OCD-ARTESIA

S

Form 3160-3
(February 2005)

OCT 31 2007
OCD-ARTESIA

FORM APPROVED
OMB No 1004-0137
Expires March 31, 2007

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☒ REENTER	5 Lease Serial No. NMDC # 118710
1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone	6 If Indian, Allotee or Tribe Name: N/A
2. Name of Operator: COG Operating, LLC 229137	7 If Unit or CA Agreement, Name and No.: N/A
3a. Address: 550 West Texas, Suite 1300, Midland, TX 79701	8. Lease Name and Well No.: High Lonesome "26" Fed Com 1H 36816 31899
3b. Phone No (include area code): 432-685-9158	9 API Well No.: 30-015-35893
4 Location of Well (Report location clearly and in accordance with any State requirements.*) At surface: 660' FSL & 1150' FEL, Unit A; At proposed prod. zone: 660' FNL & 330' FEL, Unit D	10. Field and Pool, or Exploratory: WILDCAT (Wolfcamp)
14. Distance in miles and direction from nearest town or post office*: Approx. 4 miles West of Loco Hills, NM	11. Sec., T. R. M. or Blk. and Survey or Area: Section 26, T16S, R 29E
	12. County or Parish: Eddy; 13 State: NM

15 Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any): 330'	16 No. of acres in lease: 1560	17. Spacing Unit dedicated to this well: 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.: 1200'	19. Proposed Depth: TVD 7283', MD 11,200'	20. BLM/BIA Bond No. on file: NMB 000215
21. Elevations (Show whether DF, KDB, RT, GL, etc.): 3694' GL	22. Approximate date work will start*: 09/01/2007	23. Estimated duration: 45 Days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature: Lee Ann Rollins	Name (Printed Typed): Lee Ann Rollins	Date: 08/02/2007
Title:		
Approved by (Signature): /s/ Don Peterson	Name (Printed/Typed): /S/ DON PETERSON	Date: OCT 27 2007
Title: FOR FIELD MANAGER	Office: CARLSBAD FIELD OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

*(Instructions on page 2)

Roswell Controlled Water Basin

SEE ATTACHED FOR CONDITIONS OF APPROVAL

If earthen pits are used in association with the drilling of this well, an OCD pit permit must be obtained prior to pit construction.

APPROVAL SUBJECT TO GENERAL REQUIREMENTS AND SPECIAL STIPULATIONS

STATEMENT ACCEPTING RESPONSIBILITY FOR OPERATIONS

C.O.G. Operating, LLC (229137)
550 W. Texas Avenue, Ste. 1300
Midland, TX 79701

The undersigned accepts all applicable terms, conditions, stipulations and restrictions covering operations conducted on the leased land or portion thereof, as described below:

Lease No – Surface Location:	NMLC # 118710
Lease No – Bottom Hole Location:	NMLC # 118710
Well Name:	High Lonesome "26" Federal Com #1H
Legal Description of Land:	SL: 660' FNL & 1150' FEL, Unit A BHL: 660' FNL & 330' FWL, Unit D Section 26, T16S, R29E Eddy County, NM
Formation(s) (if applicable):	Undesignated (Wolfcamp)
Bond Coverage:	$25,000 statewide bond of C.O.G. Operating, LLC
BLM Bond File No:	NMB 000215

8-3-07
Date

John Coffman
C.O.G. Operating, LLC

Exhibit "A"

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
DISTRICT II
1301 W Grand Avenue, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., 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, New Mexico 87505

Form C-102
Revised October 12, 2005

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-015-~~35893~~ 31899	96794	WILDCAT; (Wolfcamp)

Property Code	Property Name	Well Number
	HIGH LONESOME "26" FEDERAL COM	1H

OGRID No.	Operator Name	Elevation
229137	C.O.G. OPERATING L.L.C.	3694'

Surface Location

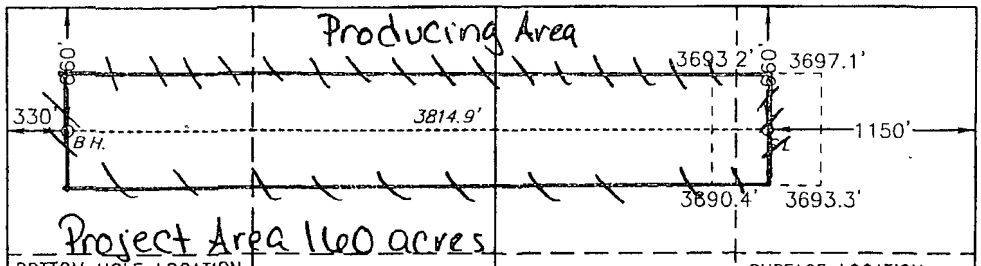
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	26	16 S	29 E		660	NORTH	1150	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
D	26	16 S	29 E		660	NORTH	330	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



Project Area 160 acres

BOTTOM HOLE LOCATION
LAT.: N 32°53'53.13"
LONG.: W104°03'10.84"
SPC- N.: 690573.773
E.: 627384.354
(NAD-83)

SURFACE LOCATION
LAT.: N 32°53'53.02"
LONG.: W104°02'26.11"
SPC- N.: 690573.536
E.: 631197.812
(NAD-83)

OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature Date

Lee An Rollins 8/3/07
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief

JULY 31, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES NEW MEXICO 7977 REGISTERED PROFESSIONAL SURVEYOR

W.O. [illegible]357

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

ATTACHMENT TO FORM 3160-3
COG Operating, LLC
High Lonesome "26" Federal Com. #1H Re-Entry
SL: 660' FNL & 1150' FEL, Unit A
BHL: 660' FNL & 330' FWL, Unit D
Sec 26, T16S, R29E
Eddy County, NM

REVISED 9/11/07

1. Proration Unit Spacing: 160 Acres

2. Ground Elevation: 3682'

3. Proposed Depths: TVD = 7323', MD = 11200'

4. Estimated tops of geological markers:

Yates	1040'
Queen	1860'
San Andres	2630'
Tubb	5360'
Abo	6030'
Wolfcamp	7294'

5. Possible mineral bearing formations:

Yates	1040'
Queen	1860'
San Andres	2630'
Tubb	5360'
Abo	6030'
Wolfcamp	7294'

6. Casing Program - **Existing**

Hole size	Interval	OD of Casing	Weight	Cond.	Collar	Grade
17-1/2"	0' - 400'	13-3/8"	48#	used	STC	H40
12-1/4"	0' – 2700'	8-5/8"	32#	used	STC	J55

6a. Casing Program - **Proposed**

Hole size	Interval	OD of Casing	Weight	Cond.	Collar	Grade
7-7/8"	0' - 6500'	5-1/2"	17#	New	LTC	HCL-80
7-7/8"	6500' - 11200'	5-1/2"	17#	New	BTC	HCL-80

ATTACHMENT TO FORM 3160-3
COG Operating, LLC
High Lonesome "26" Federal Com. #1H Re-Entry

REVISED 9/11/07

7. Cement Program

5 ½" Production casing set at +/- 11200' MD	Cement casing with 200 sx. 50/50/2 "C", yield-1.37 + 800 sx Class "H", yield-1.18. Est. TOC @ 6000'. See COA

8. Pressure Control Equipment:

After Nipple up on 8-5/8" casing and installing 3000 psi casing head, NU 3000 psi double ram BOP and 3000 psi annular BOP. Test double ram BOP and manifold to 3000# with clear fluid and annular to 1500 psi using an independent tester.

9. Proposed Mud Circulating System

Interval	Mud Wt.	Visc.	FL	Type Mud System
0' - 2700'	8.5	28	NC	Fresh water to drill out surface plugs in 8-5/8" casing.
2700' – 6900''	9.1	29	NC	Drill plug back section with fresh water/cut brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal.
6900' – 11200'	9.5	36	10	Drill kick off and horizontal section with cut brine / XCD polymer circulating the steel pits utilizing periodic sweeps as needed for seepage control and solids removal.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the well site at all times.

