

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

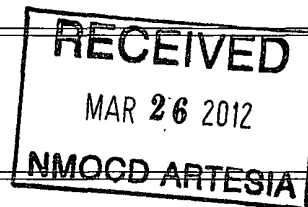
Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

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 100 MIDLAND, TX 79701**
Facility or well name: **TARPAN "33" FEE #3H**
API Number: **30-015- 40122** OCD Permit Number: **212721**
U/L or Qtr/Qtr **UL N** Section **33** Township **18S** Range **26E** 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): **KACIE CONNALLY** Title: **PERMITTING TECH**
Signature: *Kacie Connally* Date: **2/16/12**
e-mail address: **kconnally@concho.com** Telephone: **432-221-0336**

OCD Representative Signature: AK Jade Approval Date: 03/30/2012
Title: Dist # Supervisor OCD Permit Number: 212721

☐ Closure Completion Date: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

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)

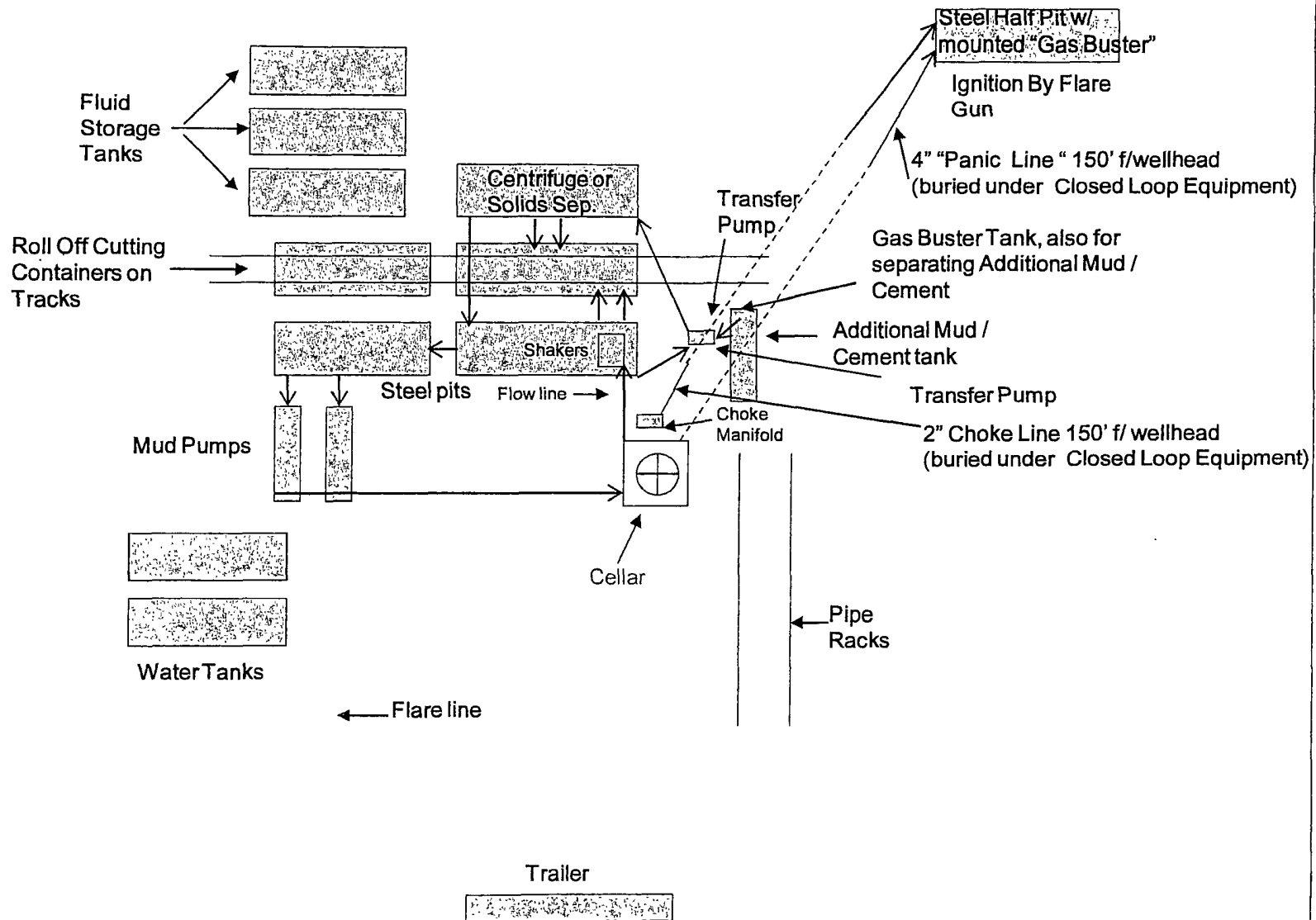
or

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)

Tarpan 33 Fee #3H

Tarpan 33 Fee #3H

OH

Plan: Plan #1 8-3/4" Hole

SHL = 150' FSL & 1700' FWL

PP = 330' FSL & 1700' FWL

BHL = 380' FNL & 1700' FWL

Standard Planning Report

14 March, 2012



Scientific Drilling
Directional Drilling Operations



