

District I
1625 N French Dr., Hobbs, NM 88240
District II
1301 W Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-144 CLEZ
July 21, 2008

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

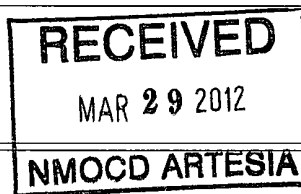
Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: COG OPERATING LLC OGRID #: 229137
Address: 550 WEST TEXAS, SUITE 1300 MIDLAND, TX 79701
Facility or well name: CLYDESDALE "1" FEE #3H
API Number: 30-015-40123 OCD Permit Number: 212727
U/L or Qtr/Qtr UL H Section 1 Township 19S Range 25E County: EDDY
Center of Proposed Design: Latitude N/A Longitude N/A NAD ☐ 1927 ☐ 1983
Surface Owner: ☐ Federal ☒ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
☒ **Closed-loop System:** Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☐ Above Ground Steel Tanks or ☒ Haul-off Bins

3.
Signs: Subsection C of 19.15.17.11 NMAC
☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
☒ Signed in compliance with 19.15.3.103 NMAC



4.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Closure Plan (Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____

5.
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)
Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.
Disposal Facility Name: CRI Disposal Facility Permit Number: R1966
Disposal Facility Name: GM INC Disposal Facility Permit Number: 711-019-001
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No
Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): KELLY J. HOLLY Title: PERMITTING TECH
Signature: [Signature] Date: 03/13/2012
e-mail address: kholly@concho.com Telephone: 432-685-4384

7. **OCD Approval:** ☒ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: [Signature] Approval Date: 04/05/2012

Title: Dist R Super OCD Permit Number: 212727

8. **Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ Closure Completion Date: _____

9. **Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

Instructions: Please indentify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

10. **Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Closed Loop Operation & Maintenance Procedure

All drilling fluid circulated over shaker(s) with cuttings discharged into roll off container.

Fluid and fines below shaker(s) are circulated with transfer pump through centrifuge(s) or solids separator with cuttings and fines discharged into roll off container.

Fluid is continuously re-circulated through equipment with polymer added to aid separation of cutting fines.

Roll off containers are lined and de-watered with fluids re-circulated into system.

Additional tank is used to capture unused drilling fluid or cement returns from casing jobs.

This equipment will be maintained 24 hrs./day by solids control personnel and or rig crews that stay on location.

Cuttings will be hauled to either:

CRI (permit number R9166)