10. Auxiliary Well Control and Monitoring Equipment

A. Kelly cock will be kept in the drill string at all times.

B. A full opening drill pipe-stabbing valve with proper drill pipe connections will be on the rig floor at all times.

11. Logging, Testing and Coring Program:

    A. The mud logging program will consist of 10' samples from beginning of lateral to TD.

    B. Drill Stem test is not anticipated.

    C. No conventional coring is anticipated.

    D. Further testing procedures will be determined after the 5 ½" production casing has been cemented at TD based on drill shows and log evaluation.

12. Abnormal Conditions, Pressures, Temperatures and Potential Hazards:

    No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is 3160 psig. Low levels of Hydrogen sulfide have been monitored in producing wells in the area, so H2S may be present while drilling of the well. An H2S plan is attached to the Drilling Program. No major loss of circulation zones has been reported in offsetting wells.

13. Anticipated Starting Date

    Drilling operations will commence approximately on October 1, 2007 with drilling and completion operations lasting approximately 45 days.

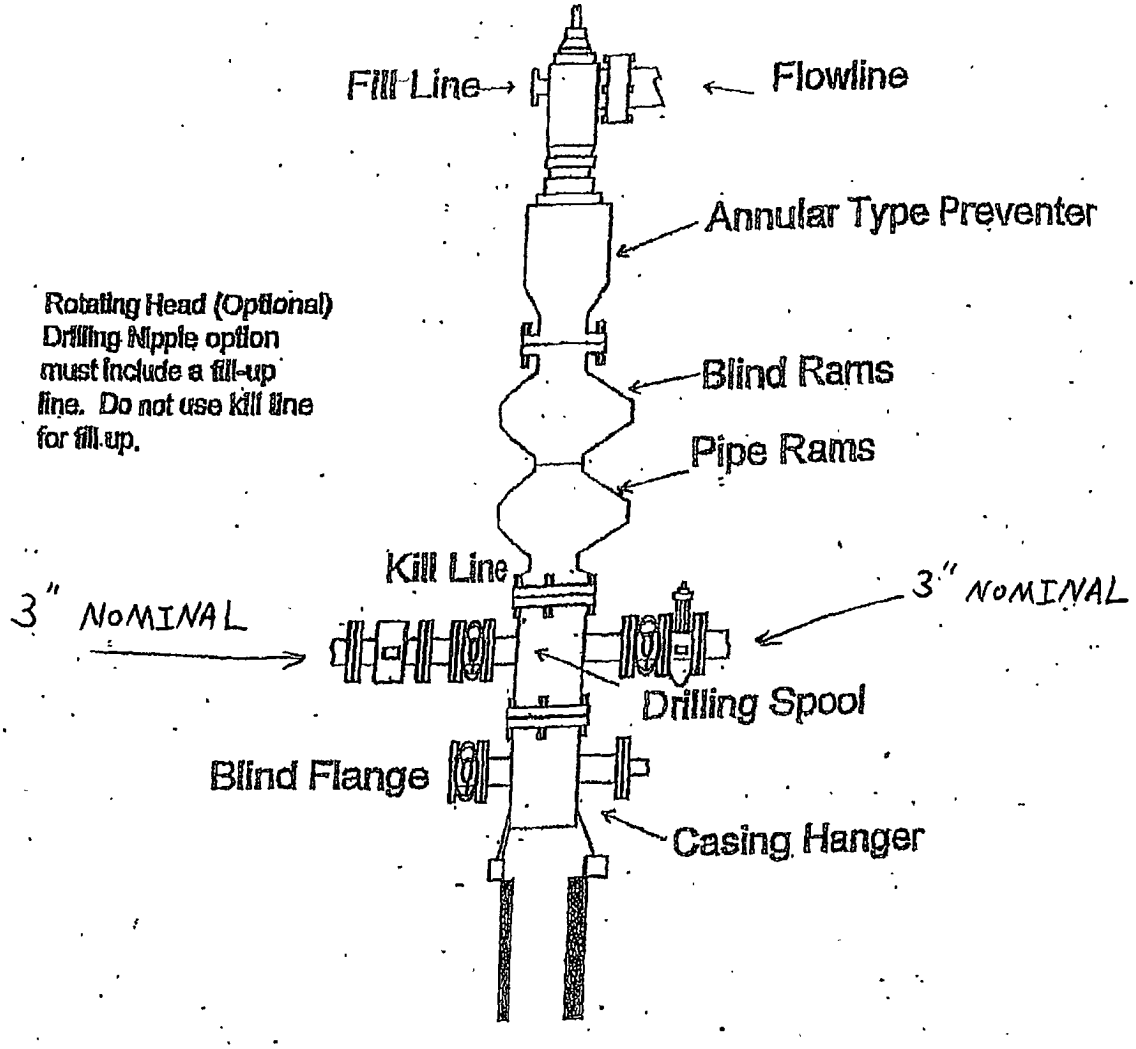
14. Drill out Procedure

    COA

    Drill out cement plug at surface, from 348' to 469', from 2628' to 2752' and from 3846' to 4005'. Spot 200 sx. "H" Kick off plug from +/- 7430' to +/-7000'. Time drill and kick off building curve over +/- 500' to horizontal at 7323' TVD in an westerly direction for +/-3800' lateral.

Exhibit "G"