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Tarpan 33 Fee #3H
Company:	COG Operating LLC	TVD Reference:	GL @ 3380 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3380 00usft
Site:	Tarpan 33 Fee #3H	North Reference:	Grid
Well:	Tarpan 33 Fee #2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 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:	Tarpan 33 Fee #3H		
Site Position:		Northing:	617,393 40 usft
From:	Map	Easting:	482,672 90 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 50.280 N
		Longitude:	104° 23' 22.771 W
		Grid Convergence:	-0 03 °

Well:	Tarpan 33 Fee #2H					
Well Position	+N/-S	0 00 usft	Northing:	617,393 40 usft	Latitude:	32° 41' 50.280 N
	+E/-W	0 00 usft	Easting:	482,672 90 usft	Longitude:	104° 23' 22.771 W
Position Uncertainty	0 00 usft		Wellhead Elevation:		Ground Level:	3,380 00 us

Wellbore:	OH
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	03/14/12	7 91	60 46	48,735

Design					Plan #1 8-3/4" Hole				
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		359 90	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0 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	359 90	2,750 00	477 46	-0 81	12 00	12 00	0 00	359 90	
7,329 08	90 00	359 90	2,750 00	4,784.00	-8 10	0 00	0.00	0 00	0 00	0 00 PBHL-Tarpan 33 Fee



