	0.00	0.00	0.00
6,725.00	87.05	89.40	4,677.05	-225.89	2,338.49	2,348.30	0.00	0.00	0.00
6,750.00	87.05	89.40	4,678.34	-225.63	2,363.46	2,373.19	0.00	0.00	0.00
6,775.00	87.05	89.40	4,679.62	-225.37	2,388.42	2,398.09	0.00	0.00	0.00
6,800.00	87.05	89.40	4,680.91	-225.10	2,413.39	2,422.98	0.00	0.00	0.00
6,825.00	87.05	89.40	4,682.20	-224.84	2,438.35	2,447.87	0.00	0.00	0.00
6,850.00	87.05	89.40	4,683.49	-224.58	2,463.32	2,472.77	0.00	0.00	0.00
6,875.00	87.05	89.40	4,684.78	-224.31	2,488.28	2,497.66	0.00	0.00	0.00
6,900.00	87.05	89.40	4,686.06	-224.05	2,513.25	2,522.55	0.00	0.00	0.00
6,925.00	87.05	89.40	4,687.35	-223.79	2,538.21	2,547.45	0.00	0.00	0.00
6,950.00	87.05	89.40	4,688.64	-223.52	2,563.18	2,572.34	0.00	0.00	0.00
6,975.00	87.05	89.40	4,689.93	-223.26	2,588.14	2,597.24	0.00	0.00	0.00
7,000.00	87.05	89.40	4,691.22	-223.00	2,613.11	2,622.13	0.00	0.00	0.00
7,025.00	87.05	89.40	4,692.51	-222.74	2,638.08	2,647.02	0.00	0.00	0.00
7,050.00	87.05	89.40	4,693.79	-222.47	2,663.04	2,671.92	0.00	0.00	0.00
7,075.00	87.05	89.40	4,695.08	-222.21	2,688.01	2,696.81	0.00	0.00	0.00
7,100.00	87.05	89.40	4,696.37	-221.95	2,712.97	2,721.70	0.00	0.00	0.00
7,125.00	87.05	89.40	4,697.66	-221.68	2,737.94	2,746.60	0.00	0.00	0.00
7,150.00	87.05	89.40	4,698.95	-221.42	2,762.90	2,771.49	0.00	0.00	0.00
7,175.00	87.05	89.40	4,700.23	-221.16	2,787.87	2,796.38	0.00	0.00	0.00
7,200.00	87.05	89.40	4,701.52	-220.89	2,812.83	2,821.28	0.00	0.00	0.00
7,225.00	87.05	89.40	4,702.81	-220.63	2,837.80	2,846.17	0.00	0.00	0.00
7,250.00	87.05	89.40	4,704.10	-220.37	2,862.76	2,871.07	0.00	0.00	0.00
7,275.00	87.05	89.40	4,705.39	-220.11	2,887.73	2,895.96	0.00	0.00	0.00
7,300.00	87.05	89.40	4,706.67	-219.84	2,912.69	2,920.85	0.00	0.00	0.00
7,325.00	87.05	89.40	4,707.96	-219.58	2,937.66	2,945.75	0.00	0.00	0.00
7,350.00	87.05	89.40	4,709.25	-219.32	2,962.63	2,970.64	0.00	0.00	0.00
7,375.00	87.05	89.40	4,710.54	-219.05	2,987.59	2,995.53	0.00	0.00	0.00
7,400.00	87.05	89.40	4,711.83	-218.79	3,012.56	3,020.43	0.00	0.00	0.00
7,425.00	87.05	89.40	4,713.11	-218.53	3,037.52	3,045.32	0.00	0.00	0.00
7,450.00	87.05	89.40	4,714.40	-218.26	3,062.49	3,070.21	0.00	0.00	0.00
7,475.00	87.05	89.40	4,715.69	-218.00	3,087.45	3,095.11	0.00	0.00	0.00
7,500.00	87.05	89.40	4,716.98	-217.74	3,112.42	3,120.00	0.00	0.00	0.00
7,525.00	87.05	89.40	4,718.27	-217.48	3,137.38	3,144.90	0.00	0.00	0.00
7,550.00	87.05	89.40	4,719.55	-217.21	3,162.35	3,169.79	0.00	0.00	0.00
7,575.00	87.05	89.40	4,720.84	-216.95	3,187.31	3,194.68	0.00	0.00	0.00
7,600.00	87.05	89.40	4,722.13	-216.69	3,212.28	3,219.58	0.00	0.00	0.00
7,625.00	87.05	89.40	4,723.42	-216.42	3,237.24	3,244.47	0.00	0.00	0.00
7,650.00	87.05	89.40	4,724.71	-216.16	3,262.21	3,269.36	0.00	0.00	0.00
7,655.70	87.05	89.40	4,725.00	-216.10	3,267.90	3,275.04	0.00	0.00	0.00