BOPE SCHEMATIC

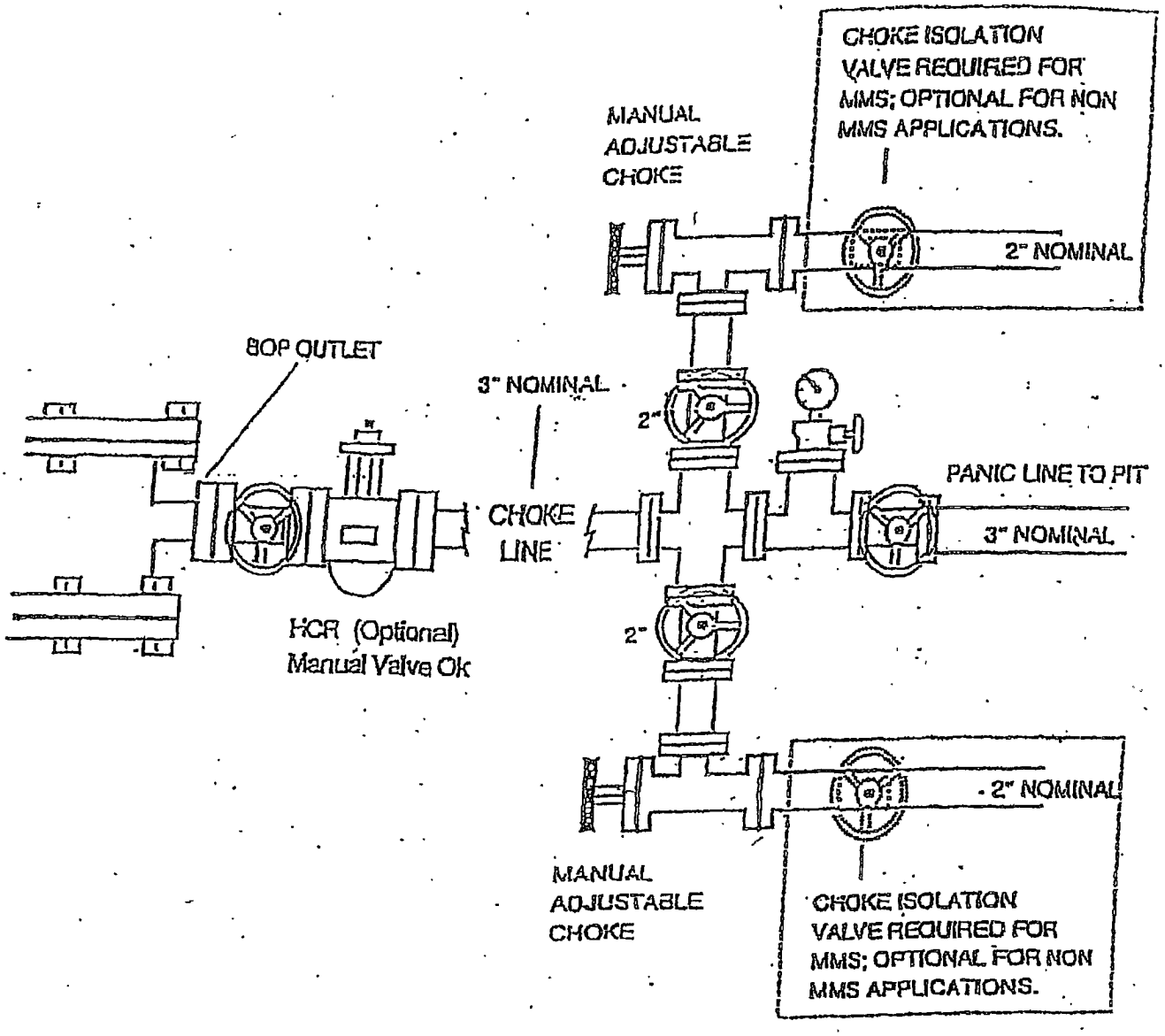


900 SERIES

Exhibit "H"

CHOKE MANIFOLD

3M SERVICE



Pathfinder Energy
Planning Report

Company:	COG Operating Company LLC	**Date:** 09/11/2007 **Time:** 15:41:13 **Page:** 1	
Field:	High Lonesome 26 Fed Com #1H	**Co-ordinate(NE) Reference:**	Site: High Lonesome Fed Com #1H
Site:	High Lonesome Fed Com #1H	**Vertical (TVD) Reference:**	SITE 3715.0
Well:	High Lonesome 26 Fed Com #1H	**Section (VS) Reference:**	Well (0.00N,0.00E,270.00Azi)
Wellpath:	OH	**Plan:**	Plan #1 9-11-07

Field: High Lonesome 26 Fed Com #1H

Map System:	US State Plane Coordinate System 1983	**Map Zone:**	New Mexico, Eastern Zone
Geo Datum:	GRS 1980	**Coordinate System:**	Site Centre
Sys Datum:	Mean Sea Level	**Geomagnetic Model:**	igrf2005

Site: High Lonesome Fed Com #1H

Site Position:		**Northing:**	690573.54 ft	**Latitude:**	32	53	53.007 N
From:	Map	**Easting:**	631197.81 ft	**Longitude:**	104	2	26.035 W
Position Uncertainty:	0.00 ft			**North Reference:**			Grid
Ground Level:	3694.00 ft			**Grid Convergence:**			0.16 deg

Well: High Lonesome 26 Fed Com #1H **Slot Name:**

Well Position:	+N/-S	0.00 ft	**Northing:**	690573.54 ft	**Latitude:**	32	53	53.007 N
	+E/-W	0.00 ft	**Easting:**	631197.81 ft	**Longitude:**	104	2	26.035 W
Position Uncertainty:		0.00 ft						

Wellpath: OH

Drilled From:	Surface		
Tie-on Depth:	0.00 ft		
Current Datum:	SITE	**Height** 3715.00 ft	**Above System Datum:** Mean Sea Level
Magnetic Data:	09/11/2007		**Declination:** 8.29 deg
Field Strength:	49394 nT		**Mag Dip Angle:** 60.83 deg

Vertical Section:	**Depth From (TVD)** ft	**+N/-S** ft	**+E/-W** ft	**Direction** deg
	7283.00	0.00	0.00	270.00

Plan: Plan #1 9-11-07 **Date Composed:** 09/11/2007
Version: 1
Principal: No **Tied-to:** From Surface

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
6845.00	0.00	0.00	6845.00	0.00	0.00	0.00	0.00	0.00	0.00	
7595.84	90.00	270.00	7323.00	0.00	-478.00	11.99	11.99	0.00	270.00	
7619.06	90.70	270.00	7322.86	0.00	-501.22	3.00	3.00	0.02	0.34	
10898.08	90.70	270.00	7283.00	0.23	-3780.00	0.00	0.00	0.00	0.00	PBHL

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1100.00	0.00	0.00	1100.00	0.00	0.00	0.00	0.00	0.00	0.00	
1200.00	0.00	0.00	1200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	0.00	
1400.00	0.00	0.00	1400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	0.00	

Pathfinder Energy
Planning Report

Company:	COG Operating Company LLC.	**Date:** 09/11/2007 **Time:** 15:41.13 **Page:**	2
Field:	High Lonesome 26 Fed Com #1H	**Co-ordinate(NE) Reference:**	Site: High Lonesome Fed Com #1H
Site:	High Lonesome Fed Com #1H	**Vertical (TVD) Reference:**	SITE 3715.0
Well:	High Lonesome 26 Fed Com #1H	**Section (VS) Reference:**	Well (0.00N,0.00E,270 00Azi)
Wellpath:	OH	**Plan:**	Plan #1 9-11-07

