

District I
1625 N. French Tr., 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: **KIOWA STATE #2**
API Number: **30-015- 39714** OCD Permit Number: **212 206**
U/L or Qtr/Qtr **UL F** Section **36** Township **17S** Range **27E** 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

NOV 29 2011

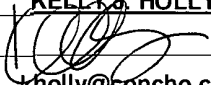
NMOCD ARTESIA

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): **KELLY J. HOLLY** Title: **PERMITTING TECH**
Signature:  Date: **10/27/2011**
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 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)

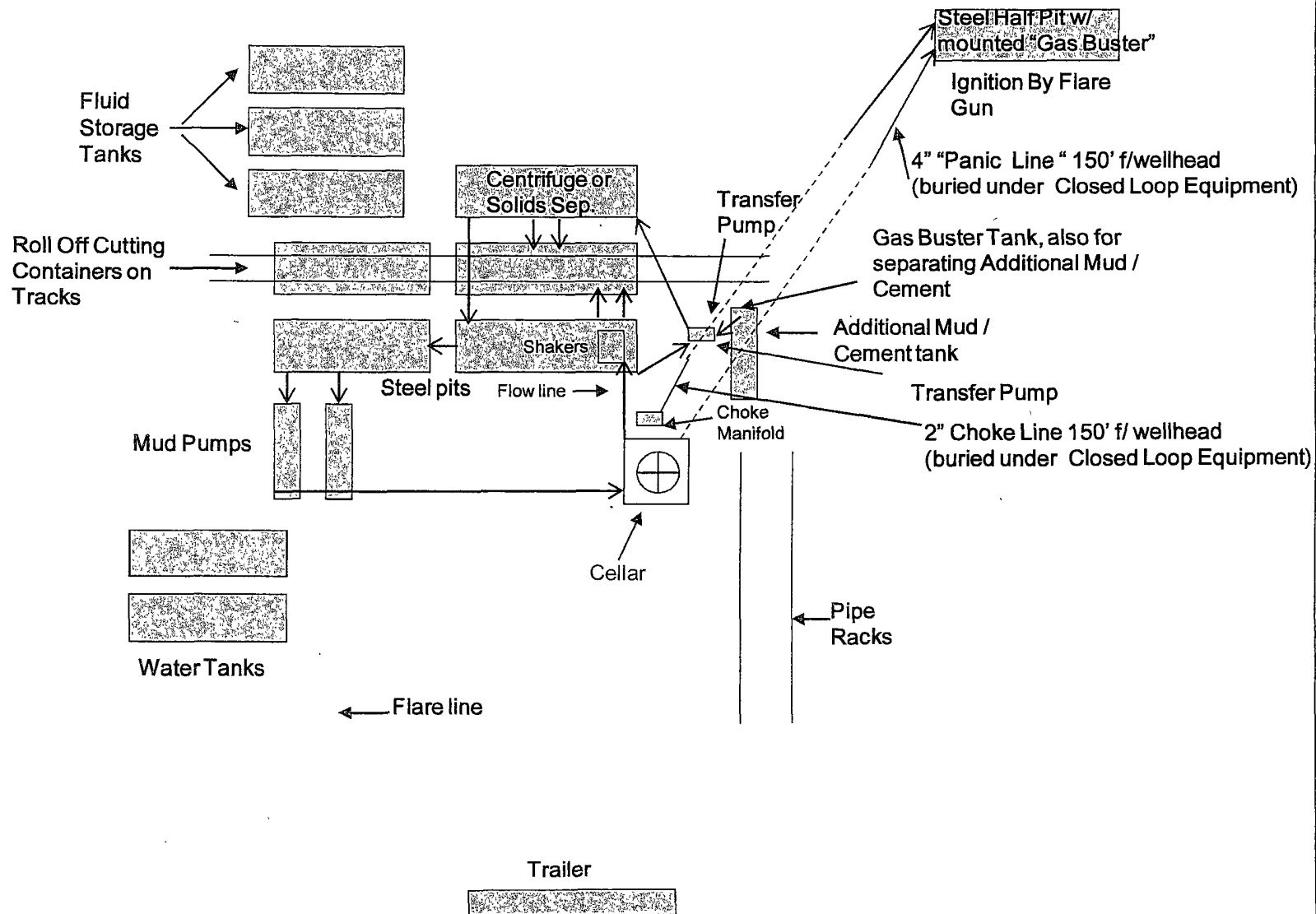
or

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)

