OCD-ARTESIA

Amended 10-4-0

Form 3160-3
(April 2004)

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

5. Lease Serial No. NM
NMLC 118710, NMLC 097874

6. If Indian, Allotee or Tribe Name
N/A

7. If Unit or CA Agreement, Name and No
N/A

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No
High Lonesome "26" Fed Com #2H 36816

2. Name of Operator
COG Operating, LLC 229137

9. API Well No.
30-015-35894

3a. Address **550 West Texas Ave., Suite 1300 Midland, TX 79701**

3b. Phone No. *(include area code)* **432-685-9158**

10. Field and Pool, or Exploratory
WILDCAT; **(Wolfcamp)**

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface **2030' FNL & 530' FEL, Unit H**
At proposed prod zone **2030' FNL & 330' FWL, Unit E** Roswell Controlled Water Basin

11. Sec., T R M. or Blk and Survey or Area
Section 26, T16S, R29E

14. Distance in miles and direction from nearest town or post office*
Approx. 4 miles west of Loco Hills, NM

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)	16. No. of acres in lease	17. Spacing Unit dedicated to this well
330	**1560**	**160**
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19. Proposed Depth	20. BLM/BIA Bond No. on file
1370	**TV 7323', MD 11950'**	**NMB 000215**
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3703'GL	**09/15/2007**	**45 days**

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No 1, shall 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 shall 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 authorized officer.

25. Signature	Name *(Printed Typed)*	Date
	Dwaine Moore	**10/04/2007**

Title
Agen for COG Operating, LLC

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)

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
ATTACHED

Amended 10-4-2007

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 #097874
Well Name:	High Lonesome "26" Federal Com #2H
Legal Description of Land:	SL: 2030' FNL & 530' FEL, Unit H BHL: 2030' FNL & 330' FWL, Unit E Sec 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

10-5-07
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
	96794	(WILDCAT) Wolfcamp

Property Code	Property Name	Well Number
	HIGH LONESOME "26" FEDERAL COM	2H

OGRID No.	Operator Name	Elevation
	C.O.G. OPERATING L.L.C.	3700'

Surface Location

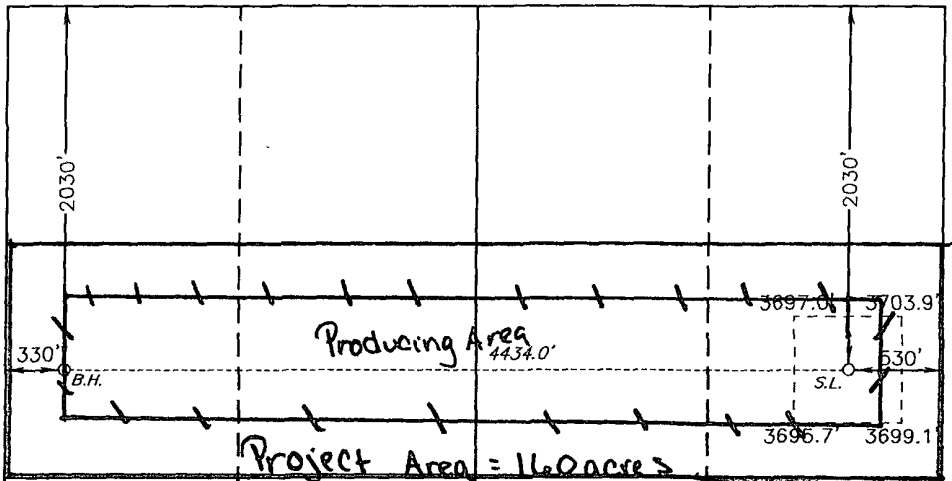
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	26	16 S	29 E		2030	NORTH	530	EAST	EDDY

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
E	26	16 S	29 E		2030	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



BOTTOM HOLE LOCATION
LAT.: N 32°53'39.6"
LONG.: W104°03'10.8"
SPC- N.: 689203.60
E.: 627386.73
(NAD-83)

SURFACE LOCATION
LAT.: N 32°53'39.46"
LONG.: W104°02'18.84"
SPC- N.: 689203.963
E.: 631822.116
(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 10/3/07 Date

Dwaine Moore Agent For COG
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.

