

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: **MINA STATE #2**
API Number: **30-015-40444** OCD Permit Number: **213158**
U/L or Qtr/Qtr **UL M** Section **27** Township **17S** Range **28E** 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

RECEIVED

JUL 09 2012

NMOCD ARTESIA

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@concho.com** Telephone: **432-221-0336**

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

OCD Representative Signature: RR Dade

Approval Date: 2/9/12

Title: DIST # Supervisor

OCD Permit Number: 213158

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)

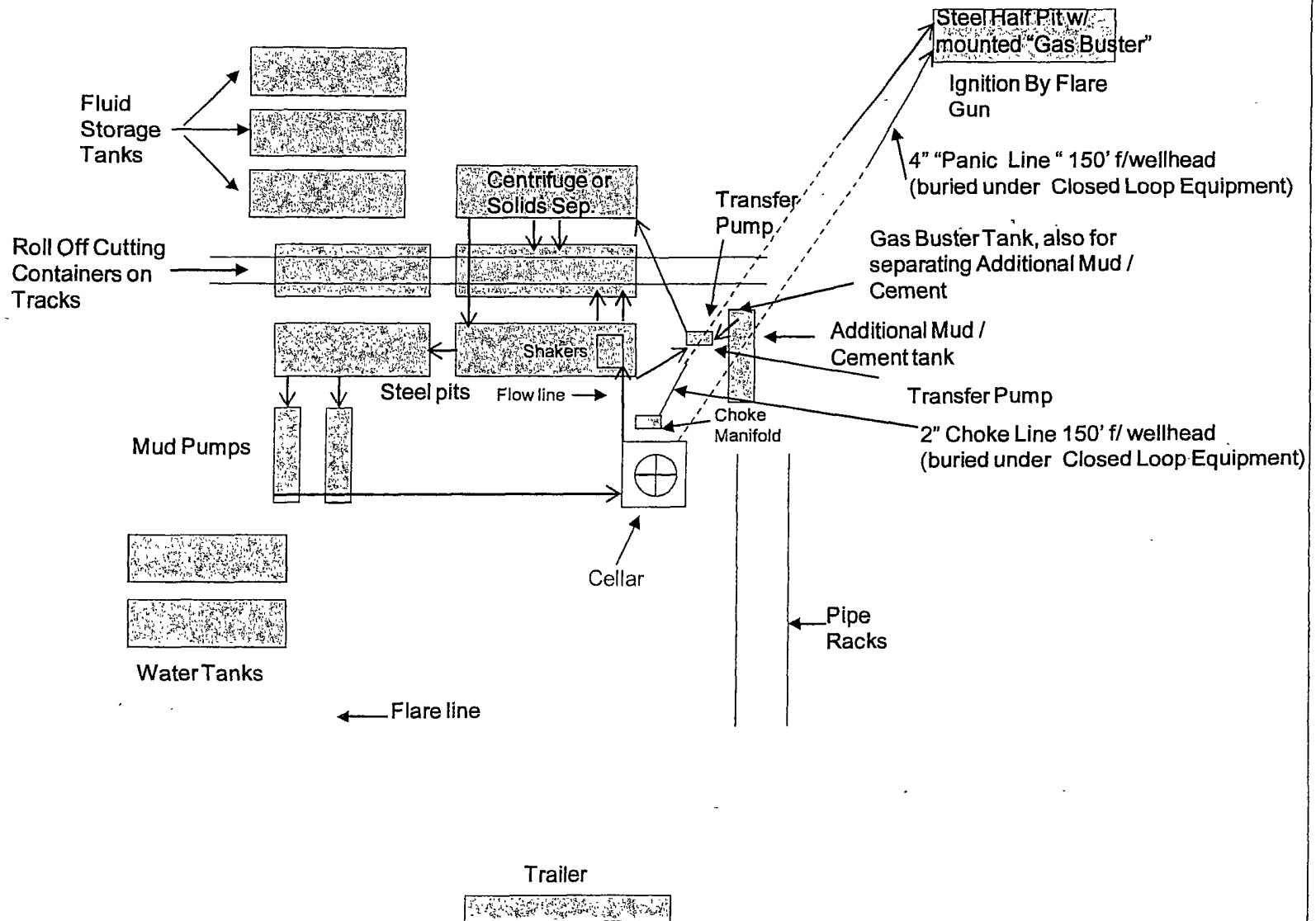
or

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)

