

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

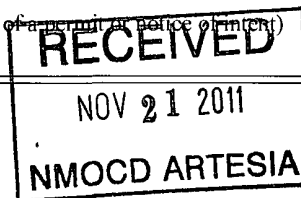
Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

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: PATTON "5" FEE #8H
API Number: 30-015-39641 OCD Permit Number: 212222
U/L or Qtr/Qtr UL M Section 5 Township 19S 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: CRJ 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): KEELY J HOLLY Title: PERMITTING TECH
Signature: [Signature] Date: 10/06/2011
e-mail address: kholly@concho.com Telephone: 432-685-4384

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

OCD Representative Signature: _____

Approval Date: _____

Title: _____

OCD Permit Number: _____

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)

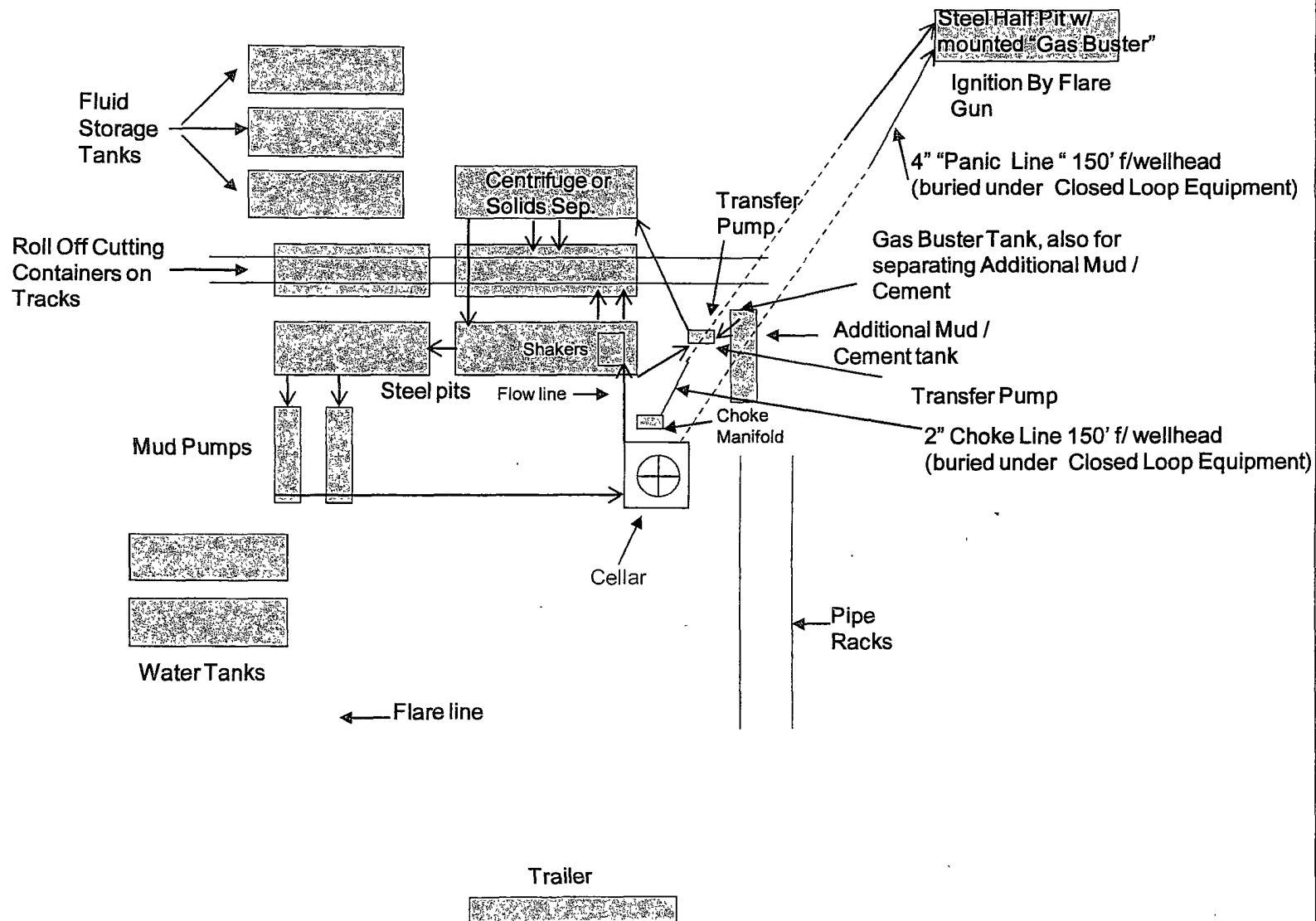
or

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)