SEPTEMBER 24, 2007
Date Surveyed

Signature & Seal of Professional Surveyor

W.O. [illegible]28

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Amended 10-04-2007

ATTACHMENT TO FORM 3160-3
COG Operating, LLC
High Lonesome "26" Federal Com. #2H
SL: 2030' FNL & 530' FEL, Unit H
BHL: 2030' FNL & 330' FWL, Unit E
Sec 26, T16S, R29E
Eddy County, NM

1. Proration Unit Spacing: 160 Acres

2. Ground Elevation: 3703'

3. Proposed Depths: Pilot hole TD = 7570', Horizontal TVD = 7323', MD = 11950'

4. Estimated tops of geological markers:

Quaternary	Surface
Yates	1040'
Queen	1875'
San Andres	2650'
Tubb	5370'
Abo	6050'
Wolfcamp	7320'

5. Possible mineral bearing formations:

Water Sand	150'	Fresh Water
Yates	1040'	Oil / Gas
Queen	1875'	Oil / Gas
San Andres	2650'	Oil / Gas
Tubb	5370'	Oil / Gas
Abo	6050'	Oil / Gas
Wolfcamp	7320'	Oil / Gas

6. Casing Program - **Proposed**

Hole size	Interval	OD of Casing	Weight	Cond.	Collar	Grade
17-1/2"	0' - +/-400'	13-3/8"	48#	New	STC	H40
Collapse sf - 2.98, Burst sf – 2.33, Tension sf – 13.42						
12 1/4"	0' - 2700'	9-5/8"	40#	New	STC	J-55
Collapse sf - 2. 86, Burst sf – 1.42, Tension sf – 7.22						
8-3/4"	0' – 6800'	5-1/2"	17#	New	~~BTC~~ LTC	L-80
Collapse sf - 2. 08, Burst sf – 2.35, Tension sf – 2.82						
7-7/8"	6800' – 11950'	5-1/2"	17#	New	BTC	L-80
Collapse sf – 1.75, Burst sf – 2.108, Tension sf – 28.19						

per operator 9-24-07

7. Cement Program

13 3/8" Surf. Csg. Set at +/- 400', Circ to Surf with +/- 400 sx Class "C" w/ 2% CaCl2, 1.35 yd.

9 5/8" Intrmd. Csg. Set at +/- 2700'. Circ to Surf with +/- 600 sx 35/65 Poz "C", 2.05 yd. & 200 sx Class "C" w/ 2% CaCl2, 1.35 yd.

5 ½" Prod. Csg. Set at +/- 11950' MD. Cement casing with +/- 200 sx. 50/50/2 "C", 1.37 yd & +/- 700 sx Class "H", 1.18 yd. Est. TOC @ 5000'. ← See COA

8. Pressure Control Equipment:

see COA ↗ After setting 13 3/8" casing and installing 3000 psi casing head, NU 13 5/8" 3000 psi annular BOP. Test annular BOP, casing and manifold with clear fluid to 800 psi w/ rig pump. After setting 9 5/8" casing and installing 3000 psi casing spool, NU 3000 psi double ram BOP and 3000psi annular BOP. Test double ram BOP and manifold to 3000# with clear fluid and annular to 1500 psi using an independent tester and used continuously until TD is reached. Blind rams will be operationally checked on each trip out of hole. Pipe rams will be operationally checked each 24 hour period. These checks will be noted on daily tour sheets. Other accessories to the BOP equipment include a Kelly cock and floor safety valves, choke lines and choke manifold with 3000 psi WP rating.

9. Proposed Mud Circulating System

Interval	Mud Wt.	Visc.	FL	Type Mud System
0' - 400'	8.5	28	NC	Fresh water native mud w/ paper for seepage and sweeps. Lime for PH.
400'- 2700'	9.1	30	NC	Cut brine mud, lime for PH and paper for seepage and sweeps.
2700'- 6000'	9.1	29	NC	Drill section with fresh water/cut brine circulating the reserve utilizing periodic sweeps of paper as needed for seepage control and solids removal.
6000' - 11950'	9.5	36	10	Drill pilot hole, curve and horizontal section with XCD polymer / cut brine / starch.

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.

ATTACHMENT TO FORM 3160-3
COG Operating, LLC
High Lonesome "26" Federal Com. #2H

11. Production Hole Drilling Summary:

Drill 8-3/4" Pilot hole thru Wolfcamp, run open hole logs. Spot 150 sx. "H" Kick off plug from +/- 7300' to +/-6900'. Time drill and kick off 7-7/8" hole at +/- 6900', building curve over +/- 475' to horizontal at 7340' TVD. Drill horizontal section in a westerly direction for +/-4500' lateral. Run production casing and cement.