PBHL-MF #19H



Scientific Drilling Planning Report



Database: EDM-Julio
Company: COG Operating LLC
Project: Eddy County, NM (NAN27 NME)
Site: Miranda Federal #19H
Well: Miranda Federal #19H
Wellbore: OH
Design: Plan #1 - 8-3/4" & 6-1/8"

Local Co-ordinate Reference: Site Miranda Federal #19H
TVD Reference: GL Elev @ 3699.20usft
MD Reference: GL Elev @ 3699.20usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

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
North HL-MF #19H - plan misses target center by 3282.63usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Rectangle (sides W4,000.00 H0.00 D0.00)	0.00	0.00	0.00	-176.10	3,277.90	675,049.30	611,904.30	32° 51' 18.950 N	103° 58' 8.125 W
East HL-MF #19H - plan misses target center by 3282.63usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E) - Rectangle (sides W0.00 H200.00 D0.00)	0.00	0.00	0.00	-176.10	3,277.90	675,049.30	611,904.30	32° 51' 18.950 N	103° 58' 8.125 W
PBHL-MF #19H - plan hits target center - Point	0.00	0.00	4,725.00	-216.10	3,267.90	675,009.30	611,894.30	32° 51' 18.554 N	103° 58' 8.244 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,400.00	1,400.00	9-5/8" Casing	9-5/8	12-1/4
4,502.21	4,450.00	7" Casing	7	8-3/4

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,500.00	1,500.00	0.00	0.00	Start Build 2.00 °/100'
1,744.00	1,743.71	-10.38	0.00	EOC hold 4.88°
4,108.87	4,100.00	-211.56	0.00	Start DLS 11.89°/100'
4,841.33	4,580.00	-245.71	457.43	EOC hold 87.05°



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Miranda Federal #19H
Wellbore: OH
Design: Plan #1 - 8-3/4" & 6-1/8"



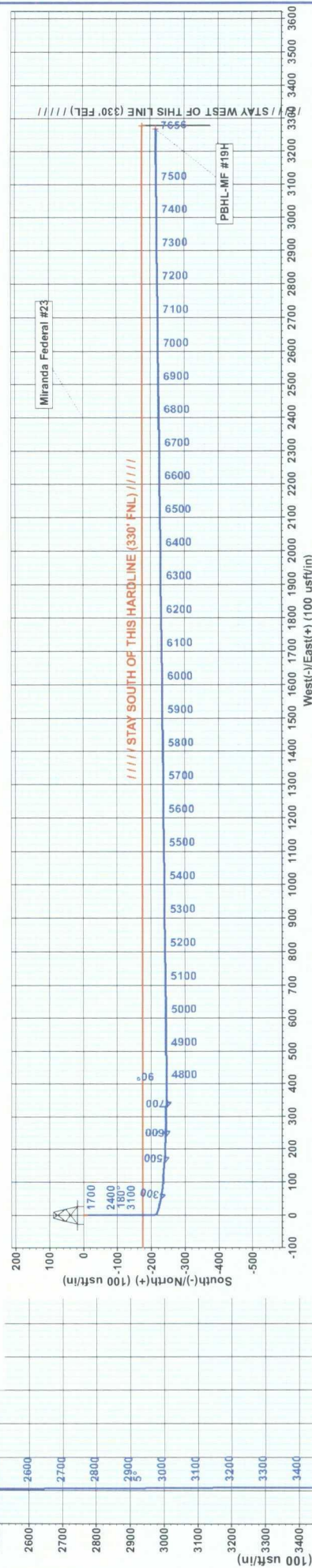
SECTION DETAILS

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSecl	Target	Name	+N/-S	+E/-W	Northing	Eastng	Latitude	Longitude	Shape
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	East HL-MF #19H	-176.10	3277.90	675049.30	611904.30	32°51'18.950" N	103°58'8.125" W	Rectangle (Sides: L 200.00 W0.00)
2	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	North HL-MF #19H	-176.10	3277.90	675049.30	611904.30	32°51'18.950" N	103°58'8.125" W	Rectangle (Sides: L 200.00 W0.00)
3	3174.00	4.88	180.00	1743.71	-10.38	0.00	2.00	180.00	0.00	0.69	PBHL-MF #19H	-216.10	3267.90	675009.30	611894.30	32°51'18.554" N	103°58'8.244" W	Point
4	4108.87	4.88	180.00	4100.00	-211.56	0.00	0.00	0.00	0.00	13.96								
5	4841.33	87.05	89.40	4580.00	-245.71	457.42	11.89	-90.85	472.64									
6	6765.70	87.05	89.40	4725.00	-216.10	3267.90	0.00	0.00	3275.04									