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1600.00	0.00	0.00	1600.00	0 00	0.00	0 00	0.00	0.00	0.00	
1700.00	0 00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	0.00	
1800.00	0.00	0 00	1800.00	0.00	0.00	0 00	0.00	0.00	0.00	
1900.00	0.00	0.00	1900.00	0.00	0.00	0.00	0.00	0 00	0.00	
2000.00	0.00	0 00	2000.00	0.00	0.00	0 00	0.00	0.00	0 00	
2100.00	0.00	0.00	2100.00	0.00	0 00	0.00	0 00	0 00	0.00	
2200.00	0.00	0.00	2200 00	0.00	0 00	0.00	0.00	0.00	0.00	
2300.00	0.00	0.00	2300.00	0 00	0.00	0 00	0.00	0.00	0.00	
2400.00	0 00	0 00	2400.00	0.00	0 00	0.00	0.00	0.00	0.00	
2500.00	0 00	0.00	2500 00	0.00	0 00	0.00	0.00	0.00	0.00	
2600.00	0 00	0 00	2600.00	0.00	0.00	0.00	0.00	0.00	0.00	
2700 00	0.00	0 00	2700.00	0.00	0.00	0 00	0.00	0.00	0.00	
2800.00	0 00	0 00	2800.00	0.00	0.00	0.00	0.00	0.00	0.00	
2900.00	0.00	0.00	2900 00	0.00	0 00	0.00	0.00	0.00	0 00	
3000.00	0.00	0 00	3000.00	0 00	0.00	0.00	0.00	0.00	0.00	
3100 00	0.00	0.00	3100.00	0.00	0 00	0 00	0 00	0.00	0.00	
3200.00	0.00	0.00	3200.00	0 00	0.00	0.00	0.00	0.00	0.00	
3300.00	0.00	0.00	3300.00	0 00	0.00	0.00	0.00	0.00	0.00	
3400 00	0.00	0 00	3400.00	0.00	0.00	0.00	0 00	0.00	0 00	
3500.00	0.00	0.00	3500.00	0.00	0.00	0.00	0.00	0 00	0 00	
3600 00	0.00	0.00	3600.00	0 00	0 00	0 00	0.00	0.00	0 00	
3700.00	0.00	0.00	3700 00	0.00	0 00	0 00	0 00	0.00	0.00	
3800.00	0.00	0.00	3800 00	0 00	0.00	0.00	0.00	0.00	0.00	
3900.00	0.00	0 00	3900.00	0.00	0.00	0.00	0.00	0 00	0 00	
4000.00	0.00	0.00	4000 00	0.00	0.00	0 00	0.00	0.00	0.00	
4100.00	0.00	0.00	4100 00	0 00	0 00	0.00	0.00	0.00	0.00	
4200.00	0.00	0 00	4200.00	0 00	0.00	0.00	0.00	0.00	0.00	
4300 00	0 00	0.00	4300.00	0.00	0 00	0 00	0 00	0.00	0.00	
4400.00	0 00	0.00	4400 00	0.00	0.00	0.00	0.00	0.00	0.00	
4500 00	0.00	0.00	4500.00	0 00	0.00	0 00	0.00	0.00	0.00	
4600.00	0.00	0.00	4600 00	0.00	0 00	0.00	0 00	0.00	0.00	
4700.00	0.00	0 00	4700 00	0 00	0.00	0.00	0.00	0.00	0 00	
4800.00	0 00	0.00	4800.00	0.00	0.00	0.00	0 00	0.00	0.00	
4900.00	0.00	0.00	4900 00	0.00	0 00	0.00	0 00	0.00	0.00	
5000.00	0.00	0 00	5000.00	0 00	0 00	0.00	0.00	0.00	0.00	
5100.00	0.00	0.00	5100.00	0 00	0.00	0.00	0.00	0.00	0.00	
5200.00	0.00	0.00	5200.00	0.00	0.00	0.00	0 00	0 00	0.00	
5300.00	0.00	0 00	5300.00	0 00	0.00	0.00	0.00	0.00	0.00	
5400.00	0.00	0.00	5400.00	0 00	0 00	0.00	0.00	0.00	0.00	
5500.00	0.00	0.00	5500 00	0.00	0.00	0.00	0.00	0.00	0.00	
5600 00	0.00	0.00	5600.00	0.00	0.00	0.00	0 00	0 00	0.00	
5700.00	0.00	0.00	5700.00	0.00	0.00	0 00	0.00	0.00	0.00	
5800.00	0.00	0.00	5800.00	0.00	0 00	0 00	0.00	0.00	0 00	
5900.00	0 00	0 00	5900 00	0 00	0 00	0.00	0 00	0 00	0.00	
6000.00	0.00	0.00	6000.00	0.00	0.00	0 00	0.00	0.00	0 00	
6100.00	0.00	0.00	6100.00	0.00	0.00	0 00	0 00	0.00	0.00	
6200.00	0.00	0.00	6200.00	0 00	0.00	0.00	0.00	0.00	0.00	
6300.00	0.00	0 00	6300 00	0 00	0.00	0.00	0.00	0.00	0 00	
6400.00	0.00	0.00	6400.00	0.00	0.00	0 00	0.00	0.00	0 00	
6500 00	0 00	0.00	6500 00	0 00	0.00	0.00	0.00	0.00	0.00	
6600 00	0 00	0.00	6600.00	0.00	0.00	0.00	0.00	0.00	0.00	
6700.00	0.00	0.00	6700.00	0.00	0.00	0.00	0.00	0.00	0 00	
6800.00	0.00	0.00	6800.00	0.00	0.00	0.00	0.00	0.00	0.00	
6845.00	0 00	0 00	6845.00	0.00	0 00	0.00	0.00	0.00	0.00	KOP @ 6845' MD, Begin Bui

Pathfinder Energy
Planning Report

Company:	COG Operating Company LLC.	**Date:** 09/11/2007 **Time:** 15:41:13 **Page:** 3	
Field:	High Lonesome 26 Fed Com #1H	**Co-ordinate(NE) Reference:**	Site: High Lonesome Fed Com #1H
Site:	High Lonesome Fed Com #1H	**Vertical (TVD) Reference:**	SITE 3715.0
Well:	High Lonesome 26 Fed Com #1H	**Section (VS) Reference:**	Well (0.00N,0.00E,270.00Azi)
Wellpath:	OH	**Plan:**	Plan #1 9-11-07

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
6900.00	6.59	270.00	6899.88	0.00	-3.16	3.16	11.99	11.99	0.00	
7000.00	18 58	270 00	6997.30	0.00	-24.91	24 91	11.99	11.99	0 00	
7100.00	30.57	270.00	7088 08	0.00	-66 42	66.42	11.99	11.99	0.00	
7200 00	42 55	270.00	7168.25	0.00	-125.88	125.88	11.99	11.99	0.00	
7300 00	54.54	270.00	7234.34	0.00	-200.69	200.69	11.99	11 99	0 00	
7400 00	66.53	270.00	7283.44	0.00	-287.59	287.59	11.99	11.99	0.00	
7500 00	78.51	270.00	7313.42	0 00	-382.80	382.80	11 99	11.99	0.00	
7595.84	90.00	270.00	7323 00	0.00	-478 00	478.00	11 99	11.99	0.00	EOC @ 7596' MD, 7323' TVD
7600.00	90.12	270 00	7323.00	0.00	-482 16	482 16	3.00	3.00	0.02	
7619 06	90.70	270.00	7322.86	0 00	-501.22	501 22	3.00	3.00	0.02	EOB @ 7619' MD, 90.7° INC
7700 00	90 70	270.00	7321.87	0.01	-582.15	582.15	0.00	0.00	0.00	
7800 00	90 70	270 00	7320.66	0.01	-682 15	682 15	0 00	0.00	0 00	
7900.00	90.70	270.00	7319.44	0.02	-782.14	782 14	0 00	0.00	0.00	
8000.00	90.70	270.00	7318.23	0.03	-882.13	882.13	0.00	0.00	0.00	
8100.00	90.70	270.00	7317.01	0.04	-982.12	982.12	0.00	0.00	0.00	
8200.00	90.70	270 00	7315.80	0.04	-1082 12	1082 12	0 00	0 00	0 00	
8300 00	90 70	270.00	7314 58	0 05	-1182 11	1182.11	0.00	0.00	0.00	
8400.00	90.70	270 00	7313 37	0 06	-1282.10	1282 10	0.00	0.00	0.00	
8500.00	90.70	270.00	7312.15	0.06	-1382.09	1382.09	0.00	0.00	0.00	
8600.00	90.70	270.00	7310.93	0.07	-1482.09	1482.09	0.00	0.00	0.00	
8700.00	90.70	270.00	7309.72	0.08	-1582.08	1582.08	0.00	0.00	0.00	
8800.00	90.70	270.00	7308.50	0.09	-1682.07	1682.07	0.00	0.00	0.00	
8900 00	90 70	270.00	7307.29	0.09	-1782 06	1782 06	0.00	0 00	0.00	
9000.00	90.70	270.00	7306.07	0.10	-1882.06	1882.06	0.00	0.00	0.00	
9100.00	90.70	270.00	7304.86	0.11	-1982.05	1982.05	0.00	0.00	0.00	
9200 00	90 70	270 00	7303.64	0 11	-2082 04	2082 04	0.00	0 00	0.00	
9300.00	90 70	270.00	7302 43	0.12	-2182.03	2182.03	0.00	0 00	0.00	
9400.00	90.70	270 00	7301 21	0.13	-2282 03	2282 03	0 00	0.00	0 00	
9500 00	90.70	270 00	7299.99	0.14	-2382 02	2382 02	0.00	0 00	0 00	
9600.00	90.70	270.00	7298.78	0.14	-2482.01	2482.01	0.00	0 00	0.00	
9700.00	90.70	270 00	7297.56	0.15	-2582 01	2582 01	0 00	0 00	0 00	
9800.00	90.70	270.00	7296.35	0.16	-2682.00	2682.00	0.00	0 00	0.00	
9900.00	90.70	270 00	7295.13	0.16	-2781.99	2781.99	0.00	0.00	0.00	
10000.00	90.70	270 00	7293 92	0.17	-2881.98	2881.98	0.00	0.00	0.00	
10100.00	90.70	270.00	7292.70	0.18	-2981.98	2981.98	0.00	0.00	0 00	
10200.00	90.70	270.00	7291 49	0.19	-3081.97	3081.97	0.00	0.00	0.00	
10300 00	90.70	270.00	7290.27	0.19	-3181.96	3181.96	0.00	0.00	0 00	
10400.00	90 70	270.00	7289.05	0.20	-3281.95	3281.95	0.00	0.00	0.00	
10500.00	90.70	270 00	7287.84	0 21	-3381 95	3381.95	0.00	0.00	0.00	
10600 00	90 70	270 00	7286 62	0.21	-3481.94	3481 94	0.00	0.00	0.00	
10700.00	90.70	270.00	7285 41	0 22	-3581 93	3581.93	0.00	0.00	0.00	
10800.00	90 70	270.00	7284.19	0.23	-3681.92	3681.92	0.00	0.00	0.00	
10898.08	90.70	270.00	7283.00	0.23	-3780.00	3780.00	0.00	0 00	0 00	PBHL