12. Logging, Testing and Coring Program:

A. The electric logging program will consist of GR-Dual Laterolog, Spectral Density, Dual Spaced Neutron, CSNG Log and will be ran from T.D. in vertical pilot hole to 9 5/8" casing shoe.

B. The mud logging program will consist of lagged 10' samples from intermediate casing point to T.D. in vertical pilot hole and from Kick off point to TD in Horizontal hole.

C. Drill Stem test is not anticipated.

D. No conventional coring is anticipated.

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

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

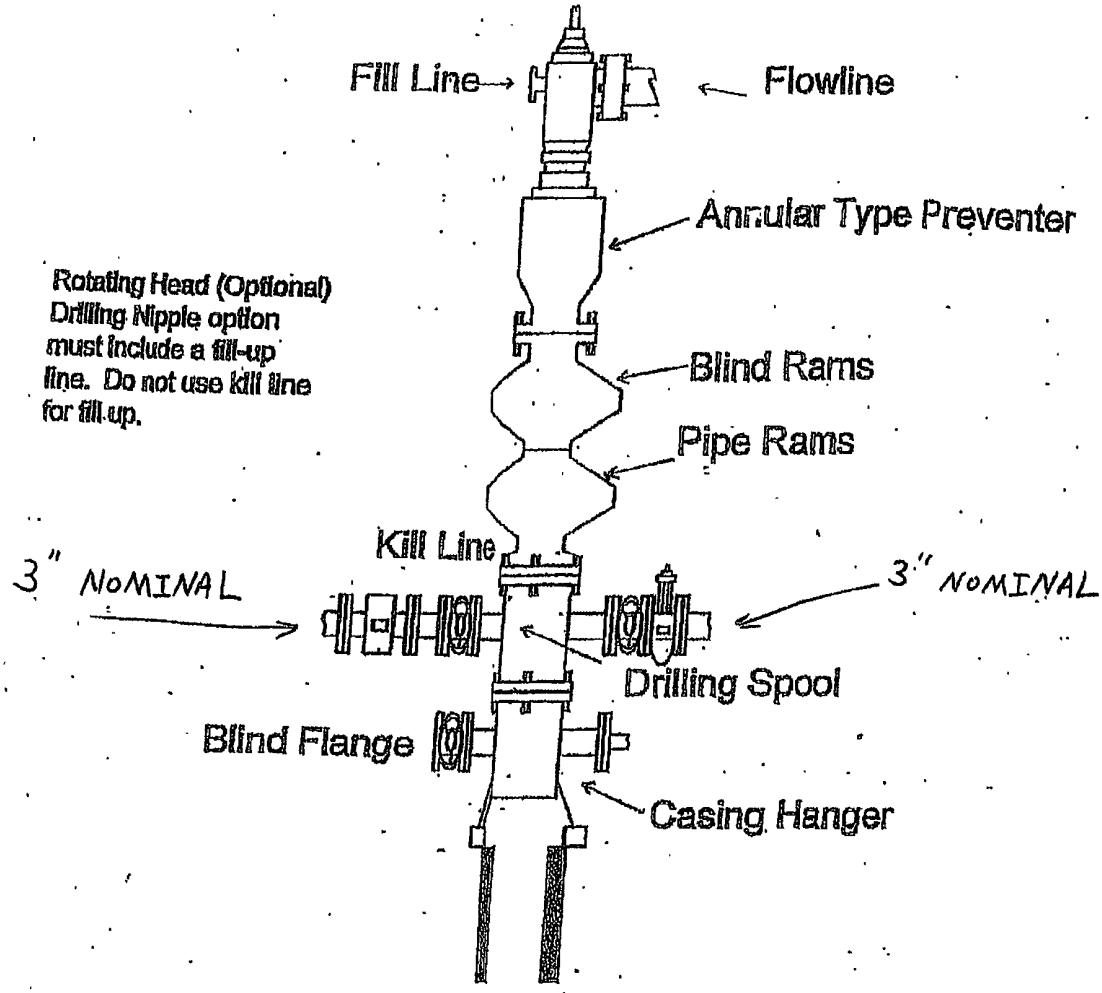
No abnormal pressures or temperatures are anticipated. The estimated bottom hole at TD is 120 degrees and estimated maximum bottom hole pressure is ~~2300~~ 3160 psig per operator 9-24-07. Low levels of Hydrogen sulfide have been monitored in producing wells in the area, so H2S may be present while drilling of the well. An H2S plan is attached to the Drilling Program. No major loss of circulation zones has been reported in offsetting wells.