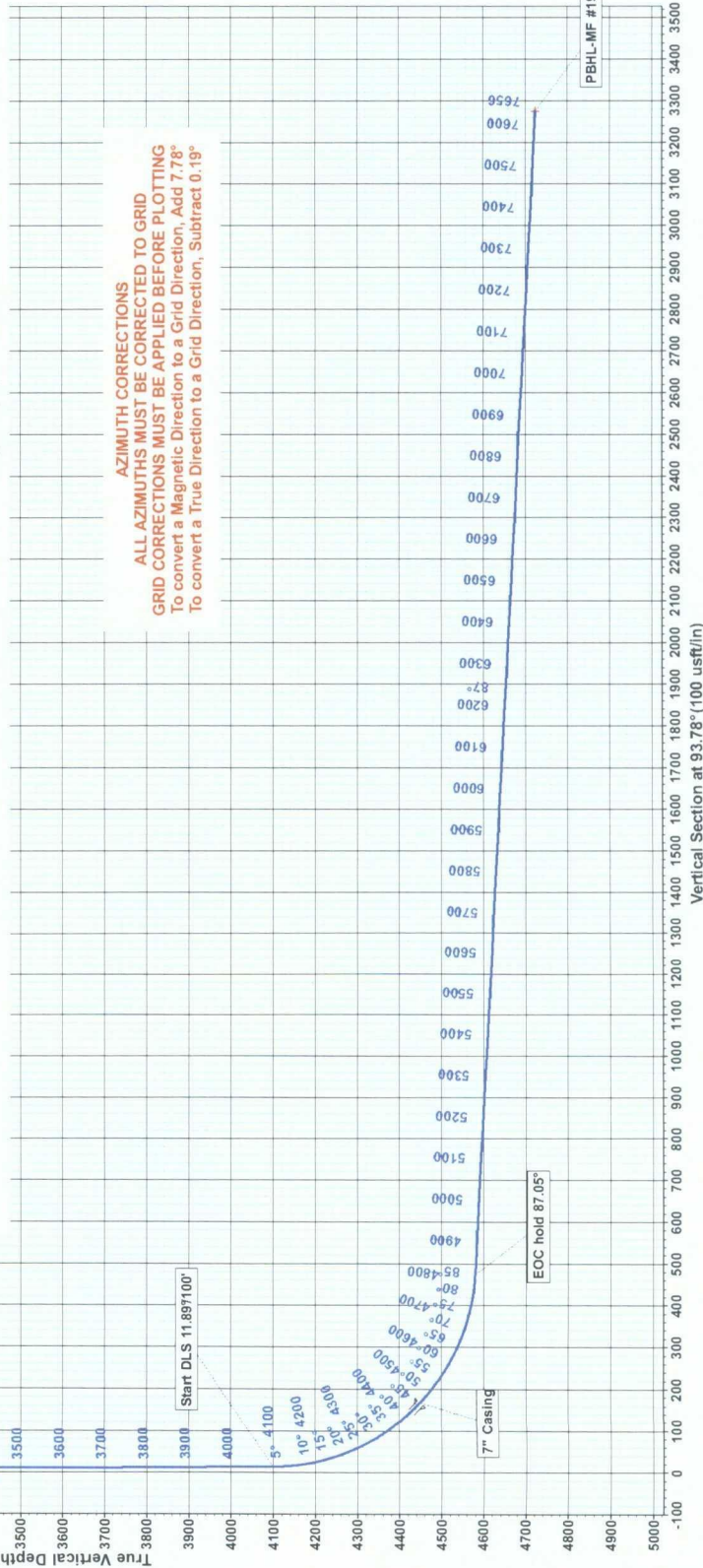
WELL DETAILS: Miranda Federal #19H

+N/-S	+E/-W	Northing	Eastng	Ground Level:	Latitude	Longitude	Slot
0.00	0.00	675225.40	608626.40	3699.20	32°51'20.802" N	103°58'46.545" W	



Azimuth to Grid North
Grid North: 0°
Magnetic North: 7.78°
Magnetic Field
Strength: 49062.1nT
Dip Angle: 60.73°
Date: 2010/09/14
Model: BGM2010

AZIMUTH CORRECTIONS
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 7.78°
To convert a True Direction to a Grid Direction, Subtract 0.19°



PROJECT DETAILS: Eddy County, NM (NAN27 NME)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level

Plan: Plan #1 - 8-3/4" & 6-1/8" (Miranda Federal #19H/OH)
Created By: Julio Pina
Date: 14-Sep-10
Checked: _____
Reviewed: _____
Date: _____
Date: _____