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Tarpan 33 Fee #3H
Company:	COG Operating LLC	TVD Reference:	GL @ 3380 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3380 00usft
Site:	Tarpan 33 Fee #3H	North Reference:	Grid
Well:	Tarpan 33 Fee #2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 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	359 90	2,299 98	0 79	0 00	0 79	12 00	12 00	0 00
2,400 00	15 30	359 90	2,398 49	16 91	-0 03	16 91	12 00	12 00	0 00
2,500 00	27 30	359 90	2,491 49	53 17	-0 09	53 17	12 00	12 00	0 00
2,600 00	39 30	359 90	2,574 93	107 96	-0 18	107 96	12 00	12 00	0 00
2,700 00	51 30	359 90	2,645 14	178 91	-0 30	178 91	12 00	12 00	0 00
2,701 40	51 46	359 90	2,646 01	180 00	-0 30	180 00	12 00	12 00	0 00
PP=330' FSL Tarpan 33 Fee #3H									
2,800 00	63 30	359 90	2,699 07	262 90	-0 45	262 90	12 00	12 00	0 00
2,900 00	75 30	359 90	2,734 36	356 27	-0 60	356 27	12 00	12 00	0 00
3,000 00	87 30	359 90	2,749 47	454 94	-0 77	454 94	12 00	12 00	0 00
3,022 54	90 00	359 90	2,750 00	477 47	-0 81	477 47	12 00	12 00	0 00
Land EOC hold 90.00°									
3,100 00	90 00	359 90	2,750 00	554 93	-0 94	554 93	0 00	0 00	0 00
3,200 00	90 00	359 90	2,750 00	654 93	-1 11	654 93	0 00	0 00	0 00
3,300 00	90 00	359 90	2,750 00	754 93	-1 28	754 93	0 00	0 00	0 00
3,400 00	90 00	359 90	2,750 00	854 93	-1 45	854 93	0 00	0 00	0 00
3,500 00	90 00	359 90	2,750 00	954 93	-1 62	954 93	0 00	0 00	0 00
3,600 00	90 00	359 90	2,750 00	1,054 93	-1 79	1,054 93	0 00	0 00	0 00
3,700 00	90 00	359 90	2,750 00	1,154 93	-1 96	1,154 93	0 00	0 00	0 00
3,800 00	90 00	359 90	2,750 00	1,254 93	-2 12	1,254 93	0 00	0 00	0 00
3,900 00	90 00	359 90	2,750 00	1,354 93	-2 29	1,354 93	0 00	0 00	0 00
4,000 00	90 00	359 90	2,750 00	1,454 93	-2 46	1,454 93	0 00	0 00	0 00
4,100 00	90 00	359 90	2,750 00	1,554 93	-2 63	1,554 93	0 00	0 00	0 00
4,200 00	90 00	359 90	2,750 00	1,654 93	-2 80	1,654 93	0 00	0 00	0 00
4,300 00	90 00	359 90	2,750 00	1,754 93	-2 97	1,754 93	0 00	0 00	0 00
4,400 00	90 00	359 90	2,750 00	1,854 93	-3 14	1,854 93	0 00	0 00	0 00
4,500 00	90 00	359 90	2,750 00	1,954 93	-3 31	1,954 93	0 00	0 00	0 00
4,600 00	90 00	359 90	2,750 00	2,054 93	-3 48	2,054 93	0 00	0 00	0 00
4,700 00	90 00	359 90	2,750 00	2,154 93	-3 65	2,154 93	0 00	0 00	0 00
4,800 00	90 00	359 90	2,750 00	2,254 93	-3 82	2,254 93	0 00	0 00	0 00
4,900 00	90 00	359 90	2,750 00	2,354 93	-3 99	2,354 93	0 00	0 00	0 00
5,000 00	90 00	359 90	2,750 00	2,454 93	-4 16	2,454 93	0 00	0 00	0 00
5,100 00	90 00	359 90	2,750 00	2,554 93	-4 33	2,554 93	0 00	0 00	0 00
5,200 00	90 00	359 90	2,750 00	2,654 93	-4 50	2,654 93	0 00	0 00	0 00
5,300 00	90 00	359 90	2,750 00	2,754 93	-4 66	2,754 93	0 00	0 00	0 00
5,400 00	90 00	359 90	2,750 00	2,854 93	-4 83	2,854 93	0 00	0 00	0 00
5,500 00	90 00	359 90	2,750 00	2,954 93	-5 00	2,954 93	0 00	0 00	0 00
5,600 00	90 00	359 90	2,750 00	3,054 93	-5 17	3,054 93	0 00	0 00	0 00
5,700 00	90 00	359 90	2,750 00	3,154 93	-5 34	3,154 93	0 00	0 00	0 00
5,800 00	90 00	359 90	2,750 00	3,254 93	-5 51	3,254 93	0 00	0 00	0 00
5,900 00	90 00	359 90	2,750 00	3,354 92	-5 68	3,354 93	0 00	0 00	0 00
6,000 00	90 00	359 90	2,750 00	3,454 92	-5 85	3,454 93	0 00	0 00	0 00
6,100 00	90 00	359 90	2,750 00	3,554 92	-6 02	3,554 93	0 00	0 00	0 00
6,200 00	90 00	359 90	2,750 00	3,654 92	-6 19	3,654 93	0 00	0 00	0 00
6,300 00	90 00	359 90	2,750 00	3,754 92	-6 36	3,754 93	0 00	0 00	0 00
6,400 00	90 00	359 90	2,750 00	3,854 92	-6 53	3,854 93	0 00	0 00	0 00
6,500 00	90 00	359 90	2,750 00	3,954 92	-6 70	3,954 93	0 00	0 00	0 00
6,600 00	90 00	359 90	2,750 00	4,054 92	-6 87	4,054 93	0 00	0 00	0 00
6,700 00	90 00	359 90	2,750 00	4,154 92	-7 03	4,154 93	0 00	0 00	0 00
6,800 00	90 00	359 90	2,750 00	4,254 92	-7 20	4,254 93	0 00	0 00	0 00

Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Tarpan 33 Fee #3H
Company:	COG Operating LLC	TVD Reference:	GL @ 3380 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3380 00usft
Site:	Tarpan 33 Fee #3H	North Reference:	Gnd
Well:	Tarpan 33 Fee #2H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 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	359.90	2,750 00	4,354 92	-7 37	4,354 93	0 00	0 00	0 00
7,000 00	90 00	359.90	2,750 00	4,454 92	-7 54	4,454 93	0.00	0 00	0 00
7,100 00	90 00	359 90	2,750 00	4,554 92	-7 71	4,554 93	0 00	0 00	0 00
7,200 00	90 00	359 90	2,750 00	4,654 92	-7 88	4,654 93	0 00	0 00	0 00
7,300 00	90 00	359 90	2,750 00	4,754 92	-8 05	4,754 93	0 00	0 00	0 00
7,329 08	90 00	359 90	2,750 00	4,784 00	-8 10	4,784 01	0 00	0 00	0 00
PBHL-Tarpan 33 Fee #3H									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PP=330' FSL Tarpan 33	0 00	360 00	2,646.02	180 00	-0.30	617,573 40	482,672 60	32° 41' 52 062 N	104° 23' 22 776 W
- plan hits target center									
- Point									
PBHL-Tarpan 33 Fee #3	0 00	360 00	2,750 00	4,784 00	-8 10	622,177 40	482,664 80	32° 42' 37 621 N	104° 23' 22 895 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
2,272 54	2,272 54	0 00	0.00	KOP Start Build 12 00°/100'
3,022 54	2,750 00	477 47	-0 81	Land EOC hold 90 00°



To convert Magnetic North to Grid Add 7.94°
To convert True North to Grid Add 0.03°

Azimuth to Grid North
True North 0.03°
Magnetic North 7.94°
Magnetic Field
Strength 28735 Gauss
Dip Angle 60.46°
Date 03/14/2012
Model IGRF2010

Tarpan 33 Fee #2H
Eddy County, NM (NAN27 NME)
Northing: (Y) 617393.40
Easting: (X) 482672.90
Plan #1 8-3/4" Hole

WELL DETAILS: Tarpan 33 Fee #2H

+N-S	+E-W	Northing	Ground Level	3380.00	Latitude	Longitude	Slot
0.00	0.00	617393.40	Easting	482672.90	32° 41' 50.280 N	104° 23' 22.771 W	

SECTION DETAILS

Sec	MD	Inc	At	TVD	+N-S	+E-W	Flag	TFace	VSecl	Target
2	2272.54	0.00	0.00	2272.54	0.00	0.00	0.00	0.00	0.00	
3	3022.54	90.00	359.90	2750.00	477.48	-0.81	12.00	359.90	477.48	
4	7329.08	90.00	359.90	2750.00	4784.00	-8.10	0.00	0.00	4784.01	PBHL-Tarpan 33 Fee #3H

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PP=330 FSL Tarpan 33 Fee #3H	180.00	-0.30	617573.40	482672.60	32° 41' 52.082 N	104° 23' 22.778 W		Point
PBHL-Tarpan 33 Fee #3H	2750.00	4784.00	-8.10	622177.40	482954.80	32° 42' 32.521 N	104° 23' 22.805 W	Point
- plan hits target center								

PROJECT DETAILS Eddy County NM (NAN27 NME)

Geoid 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

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

Local Origin Site Tarpan 33 Fee #3H Grid North

Latitude 32° 41' 50.280 N
Longitude 104° 23' 22.771 W

Grid East 482672.90

Grid North 617393.40

Scale Factor 1.000

Geomagnetic Model IGRF2010
Sample Date 14-Mar-12
Magnetic Declination 7.91°
Dip Angle from Horizontal 60.46°
Magnetic Field Strength 48735

To convert Magnetic North to Grid Add 7.94°
To convert True North to Grid Add 0.03°