Targets

Name	Description Dip.	Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	<---- Latitude ----> Deg	Min	Sec	<--- Longitude ---> Deg	Min	Sec
PBHL			7283.00	0.23	-3780.00	690573 77	627417.81	32	53	53 111 N	104	3 10.370 W	

Pathfinder Energy
Planning Report

Company:	COG Operating Company LLC.	**Date:**	09/11/2007	**Time:** 15:41:13	**Page:** 4
Field:	High Lonesome 26 Fed Com #1H	**Co-ordinate(NE) Reference:**	Site. High Lonesome Fed Com #1H		
Site:	High Lonesome Fed Com #1H	**Vertical (TVD) Reference:**	SITE 3715.0		
Well:	High Lonesome 26 Fed Com #1H	**Section (VS) Reference:**	Well (0.00N,0.00E,270.00Azi)		
Wellpath:	OH	**Plan:**	Plan #1 9-11-07		

Annotation

MD ft	TVD ft	
6845.00	6845.00	KOP @ 6845' MD, Begin Build @ 11.99°/100'
7595.84	7323.00	EOC @ 7596' MD, 7323' TVD, Begin Build @ 3°/100'
7619.06	7322.86	EOB @ 7619' MD, 90.7° INC, Hold to TD

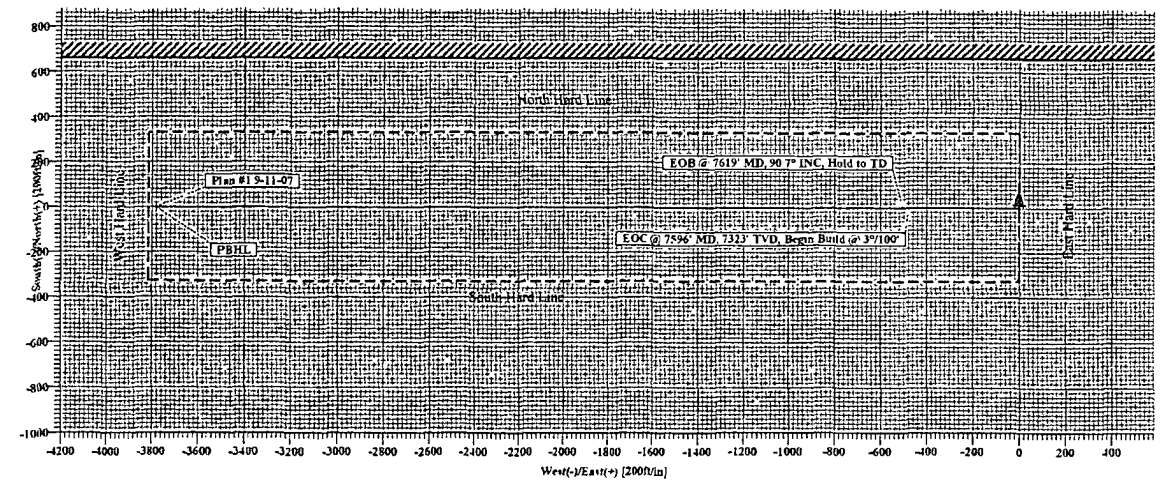
COG Operating Company LLC.

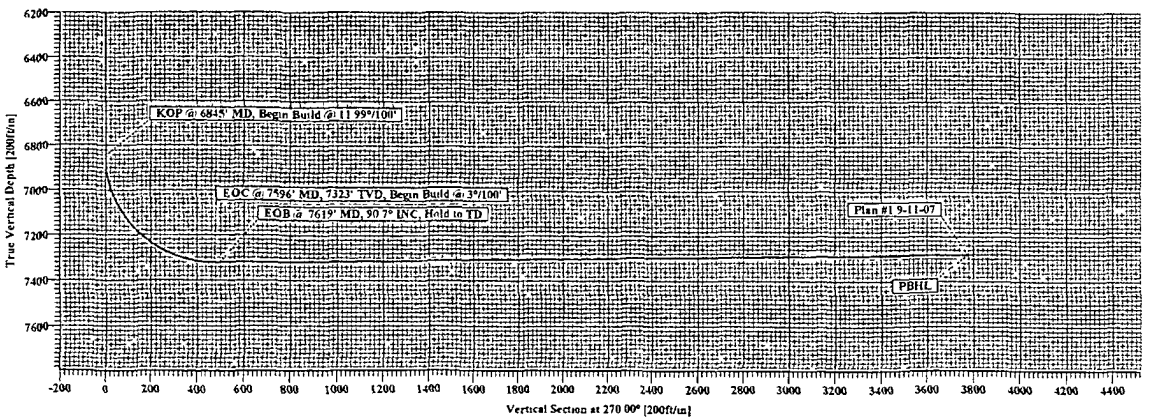
PATHFINDER

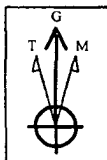
Field: High Lonesome 26 Fed Com #1H
Site: High Lonesome Fed Com #1H
Well: High Lonesome 26 Fed Com #1H
Wellpath: OH
Plan: Plan #1 9-11-07

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	6845 00	0 00	0 00	6845 00	0 00	0 00	0 00	0 00	0 00	
3	7595 84	90 00	270 00	7323 00	0 00	-478 00	11 99	270 00	478 00	
4	7619 06	90 70	270 00	7322 86	0 00	-501 22	3 00	0 34	501 22	
5	10898 08	90 70	270 00	7283 00	0 23	-3780 00	0 00	0 00	3780 00	PBHL







Azimuths to Grid North
True North -0 16°
Magnetic North 8 13°

Magnetic Field
Strength 49394nT
Dip Angle 60 83°
Date 09/11/2007
Model igrf2005

SITE DETAILS

High Lonesome Fed Com #1H

Site Centre Northing 690573 54
Easting 631197 81

Ground Level 3694 00
Positional Uncertainty 0 00
Convergence 0 16

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
PBHL	7283 00	0 23	-3780 00	Point

WELLPATH DETAILS

OH

Rig
Ref Datum SITE 3715 00ft

V Section Angle	Origin +N/-S	Origin +E/-W	Starting From TVD
270 00°	0 00	0 00	7283 00

ANNOTATIONS

No	TVD	MD	Annotation
1	6845 00	6845 00	KOP @ 6845' MD, Begin Build @ 11 99°/100'
2	7323 00	7595 84	EOC @ 7596' MD, 7323' TVD, Begin Build @ 3°/100'
3	7322 86	7619 06	EOB @ 7619' MD 90 7° INC, Hold to TD

COG OPERATING, LLC

HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN FOR DRILLING / COMPLETING / WORKOVER / FACILITY WITH THE EXPECTATION OF H2S IN EXCESS OF 100 PPM

High Lonesome "26" Federal Com #1H
RE-ENTRY WELL
SL: 660' FNL & 1150' FEL, Unit A
BHL: 660' FNL & 330' FWL, Unit D
Sec 26, T16S, R29E
Eddy County, New Mexico

This well / facility is not expected to have H2S, but the following is submitted as requested.