14. Anticipated Starting Date

Drilling operations will commence approximately on September 15, 2007 with drilling and completion operations lasting approximately 45 days.

Exhibit "G"

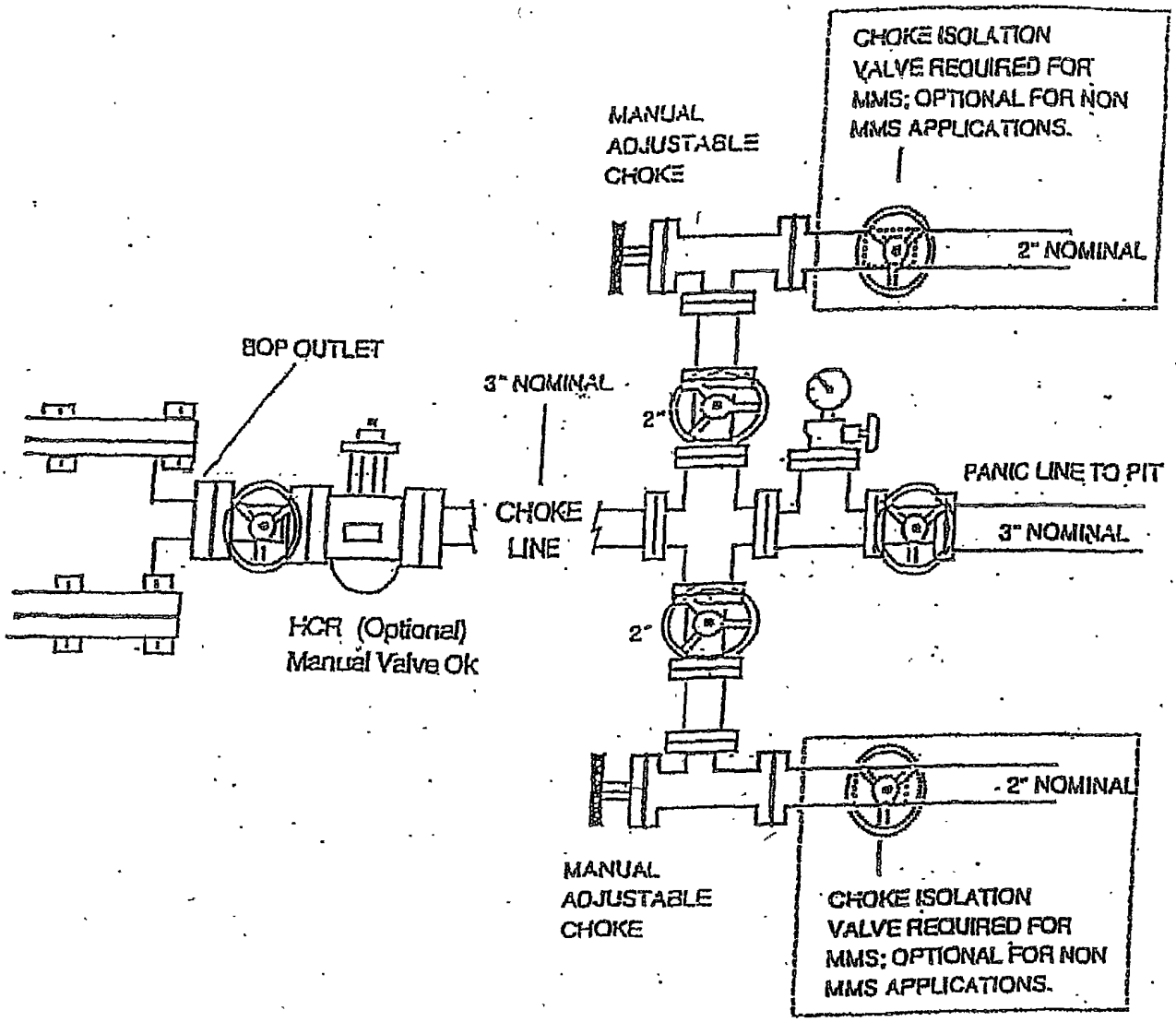
BOPE SCHEMATIC



900 SERIES

Exhibit "H"