Patton 5 Fee #8H

Patton 5 Fee #8H

OH

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

SHL = 330' FSL & 330' FWL

BHL = 330' FSL & 330' FEL

Standard Planning Report

11 November, 2011





Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Patton 5 Fee #8H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3363 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3363 00usft
Site:	Patton 5 Fee #8H	North Reference:	Grid
Well:	Patton 5 Fee #8H	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	Patton 5 Fee #8H		
Site Position:		Northing:	612,352 50 usft
From:	Map	Easting:	476,064 80 usft
Position Uncertainty:	0 00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 41' 0 356 N
		Longitude:	104° 24' 40 059 W
		Grid Convergence:	-0.04 °

Well	Patton 5 Fee #8H		
Well Position	+N/-S	0 00 usft	Northing:
	+E/-W	0 00 usft	Easting:
Position Uncertainty	0 00 usft	Wellhead Elevation:	Ground Level:

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF2010	2011/11/11	7 96
			Dip Angle
			(°)
			60 46
			Field Strength
			(nT)
			48,758

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
	(usft)	(usft)	(usft)
	0 00	0 00	0 00
			Direction
			(°)
			89 98

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	89 98	2,750 00	0 18	477 46	12 00	12 00	0 00	89 98	
7,147 57	90 00	89 98	2,750 00	1 70	4,602 50	0 00	0 00	0 00	0 00	PBHL-Patton 5 Fee #:



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Patton 5 Fee #8H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3363 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3363 00usft
Site:	Patton 5 Fee #8H	North Reference:	Grid
Well:	Patton 5 Fee #8H	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	89.98	2,299 98	0 00	0 79	0 79	12 00	12 00	0 00
2,400 00	15 30	89.98	2,398 49	0 01	16 91	16 91	12 00	12 00	0 00
2,500 00	27 30	89.98	2,491 49	0 02	53 17	53 17	12 00	12 00	0 00
2,600 00	39.30	89.98	2,574 93	0 04	107 96	107 96	12 00	12 00	0 00
2,700 00	51.30	89.98	2,645 14	0 07	178 91	178 91	12 00	12 00	0 00
2,800 00	63 30	89.98	2,699 07	0 10	262 90	262 90	12 00	12 00	0 00
2,900 00	75 30	89.98	2,734 36	0 13	356 27	356 27	12.00	12 00	0 00
3,000 00	87.30	89.98	2,749 47	0 17	454 94	454 94	12 00	12 00	0 00
3,022 54	90 00	89.98	2,750 00	0 18	477 47	477 47	12 00	12 00	0 00
Land EOC hold 90.00°									
3,100 00	90 00	89.98	2,750 00	0 20	554 93	554 93	0 00	0 00	0 00
3,200 00	90 00	89.98	2,750 00	0 24	654 93	654 93	0 00	0 00	0 00
3,300 00	90 00	89.98	2,750.00	0 28	754 93	754 93	0 00	0 00	0 00
3,400 00	90 00	89.98	2,750 00	0 32	854 93	854 93	0 00	0 00	0 00
3,500 00	90 00	89.98	2,750 00	0 35	954 93	954 93	0 00	0 00	0 00
3,600 00	90 00	89.98	2,750.00	0 39	1,054 93	1,054 93	0.00	0.00	0 00
3,700 00	90 00	89.98	2,750 00	0 43	1,154 93	1,154 93	0 00	0 00	0 00
3,800 00	90 00	89.98	2,750.00	0 46	1,254 93	1,254 93	0.00	0 00	0 00
3,900 00	90 00	89.98	2,750 00	0 50	1,354 93	1,354 93	0 00	0 00	0.00
4,000 00	90.00	89.98	2,750 00	0.54	1,454.93	1,454 93	0 00	0 00	0 00
4,100 00	90 00	89.98	2,750.00	0 57	1,554 93	1,554 93	0 00	0 00	0 00
4,200 00	90 00	89.98	2,750 00	0.61	1,654 93	1,654 93	0 00	0 00	0 00
4,300 00	90 00	89.98	2,750 00	0 65	1,754 93	1,754 93	0.00	0 00	0 00
4,400 00	90 00	89.98	2,750 00	0 69	1,854 93	1,854 93	0 00	0 00	0 00
4,500 00	90 00	89.98	2,750 00	0 72	1,954 93	1,954 93	0.00	0 00	0 00
4,600 00	90 00	89.98	2,750 00	0 76	2,054 93	2,054 93	0 00	0 00	0 00
4,700 00	90 00	89.98	2,750 00	0.80	2,154 93	2,154.93	0.00	0 00	0 00
4,800 00	90 00	89.98	2,750 00	0.83	2,254 93	2,254.93	0 00	0 00	0 00
4,900 00	90 00	89.98	2,750.00	0 87	2,354 93	2,354 93	0 00	0 00	0 00
5,000 00	90 00	89.98	2,750 00	0 91	2,454 93	2,454 93	0 00	0 00	0 00
5,100 00	90 00	89.98	2,750 00	0 94	2,554 93	2,554 93	0 00	0 00	0 00
5,200 00	90.00	89.98	2,750 00	0 98	2,654 93	2,654 93	0 00	0 00	0 00
5,300 00	90 00	89.98	2,750 00	1 02	2,754 93	2,754 93	0 00	0 00	0 00
5,400 00	90 00	89.98	2,750 00	1 05	2,854 93	2,854 93	0 00	0 00	0 00
5,500 00	90.00	89.98	2,750 00	1 09	2,954 93	2,954 93	0 00	0 00	0 00
5,600 00	90 00	89.98	2,750 00	1.13	3,054 93	3,054.93	0 00	0 00	0 00
5,700 00	90 00	89.98	2,750.00	1 17	3,154 93	3,154 93	0 00	0 00	0 00
5,800 00	90 00	89.98	2,750 00	1 20	3,254 93	3,254 93	0 00	0 00	0 00
5,900 00	90 00	89.98	2,750 00	1 24	3,354 93	3,354 93	0 00	0 00	0 00
6,000 00	90 00	89.98	2,750 00	1 28	3,454 93	3,454 93	0.00	0 00	0 00
6,100 00	90.00	89.98	2,750 00	1 31	3,554 93	3,554 93	0 00	0 00	0 00
6,200 00	90 00	89.98	2,750 00	1 35	3,654 93	3,654 93	0 00	0 00	0 00
6,300 00	90 00	89.98	2,750 00	1.39	3,754 93	3,754 93	0 00	0 00	0 00
6,400 00	90 00	89.98	2,750 00	1 42	3,854 93	3,854 93	0 00	0 00	0 00
6,500 00	90 00	89.98	2,750 00	1 46	3,954 93	3,954 93	0 00	0 00	0 00
6,600 00	90 00	89.98	2,750 00	1.50	4,054 93	4,054 93	0 00	0 00	0 00
6,700 00	90 00	89.98	2,750 00	1 53	4,154 93	4,154.93	0 00	0 00	0 00
6,800 00	90 00	89.98	2,750 00	1.57	4,254.93	4,254 93	0 00	0 00	0 00
6,900 00	90.00	89.98	2,750.00	1 61	4,354 93	4,354 93	0 00	0 00	0 00
7,000 00	90.00	89.98	2,750 00	1 65	4,454 93	4,454 93	0 00	0 00	0 00
7,100 00	90 00	89.98	2,750 00	1 68	4,554.93	4,554.93	0.00	0 00	0 00