Kiowa State #2

Kiowa State #2

OH

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

SHL = 1945' FNL & 1400' FWL

BHL = 2300' FNL & 1700' FWL

Paddock Top = 199' S of Surface & 145' S of Surface @ 3200' TVD

Standard Planning Report

18 November, 2011





Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Kiowa State #2
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3596 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3596 00usft
Site:	Kiowa State #2	North Reference:	Grid
Well:	Kiowa State #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Rev 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	Kiowa State #2		
Site Position:	From: Map	Northing: 652,003 70 usft Easting: 530,027 70 usft	Latitude: 32° 47' 32 677 N Longitude: 104° 14' 8 227 W
Position Uncertainty:	0 00 usft	Slot Radius: 13-3/16 "	Grid Convergence: 0 05 °

Well	Kiowa State #2		
Well Position	+N/-S 0 00 usft +E/-W 0 00 usft	Northing: 652,003 70 usft Easting: 530,027 70 usft	Latitude: 32° 47' 32 677 N Longitude: 104° 14' 8 227 W
Position Uncertainty	0 00 usft	Wellhead Elevation:	Ground Level: 3,596 00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/11/11	7 88	60 59	48,842

Design:	Plan #1 Rev 1 7-7/8" 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	143 81

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	
950 00	0 00	0 00	950 00	0 00	0 00	0 00	0 00	0 00	0 00	
1,287.59	6 75	143 81	1,286 81	-16 04	11 73	2 00	2 00	42 60	143 81	
4,875 66	6 75	143 81	4,850 00	-356 50	260 80	0 00	0 00	0 00	0 00	PBHL-Kiowa #2



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Kiowa State #2
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3596 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3596 00usft
Site:	Kiowa State #2	North Reference:	Grid
Well:	Kiowa State #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Rev 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	
South HL-Kiowa #2 - East HL-Kiowa #2										
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	143 81	1,000 00	-0 35	0 26	0 44	2 00	2 00	0 00	
1,100 00	3 00	143 81	1,099 93	-3 17	2 32	3 93	2 00	2 00	0 00	
1,200 00	5 00	143 81	1,199 68	-8 80	6 44	10 90	2 00	2 00	0 00	
1,287 59	6 75	143 81	1,286 81	-16 04	11 73	19 87	2 00	2 00	0 00	
EOC hold 6.75°										
1,300 00	6 75	143 81	1,299 13	-17 21	12 59	21 33	0 00	0 00	0 00	
1,400 00	6 75	143 81	1,398 44	-26 70	19 53	33 08	0 00	0 00	0 00	
1,500 00	6 75	143 81	1,497 75	-36 19	26 48	44 84	0 00	0 00	0 00	
1,600 00	6 75	143 81	1,597 05	-45 68	33 42	56 60	0 00	0 00	0 00	
1,700 00	6 75	143 81	1,696 36	-55 17	40 36	68 35	0 00	0 00	0 00	
1,800 00	6 75	143 81	1,795 67	-64 66	47 30	80 11	0 00	0 00	0 00	
1,900 00	6 75	143 81	1,894 97	-74 15	54 24	91 87	0 00	0 00	0 00	
2,000 00	6 75	143 81	1,994 28	-83 63	61 18	103 62	0 00	0 00	0 00	
2,100 00	6 75	143 81	2,093 59	-93 12	68 12	115 38	0 00	0 00	0 00	
2,200 00	6 75	143 81	2,192 89	-102 61	75 07	127 14	0 00	0 00	0 00	
2,300 00	6 75	143 81	2,292 20	-112 10	82 01	138 90	0 00	0 00	0 00	
2,400 00	6 75	143 81	2,391 50	-121 59	88 95	150 65	0 00	0 00	0 00	
2,500 00	6 75	143 81	2,490 81	-131 08	95 89	162 41	0 00	0 00	0 00	
2,600 00	6 75	143 81	2,590 12	-140 57	102 83	174 17	0 00	0 00	0 00	
2,700 00	6 75	143 81	2,689 42	-150 06	109 77	185 92	0 00	0 00	0 00	
2,800 00	6 75	143 81	2,788 73	-159 54	116 72	197 68	0 00	0 00	0 00	
2,900 00	6 75	143 81	2,888 04	-169 03	123 66	209 44	0 00	0 00	0 00	
3,000 00	6 75	143 81	2,987 34	-178 52	130 60	221 19	0 00	0 00	0 00	
3,100 00	6 75	143 81	3,086 65	-188 01	137 54	232 95	0 00	0 00	0 00	
3,200 00	6 75	143 81	3,185 96	-197 50	144 48	244 71	0 00	0 00	0 00	
3,214 14	6 75	143 81	3,200 00	-198 84	145 46	246 37	0 00	0 00	0 00	
Top of Paddock										
3,300 00	6 75	143 81	3,285 26	-206 99	151 42	256 46	0 00	0 00	0 00	
3,400 00	6 75	143 81	3,384 57	-216 48	158 37	268 22	0 00	0 00	0 00	
3,500 00	6 75	143 81	3,483 88	-225 97	165 31	279 98	0 00	0 00	0 00	
3,600 00	6 75	143 81	3,583 18	-235 45	172 25	291 73	0 00	0 00	0 00	
3,700 00	6 75	143 81	3,682 49	-244 94	179 19	303 49	0 00	0 00	0 00	
3,800 00	6 75	143 81	3,781 80	-254 43	186 13	315 25	0 00	0 00	0 00	
3,900 00	6 75	143 81	3,881 10	-263 92	193 07	327 00	0 00	0 00	0 00	
4,000 00	6 75	143 81	3,980 41	-273 41	200 01	338 76	0 00	0 00	0 00	
4,100 00	6 75	143 81	4,079 71	-282 90	206 96	350 52	0 00	0 00	0 00	
4,200 00	6 75	143 81	4,179 02	-292 39	213 90	362 27	0 00	0 00	0 00	
4,300 00	6 75	143 81	4,278 33	-301 88	220 84	374 03	0 00	0 00	0 00	
4,400 00	6 75	143 81	4,377 63	-311 37	227 78	385 79	0 00	0 00	0 00	
4,500 00	6 75	143 81	4,476 94	-320 85	234 72	397 55	0 00	0 00	0 00	
4,600 00	6 75	143 81	4,576 25	-330 34	241 66	409 30	0 00	0 00	0 00	
4,700 00	6 75	143 81	4,675 55	-339 83	248 61	421 06	0 00	0 00	0 00	
4,800 00	6 75	143 81	4,774 86	-349 32	255 55	432 82	0 00	0 00	0 00	
4,875 66	6 75	143 81	4,850 00	-356 50	260 80	441 71	0 00	0 00	0 00	
PBHL-Kiowa #2										