TABLE OF CONTENTS

GENERAL H2S EMERGENCY ACTIONS

In the event of any evidence of H2S emergency, the following plan will be initiated:

1. All personnel will immediately evacuate to an up-wind and if possible up-hill "safe area".

2. If for any reason a person must enter the hazardous area, they must wear a SCBA (self-contained breathing apparatus).

3. Always use the "buddy system".

4. Isolate the well / problem if possible.

5. Account for all personnel.

6. Display the proper colors warning all unsuspecting personnel of the danger at hand.

7. Contact the company representative as soon as possible if not at the location (use the enclosed call list as instructed).

At this point the company representative will evaluate the situation and coordinate the necessary duties to bring the situation under control, and if necessary, the notification of emergency response agencies and residents.

EMERGENCY PROCEDURES FOR AN UNCONTROLLABLE RELEASE OF H2S

1. All personnel will don the self-contained breathing apparatus.

2. Remove all personnel to the "safe area: (always use the "buddy system").

3. Contact company representative if not on location.

4. Set in motion the steps to protect and / or remove the general public to any upwind "safe are". Maintain strict security and safety procedures while dealing with the source.

5. No entry to any unauthorized personnel.

6. Notify the appropriate agencies:
   City Police - City streets
   State Police - State Roads
   County Sheriff - County Roads

7. Call the NMOCD.

If at this time the supervising person determines the release of H2S cannot be contained to the site location and the general public is in harms way, he will immediately notify public safety personnel.

EMERGENCY CALL LIST

	Office	Cell	Home
John Coffman	432-683-7443	432-631-9762	432-699-5552
Erick Nelson	432-683-7443	432-238-7591	
Matt Corser	432-683-7443	432-413-0071	

EMERGENCY RESPONSE NUMBERS
Eddy County, New Mexico

State Police	**505-748-9718**
Eddy County Sheriff	**505-746-2701**
Emergency Medical Services (Ambulance)	**911 or 505-746-2701**
Eddy County Emergency Management (Harry Burgess)	**505-887-9511**
State Emergency Response Center (SERC)	**505-476-9620**
Carlsbad Police Department	**505-885-2111**
Carlsbad Fire Department	**505-885-3125**
New Mexico Oil Conservation Division	**505-748-1283**
Callaway Safety Equipment, Inc.	**505-392-2973**

PROTECTION OF THE GENERAL (ROE) RADIUS OF EXPOSURE

In the event greater than 100 ppg H2S is present, the ROE calculations will be done to determine if the following is warranted:

* 100 ppm at any public area (any place not associated with this site)

* 500 ppm at any public road (any road which the general public may travel).

* 100 ppm radius of 3000' will be assumed if there is insufficient data to do the calculations, and there is a reasonable expectation that H2S could be present in concentrations greater than 100 ppm in the gas mixture.

Calculation for the 100 ppm ROE: (H2S concentrations in decimal form)

$X = [(1.589)(concentration)(Q)] (0.6258)$

10,000 ppm + = .01
1,000 ppm + = .001
100 ppm + = .0001
10 ppm + = .00001

Calculation for the 500 ppm ROE:

$X = [(0.4546)(concentration)(Q)] (.06258)$

EXAMPLE: If a well / facility has been determined to have 150 ppm H2S in the gas mixture and the well / facility is producing at a gas rate of 200 MCFD then:

ROE for 100 ppm $X=[(1.589)(.00010)(200,000)] (0.6258)$
$X=8.8'$
ROE for 500 ppm $X=[(.4546)(.00050)(200,000)] (0.6258)$
$X=10.9'$

These calculations will be forwarded to the appropriate NMOCD district office when applicable.

PUBLIC EVACUATION PLAN

When the supervisor has determined that the general public will be involved, the following plan will be implemented.

1. Notification of the emergency response agencies of the hazardous condition and implement evacuation procedures.

2. A trained person in H2S safety shall monitor with detection equipment the H2S concentration, wind and area of exposure. This person will determine the outer perimeter of the hazardous area. The extent of the evacuation area will be determined from the data being collected. Monitoring shall continue until the situation has been resolved. All monitoring equipment shall be UL approved for use in Class I Groups A, B, C & D, Division I hazardous locations. All monitors will have a minimum capability of measuring H2S, oxygen, and flammable values.

3. Law enforcement shall be notified to set up necessary barriers and maintain such for the duration of the situation as well as aid in the evacuation procedure.

4. The company representative shall stay in communication with all agencies throughout the duration of the situation and inform such agencies when the situation has been contained and the effected area is safe to enter.

PROCEDURE FOR IGNITING AN UNCONTROLLABLE CONDITION

The decision to ignite a well should be a last resort and one, if not both, of the following pertain:

1. Human life and / or property are endangered.

2. There is no hope of bringing the situation under control with the prevailing conditions at the site.

Instructions for Igniting the Well:

1. Two people are required. They must be equipped with positive pressure, self-contained breathing apparatus and "D"-ring style, full body, OSHA approved safety harness. Non-flammable rope will be attached.

2. One of the people will be a qualified safety person who will test the atmosphere for H2S, oxygen and LFL. The other person will be the company representative.

3. Ignite upwind from a distance no closer than necessary. Make sure that where you ignite from has the maximum escape avenue available. A 25mm flare gun with a range of approximately +/- 500 feet shall be used to ignite the gas.

4. Before igniting, check for the presence of combustible gases.

5. After igniting, continue emergency actions and procedures as before.

REQUIRED EMERGENCY EQUIPMENT

1. Breathing Apparatus

* Rescue Packs (SCBA) – 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.

* Work / Escape Packs – 4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.

* Emergency Escape Packs – 4 packs shall be stored in the doghouse for emergency evacuation.

2. Signage and Flagging

* One Color Code Condition Sign will be placed at the entrance to the site reflecting the possible conditions at the site.

* A Colored Condition flag will be on display reflecting the condition at the site at that time.

3. Briefing Area

* Two perpendicular areas will be designated by signs and readily accessible.

4. Windsocks

* Two windsocks will be placed in strategic locations, visible from all angles.

5. H2S Detectors and Alarms

* The stationary detector with three (3) sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible alarm @ 15 ppm. Calibrate a minimum of every 30 days or as needed. The three sensors will be placed in the following places: (Gas sample tubes will be stored in the safety trailer):

* Rig Floor
* Bell Nipple
* End of flow line or where well bore fluid is being discharged

6. Auxiliary Rescue Equipment

* Stretcher
* Two OSHA full body harnesses
* 100' of 5/8" OSHA approved rope
* One 20 lb. Class ABC fire extinguisher
* Communication via cell phones on location and vehicles on location

USING SELF-CONTAINED BREATHING AIR EQUIPMENT (SCBA)

1. SCBA should be worn when any of the following are performed:

    * Working near the top or on top of a tank
    * Disconnecting any line where H2S can reasonably be expected.
    * Sampling air in the area to determine if toxic concentrations of H2S exist.
    * Working in areas where over 10 ppm of H2S has been detected.
    * At any time there is a doubt of the level of H2S in the area.

2. All personnel shall be trained in the use of SCBA prior to working in a potentially hazardous location.

3. Facial hair and standard eyeglasses are not allowed with SCBA.

4. Contact lenses are never allowed with SCBA.

5. When breaking out any line where H2S can reasonably be expected.

6. After each use, the SCBA unit shall be cleaned, disinfected, serviced and inspected.

7. All SCBA shall be inspected monthly.

RESCUE & FIRST AID FOR VICTIMS OF H2S POISONING

* Do not panic.

* Remain calm and think.

* Get on the breathing apparatus.

* Remove the victim to the safe breathing area as quickly as possible, upwind and uphill from source or crosswind to achieve upwind.

* Notify emergency response personnel.

* Provide artificial respiration and / or CPR as necessary.

* Remove all contaminated clothing to avoid further exposure.

* A minimum of two (2) personnel on location shall be trained in CPR and First Aid.