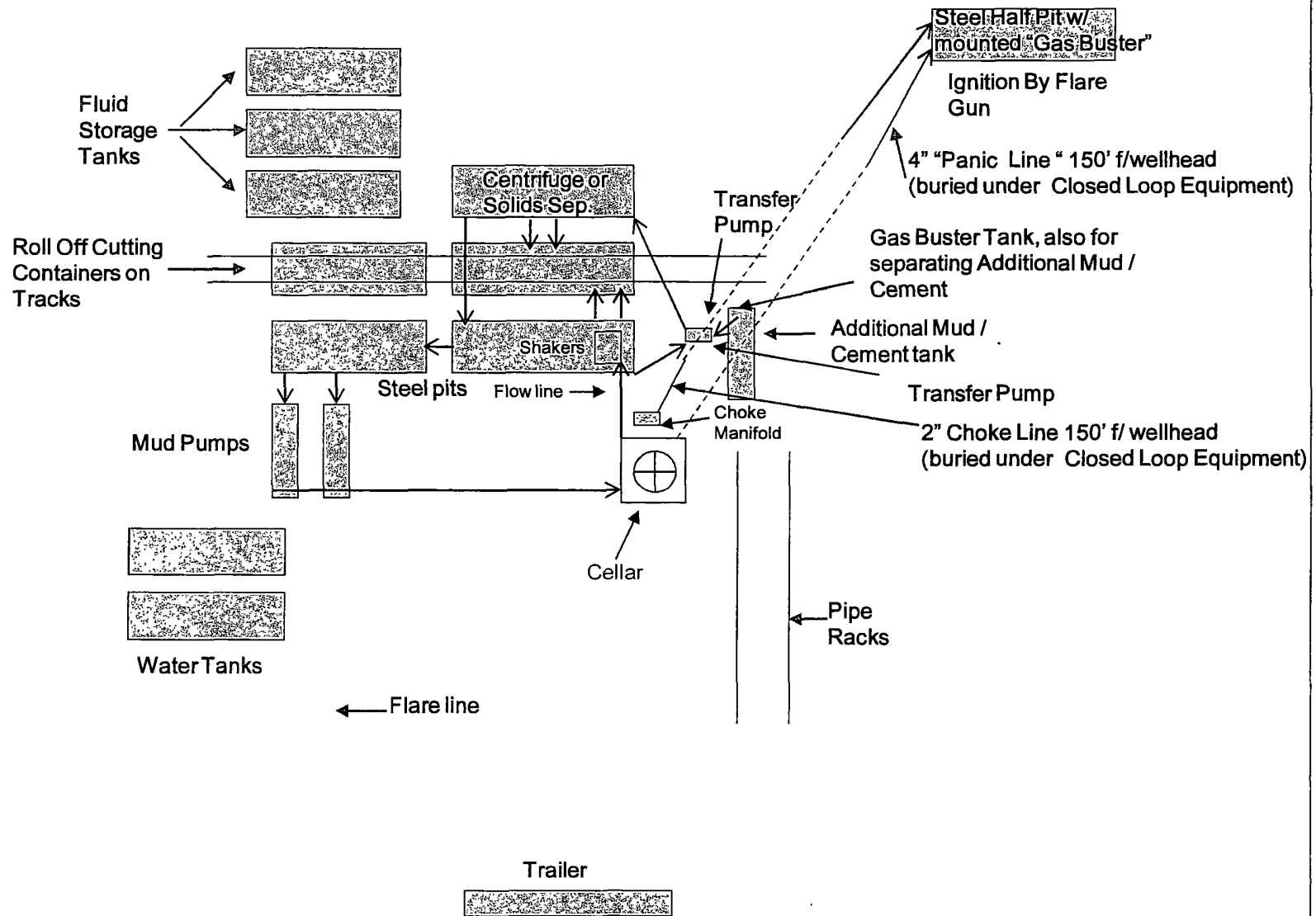
or

GMI (permit number 711-019-001)

dependent upon which rig is available to drill this well.

COG Operating LLC

Closed Loop Equipment Diagram





COG Operating LLC

Eddy County, NM (NAN27 NME)

Clydesdale 1 Fee #3H

Clydesdale 1 Fee #3H

OH

Plan: Plan #2 8-3/4" Hole

SHL = 1700' FNL & 150' FEL

PP = 1700' FNL & 330' FEL

BHL = 1700' FNL & 330' FWL

Standard Planning Report

14 March, 2012





SDI
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Clydesdale 1 Fee #3H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3400.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3400.00usft
Site:	Clydesdale 1 Fee #3H	North Reference:	Grd
Well:	Clydesdale 1 Fee #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 8-3/4" Hole		

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	Clydesdale 1 Fee #3H		
Site Position:		Northing:	615,520 30 usft
From:	Map	Easting:	470,392 10 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 31 658 N
		Longitude:	104° 25' 46 467 W
		Grid Convergence:	-0 05 °

Well	Clydesdale 1 Fee #3H		
Well Position	+N/-S	0 00 usft	Northing:
	+E/-W	0 00 usft	Easting:
Position Uncertainty	0 00 usft	Wellhead Elevation:	Ground Level:
			3,400 00 usft

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	10/10/11	(°)	(°)	(nT)
			7 97	60 46	48,770

Design	Plan #2 8-3/4" Hole		
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
			271 25

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	
2,272 54	0 00	0 00	2,272 54	0 00	0 00	0 00	0 00	0 00	0 00	
3,022 54	90 00	271 25	2,750 00	10 38	-477 35	12 00	12 00	0 00	271 25	
7,429 43	90 00	271 25	2,750.00	106 20	-4,883 20	0 00	0 00	0 00	0 00	PBHL-Clydesdale 1 F



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Clydesdale 1 Fee #3H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3400.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3400.00usft
Site:	Clydesdale 1 Fee #3H	North Reference:	Grid
Well:	Clydesdale 1 Fee #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 8-3/4" Hole		