Offset Wells to Miranda Federal #19

API#	Operator	Lease	Well#	County	Legal	Field Name	Reservoir Name	Total Depth	Well Type	Well Status	First Prod.	Last Prod.	Avg. (B/OID)
30-015-04114		HOLDER CB NCT B FEDERAL	001	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA			G Active	Jan 1988	Dec 1993	0.00
30-015-21221	SEELY OIL CO	ARCO FEDERAL	003	EDDY	S:9, T:17S, R:30E	SQUARE LAKE	GRAYBURG-SAN ANDRES	0	O	Pumping	Jan 1975	Jun 2010	0.03
30-015-21276	SEELY OIL CO	ARCO FEDERAL	004	EDDY	S:9, T:17S, R:30E	SQUARE LAKE	GRAYBURG-SAN ANDRES	0	O	Pumping	Jan 1975	Jun 2010	0.03
30-015-21437	SEELY OIL CO	ARCO FEDERAL	006	EDDY	S:9, T:17S, R:30E	SQUARE LAKE	GRAYBURG-SAN ANDRES	0	O	Pumping	Feb 1975	Jun 2010	0.03
30-015-20851	SEELY OIL CO	ARCO FEDERAL	001	EDDY	S:9, T:17S, R:30E	SQUARE LAKE	GRAYBURG-SAN ANDRES	2,880	O	Active	Nov 1973	Jun 2010	0.07
30-015-20951	SEELY OIL CO	ARCO FEDERAL	002	EDDY	S:9, T:17S, R:30E	SQUARE LAKE	GRAYBURG-SAN ANDRES	0	O	Pumping	Jan 1975	Jun 2010	0.07
30-015-21436	SEELY OIL CO	ARCO FEDERAL	005	EDDY	S:9, T:17S, R:30E	SQUARE LAKE	GRAYBURG-SAN ANDRES	0	O	Pumping	Feb 1975	Jun 2010	0.07
30-015-25110	CBS OPERATING CORP	LOCO HILLS B FEDERAL	009	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA	3,040	PO	Shut-in	Jan 1993	Feb 2010	0.07
30-015-20617	CBS OPERATING CORP	LOCO HILLS B FEDERAL	002	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA	2,878	O	Active	Jan 1979	Apr 2005	0.33
30-015-20675	CBS OPERATING CORP	LOCO HILLS B FEDERAL	008	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA		O	Shut-in	Jan 1979	Jun 2010	0.73
30-015-35396	COG OPERATING LLC	POLARIS B FEDERAL	11	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	6,015	O	Active	Nov 2007	Jul 2010	0.97
30-015-20673	CBS OPERATING CORP	LOCO HILLS B FEDERAL	006	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA	2,880	O	Active	Jan 1979	Jun 2010	1.10
30-015-35395	COG OPERATING LLC	POLARIS B FEDERAL	10	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	6,000	O	Active	May 2008	Jul 2010	4.35
30-015-36328	CIMAREX ENERGY CO. OF COLORADO	VEGA "9" FEDERAL	2	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,005	O	Active Permit	Jun 2008	Jul 2010	4.65
30-015-20673	CBS OPERATING CORP	LOCO HILLS B FEDERAL	006	EDDY	S:9, T:17S, R:30E	GRAYBURG JKSN SR-Q-G-SA(DO NOT USE)		2,880	O	Active	Jul 1972	Dec 1977	5.32
30-015-34707	COG OPERATING LLC	POLARIS B FEDERAL	5	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,985	O	Active Permit	Nov 2006	Jul 2010	6.03
30-015-20675	CBS OPERATING CORP	LOCO HILLS B FEDERAL	008	EDDY	S:9, T:17S, R:30E	GRAYBURG JKSN SR-Q-G-SA(DO NOT USE)			O	Shut-in	Jan 1973	Dec 1977	6.10
30-015-20674	CBS OPERATING CORP	LOCO HILLS B FEDERAL	007	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA		G	Flowing	Jan 1979	Dec 1982	6.23
	CBS	LOCO			S:9,								

