

District I
1725 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 rules, regulations or ordinances.

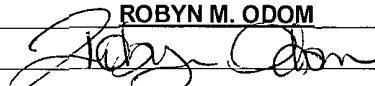
1. Operator: COG OPERATING LLC OGRID #: 229137		RECEIVED MAR 04 2010 NMOCD ARTESIA
Address: 550 WEST TEXAS, SUITE 1300 MIDLAND, TX 79701		
Facility or well name: Firecracker State #9		
API Number: 30-015- 37639 OCD Permit Number: 210070		
U/L or Qtr/Qtr UL J Section 14 Township 17S Range 28E County: 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

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): **ROBYN M. ODOM** Title: **REGULATORY ANALYST**
Signature:  Date: **3-04-2010**
e-mail address: **rodom@conchoresources.com** Telephone: **432-685-4385**

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

OCD Representative Signature: *Kevin R. Dade* Approval Date: 03/10/2010
Title: *Dist II Supervisor* OCD Permit Number: 210070

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)

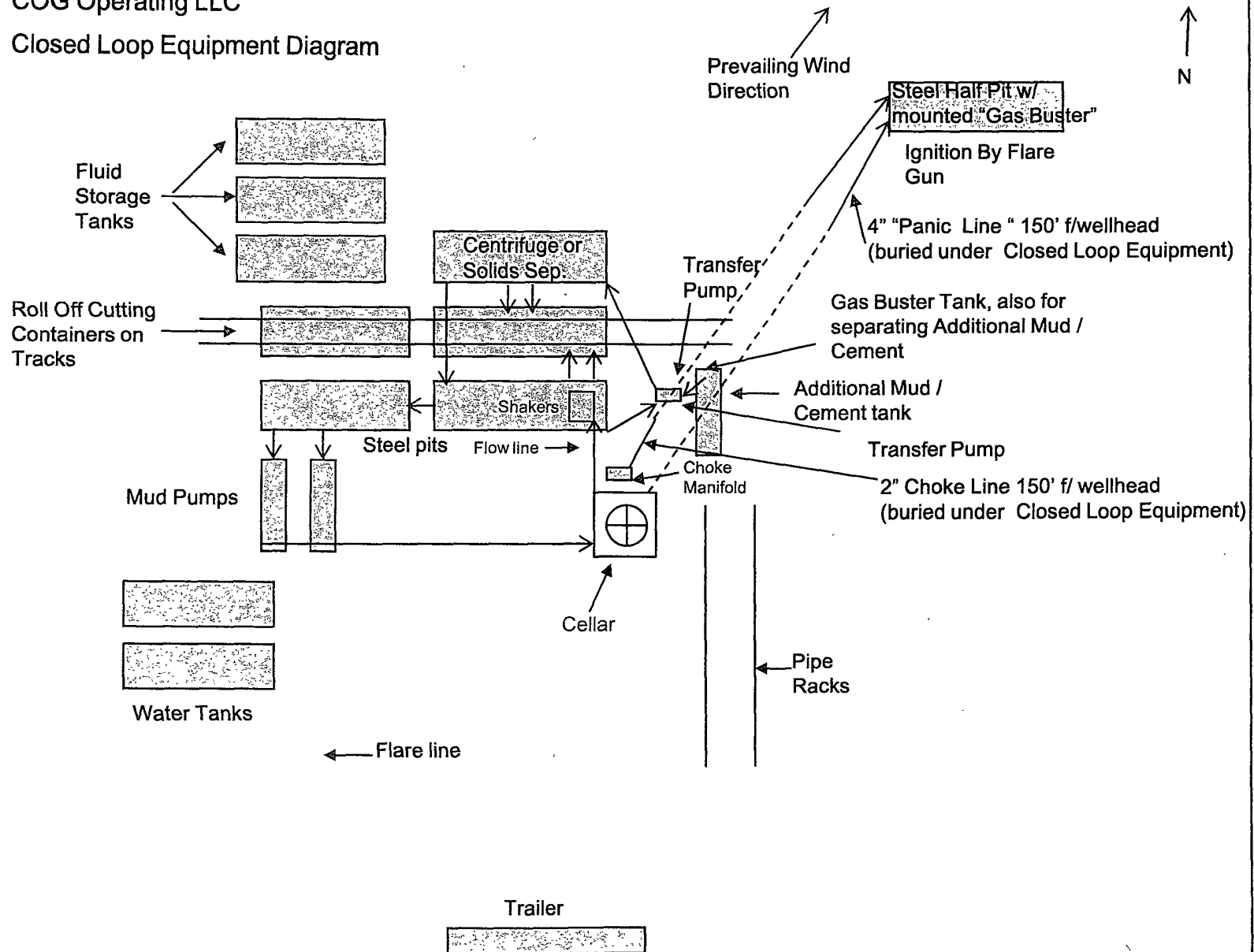
or

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)

Firecracker State #9

Firecracker State #9

OH

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

SHL = 1900' FSL & 2310' FEL

BHL = 1660' FSL & 2260' FEL

Paddock Top = 1660' FSL & 2260' FEL @ 3700' TVD

Standard Planning Report

01 March, 2010





Scientific Drilling
Planning Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Firecracker State #9
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3615 00ft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3615 00ft
Site:	Firecracker State #9	North Reference:	Grid
Well:	Firecracker State #9	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	Firecracker State #9		
Site Position:	Map	Northing:	666,826.00 ft
From:		Easting:	557,707.60 ft
Position Uncertainty:	0 00 ft	Slot Radius:	0 "
		Latitude:	32° 49' 58.980 N
		Longitude:	104° 8' 43.650 W
		Grid Convergence:	0 10 °

Well	Firecracker State #9, BHL 1660' FSL, 2260' FEL, Sec 14, T17S, R28E, Unit J		
Well Position	+N/-S	0 00 ft	Northing:
	+E/-W	0 00 ft	Easting:
Position Uncertainty	0 00 ft	Wellhead Elevation:	Ground Level:
			3,615 00 ft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	2010/03/01	8 04
			Dip Angle
			(°)
			60 70
			Field Strength
			(nT)
			49,078

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
	(ft)	(ft)	(ft)
	0 00	0 00	0 00
			Direction
			(°)
			166 92

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100ft)	(°/100ft)	(°/100ft)		
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	
1,236 29	5 73	166 92	1,235 81	-13 92	3 23	2 00	2 00	0 00	166 92	
3,425 58	5 73	166 92	3,414 19	-226 68	52 67	0 00	0 00	0 00	0 00	
3,711 88	0 00	0 00	3,700 00	-240 60	55 90	2 00	-2 00	0 00	180 00	PP-FS #9
5,411 88	0 00	0 00	5,400 00	-240.60	55.90	0.00	0.00	0 00	0 00	PBHL-FS #9



