

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

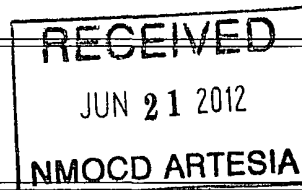
Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

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: HOGAN STATE COM #3H
API Number: 30-015-40414 OCD Permit Number: 213108
U/L or Qtr/Qtr UL P Section 2 Township 17S Range 29E 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: 4-17-2012
e-mail address: kconnally@goncho.com Telephone: 432-221-0336

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

OCD Representative Signature: _____

Approval Date: 6/25/12

Title: _____

OCD Permit Number: 213108

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 identify 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)

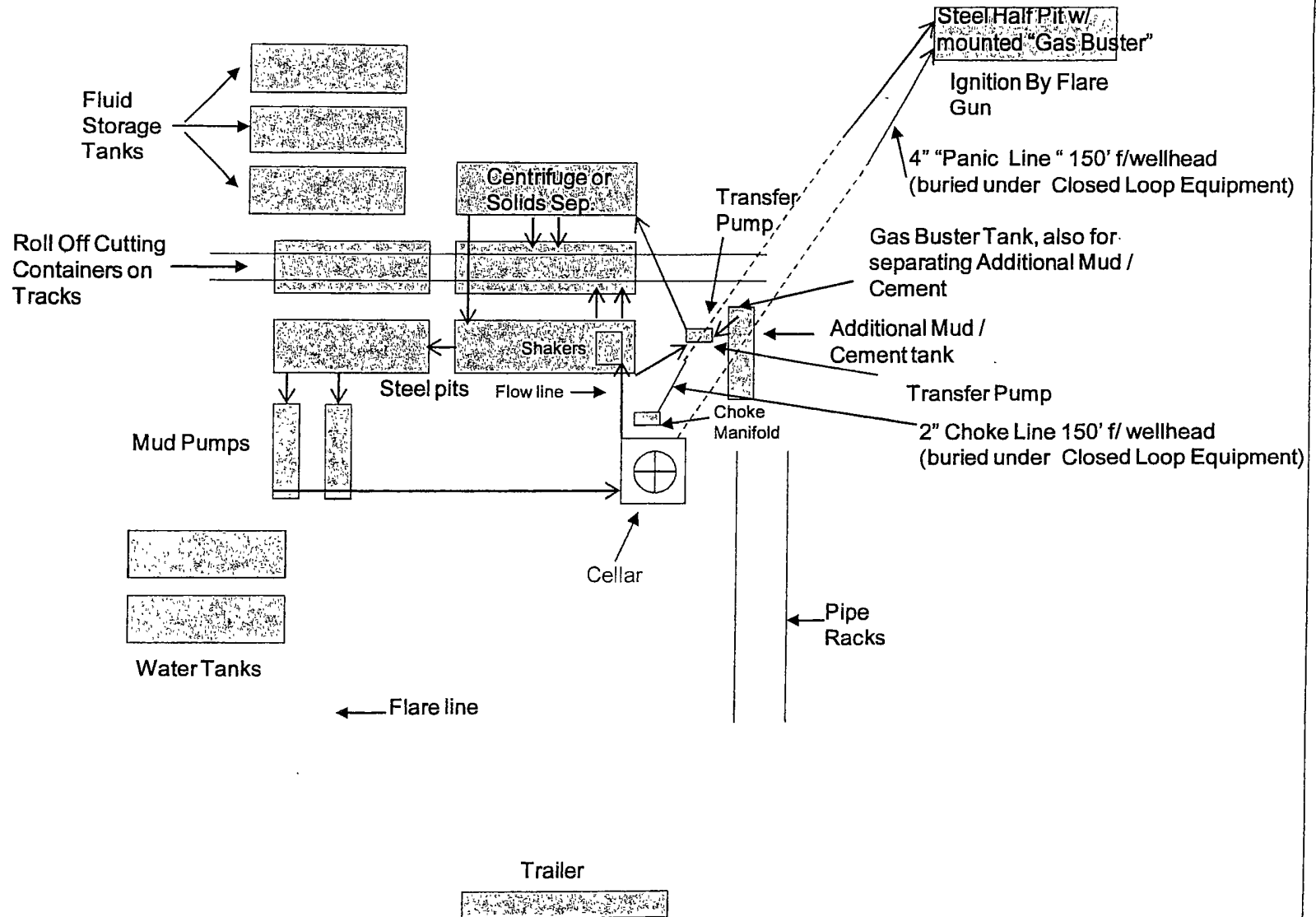
or

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)