30-015-20672	OPERATING CORP	HILLS B FEDERAL	005	EDDY	T:17S, R:30E	GRAYBURG JKSN SR-Q-G-SA(DO NOT USE)		2,870	PI	Flowing	Jul 1972	Dec 1977	6.84
30-015-20617	OPERATING CORP	LOCO HILLS B FEDERAL	002	EDDY	S:9, T:17S, R:30E	GRAYBURG JKSN SR-Q-G-SA(DO NOT USE)		2,878	O	Active	Jun 1972	Dec 1977	7.77
30-015-36710	COG OPERATING LLC	POLARIS B FEDERAL	24	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,005	O	Active Permit	May 2009	Jul 2010	7.87
30-015-35649	COG OPERATING LLC	POLARIS B FEDERAL	6	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,970	O	Active	Nov 2007	Jul 2010	7.97
30-015-35931	COG OPERATING LLC	POLARIS B FEDERAL	15	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,920	O	Active Permit	Feb 2008	Jul 2010	9.45
30-015-35397	COG OPERATING LLC	POLARIS B FEDERAL	12	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,920	O	Active	Nov 2007	Jul 2010	9.87
30-015-36234	CIMAREX ENERGY CO. OF COLORADO	VEGA "9" FEDERAL	1	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,995	O	Active Permit	Jun 2008	Jul 2010	11.13
30-015-35471	COG OPERATING LLC	HOLDER CB FEDERAL	11	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,896	O	Active	Sep 2007	Jul 2010	11.84
30-015-35699	COG OPERATING LLC	POLARIS B FEDERAL	7	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	6,020	O	Active Permit	Feb 2008	Jul 2010	13.23
30-015-35927	COG OPERATING LLC	POLARIS B FEDERAL	16	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,935	O	Active Permit	Mar 2008	Jul 2010	13.87
30-015-35965	COG OPERATING LLC	HOLDER CB FEDERAL	15	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,920	O	Active Permit	Jun 2008	Jul 2010	15.19
30-015-35964	COG OPERATING LLC	HOLDER CB FEDERAL	14	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,935	O	Active Permit	Oct 2008	Jul 2010	15.52
30-015-35932	COG OPERATING LLC	POLARIS B FEDERAL	17	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,920	O	Active Permit	Feb 2008	Jul 2010	15.65
30-015-35394	COG OPERATING LLC	POLARIS B FEDERAL	9	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	6,007	O	Active Permit	Nov 2007	Jul 2010	16.16
30-015-36668	COG OPERATING LLC	HOLDER CB FEDERAL	17	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,004	O	Active Permit	Aug 2009	Jul 2010	16.32
30-015-35393	COG OPERATING LLC	POLARIS B FEDERAL	8	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	5,970	O	Active	Sep 2007	Jul 2010	17.74
30-015-36707	COG OPERATING LLC	POLARIS B FEDERAL	21	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,010	O	Active Permit	May 2009	Jul 2010	22.16
30-015-36669	COG OPERATING LLC	HOLDER CB FEDERAL	18	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,049	U	Active Permit	Dec 2009	Jul 2010	22.45
30-015-20674	CBS OPERATING CORP	LOCO HILLS B FEDERAL	007	EDDY	S:9, T:17S, R:30E	GRAYBURG JKSN SR-Q-G-SA(DO NOT USE)					Jul 1972	Dec 1977	25.74
30-015-36663	COG OPERATING LLC	POLARIS B FEDERAL	31	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,006	O	Active Permit	Jul 2009	Jul 2010	28.29
	COG	POLARIS			S:9,								