Mina State #2

OH

Plan: Plan #1 - 7-7/8" Hole

SHL = 1200' FSL & 990' FWL

BHL = 980' FSL & 980' FWL

Top of Paddock Top = 980' FSL & 980' FWL @ 3700' TVD

Standard Planning Report

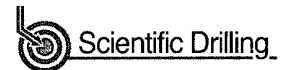
17 May, 2012





Scientific Drilling International, Inc.

Planning Report



Database:	EDM:5000.1.Single-User.Db	Local Co-ordinate Reference:	Site Mina State #2
Company:	COG:Operating LLC	TVD Reference:	GL @ 3682.00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3682.00usft
Site:	Mina State #2	North Reference:	Grid:
Well:	Mina State #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 7-7/8" 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:	Mina State #2		
Site Position:		Northing:	655,383.70 usft
From:	Map	Easting:	550,565.30 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16"
		Latitude:	32° 48' 5.871 N
		Longitude:	104° 10' 7.568 W
		Grid Convergence:	0.09°

Well:	Mina State #2		
Well Position	+N/-S	0.00 usft	Northing:
	+E/-W	0.00 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	Ground Level:
			3,682.00 usft

Wellbore:	OH		
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Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	05/17/12	7.79	60.59	48,803

Design:	Plan #1 - 7-7/8" 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
			183.20

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	
950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,202.07	5.04	183.20	1,201.74	-11.07	-0.62	2.00	2.00	0.00	183.20	
3,457.31	5.04	183.20	3,448.26	-208.93	-11.68	0.00	0.00	0.00	0.00	
3,709.37	0.00	0.00	3,700.00	-220.00	-12.30	2.00	-2.00	0.00	180.00	T1-Mina State #2
5,609.37	0.00	0.00	5,600.00	-220.00	-12.30	0.00	0.00	0.00	0.00	PBHL-Mina State #2