Hogan State Com #3H

OH

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

SHL = 990' FSL & 330' FEL

BHL = 990' FSL & 330' FWL

Standard Planning Report

30 May, 2012





Scientific Drilling International, Inc.

Planning Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Hogan State Com #3H
Company:	COG Operating LLC	TVD Reference:	GL @ 3662 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3662 00usft
Site:	Hogan State Com #3H	North Reference:	Grid
Well:	Hogan State Com #3H	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:	Hogan State Com #3H		
Site Position:		Northing:	676,312 20 usft
From:	Map	Easting:	590,870 00 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 51' 32 097 N
		Longitude:	104° 2' 14 669 W
		Grid Convergence:	0 16 °

Well:	Hogan State Com #3H					
Well Position	+N/-S	0 00 usft	Northing:	676,312 20 usft	Latitude:	32° 51' 32 097 N
	+E/-W	0 00 usft	Easting:	590,870 00 usft	Longitude:	104° 2' 14 669 W
Position Uncertainty		0 00 usft	Wellhead Elevation:		Ground Level:	3,662 00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	05/30/12	7 73	60 67	48,849

Design: Plan #1 - 8-3/4" Hole				
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0 00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0 00	0 00	0 00	270 08

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(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	
4,722 61	0 00	0 00	4,722 61	0 00	0 00	0 00	0 00	0 00	0 00	
5,480 94	91 00	270 08	5,200 00	0 68	-485 80	12 00	12 00	0 00	270 08	
9,627 48	91 00	270 08	5,127 63	6 50	-4,631 70	0 00	0 00	0 00	0 00	PBHL-Hogan State #:



Scientific Drilling International, Inc.
Planning Report



Database:	EDM-5000 1 Single User Db	Local Co-ordinate Reference:	Site Hogan State Com #3H
Company:	COG Operating LLC	TVD Reference:	GL @ 3662 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3662 00usft
Site:	Hogan State Com #3H	North Reference:	Grid
Well:	Hogan State Com #3H	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
4,722 60	0 00	0 00	4,722 60	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start Build 12.00°/100'									
4,800 00	9 29	270 08	4,799 66	0 01	-6 26	6 26	12 00	12 00	0 00
4,900 00	21 29	270 08	4,895 95	0 05	-32 58	32 58	12 00	12 00	0 00
5,000 00	33 29	270 08	4,984 66	0 11	-78 34	78 34	12 00	12 00	0 00
5,100 00	45 29	270 08	5,061 91	0 20	-141 54	141 54	12 00	12 00	0 00
5,200 00	57 29	270 08	5,124 34	0 31	-219 43	219 43	12 00	12 00	0 00
5,300 00	69 29	270 08	5,169 21	0 43	-308 59	308 59	12 00	12 00	0 00
5,400 00	81 29	270 08	5,194 56	0 57	-405 14	405 14	12 00	12 00	0 00
5,480 94	91 00	270 08	5,200 00	0 68	-485.80	485 80	12 00	12 00	0 00
Land hold 91.00°									
5,500 00	91 00	270 08	5,199 66	0 71	-504 86	504 86	0 00	0 00	0 00
5,600 00	91 00	270 08	5,197 92	0 85	-604 84	604 84	0 00	0 00	0 00
5,700 00	91 00	270 08	5,196 17	0 99	-704 83	704 83	0 00	0 00	0 00
5,800 00	91 00	270 08	5,194 43	1 13	-804 81	804 81	0 00	0 00	0 00
5,900 00	91 00	270 08	5,192 68	1 27	-904 79	904 80	0 00	0 00	0 00
6,000 00	91 00	270 08	5,190 94	1 41	-1,004 78	1,004 78	0 00	0 00	0 00
6,100 00	91 00	270 08	5,189 19	1 55	-1,104.76	1,104 77	0 00	0 00	0 00
6,200 00	91 00	270 08	5,187 45	1 69	-1,204 75	1,204 75	0 00	0 00	0 00
6,300 00	91 00	270 08	5,185 70	1 83	-1,304 73	1,304 73	0 00	0 00	0 00
6,400 00	91 00	270 08	5,183 96	1 97	-1,404 72	1,404 72	0 00	0 00	0 00
6,500 00	91 00	270 08	5,182 21	2 11	-1,504 70	1,504 70	0 00	0 00	0 00
6,600 00	91 00	270 08	5,180 47	2 25	-1,604 69	1,604 69	0 00	0 00	0 00
6,700 00	91 00	270 08	5,178 72	2 39	-1,704 67	1,704 67	0 00	0 00	0 00
6,800 00	91 00	270 08	5,176 98	2 53	-1,804 66	1,804 66	0 00	0 00	0 00
6,900 00	91 00	270 08	5,175 23	2 67	-1,904 64	1,904 64	0 00	0 00	0 00
7,000 00	91 00	270 08	5,173 49	2 81	-2,004 63	2,004 63	0 00	0 00	0 00
7,100 00	91 00	270 08	5,171 74	2 95	-2,104 61	2,104 61	0 00	0 00	0 00
7,200 00	91 00	270 08	5,170 00	3 09	-2,204 60	2,204 60	0 00	0 00	0 00
7,300 00	91 00	270 08	5,168 25	3 23	-2,304 58	2,304 58	0 00	0 00	0 00
7,400 00	91 00	270 08	5,166 50	3 37	-2,404 56	2,404 57	0 00	0 00	0 00
7,500 00	91 00	270 08	5,164 76	3 51	-2,504 55	2,504 55	0 00	0 00	0 00
7,600 00	91 00	270 08	5,163 01	3 66	-2,604 53	2,604 54	0 00	0 00	0 00
7,700 00	91 00	270 08	5,161 27	3 80	-2,704 52	2,704 52	0 00	0 00	0 00
7,800 00	91 00	270 08	5,159 52	3 94	-2,804 50	2,804 51	0 00	0 00	0 00
7,900 00	91 00	270 08	5,157 78	4 08	-2,904 49	2,904 49	0 00	0 00	0 00
8,000 00	91 00	270 08	5,156 03	4 22	-3,004 47	3,004 48	0 00	0 00	0 00
8,100 00	91 00	270 08	5,154 29	4 36	-3,104 46	3,104 46	0 00	0 00	0 00
8,200 00	91 00	270 08	5,152 54	4 50	-3,204 44	3,204 45	0 00	0 00	0 00
8,300 00	91 00	270 08	5,150 80	4 64	-3,304 43	3,304 43	0 00	0 00	0 00
8,400 00	91 00	270 08	5,149 05	4 78	-3,404 41	3,404 41	0 00	0 00	0 00
8,500 00	91 00	270 08	5,147 31	4 92	-3,504 40	3,504 40	0 00	0 00	0 00
8,600 00	91 00	270 08	5,145 56	5 06	-3,604 38	3,604 38	0 00	0 00	0 00
8,700 00	91 00	270 08	5,143 82	5 20	-3,704 37	3,704 37	0 00	0 00	0 00
8,800 00	91 00	270 08	5,142 07	5 34	-3,804 35	3,804 35	0 00	0 00	0 00
8,900 00	91 00	270 08	5,140 33	5 48	-3,904 33	3,904.34	0 00	0 00	0 00
9,000 00	91 00	270 08	5,138 58	5 62	-4,004.32	4,004 32	0 00	0 00	0 00
9,100 00	91 00	270 08	5,136 84	5 76	-4,104 30	4,104 31	0 00	0 00	0 00
9,200 00	91 00	270 08	5,135 09	5 90	-4,204 29	4,204 29	0 00	0 00	0 00
9,300 00	91 00	270 08	5,133 35	6 04	-4,304 27	4,304 28	0 00	0 00	0 00
9,400 00	91 00	270 08	5,131 60	6 18	-4,404 26	4,404 26	0 00	0 00	0 00
9,500 00	91 00	270 08	5,129 85	6 32	-4,504 24	4,504 25	0 00	0 00	0 00
9,600 00	91 00	270 08	5,128 11	6 46	-4,604 23	4,604 23	0 00	0 00	0 00