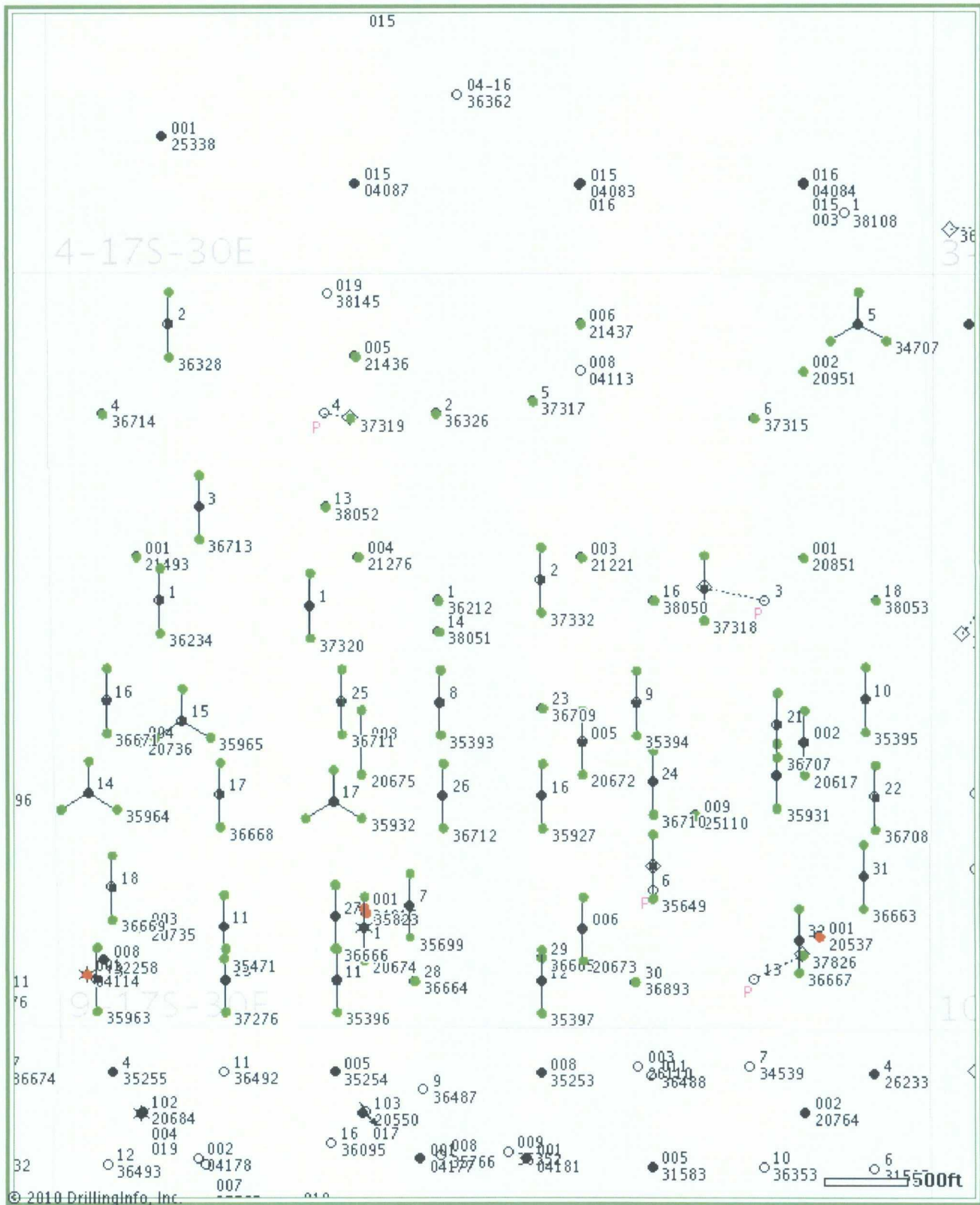
30-015-34707	OPERATING LLC	B FEDERAL	5	EDDY	T:17S, R:30E	LOCO HILLS; GLORIETA-YESO			5,985	O	Active Permit	Nov 2006	Nov 2006	29.17
30-015-36711	COG OPERATING LLC	POLARIS B FEDERAL	25	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,012	O	Active Permit	Oct 2009	Jul 2010	34.03
30-015-37332	COG OPERATING LLC	MIRANDA FEDERAL	2	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,030	O	Active Permit	Mar 2010	Jul 2010	34.48
30-015-36671	COG OPERATING LLC	HOLDER CB FEDERAL	16	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,017	O	Active Permit	Jan 2010	Jul 2010	35.00
30-015-35963	COG OPERATING LLC	HOLDER CB FEDERAL	13	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK		5,917	O	Active Permit	Aug 2008	Jul 2010	36.26
30-015-37320	COG OPERATING LLC	MIRANDA FEDERAL	1	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,023	O	Active Permit	Jun 2010	Jul 2010	37.10
30-015-36712	COG OPERATING LLC	POLARIS B FEDERAL	26	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,007	O	Active Permit	Jul 2009	Jul 2010	42.61
30-015-35397	COG OPERATING LLC	POLARIS B FEDERAL	12	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORETA-YESO (GAS)	GAS		5,920	O	Active	Nov 2007	Nov 2007	44.57
30-015-36708	COG OPERATING LLC	POLARIS B FEDERAL	22	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,014	O	Active Permit	Apr 2010	Jul 2010	46.26
30-015-37318	COG OPERATING LLC	MIRANDA FEDERAL	3	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,065	O	Active Permit	Apr 2010	Jul 2010	46.61
30-015-36666	COG OPERATING LLC	FEDERAL	27	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,023	O	Active Permit	Feb 2010	Jul 2010	47.03
30-015-37276	COG OPERATING LLC	HOLDER CB FEDERAL	19	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		5,860	O	Active Permit	Mar 2010	Jul 2010	53.61
30-015-36709	COG OPERATING LLC	POLARIS B FEDERAL	23	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,000	PO	Active Permit	Jul 2010	Jul 2010	62.45
30-015-36714	CIMAREX ENERGY CO. OF COLORADO	VEGA 9 FEDERAL	4	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,000	PO	Active Permit	Jun 2010	Jul 2010	81.65
30-015-36667	COG OPERATING LLC	POLARIS B FEDERAL	32	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		6,015	O	Active Permit	May 2010	Jul 2010	99.00
30-015-36713	CIMAREX ENERGY CO. OF COLORADO	VEGA 9 FEDERAL	3	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK		5,616	O	Active Permit	Jun 2010	Jul 2010	163.03
30-015-20537	CBS OPERATING CORP	LOCO HILLS B FEDERAL	001	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA		2,872	PO	Injection Well	Jan 1993	Jun 2010	
30-015-20672	CBS OPERATING CORP	LOCO HILLS B FEDERAL	005	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA		2,870	PI	Flowing	Jan 1979	Dec 1982	
30-015-21493	SEELY OIL CO	PARKE G FEDERAL	001	EDDY	S:9, T:17S, R:30E	SQUARE LAKE	GRAYBURG-SAN ANDRES		0	O	Pumping	Apr 1975	Mar 2010	
30-015-20735		HOLDER CB NCT B FEDERAL	003	EDDY	S:9, T:17S, R:30E	GRAYBURG JACKSON	SR-Q-G-SA		3,600	O	Active			