Scientific Drilling
Planning Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Firecracker State #9
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3615 00ft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3615 00ft
Site:	Firecracker State #9	North Reference:	Grid
Well:	Firecracker State #9	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 7-7/8" Hole		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0 00	0 00	0 00	0 00	0 00	0 00	0.00	0 00	0 00	0 00
East HL-FS #9 - South HL-FS #9									
850 00	0 00	0 00	850 00	0.00	0 00	0.00	0 00	0 00	0 00
8-5/8" Casing									
950.00	0 00	0 00	950.00	0 00	0.00	0 00	0 00	0 00	0 00
KOP Start Build 2.00°/100'									
1,000 00	1 00	166 92	1,000 00	-0 43	0 10	0 44	2 00	2 00	0 00
1,100 00	3 00	166 92	1,099.93	-3 82	0 89	3 93	2.00	2 00	0.00
1,200 00	5 00	166 92	1,199 68	-10 62	2 47	10 90	2 00	2 00	0 00
1,236 29	5 73	166 92	1,235 81	-13 92	3 23	14 29	2.00	2 00	0.00
EOC hold 5.73°									
1,300 00	5 73	166 92	1,299 21	-20 11	4 67	20 65	0 00	0 00	0 00
1,400 00	5 73	166 92	1,398 71	-29 83	6 93	30 63	0 00	0 00	0 00
1,500 00	5 73	166 92	1,498 21	-39 55	9 19	40 60	0 00	0 00	0 00
1,600.00	5 73	166 92	1,597 71	-49 27	11 45	50 58	0 00	0 00	0 00
1,700 00	5 73	166 92	1,697 21	-58.99	13 70	60 56	0.00	0 00	0 00
1,800 00	5 73	166 92	1,796.71	-68 70	15 96	70 53	0 00	0 00	0 00
1,900 00	5 73	166 92	1,896 21	-78.42	18 22	80 51	0.00	0 00	0 00
2,000 00	5 73	166 92	1,995 71	-88 14	20 48	90 49	0 00	0 00	0 00
2,100 00	5 73	166 92	2,095 21	-97 86	22 74	100 46	0 00	0 00	0 00
2,200 00	5 73	166 92	2,194 72	-107 58	24 99	110 44	0 00	0 00	0 00
2,300 00	5 73	166 92	2,294 22	-117 29	27 25	120 42	0 00	0 00	0 00
2,400.00	5 73	166 92	2,393 72	-127 01	29 51	130 39	0 00	0 00	0 00
2,500.00	5 73	166 92	2,493.22	-136 73	31 77	140 37	0 00	0 00	0 00
2,600 00	5 73	166 92	2,592 72	-146 45	34 02	150 35	0 00	0 00	0 00
2,700.00	5 73	166 92	2,692 22	-156 17	36 28	160.32	0 00	0 00	0 00
2,800 00	5 73	166 92	2,791 72	-165 88	38 54	170 30	0 00	0 00	0 00
2,900.00	5 73	166.92	2,891.22	-175 60	40 80	180 28	0 00	0 00	0 00
3,000 00	5 73	166 92	2,990 72	-185 32	43 06	190 26	0 00	0 00	0 00
3,100 00	5 73	166 92	3,090 23	-195 04	45 31	200 23	0 00	0 00	0 00
3,200 00	5 73	166 92	3,189.73	-204 76	47 57	210 21	0 00	0 00	0 00
3,300 00	5 73	166 92	3,289.23	-214 47	49 83	220 19	0 00	0 00	0 00
3,400 00	5 73	166 92	3,388 73	-224 19	52 09	230 16	0 00	0 00	0 00
3,425 58	5 73	166 92	3,414 19	-226 68	52 67	232.72	0 00	0 00	0 00
Start Drop 2.00°/100'									
3,500 00	4 24	166 92	3,488 32	-232 97	54 13	239 18	2 00	-2 00	0 00
3,600 00	2 24	166 92	3,588.15	-238 47	55 41	244 82	2 00	-2 00	0 00
3,700 00	0 24	166 92	3,688 12	-240 58	55 89	246 98	2 00	-2 00	0 00
3,711.88	0 00	0 00	3,700 00	-240.60	55 90	247 01	2 00	-2 00	0 00
EOC Hold 0.00° - PP-FS #9									
5,411 88	0 00	0 00	5,400 00	-240 60	55 90	247 01	0 00	0 00	0.00
PBHL-FS #9									



Scientific Drilling
Planning Report



Database:	EDM 5000 1 Single User Db	Local Co-ordinate Reference:	Site Firecracker State #9
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3615 00ft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3615 00ft
Site:	Firecracker State #9	North Reference:	Grid
Well:	Firecracker State #9	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 7-7/8" Hole		