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Hogan State Com #3H:
Company:	COG Operating LLC	TVD Reference:	GL @ 3662 00usft
Project:	Eddy County, NM (NAN27, NME)	MD Reference:	GL @ 3662 00usft
Site:	Hogan State Com #3H	North Reference:	Gnd
Well:	Hogan State Com #3H	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)
9,627 48	91 00	270 08	5,127 63	6 50	-4,631 70	4,631 70	0 00	0 00	0 00
PBHL-Hogan State #3H									

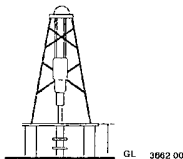
Design Targets									
Target Name	hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	
Shape									Latitude Longitude
PBHL-Hogan State #3H		0 00	0 01	5,127 63	6 50	-4,631 70	676,318 70	586,238 30	32° 51' 32 287 N 104° 3' 8 969 W
- plan hits target center - Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,722 60	4,722 60	0 00	0 00	KOP Start Build 12 00°/100'
5,480 94	5,200 00	0 68	-485 80	Land hold 91 00°



Azimuth to Grid North
True North -0.16°
Magnetic North 7.57°
Magnetic Field
Strength 48849.3nT
Dip Angle 80.67°
Date 05/02/2012
Model IGRF2010
To convert Magnetic North to Grid Add 7.57°
To convert True North to Grid Subtract 0.16°

Hogan State Com #3H
Eddy County, NM (NAN27 NME)
Northing (Y) 676312.20
Easting (X) 590870.00
Plan #1 - 8-3/4" Hole



WELL DETAILS: Hogan State Com #3H

+N-S	+E-W	Northing	Ground Level	3562.00	Latitude	Longitude	Slot
0.00	0.00	676312.20	590870.00		32° 51' 32.067" N	104° 2' 14.696" 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

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 Hogan State Com #3H Grid North
Latitude 32° 51' 32.067" N
Longitude 104° 2' 14.696" W
Grid East 590870.00
Grid North 676312.20
Scale Factor 1.000

Geomagnetic Model IGRF2010
Sample Date 30-May-12
Magnetic Declination 7.73°
Dip Angle from Horizontal 80.67°
Magnetic Field Strength 48849
To convert Magnetic North to Grid Add 7.57°
To convert True North to Grid Subtract 0.16°

SECTION DETAILS

Sec	MD	Inc	An	TVD	+N-S	+E-W	Dleg	TFace	VFace	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4722.60	0.00	0.00	4722.60	0.00	0.00	0.00	0.00	0.00	
3	5480.94	91.00	270.08	5200.00	0.68	-485.80	12.00	270.08	485.80	
4	9627.48	91.00	270.08	5127.63	6.50	-4631.70	0.00	0.00	4631.70	PBHL-Hogan State #3H