30-015-34915	GRUY PETROLEUM MANAGEMENT CO.	STEWART 9 FEDERAL COM	001	EDDY	S:9, T:17S, R:30E	LOCO HILLS	MORROW (GAS)	11,650	PG	Active Permit			
30-015-35823	GRUY PETROLEUM MANAGEMENT CO.	STEWART 9 FEDERAL COM	1	EDDY	S:9, T:17S, R:30E	LOCO HILLS	MORROW (GAS)	11,650	PG	Active Permit			
30-015-35393	COG OPERATING LLC	POLARIS B FEDERAL	8	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA YESO		5,970	O	Active			
30-015-35471	COG OPERATING LLC	HOLDER CB FEDERAL	11	EDDY	S:9, T:17S, R:30E	LOCO HILLS; EMPIRE; YESO		5,896	O	Active			
30-015-35649	COG OPERATING LLC	POLARIS B FEDERAL	6	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORETA-YESO (GAS)	GAS	5,970	O	Active			
30-015-35394	COG OPERATING LLC	POLARIS B FEDERAL	9	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORETA-YESO (GAS)	GAS	6,007	O	Active Permit			
30-015-35396	COG OPERATING LLC	POLARIS B FEDERAL	11	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORETA-YESO (GAS)	GAS	6,015	O	Active			
30-015-35699	COG OPERATING LLC	POLARIS B FEDERAL	7	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA YESO		6,020	O	Active Permit			
30-015-35927	COG OPERATING LLC	POLARIS B FEDERAL	16	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA YESO		5,935	O	Active Permit			
30-015-35931	COG OPERATING LLC	POLARIS B FEDERAL	15	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA YESO		5,920	O	Active Permit			
30-015-35932	COG OPERATING LLC	POLARIS B FEDERAL	17	EDDY	S:9, T:17S, R:30E	LOCO HILLS	QU-GB-SA, SOUTH	5,920	O	Active Permit			
30-015-36212	CIMAREX ENERGY CO. OF COLORADO	DRACO 9 FEDERAL	1	EDDY	S:9, T:17S, R:30E	LOCO HILLS	PADDOCK	6,000	PO	Active Permit			
30-015-35395	COG OPERATING LLC	POLARIS B FEDERAL	10	EDDY	S:9, T:17S, R:30E	LOCO HILLS	QU-GB-SA, SOUTH	6,000	O	Active			
30-015-35965	COB OPERATING LLC	HOLDER CB FEDERAL	15	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,920	O	Active Permit			
30-015-36326	CIMAREX ENERGY CO. OF COLORADO	DRACO 9 FEDERAL	2	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active Permit			
30-015-35965	COG OPERATING LLC	HOLDER CB FEDERAL	15	EDDY	S:9, T:17S, R:30E	LOCO HILLS	QU-GB-SA, SOUTH	5,920	O	Active Permit			
30-015-35963	COG OPERATING LLC	HOLDER CB FEDERAL	13	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,917	O	Active Permit			
30-015-36234	CIMAREX ENERGY CO. OF COLORADO	VEGA 9 FEDERAL	1	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,995	O	Active Permit			
	COG OPERATING	POLARIS B			S:9, T:17S,								

30-015-36664	LLC	FEDERAL	28	EDDY	R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active Permit			
30-015-36665	COG OPERATING LLC	POLARIS B FEDERAL	29	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active Permit			
30-015-36328	CIMAREX ENERGY CO.	VEGA 9 FEDERAL	2	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,005	O	Active Permit			
30-015-35964	COG OPERATING LLC	HOLDER FEDERAL	14	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,935	O	Active Permit			
30-015-35964	COG OPERATING LLC	HOLDER FEDERAL	14	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,935	O	Active Permit			
30-015-36893	COG OPERATING LLC	POLARIS B FEDERAL	30	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active Permit			
30-015-35932	COG OPERATING LLC	POLARIS B FEDERAL	17	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,920	O	Active Permit			
30-015-36710	COG OPERATING LLC	POLARIS B FEDERAL	24	EDDY	S:9, T:17S, R:30E	LOCO HILLS		6,005	O	Active Permit			
30-015-36707	COG OPERATING LLC	POLARIS B FEDERAL	21	EDDY	S:9, T:17S, R:30E	LOCO HILLS		6,010	O	Active Permit			
30-015-36712	COG OPERATING LLC	POLARIS B FEDERAL	26	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,007	O	Active Permit			
30-015-36663	COG OPERATING LLC	POLARIS B FEDERAL	31	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,006	O	Active Permit			
30-015-37319	COG OPERATING LLC	MIRANDA FEDERAL	4	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,159	PO	Active Permit			
30-015-37315	COG OPERATING LLC	MIRANDA FEDERAL	6	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active Permit			
30-015-37317	COG OPERATING LLC	MIRANDA FEDERAL	5	EDDY	S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active Permit			
30-015-36668	COG OPERATING LLC	HOLDER FEDERAL	17	EDDY	S:9, T:17S, R:30E	LOCO HILLS	QU-GB-SA, SOUTH	6,004	O	Active Permit			
30-015-36711	COG OPERATING LLC	POLARIS B FEDERAL	25	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,012	O	Active Permit			
30-015-34707	COG OPERATING LLC	POLARIS B FEDERAL	5	EDDY	S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,985	O	Active Permit			
30-015-36669	COG OPERATING LLC	HOLDER FEDERAL	18	EDDY	S:9, T:17S, R:30E	LOCO HILLS		6,049	U	Active Permit			
30-015-36666	COG OPERATING LLC	POLARIS B FEDERAL	27	EDDY	S:9, T:17S, R:30E	LOCO HILLS	QU-GB-SA, SOUTH	6,023	O	Active Permit			
30-015-36671	COG OPERATING LLC	HOLDER FEDERAL	16	EDDY	S:9, T:17S, R:30E	LOCO HILLS	QU-GB-SA, SOUTH	6,017	O	Active Permit			
30-015-36664	COG OPERATING LLC	HOLDER FEDERAL			S:9, T:17S,								