Database:	EDM 5000 1- Single User Db	Local Co-ordinate Reference:	Site Mina State #2
Company:	COG Operating LLC	TVD Reference:	GL @ 3682 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3682 00usft
Site:	Mina State #2	North Reference:	Grid
Well:	Mina State #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 7-7/8" 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
850 00	0 00	0 00	850 00	0 00	0 00	0.00	0 00	0.00	0 00
8 5/8"									
950 00	0 00	0 00	950 00	0 00	0 00	0 00	0 00	0 00	0 00
KOP Start 2.00°/100'									
1,000 00	1 00	183 20	1,000 00	-0 44	-0 02	0 44	2 00	2 00	0 00
1,100 00	3 00	183 20	1,099 93	-3 92	-0 22	3 93	2 00	2 00	0 00
1,200 00	5 00	183 20	1,199 68	-10 88	-0 61	10 90	2 00	2 00	0 00
1,202 07	5 04	183 20	1,201 74	-11.07	-0 62	11 08	2 00	2 00	0 00
Hold 5.04°									
1,300 00	5 04	183 20	1,299 30	-19.66	-1 10	19.69	0 00	0.00	0 00
1,400 00	5 04	183.20	1,398 91	-28 43	-1 59	28 48	0 00	0 00	0 00
1,500 00	5 04	183 20	1,498 52	-37 21	-2 08	37 26	0 00	0 00	0 00
1,600 00	5 04	183 20	1,598 14	-45 98	-2 57	46 05	0 00	0 00	0 00
1,700 00	5 04	183 20	1,697 75	-54 75	-3 06	54.84	0 00	0 00	0 00
1,800 00	5 04	183 20	1,797 36	-63 53	-3 55	63.63	0 00	0 00	0 00
1,900 00	5 04	183 20	1,896 97	-72 30	-4 04	72.41	0 00	0 00	0 00
2,000 00	5 04	183 20	1,996 59	-81 07	-4 53	81 20	0 00	0 00	0 00
2,100 00	5 04	183 20	2,096 20	-89 85	-5 02	89 99	0 00	0.00	0 00
2,200 00	5 04	183 20	2,195 81	-98 62	-5 51	98 78	0 00	0 00	0 00
2,300 00	5 04	183 20	2,295 43	-107 40	-6 00	107 56	0 00	0 00	0 00
2,400 00	5 04	183 20	2,395 04	-116 17	-6 49	116.35	0 00	0 00	0 00
2,500 00	5 04	183 20	2,494 65	-124 94	-6 99	125 14	0 00	0.00	0 00
2,600 00	5 04	183 20	2,594 27	-133.72	-7 48	133 93	0 00	0 00	0 00
2,700 00	5 04	183 20	2,693 88	-142.49	-7 97	142.71	0 00	0 00	0 00
2,800 00	5 04	183 20	2,793 49	-151 26	-8 46	151 50	0 00	0 00	0 00
2,900.00	5 04	183 20	2,893 11	-160 04	-8 95	160 29	0 00	0.00	0 00
3,000 00	5 04	183 20	2,992 72	-168 81	-9 44	169 08	0 00	0 00	0 00
3,100 00	5 04	183 20	3,092 33	-177 59	-9 93	177 86	0 00	0.00	0 00
3,200 00	5 04	183 20	3,191 95	-186 36	-10 42	186 65	0 00	0 00	0 00
3,300 00	5 04	183 20	3,291 56	-195 13	-10 91	195 44	0 00	0 00	0 00
3,400 00	5 04	183 20	3,391 17	-203.91	-11 40	204 23	0 00	0 00	0 00
3,457 31	5 04	183 20	3,448 26	-208 93	-11 68	209 26	0 00	0 00	0 00
Start Drop 2.00°/100'									
3,500 00	4 19	183 20	3,490 81	-212.36	-11 87	212.70	2 00	-2 00	0 00
3,600 00	2 19	183 20	3,590 65	-217.92	-12 18	218 26	2 00	-2 00	0 00
3,700 00	0 19	183 20	3,690 63	-219 98	-12 30	220 33	2 00	-2 00	0 00
3,709 37	0 00	0 00	3,700 00	-220 00	-12 30	220 34	2 00	-2 00	0 00
Hold 0.00° - Top of Paddock - T1-Mina State #2									
5,609 37	0 00	0 00	5,600 00	-220 00	-12 30	220 34	0 00	0 00	0 00
PBHL-Mina State #2									



Scientific Drilling International, Inc.
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Site Mina State #2
Company:	COG Operating LLC	TVD Reference:	GL @ 3682 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL @ 3682 00usft
Site:	Mina State #2	North Reference:	Grid
Well:	Mina State #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 - 7-7/8" Hole		

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
T1-Mina State #2	0.00	0 00	3,700 00	-220 00	-12 30	655,163.70	550,553 00	32° 48' 3 695 N	104° 10' 7 716 W
- plan hits target center									
- Circle (radius 10 00)									
PBHL-Mina State #2	0 00	0.00	5,600 00	-220 00	-12 30	655,163 70	550,553 00	32° 48' 3 695 N	104° 10' 7 716 W
- plan hits target center									
- Circle (radius 10.00)									

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
850.00	850 00	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,709 37	3,700.00	Top of Paddock		0 00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
950 00	950 00	0 00	0 00	KOP Start 2 00°/100'
1,202 07	1,201 74	-11 07	-0 62	Hold 5 04°
3,457 31	3,448 26	-208 93	-11.68	Start Drop 2 00°/100'
3,709 37	3,700 00	-220 00	-12 30	Hold 0 00°