CHOKE MANIFOLD
5M SERVICE



Amended

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Concho O&G**	Slot	**#2H_SHL**
Area	**Chavez County, NM**	Well	**#2H**
Field	**(High Lone.)Section 26 T16S**	Wellbore	**#2H PWB**
Facility	***High Lonesome 26 Federal Com #2H***		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet**	Software System	**WellArchitect™ 1.2**
North Reference	**Grid**	User	**Gomeoscr**
Scale	**0.999919**	Report Generated	**09/20/07 at 07:57:37**
Wellbore last revised	**09/20/07**	Database/Source file	**WA_Midland/#2H_PWB.xn**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	**East [feet]**	**Easting [US feet]**	**Northing [US feet]**	**Latitude [°]**	**Longitude [°]**
Slot Location	**0.00**	**0.00**	632022.07	689254.52	32 53 39.947N	104 02 16.396W
Facility Reference Pt			**632022.07**	**689254.52**	32 53 39.947N	104 02 16.396W
Field Reference Pt			**632022.07**	**689254.52**	32 53 39.947N	104 02 16.396W

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on #2H_SHL (RT) to Facility Vertical Datum	**0.00 feet**
Horizontal Reference Pt	**Facility Center**	Rig on #2H_SHL (RT) to GRN. ELEV.	**3703.00 feet**
Vertical Reference Pt	**Rig on #2H_SHL (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00 feet**
MD Reference Pt	**Rig on #2H_SHL (RT)**	Section Origin	**N 0.00, E 0.00 ft**
Field Vertical Reference	**GRN. ELEV.**	Section Azimuth	**270.00°**

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Concho O&G**	Slot	**#2H_SHL**
Area	**Chavez County, NM**	Well	**#2H**
Field	**(High Lone.)Section 26 T16S**	Wellbore	**#2H PWB**
Facility	**High Lonesome 26 Federal Com #2H**		

WELLPATH DATA (60 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
0.00	0.000	269.996	0.00	0.00	0.00	0.00	0.00	Tie On	
1050.00†	0.000	269.996	1050.00	0.00	0.00	0.00	0.00		Yates
1875.00†	0.000	269.996	1875.00	0.00	0.00	0.00	0.00		Queen
2650.00†	0.000	269.996	2650.00	0.00	0.00	0.00	0.00		San Andres
5370.00†	0.000	269.996	5370.00	0.00	0.00	0.00	0.00		Tubb
6050.00†	0.000	269.996	6050.00	0.00	0.00	0.00	0.00		Abo
6860.00	0.000	269.996	6860.00	0.00	0.00	0.00	0.00	KOP	
6960.00†	11.930	269.996	6959.28	10.37	0.00	-10.37	11.93		
7060.00†	23.860	269.996	7054.27	41.05	0.00	-41.05	11.93		
7160.00†	35.790	269.996	7140.87	90.69	-0.01	-90.69	11.93		
7260.00†	47.720	269.996	7215.33	157.17	-0.01	-157.17	11.93		
7360.00†	59.650	269.996	7274.45	237.60	-0.02	-237.60	11.93		
7460.00†	71.580	269.996	7315.66	328.51	-0.03	-328.51	11.93		
7474.38†	73.296	269.996	7320.00	342.22	-0.03	-342.22	11.93		Wolfcamp
7560.00†	83.510	269.996	7337.19	425.98	-0.03	-425.98	11.93		
7620.22	90.694	269.996	7340.23	486.08	-0.04	-486.08	11.93	EOC	
7660.00†	90.694	269.996	7339.75	525.86	-0.04	-525.86	0.00		
7760.00†	90.694	269.996	7338.54	625.86	-0.05	-625.86	0.00		
7860.00†	90.694	269.996	7337.33	725.85	-0.06	-725.85	0.00		
7960.00†	90.694	269.996	7336.12	825.84	-0.06	-825.84	0.00		
8060.00†	90.694	269.996	7334.91	925.83	-0.07	-925.83	0.00		
8160.00†	90.694	269.996	7333.69	1025.83	-0.08	-1025.83	0.00		
8260.00†	90.694	269.996	7332.48	1125.82	-0.09	-1125.82	0.00		
8360.00†	90.694	269.996	7331.27	1225.81	-0.10	-1225.81	0.00		
8460.00†	90.694	269.996	7330.06	1325.80	-0.10	-1325.80	0.00		

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Concho O&G**	Slot	**#2H_SHL**
Area	**Chavez County, NM**	Well	**#2H**
Field	**(High Lone.)Section 26 T16S**	Wellbore	**#2H PWB**
Facility	**High Lonesome 26 Federal Com #2H**		