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Patton 5 Fee #8H
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3363 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3363 00usft
Site:	Patton 5 Fee #8H	North Reference:	Grid
Well:	Patton 5 Fee #8H	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)
7,147.57	90.00	89.98	2,750.00	1.70	4,602.50	4,602.50	0.00	0.00	0.00
PBHL-Patton 5 Fee #8H									

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									
PBHL-Patton 5 Fee #8H	0.00	0.00	2,750.00	1.70	4,602.50	612,354.20	480,667.30	32° 41' 0 403 N	104° 23' 46 207 W
- plan hits target center									
- 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	67.98	472.61	Land EOC hold 90 00°



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Patton 5 Fee #8H
Wellbore: OH
Design: Plan #1 8-3/4" Hole



SECTION DETAILS

Sec	MD	Inc	Azi	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	2272.54	0.00	0.00	2272.54	0.00	0.00	0.00	0.00	0.00	
3	3022.54	90.00	89.98	2750.00	0.18	477.46	12.00	89.98	477.46	
4	7147.57	90.00	89.98	2750.00	1.70	4602.50	0.00	0.00	4602.50	PBHL-Patton 5 Fee #8H

Plan Plan #1 8-3/4" Hole (Patton 5 Fee #8H/OH)

Created By Julio Pina Date: 11-Nov-11
Checked _____ Date _____
Reviewed _____ Date _____

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
PBHL-Patton 5 Fee #8H	2750.00	1.70	4602.50	612354.20	480667.30	32°41' 0.403 N	104°23' 46.207 W	Point