Toxic Effects of H2S Poisoning

Hydrogen Sulfide is extremely toxic. The acceptable ceiling concentration for eight-hour exposure is 10 PPM, which is .001% by volume. Hydrogen Sulfide is heavier than air (specific gravity-1.192) and is colorless and transparent. Hydrogen Sulfide is almost as toxic as Hydrogen Cyanide and is 5-6 times more toxic that Carbon Monoxide. Occupational exposure limits for Hydrogen sulfide and other gasses are compared below in Table 1. toxicity table for H2S and physical effects are shown in Table II.

Table 1
Permissible Exposure Limits of Various Gasses

Common Name	Symbol	Sp. Gravity	TLV	STEL	IDLH
Hydrogen Cyanide	HCN	.94	4.7 ppm	C	
Hydrogen Sulfide	H2S	1.192	10 ppm	15 ppm	100 ppm
Sulfide Dioxide	SO2	2.21	2 ppm	5 ppm	
Chlorine	CL	2.45	.5 ppm	1 ppm	
Carbon Monoxide	CO	.97	25 ppm	200 ppm	
Carbon Dioxide	CO2	1.52	5000 ppm	30,000 ppm	
Methane	CH4	.55	4.7% LEL	14% UEL	

Definitions

A. TLV – Threshold Limit Value is the concentration employees may be exposed to based on a TWA (time weighted average) for eight (8) hours in one day for 40 hours in one (1) week. This is set by ACGIH (American Conference of Governmental Hygienists and regulated by OSHA.

B. STEL – Short Term Exposure Limit is the 15 minute average concentration an employee may be exposed to providing that the highest exposure never exceeds the OEL (Occupational Exposure Limit). The OEL for H2S is 19 PPM.

C. IDLH – Immediately Dangerous to Life and Health is the concentration that has been determined by the ACGIH to cause serious health problems or death if exposed to this level. The IDLH for H2S is 100 PPM.

D. TWA – Time Weighted Average is the average concentration of any chemical or gas for an eight (8) hour period. This is the concentration that any employee may be exposed to based on an TWA.

TABLE II
Toxicity Table of H2S

Percent %	PPM	Physical Effects
.0001	1	Can smell less than 1 ppm.
.001	10	TLV for 8 hours of exposure
.0015	15	STEL for 15 minutes of exposure
.01	100	Immediately Dangerous to Life & Health. Kills sense of smell in 3 to 5 minutes.
.02	200	Kills sense of smell quickly, may burn eyes and throat.
.05	500	Dizziness, cessation of breathing begins in a few minutes.
.07	700	Unconscious quickly, death will result if not rescued promptly.
.10	1000	Death will result unless rescued promptly. Artificial resuscitation may be necessary.

PHYSICAL PROPERTIES OF H2S

The properties of all gasses are usually described in the context of seven major categories:

COLOR
ODOR
VAPOR DENSITY
EXPLOSIVE LIMITS
FLAMMABILITY
SOLUBILITY (IN WATER)
BOILING POINT

Hydrogen Sulfide is no exception. Information from these categories should be considered in order to provide a fairly complete picture of the properties of the gas.

COLOR – TRANSPARENT

Hydrogen Sulfide is colorless so it is invisible. This fact simply means that you can't rely on your eyes to detect its presence, a fact that makes the gas extremely dangerous to be around.

ODOR – ROTTEN EGGS

Hydrogen Sulfide has a distinctive offensive smell, similar to "rotten eggs". For this reason it earned its common name "sour gas". However, H2S, even in low concentrations, is so toxic that it attacks and quickly impairs a victim's sense of smell, so it could be fatal to rely on your nose as a detection device.

VAPOR DENSITY – SPECIFIC GRAVITY OF 1.192

Hydrogen Sulfide is heavier than air so it tends to settle in low-lying areas like pits, cellars or tanks. If you find yourself in a location where H2S is known to exist, protect yourself. Whenever possible, work in an area upwind and keep to higher ground.

EXPLOSIVE LIMITS – 4.3% TO 46%

Mixed with the right proportion of air or oxygen, H2S will ignite and burn or explode, producing another alarming element of danger besides poisoning.

FLAMMABILITY

Hydrogen Sulfide will burn readily with a distinctive clear blue flame, producing Sulfur Dioxide (SO2), another hazardous gas that irritates the eyes and lungs.

SOLUBILITY – 4 TO 1 RATIO WITH WATER

Hydrogen Sulfide can be dissolved in liquids, which means that it can be present in any container or vessel used to carry or hold well fluids including oil, water, emulsion and sludge. The solubility of H2S is dependent on temperature and pressure, but if conditions are right, simply agitating a fluid containing H2S may release the gas into the air.

BOILING POINT – (-76 degrees Fahrenheit)

Liquefied Hydrogen Sulfide boils at a very low temperature, so it is usually found as a gas.

SURFACE USE AND OPERATIONS PLAN
FOR DRILLING, COMPLETION, AND PRODUCING

C.O.G. Operating, LLC
High Lonesome "26" Federal Com #1H
SL: 660' FNL & 1150' FEL, Unit A
BHL: 660' FNL & 330' FWL, Unit D
Sec 26, T16S, R29E
Eddy County, New Mexico

LOCATED

Approximately 4 miles West from Loco Hills, New Mexico

OIL & GAS LEASE

SL: NMLC # 118710
BHL: NMLC # 118710

RECORD TITLE LESSEE

SL: COG Operating, LLC, 550 W. Texas, Suite 1300, Midland, TX 79701- 57.5 %
Rubicon Oil and Gas II LP, 508 W. Wall Suite 500, Midland, TX 79701- 42.5 %
BHL: COG Operating, LLC, 550 W. Texas, Suite 1300, Midland, TX 79701- 57.5 %
Rubicon Oil and Gas II LP, 508 W. Wall Suite 500, Midland, TX 79701- 42.5 %

BOND COVERAGE

$25,000 statewide bond of C.O.G. Operating, L.L.C.

SURFACE OWNER

Bureau of Land Management

MINERAL OWNER

Bureau of Land Management

GRAZING TENANT

Bogle LTD CO LLC, PO Box 460, Dexter, NM 88230; 505-734-5442

POOL

Wolfcamp

PROPOSED TOTAL DEPTH

This well will be drilled to a Total Vertical Depth of approximately 7283' and a Measured Depth of approximately 11,200'.

EXHIBITS

A.	Well Location & Acreage Dedication Map
B.	Area Road Map
C.	Vicinity Oil & Gas Map
D.	Topographic & Location Verification Map
E.	Proposed Lease Road and Pad Layout Map
F.	Drilling Rig Layout
G.	BOPE Schematic
H.	Choke Manifold Schematic

EXISTING ROADS

A. Exhibit A is a portion of a section map showing the location of the proposed well as staked.

B. Exhibit B is a map showing existing roads in the vicinity of the proposed well site.

C. Directions to well location: From the junction of US HWY 82 and Co. Rd. 216 (Kewanee) go North on Co. Rd. 216 for approx. 5.3 miles to proposed lease road.

ACCESS ROADS

A. Length and Width: 1724.7' long and 30' wide. The access road will be built and is shown on Exhibit E-1, E-2

B. Surface Material: Existing

C. Maximum Grad: Less than five percent

D. Turnouts: None necessary

E. Drainage Design: Existing

F. Culverts: None necessary

G. Gates and Cattle Guards: None needed

LOCATION OF EXISITING WELLS

Existing wells in the immediate area are shown in Exhibit C.

LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

Necessary production facilities for this well will be located on the well pad.

LOCATION AND TYPE OF WATER SUPPLY

It is not contemplated that a water well will be drilled. Water necessary for drilling will be purchased and hauled to the site over existing roads shown on Exhibit B.

METHODS OF HANDLING WASTE DISPOSAL

A. Drilling fluids will be allowed to evaporate in the drilling pits until the pits are dry.

B. Water produced during tests will be disposed of in the drilling pits.

C. Oil produced during tests will be stored in test tanks.

D. Trash will be contained in a trash trailer and removed from well site.

E. All trash and debris will be removed from the well site within 30 days after finishing drilling and/or completion operations.