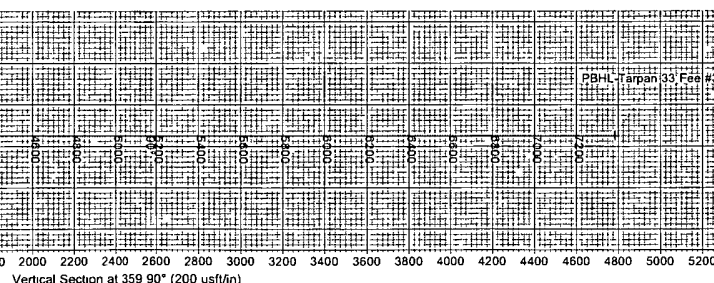
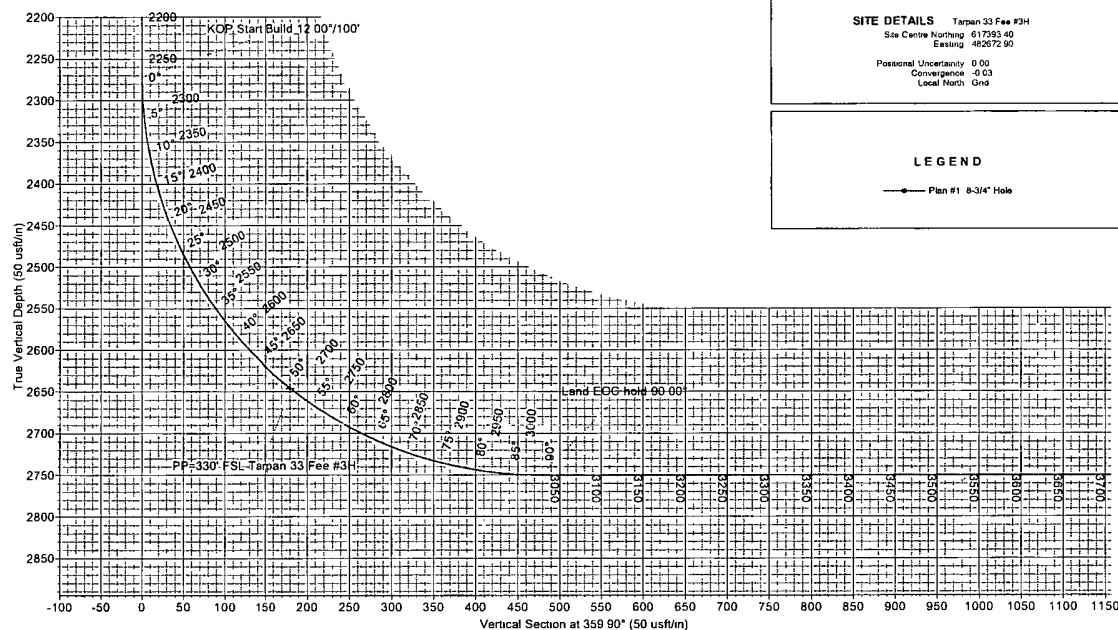
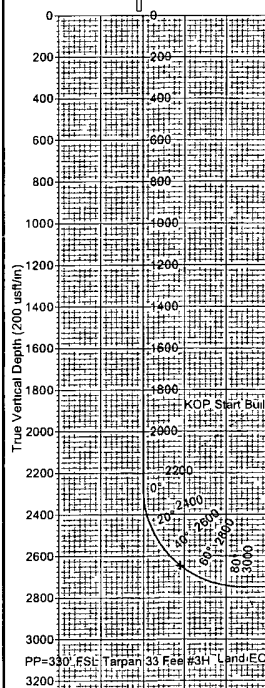
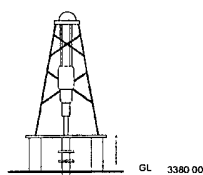
SITE DETAILS Tarpan 33 Fee #3H

Site Centre Northing 617393.40
Easting 482672.90

Positional Uncertainty 0.00
Convergence -0.03
Local North Grid

LEGEND

Plan #1 8-3/4" Hole



Julio C Priia
Scientific Drilling
2034 Trade Dr
Midland, TX 79708