SITE DETAILS Hogan State Com #3H

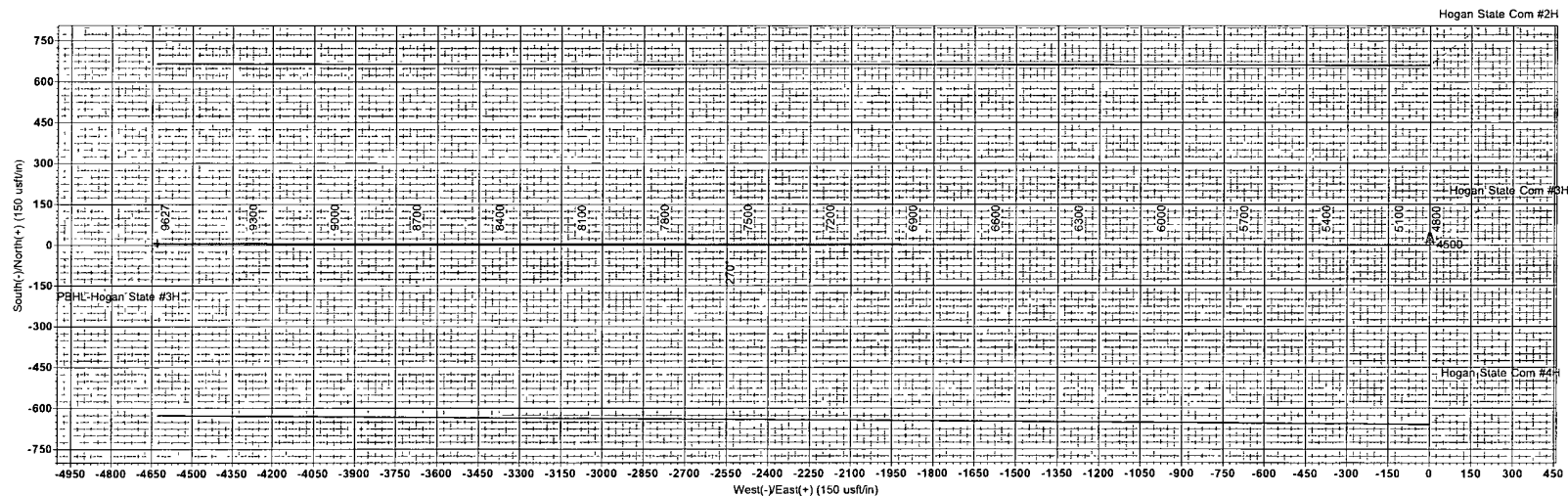
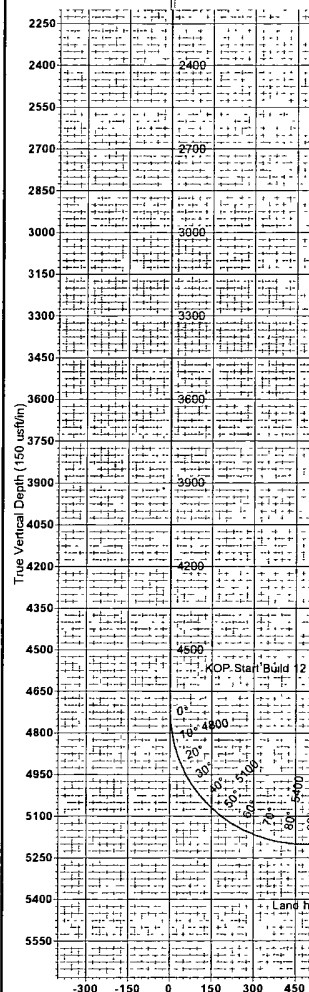
Site Centre Northing 676312.20
Easting 590870.00
Positional Uncertainty 0.00
Convergence 0.16
Local North Grid

DESIGN TARGET DETAILS

Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-Hogan State #3H - plan this target center	5127.63	6.50	-4631.70	676312.70	586238.30	32° 51' 32.287" N	104° 3' 8.959" W	Point

LEGEND

- Hogan State Com #4H OH Plan #1 - 8-3/4" Hole V0
- Hogan State Com #2H OH Plan #1 - 8-3/4" Hole V0
- Plan #1 - 8-3/4" Hole



Vertical Section at 270.08° (150 usf/in)

Julio C. Peña
Scientific Drilling
2034 Trade Drive
Midland, TX 79703