Scientific Drilling
Planning Report



Database:	EDM-Julio	Local Co-ordinate Reference:	Site Kiowa State #2
Company:	COG Operating LLC	TVD Reference:	GL Elev @ 3596 00usft
Project:	Eddy County, NM (NAN27 NME)	MD Reference:	GL Elev @ 3596 00usft
Site:	Kiowa State #2	North Reference:	Grid
Well:	Kiowa State #2	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1 Rev 1 7-7/8" Hole		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
South HL-Kiowa #2	0 00	0 00	0 00	-366 50	210 80	651,637 20	530,238 50	32° 47' 29 048 N	104° 14' 5 761 W
- plan misses target center by 422 80usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W200 00 H0 00 D0 00)									
East HL-Kiowa #2	0 00	0 00	0 00	-366 50	210 80	651,637 20	530,238 50	32° 47' 29 048 N	104° 14' 5 761 W
- plan misses target center by 422 80usft at 0 00usft MD (0 00 TVD, 0 00 N, 0 00 E)									
- Rectangle (sides W0 00 H300 00 D0 00)									
PBHL-Kiowa #2	0 00	0 01	4,850 00	-356 50	260 80	651,647 20	530,288 50	32° 47' 29 147 N	104° 14' 5 175 W
- plan hits target center									
- Circle (radius 50 00)									