30-015-37276	LLC	FEDERAL	19	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,860	O	Active Permit		
30-015-37320	COG OPERATING LLC	MIRANDA FEDERAL	1	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,023	O	Active Permit		
30-015-37332	COG OPERATING LLC	MIRANDA FEDERAL	2	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS GLORIETA -YESO		6,030	O	Active Permit		
30-015-37826	COG OPERATING LLC	POLARIS B FEDERAL	13	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active Permit		
30-015-37318	COG OPERATING LLC	MIRANDA FEDERAL	3	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,065	O	Active Permit		
30-015-36708	COG OPERATING LLC	POLARIS B FEDERAL	22	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,014	O	Active Permit		
30-015-38050	COG OPERATING LLC	MIRANDA FEDERAL	16	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active		
30-015-38051	COG OPERATING LLC	MIRANDA FEDERAL	14	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,150	PO	Active		
30-015-38052	COG OPERATING LLC	MIRANDA FEDERAL	13	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active		
30-015-38053	COG OPERATING LLC	MIRANDA FEDERAL	18	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS (PADDOCK)	PADDOCK	6,000	PO	Active		
30-015-36667	COG OPERATING LLC	POLARIS B FEDERAL	32	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		6,015	O	Active Permit		
30-015-36713	CIMAREX ENERGY CO. OF COLORADO	VEGA 9 FEDERAL	3	EDDY	R:30E S:9, T:17S, R:30E	LOCO HILLS; GLORIETA-YESO		5,616	O	Active Permit		

Offset Wells to Miranda Federal #19



Miranda Federal

LOCO HILLS

WALTERS LAKE

MIDLAND MAP

Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Wednesday, September 22, 2010 4:12 PM
To: 'Robyn Odom'
Cc: Inge, Richard, EMNRD
Subject: Miranda Fed #19; NSL Application

Dear Ms. Odom

I have in hand the referenced application.

If I read this application correctly, the current proposal for this well is that it will penetrate the top of the Glorieta at a point (penetration point) that is a standard location. As such, NSL approval is not required. If the well penetrates the pool at a standard location, and the entire horizontal shaft is within the Producing Area, the location is not unorthodox, regardless of the surface location.

Please advise if this is a correct interpretation of what you are planning for this well. If so, we can cancel this application.

Sincerely

David K. Brooks
Legal Examiner

Brooks, David K., EMNRD

From: Brooks, David K., EMNRD
Sent: Thursday, September 23, 2010 9:10 AM
To: 'Robyn Odom'
Subject: RE: Miranda Fed #19; NSL Application

Dear Ms. Odom

Since the now-proposed location is orthodox, I will not be issuing an amended order. The district office should give OCD approval on the revised APD. If any issue arises, please let me know.

Sincerely

David K. Brooks

From: Robyn Odom [mailto:rodom@conchoresources.com]
Sent: Thursday, September 23, 2010 7:33 AM
To: Brooks, David K., EMNRD
Subject: RE: Miranda Fed #19; NSL Application

Dear Mr. Brooks,

You are correct that the penetration point is at a standard location. I just wanted to send in the amendment to show that the location had been changed. Please let me know if you need any more information.

Thank you,

Robyn Odom
(432) 685-4385

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From: Brooks, David K., EMNRD [mailto:david.brooks@state.nm.us]
Sent: Wednesday, September 22, 2010 5:12 PM
To: Robyn Odom
Cc: Inge, Richard, EMNRD
Subject: Miranda Fed #19; NSL Application

Dear Ms. Odom

I have in hand the referenced application.

If I read this application correctly, the current proposal for this well is that it will penetrate the top of the Glorieta at a point (penetration point) that is a standard location. As such, NSL approval is not required. If the well penetrates the pool at a standard location, and the entire horizontal shaft is within the Producing Area, the location is not unorthodox, regardless of the surface location.

Please advise if this is a correct interpretation of what you are planning for this well. If so, we can cancel this application.

Sincerely

David K. Brooks
Legal Examiner

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