WELLPATH DATA (60 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
8560.00†	90.694	269.996	7328.85	1425.80	-0.11	-1425.80	0.00		
8660.00†	90.694	269.996	7327.64	1525.79	-0.12	-1525.79	0.00		
8760.00†	90.694	269.996	7326.43	1625.78	-0.13	-1625.78	0.00		
8860.00†	90.694	269.996	7325.22	1725.77	-0.13	-1725.77	0.00		
8960.00†	90.694	269.996	7324.01	1825.77	-0.14	-1825.77	0.00		
9060.00†	90.694	269.996	7322.79	1925.76	-0.15	-1925.76	0.00		
9160.00†	90.694	269.996	7321.58	2025.75	-0.16	-2025.75	0.00		
9260.00†	90.694	269.996	7320.37	2125.75	-0.17	-2125.75	0.00		
9360.00†	90.694	269.996	7319.16	2225.74	-0.17	-2225.74	0.00		
9460.00†	90.694	269.996	7317.95	2325.73	-0.18	-2325.73	0.00		
9560.00†	90.694	269.996	7316.74	2425.72	-0.19	-2425.72	0.00		
9660.00†	90.694	269.996	7315.53	2525.72	-0.20	-2525.72	0.00		
9760.00†	90.694	269.996	7314.32	2625.71	-0.20	-2625.71	0.00		
9860.00†	90.694	269.996	7313.11	2725.70	-0.21	-2725.70	0.00		
9960.00†	90.694	269.996	7311.89	2825.69	-0.22	-2825.69	0.00		
10060.00†	90.694	269.996	7310.68	2925.69	-0.23	-2925.69	0.00		
10097.35†	90.694	269.996	7310.23	2963.04	-0.23	-2963.04	0.00		Wolfcamp
10160.00†	90.694	269.996	7309.47	3025.68	-0.24	-3025.68	0.00		
10260.00†	90.694	269.996	7308.26	3125.67	-0.24	-3125.67	0.00		
10360.00†	90.694	269.996	7307.05	3225.66	-0.25	-3225.66	0.00		
10460.00†	90.694	269.996	7305.84	3325.66	-0.26	-3325.66	0.00		
10560.00†	90.694	269.996	7304.63	3425.65	-0.27	-3425.65	0.00		
10660.00†	90.694	269.996	7303.42	3525.64	-0.27	-3525.64	0.00		
10760.00†	90.694	269.996	7302.21	3625.64	-0.28	-3625.64	0.00		
10860.00†	90.694	269.996	7300.99	3725.63	-0.29	-3725.63	0.00		

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Concho O&G**	Slot	**#2H_SHL**
Area	**Chavez County, NM**	Well	**#2H**
Field	**(High Lone.)Section 26 T16S**	Wellbore	**#2H PWB**
Facility	**High Lonesome 26 Federal Com #2H**		

WELLPATH DATA (60 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]	Design Comments	Path Comment
10960.00†	90.694	269.996	7299.78	3825.62	-0.30	-3825.62	0.00		
11060.00†	90.694	269.996	7298.57	3925.61	-0.31	-3925.61	0.00		
11160.00†	90.694	269.996	7297.36	4025.61	-0.31	-4025.61	0.00		
11260.00†	90.694	269.996	7296.15	4125.60	-0.32	-4125.60	0.00		
11360.00†	90.694	269.996	7294.94	4225.59	-0.33	-4225.59	0.00		
11460.00†	90.694	269.996	7293.73	4325.58	-0.34	-4325.58	0.00		
11560.00†	90.694	269.996	7292.52	4425.58	-0.34	-4425.58	0.00		
11660.00†	90.694	269.996	7291.31	4525.57	-0.35	-4525.57	0.00		
11760.00†	90.694	269.996	7290.10	4625.56	-0.36	-4625.56	0.00		
11767.86	90.694	269.996	7290.00†	4633.43	-0.36	-4633.43	0.00	#2H BHL	

HOLE & CASING SECTIONS Ref Wellbore: #2H PWB Ref Wellpath: Plan #1

String/Diameter	Start MD [feet]	End MD [feet]	Interval [feet]	Start TVD [feet]	End TVD [feet]	Start N/S [feet]	Start E/W [feet]	End N/S [feet]	End E/W [feet]
8.75in Open Hole	6860.00	7620.22	760.22	6860.00	7340.23	0.00	0.00	-0.04	-486.09
7.875in Open Hole	7620.22	11767.86	4147.64	7340.23	7290.00	-0.04	-486.09	-0.36	-4633.42

Planned Wellpath Report

Plan #1

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**Concho O&G**	Slot	**#2H_SHL**
Area	**Chavez County, NM**	Well	**#2H**
Field	**(High Lone.)Section 26 T16S**	Wellbore	**#2H PWB**
Facility	**High Lonesome 26 Federal Com #2H**		