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
2,272.54	0 00	0 00	2,272.54	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 12.00°/100'									
2,300.00	3 30	271 25	2,299.98	0 02	-0 79	0 79	12 00	12 00	0 00
2,400.00	15 30	271 25	2,398.49	0 37	-16 91	16 91	12 00	12 00	0 00
2,500.00	27 30	271 25	2,491.49	1 16	-53 15	53 17	12 00	12 00	0 00
2,600.00	39 30	271 25	2,574.93	2 35	-107 94	107 96	12 00	12 00	0 00
2,700.00	51 30	271 25	2,645.14	3 89	-178 86	178 91	12 00	12 00	0 00
2,701.44	51 47	271 25	2,646.04	3.91	-179.99	180.03	12.00	12.00	0.00
PP=330° FSL Clydesdale 1 Fee #3H									
2,800.00	63 30	271 25	2,699.07	5.72	-262.84	262.90	12.00	12.00	0.00
2,900.00	75 30	271 25	2,734.36	7 75	-356 19	356 27	12 00	12 00	0 00
3,000.00	87 30	271 25	2,749.47	9.89	-454.83	454.94	12.00	12.00	0.00
3,022.54	90 00	271 25	2,750.00	10.38	-477.36	477.47	12.00	12.00	0.00
Land EOC hold 90.00°									
3,100.00	90 00	271 25	2,750.00	12 07	-554 80	554 93	0 00	0 00	0 00
3,200.00	90 00	271 25	2,750.00	14 24	-654 77	654 93	0 00	0 00	0 00
3,300.00	90.00	271 25	2,750.00	16 41	-754 75	754 93	0 00	0 00	0 00
3,400.00	90 00	271 25	2,750.00	18 59	-854.73	854 93	0 00	0 00	0 00
3,500.00	90 00	271 25	2,750.00	20 76	-954 70	954 93	0 00	0 00	0 00
3,600.00	90 00	271 25	2,750.00	22 94	-1,054.68	1,054.93	0 00	0 00	0 00
3,700.00	90 00	271.25	2,750.00	25 11	-1,154.66	1,154.93	0 00	0 00	0 00
3,800.00	90 00	271 25	2,750.00	27.29	-1,254.63	1,254.93	0 00	0 00	0 00
3,900.00	90 00	271 25	2,750.00	29 46	-1,354.61	1,354.93	0 00	0 00	0 00
4,000.00	90 00	271 25	2,750.00	31 63	-1,454.59	1,454.93	0 00	0 00	0 00
4,100.00	90 00	271 25	2,750.00	33 81	-1,554.56	1,554.93	0 00	0 00	0 00
4,200.00	90 00	271 25	2,750.00	35 98	-1,654.54	1,654.93	0 00	0 00	0 00
4,300.00	90 00	271 25	2,750.00	38 16	-1,754.51	1,754.93	0 00	0 00	0 00
4,400.00	90 00	271.25	2,750.00	40 33	-1,854.49	1,854.93	0 00	0 00	0 00
4,500.00	90 00	271 25	2,750.00	42 51	-1,954.47	1,954.93	0 00	0 00	0 00
4,600.00	90 00	271 25	2,750.00	44 68	-2,054.44	2,054.93	0 00	0 00	0 00
4,700.00	90.00	271 25	2,750.00	46 85	-2,154.42	2,154.93	0 00	0 00	0 00
4,800.00	90 00	271 25	2,750.00	49.03	-2,254.40	2,254.93	0 00	0 00	0 00
4,900.00	90 00	271 25	2,750.00	51 20	-2,354.37	2,354.93	0 00	0 00	0 00
5,000.00	90 00	271 25	2,750.00	53 38	-2,454.35	2,454.93	0 00	0 00	0 00
5,100.00	90 00	271 25	2,750.00	55.55	-2,554.33	2,554.93	0 00	0 00	0 00
5,200.00	90 00	271 25	2,750.00	57 73	-2,654.30	2,654.93	0 00	0 00	0 00
5,300.00	90 00	271 25	2,750.00	59 90	-2,754.28	2,754.93	0 00	0 00	0 00
5,400.00	90 00	271 25	2,750.00	62 07	-2,854.25	2,854.93	0 00	0 00	0 00
5,500.00	90 00	271 25	2,750.00	64 25	-2,954.23	2,954.93	0 00	0 00	0 00
5,600.00	90 00	271 25	2,750.00	66 42	-3,054.21	3,054.93	0 00	0 00	0 00
5,700.00	90 00	271 25	2,750.00	68 60	-3,154.18	3,154.93	0 00	0 00	0 00
5,800.00	90.00	271 25	2,750.00	70 77	-3,254.16	3,254.93	0 00	0 00	0 00
5,900.00	90 00	271 25	2,750.00	72 95	-3,354.14	3,354.93	0 00	0 00	0 00
6,000.00	90 00	271 25	2,750.00	75 12	-3,454.11	3,454.93	0 00	0 00	0 00
6,100.00	90 00	271 25	2,750.00	77 29	-3,554.09	3,554.93	0 00	0 00	0 00
6,200.00	90 00	271.25	2,750.00	79 47	-3,654.07	3,654.93	0 00	0 00	0 00
6,300.00	90.00	271 25	2,750.00	81 64	-3,754.04	3,754.93	0 00	0 00	0 00
6,400.00	90 00	271 25	2,750.00	83 82	-3,854.02	3,854.93	0 00	0 00	0 00
6,500.00	90 00	271 25	2,750.00	85 99	-3,953.99	3,954.93	0 00	0 00	0 00
6,600.00	90.00	271 25	2,750.00	88.17	-4,053.97	4,054.93	0 00	0 00	0 00
6,700.00	90 00	271 25	2,750.00	90 34	-4,153.95	4,154.93	0 00	0 00	0 00
6,800.00	90 00	271.25	2,750.00	92 51	-4,253.92	4,254.93	0 00	0 00	0 00