ANCILLARY FACILITIES

None required.

WELL SITE LAYOUT

Exhibits E and F show the relative location and dimensions of the well pad, mud pits, reserve pit, and trash pit, and the location of major rig components.

PLANS FOR RESTORATION OF THE SURFACE

A. After completion of drilling and/or completion operations, all equipment and other material not needed for operations will be removed. The well site will be cleaned of all trash and junk to leave the site in an as aesthetically pleasing condition as possible.

B. After abandonment, all equipment, trash, and junk will be removed and the site will be clean.

OTHER INFORMATION

A. Topography:
The topography consists of sandy soil with native grasses. No wildlife was observed, but the usual inhabitants of this region are Jackrabbits, Reptiles, Coyotes, etc.

B. Soil: Topsoil at the well site is sandy soil.

C. Flora and Fauna: The location is in an area sparsely covered with mesquite and range grasses.

D. Ponds and Streams: There are no rivers, lakes, ponds, or streams in the area.

E. Residences and Other Structures: There are no residences within a mile of the proposed well site.

F. Archaeological, Historical, and Cultural sites: An Archaeological Survey has been ordered and a copy to be sent to the BLM Office.

G. Land Use: Grazing

ONLEASE RIGHT OF WAY REQUEST

Requesting Right of Way for all onlease appurtenances, including proposed lease roads.

A. Roads: Building of a proposed lease road 1724.7' in length. (See Exhibit E-1, E-2).

OPERATOR'S REPRESENTATIVE

John Coffman
C.O.G. Operating, LLC
550 W. Texas Ave, Suite 1300
Midland, TX 79701
(432) 683-7443

CERTIFICATION

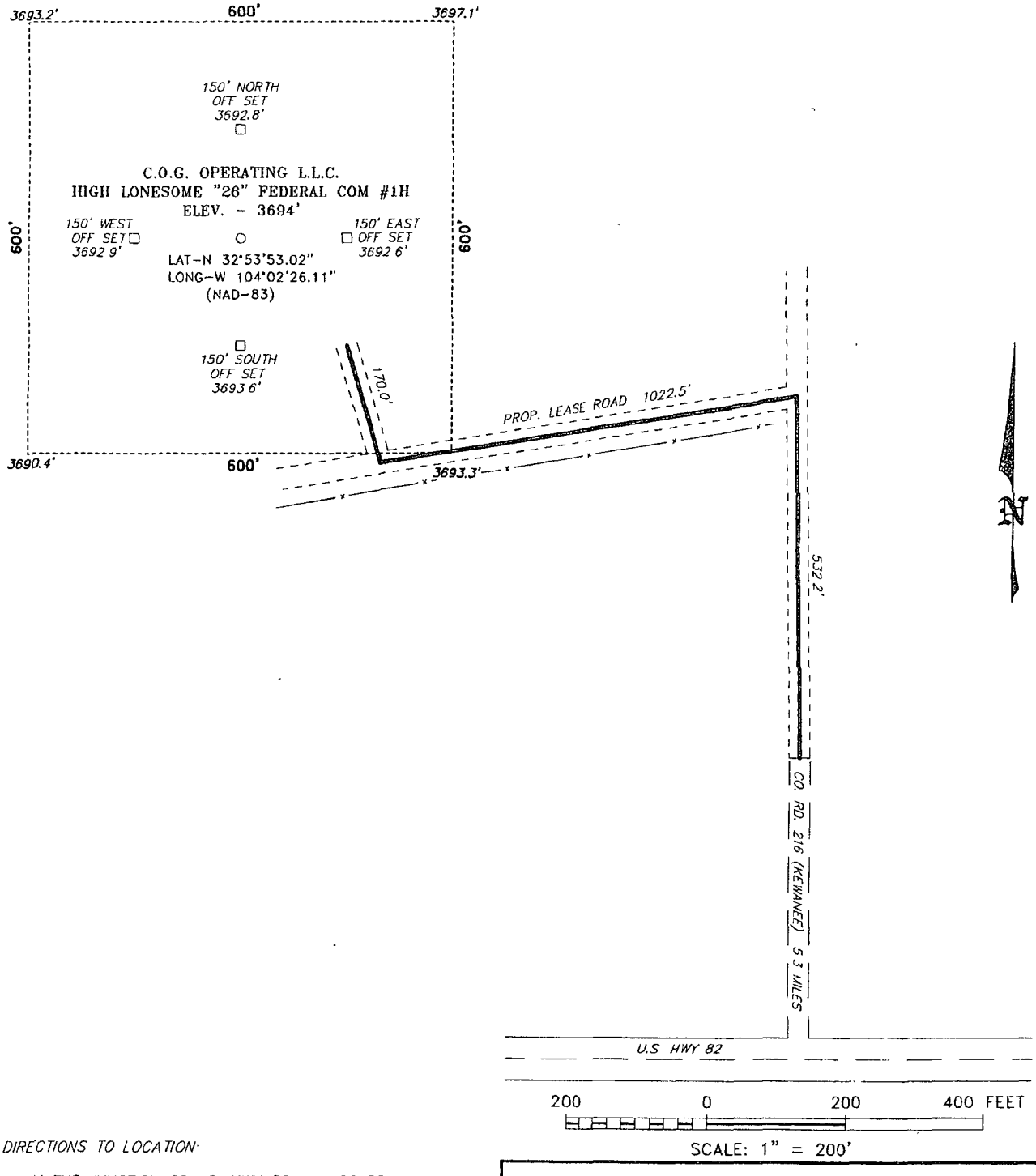
I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be preformed by the C.O.G. Operating, LLC Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

8-3-07
Date

John Coffman
C.O.G. Operating, LLC

Exhibit "E-1"

SECTION 26, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



DIRECTIONS TO LOCATION:

FROM THE JUNCTION OF US HWY 82 AND CO RD. 216 (KEWANEE), GO NORTH ON CO. RD. 216 FOR APPROX. 5.3 MILES TO PROPOSED LEASE ROAD

C.O.G. OPERATING L.L.C.

REF: HIGH LONESOME "26" FED COM #1H / Well Pad Topo

THE HIGH LONESOME "26" FED COM #1H LOCATED 660' FROM THE NORTH LINE AND 1150' FROM THE EAST LINE OF SECTION 26, TOWNSHIP 16 SOUTH, RANGE 29 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 18357	Drawn By: J. M. SMALL		
Date: 08-03-2007	Disk: JMS 18357W	Survey Date: 07-31-2007	Sheet 1 of 1 Sheets

VII. DRILLING – RE-ENTRY

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 2 hours in advance for a representative to witness:

a. Spudding well
b. Setting and/or Cementing of all casing strings
c. BOPE tests

☒ **Eddy County**
Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (505) 361-2822

1. **Although Hydrogen Sulfide has not been reported in this section, it is always a potential hazard. If H2S is encountered, please report measurements to the BLM.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. When floor controls are required, (3M or Greater) controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING

1. The **13-3/8** inch surface casing **is existing and is set at 400' and cemented to surface.**

2. The **8-5/8** inch intermediate casing **is existing and is set at 2700' and cemented to surface. A casing integrity test of the 8-5/8" casing is required prior to drilling out the bottom cement plug at 2628 feet.**

Possible lost circulation in the San Andres.
Possible high pressure gas bursts in the Wolfcamp formation.

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

   ☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification. **Additional cement will be required to tie-back to the intermediate casing.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. The appropriate BLM office shall be notified a minimum of 2 hours in advance for a representative to witness the tests.

   a. The tests shall be done by an independent service company.

   b. The results of the test shall be reported to the appropriate BLM office.

   c. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

   d. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

D. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

Engineer on call phone (after hours): **Carlsbad: (505) 706-2779**

WWI 092407