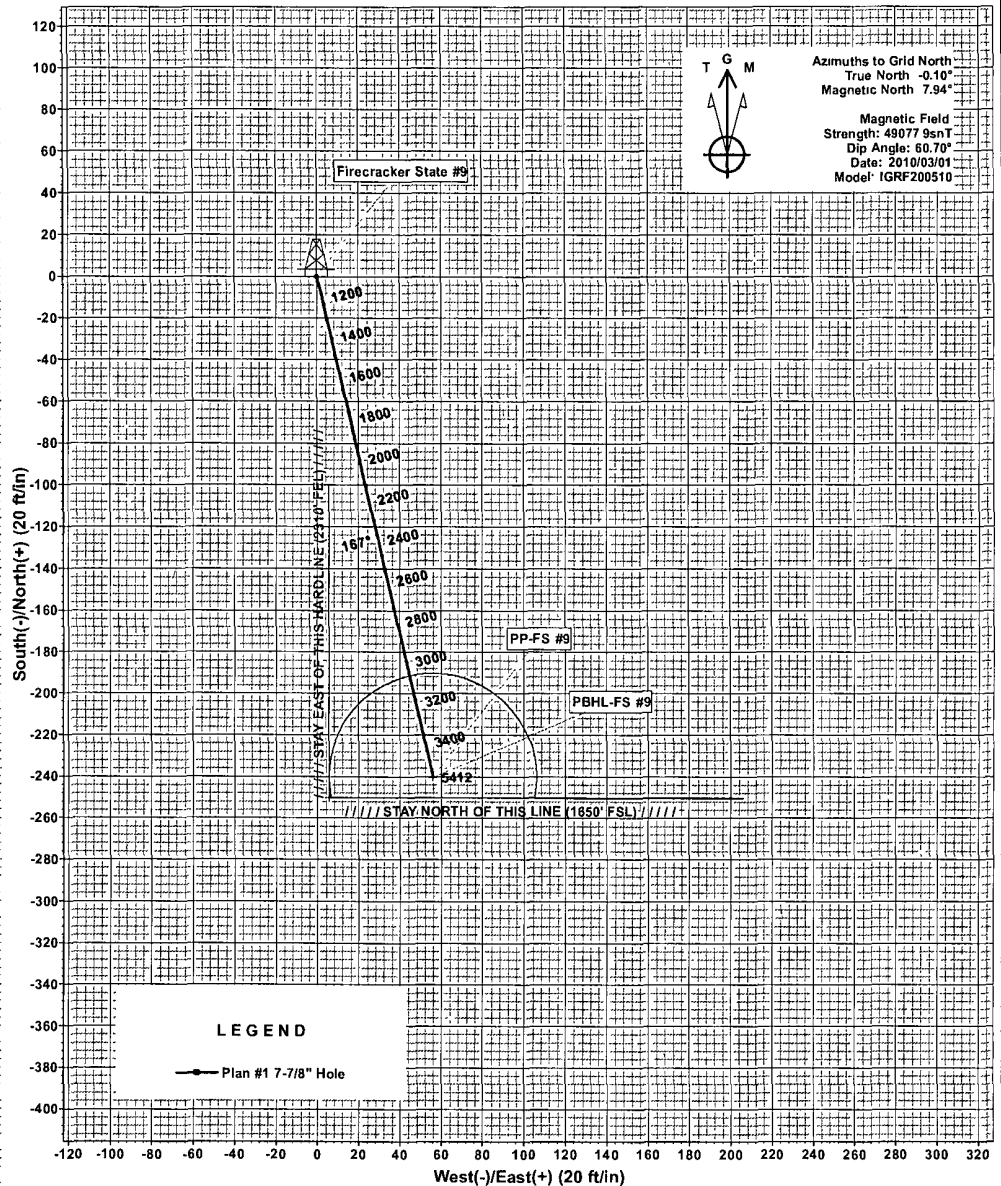
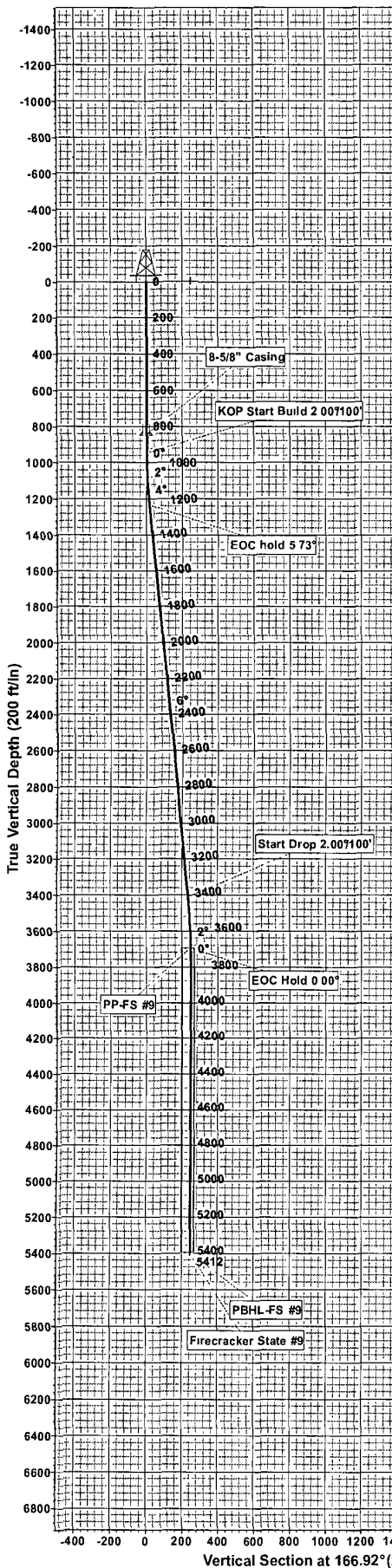
Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
East HL-FS #9	0 00	0 01	0 00	-250 60	5 90	666,575 40	557,713 50	32° 49' 56 500 N	104° 8' 43 586 W
- plan misses target center by 250 67ft at 0 00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W0 00 H150 00 D0 00)									
South HL-FS #9	0 00	0 01	0 00	-250 60	5 90	666,575 40	557,713 50	32° 49' 56 500 N	104° 8' 43 586 W
- plan misses target center by 250 67ft at 0 00ft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W200 00 H0 00 D0 00)									
PP-FS #9	0 00	0 01	3,700 00	-240 60	55 90	666,585 40	557,763 50	32° 49' 56 598 N	104° 8' 43 000 W
- plan hits target center									
- Point									
PBHL-FS #9	0 00	0 01	5,400 00	-240 60	55 90	666,585 40	557,763 50	32° 49' 56 598 N	104° 8' 43 000 W
- plan hits target center									
- Circle (radius 50 00)									