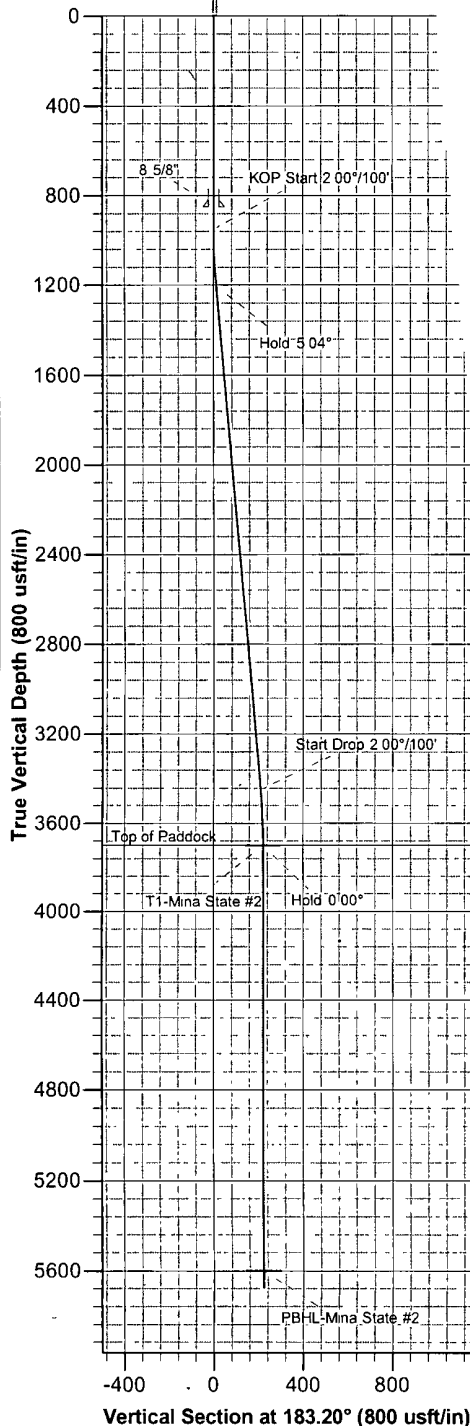
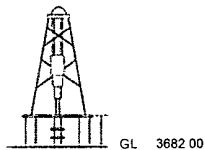


Azimuths to Grid North
True North -0.09°
Magnetic North 7.70°

Magnetic Field
Strength 48803.4 nT
Dip Angle 60.59°
Date 05/17/2012
Model IGRF2010

To convert Magnetic North to Grid, Add 7.70°
To convert True North to Grid, Subtract 0.09°

Mina State #2
Eddy County, NM (NAN27 NME)
Northing: (Y) 655383.70
Easting: (X) 550565.30
Plan #1 - 7-7/8" Hole



WELL DETAILS: Mina State #2

+N/-S	+E/-W	Northing	Ground Level	3682.00	Latitude	Longitude
0.00	0.00	655383.70	Easting	550565.30	32° 48' 5.871 N	104° 10' 7.568 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	950.00	0.00	0.00	950.00	0.00	0.00	0.00	0.00	0.00	
3	1202.07	5.04	183.20	1201.74	-11.07	-0.62	2.00	183.20	11.08	
4	3457.31	5.04	183.20	3448.26	-208.93	-11.68	0.00	0.00	209.26	
5	3709.37	0.00	0.00	3700.00	-220.00	-12.30	2.00	180.00	220.34	T1-Mina State #2
6	5609.37	0.00	0.00	5600.00	-220.00	-12.30	0.00	0.00	220.34	PBHL-Mina State #2

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
T1-Mina State #2	3700.00	-220.00	-12.30	655163.70	550553.0032° 48' 3.695 N	104° 10' 7.716 W	
- plan hits target center							
PBHL-Mina State #2	5600.00	-220.00	-12.30	655163.70	550553.0032° 48' 3.695 N	104° 10' 7.716 W	
- plan hits target center							

SITE DETAILS: Mina State #2

Site Centre Northing	655383.70
Easting	550565.30
Positional Uncertainty	0.00
Convergence	0.09
Local North	Grid

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

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
3700.00	3709.37	Top of Paddock	0.00	

LEGEND

— Plan #1 - 7-7/8" Hole