TARGETS

Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) #2H BHL	11767.86	7290.00	-0.36	-4633.43	**627389.03**	**689254.16**	32 53 40.068N	104 03 10.734W	point

Concho O&G

Location Chavez County, NM
Field (High Lone)Section 26 T16S
Facility High Lonesome 26 Federal Com #2H

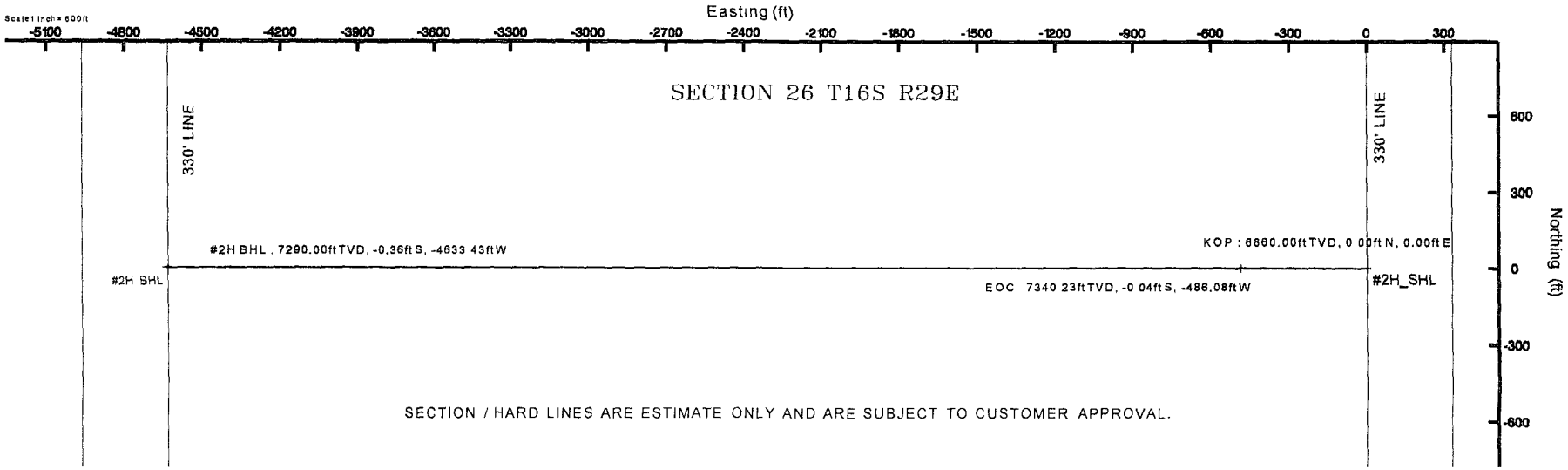
Slot #2H_SHL
Well #2H
Wellbore #2H PWB

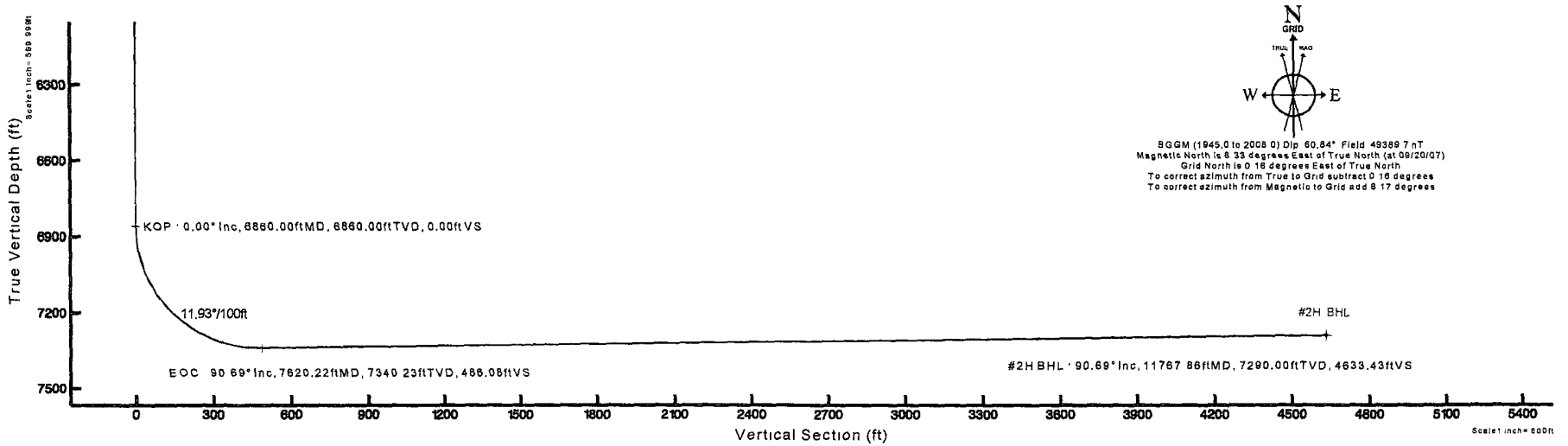
BAKER HUGHES INTEQ

Well Profile Data

DesignComment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	269.996	0.00	0.00	0.00	0.00	0.00
KOP	6860.00	0.000	269.996	6860.00	0.00	0.00	0.00	0.00
EOC	7620.22	90.694	269.996	7340.23	-0.04	-486.08	11.93	486.08
#2H BHL	11767.86	90.694	269.996	7290.00	-0.36	-4633.43	0.00	4633.43

Plot reference wellpath is Plan #1	
True vertical depths are referenced to Rig on #2H_SHL (RT)	Grid System: NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on #2H_SHL (RT)	North Reference: Grid north
Rig on #2H_SHL (RT) to GRN_ELEV = 3703 feet	Scale Factor: True distance
GRN_ELEV to Mud line (Facility - High Lonesome 26 Federal Com #2H) = 3703 feet	Depths are in feet
Coordinates are in feet referenced to Facility Center	Created by: gomezc on 9/20/2007





Azimuth 270.00° with reference 0.00 N, 0.00 E from wellhead

PROPOSED WELLPATH REPORT (CSV version)
Prepared by Baker Hughes INTEQ
Software System: WellArchitect™1.2

REFERENCE WELLPATH IDENTIFICATION

Operator	Concho O&G
Area	Chavez County, NM
Field	(High Lone.)Section 26 T16S
Facility	High Lonesome 26 Federal Com #2H