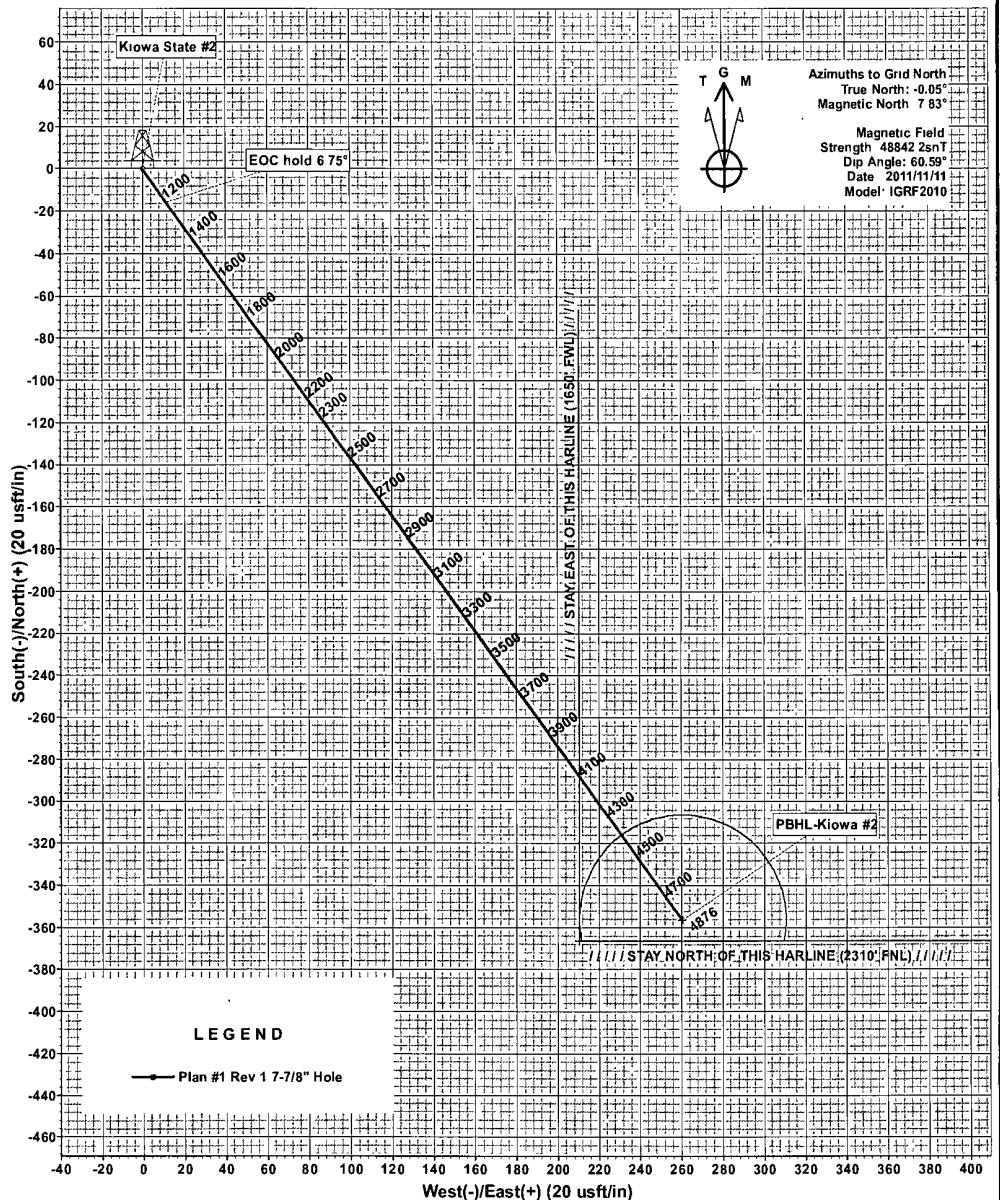
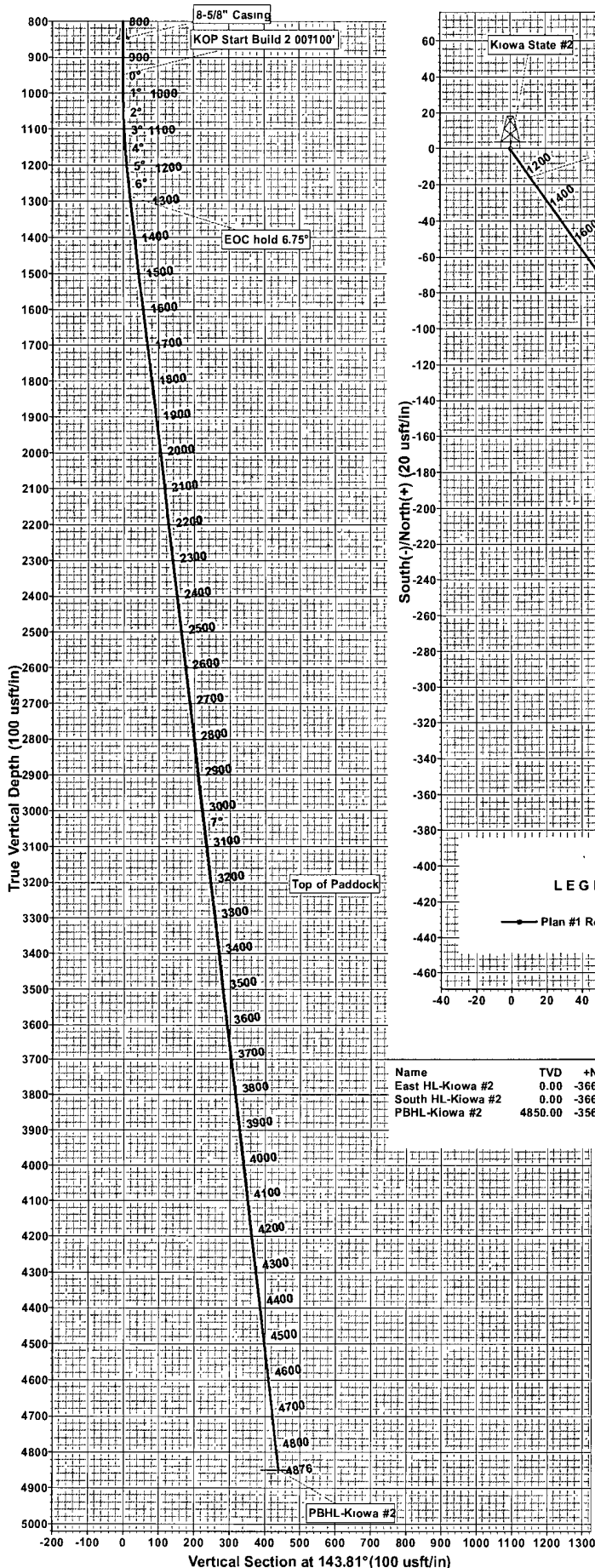
Casing Points				
Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
(usft)	(usft)	Name	(")	(")
850 00	850 00	8-5/8" Casing	8-5/8	12-1/4