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

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
950 00	950 00	0 00	0 00	KOP Start Build 2 00°/100'
1,236 29	1,235 81	-13 92	3 23	EOC hold 5 73°
3,425 58	3,414 19	-226 68	52 67	Start Drop 2 00°/100'
3,711 88	3,700 00	-240 60	55 90	EOC Hold 0 00°



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Firecracker State #9
Wellbore: OH
Design: Plan #1 7-7/8" Hole



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
East HL-FS #9	0.00	-250.60	5.90	666575.40	557713.50	32°49' 56.500 N	104°8' 43.586 W	Rectangle (Sides: L150.00 W0.00)
South HL-FS #9	0.00	-250.60	5.90	666575.40	557713.50	32°49' 56.500 N	104°8' 43.586 W	Rectangle (Sides: L0.00 W200.00)
PP-FS #9	3700.00	-240.60	55.90	666585.40	557763.50	32°49' 56.598 N	104°8' 43.000 W	Point
PBHL-FS #9	5400.00	-240.60	55.90	666585.40	557763.50	32°49' 56.598 N	104°8' 43.000 W	Circle (Radius: 50.00)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	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	1236.29	5.73	166.92	1235.81	-13.92	3.23	2.00	166.92	14.29	
4	3425.58	5.73	166.92	3414.19	-226.68	52.67	0.00	0.00	232.72	
5	3711.88	0.00	0.00	3700.00	-240.60	55.90	2.00	180.00	247.01	PP-FS #9
6	5411.88	0.00	0.00	5400.00	-240.60	55.90	0.00	0.00	247.01	PBHL-FS #9

WELL DETAILS Firecracker State #9

Ground Level:		3615.00			
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	666826.00	557707.60	32°49' 58.980 N	104°8' 4.3650 W

PROJECT DETAILS: Eddy County, NM (NAN27 NME)			Plan: Plan #1 7-7/8" Hole (Firecracker State #9)OH		
Geodetic System:	US State Plane 1927 (Exact solution)	Created By:	Julio Pina	Date:	01-Mar-10
Datum:	NAD 1927 (NADCON CONUS)	Checked:		Date:	
Ellipsoid:	Clarke 1866	Reviewed:		Date:	
Zone:	New Mexico East 3001	Approved:		Date:	
System Datum:	Mean Sea Level				