AZIMUTH CORRECTIONS

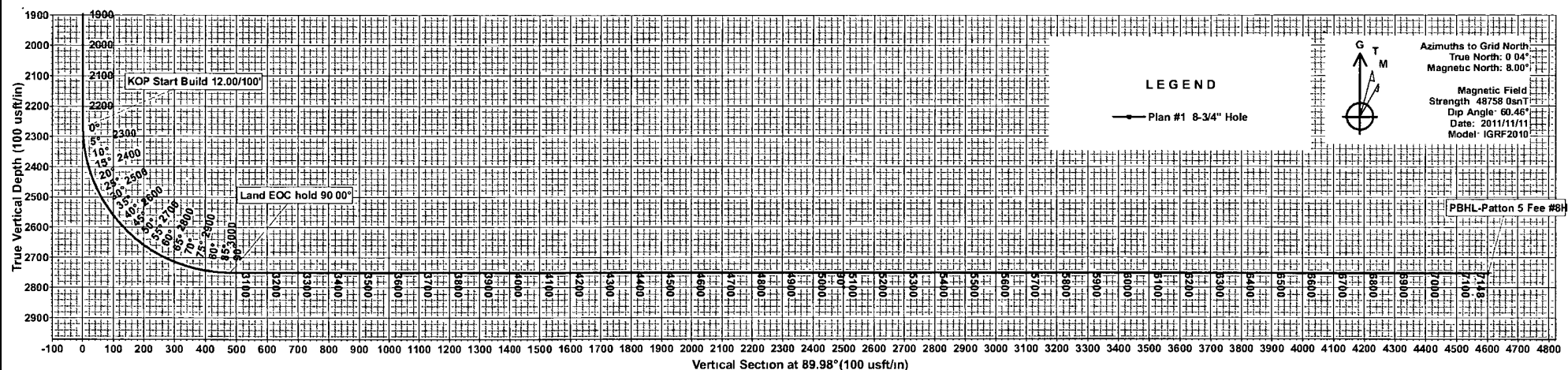
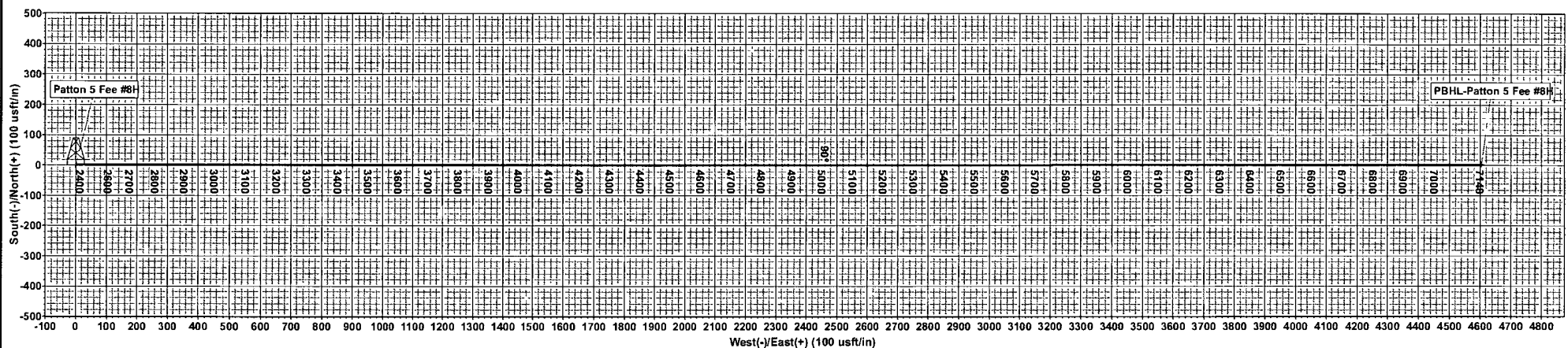
ALL AZIMUTHS MUST BE CORRECTED TO GRID
GRID CORRECTIONS MUST BE APPLIED BEFORE PLOTTING
To convert a Magnetic Direction to a Grid Direction, Add 8.00°
To convert a True Direction to a Grid Direction, Add 0.04°

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

WELL DETAILS: Patton 5 Fee #8H

Ground Level:	3363.00					
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	612352.50	476064.80	32°41' 0.356 N	104°24' 4.059 W	



LEGEND

Plan #1 8-3/4" Hole



Azimuths to Grid North
True North: 0.04°
Magnetic North: 8.00°
Magnetic Field
Strength 48758 Gauss
Dip Angle 60.46°
Date: 2011/11/11
Model: IGRF2010