Formations				
Measured Depth	Vertical Depth	Name	Lithology	Dip Direction
(usft)	(usft)			(°)
3,214 14	3,200 00	Top of Paddock		0 00

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S	+E/-W	
		(usft)	(usft)	
950 00	950 00	0 00	0 00	KOP Start Build 2 00°/100'
1,287 59	1,286 81	-16 04	11 73	EOC hold 6 75°



Scientific Drilling for COG Operating LLC
Site: Eddy County, NM (NAN27 NME)
Well: Kiowa State #2
Wellbore: OH
Design: Plan #1 Rev 1 7-7/8" Hole



Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
East HL-Kiowa #2	0.00	-366.50	210.80	651637.20	530238.50	32°47' 29.048 N	104°14' 5.761 W	Rectangle (Sides L 300.00 W0.00)
South HL-Kiowa #2	0.00	-366.50	210.80	651637.20	530238.50	32°47' 29.048 N	104°14' 5.761 W	Rectangle (Sides L 0.00 W200.00)
PBHL-Kiowa #2	4850.00	-356.50	260.80	651647.20	530288.50	32°47' 29.147 N	104°14' 5.175 W	Circle (Radius 50.00)

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	1287.59	6.75	143.81	1286.81	-16.04	11.73	2.00	143.81	19.87	
4	4875.66	6.75	143.81	4850.00	-356.50	260.80	0.00	0.00	441.71	PBHL-Kiowa #2

WELL DETAILS: Kiowa State #2

+N/-S	+E/-W	Ground Level	3596.00
0.00	0.00	Northing	652003.70
		Easting	530027.70
		Latitude	32°47' 32.677 N
		Longitude	104°14' 8.227 W

PROJECT DETAILS: Eddy County, NM (NAN27 NME)		Plan Plan #1 Rev 1 7-7/8" Hole (Kiowa State #2/OH)	
Geodetic System: US State Plane 1927 (Exact solution)	Created By: Julio Pina	Date:	11-Nov-11
Datum: NAD 1927 (NADCON CONUS)		Date:	
Ellipsoid: Clarke 1866	Checked:	Date:	
Zone: New Mexico East 3001	Reviewed:	Date:	
System Datum: Mean Sea Level	Approved:	Date:	