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Clydesdale 1 Fee #3H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3400 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3400 00usft
Site:	Clydesdale 1 Fee #3H	North Reference:	Grid
Well:	Clydesdale 1 Fee #3H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2 8-3/4" Hole		

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)
6,900 00	90 00	271 25	2,750.00	94 69	-4,353 90	4,354 93	0.00	0 00	0 00
7,000.00	90 00	271 25	2,750 00	96 86	-4,453 88	4,454 93	0 00	0 00	0 00
7,100 00	90 00	271 25	2,750 00	99 04	-4,553 85	4,554 93	0 00	0.00	0 00
7,200 00	90 00	271 25	2,750.00	101 21	-4,653 83	4,654 93	0 00	0 00	0 00
7,300 00	90 00	271 25	2,750 00	103 39	-4,753 81	4,754 93	0 00	0 00	0 00
7,400.00	90.00	271 25	2,750 00	105 56	-4,853 78	4,854 93	0 00	0 00	0 00
7,429 43	90 00	271 25	2,750 00	106 20	-4,883 20	4,884 35	0 00	0 00	0 00
PBHL-Clydesdale 1 Fee #3H									

Design Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	
Shape									Latitude Longitude
PP=330' FSL Clydesdale	- plan hits target center	0 00	360 00	2,646 05	3 91	-180 00	615,524 22	470,212 10	32° 41' 31 695 N 104° 25' 48 574 W
	- Point								
PBHL-Clydesdale 1 Fee	- plan hits target center	0 00	0 00	2,750 00	106 20	-4,883 20	615,626 50	465,508 90	32° 41' 32.661 N 104° 26' 43 611 W
	- Point								

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,272 54	2,272 54	0 00	0 00	KOP Start Build 12 00°/100'
3,022.54	2,750 00	266 99	-395 85	Land EOC hold 90 00°



Clydesdale 1 Fee #3H
Eddy County, NM (NAN27 NME)
Northing (Y) 615520.30
Easting (X) 470392.10
Plan #2 8-3/4" Hole



Azimuth to Grid North
True North 0.05°
Magnetic North 8.03°
Magnetic Field
Strength: 48760 (nT)
Dip Angle: 66.46°
Date: 10/10/2011
Model: IGRF-2010

To convert Magnetic North to Grid Add 8.03°
To convert True North to Grid Add 0.05°

WELL DETAILS Clydesdale 1 Fee #3H

	+N-S	+E-W	Northing	Ground Level	Latitude	Longitude	Slot
	0.00	0.00	615520.30	3400.00	32° 41' 31.558 N	104° 25' 46.467 W	

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

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSecl	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2272.54	0.00	0.00	2272.54	0.00	0.00	0.00	0.00	0.00	
3	3022.54	90.00	271.25	2750.00	10.36	-477.35	12.00	271.25	477.46	
4	7429.43	90.00	271.25	2750.00	106.20	-4883.20	0.00	0.00	4884.35	PBHL-Clydesdale 1 Fee #3H

SITE DETAILS Clydesdale 1 Fee #3H

Site Centre Northing 615520.30
Easting 470392.10
Positional Uncertainty 0.00
Convergence -0.05
Local North Grid

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PP-330 FSL Clydesdale 1 Fee #3H	3.01	-180.00	615524.21	470212.10	32° 41' 31.686 N	104° 25' 48.574 W	Point	
- plan into target center								
PBHL-Clydesdale 1 Fee #3H	2750.00	106.20	-4883.20	615526.50	465508.90	32° 41' 32.001 N	104° 25' 43.611 W	Point
- plan into target center								

LEGEND

Plan #2 8-3/4" Hole

Map System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1866
Zone Name New Mexico East 3001

Local Origin See Clydesdale 1 Fee #3H Grid North

Latitude 32° 41' 31.558 N
Longitude 104° 25' 46.467 W

Grid East 470392.10
Grid North 615520.30
Scale Factor 1.000

Geomagnetic Model IGRF-2010

Sample Date 10-Oct-11

Magnetic Declination 7.97°

Dip Angle from Horizontal 66.46°

Magnetic Field Strength 48770

To convert Magnetic North to Grid Add 8.03°

To convert Magnetic North to True North Add 7.97° East

To convert True North to Grid Add 0.05°