Slot	#2H_SHL
Well	#2H
Wellbore	#2H PWB
Wellpath	Plan #1
Sidetrack	(none)

REPORT SETUP INFORMATION

Projection :	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet
North Refe	Grid
Scale	0.999919
Wellbore L	9/20/2007
Software S	WellArchitect™
User	Gomeoscr
Report Ger	09/20/07 at 08:09:47
DataBase/S	WA_Midland/ev01.xml

WELLPATI	Local North [ft]	Local East [ft]	Grid East [ft]	Grid North [ft]	Latitude [°]	Longitude [°]
Slot Locati	0	0	632022.1	689254.5	32 53 39.9	104 02 16.396W
Facility Ref			632022.1	689254.5	32 53 39.9	104 02 16.396W
Field Refer			632022.1	689254.5	32 53 39.9	104 02 16.396W

WELLPATH DATUM

Calculation	Minimum curvature
Horizontal I	Facility Center
Vertical Re	Rig on #2H_SHL (RT)
MD Refere	Rig on #2H_SHL (RT)
Field Vertic	GRN. ELEV.
Rig on #2H	0.00 feet
Rig on #2H	3703.00 feet
Facility Ver	0.00 feet
Section Ori	0.00 feet
Section Ori	0.00 feet
Section Azi	270.00°

WELLPATH DATA Wellbore: #2H PWB Wellpath: Plan #1 † = interpolated/extrapolated station

	MD feet	Inclination deg	Azimuth deg	TVD feet	Vert Sect feet	North feet	East feet	DLS deg/100ft	Design Co	Path Comr	Tgt#
	0	0	269.996	0	0	0	0	0	Tie On		
†	100	0	0	100	0	0	0	0			
†	200	0	0	200	0	0	0	0			
†	300	0	0	300	0	0	0	0			
†	400	0	0	400	0	0	0	0			
†	500	0	0	500	0	0	0	0			
†	600	0	0	600	0	0	0	0			
†	700	0	0	700	0	0	0	0			
†	800	0	0	800	0	0	0	0			
†	900	0	0	900	0	0	0	0			
†	1000	0	0	1000	0	0	0	0			
†	1050	0	269.996	1050	0	0	0	0		Yates	
†	1100	0	0	1100	0	0	0	0			
†	1200	0	0	1200	0	0	0	0			
†	1300	0	0	1300	0	0	0	0			
†	1400	0	0	1400	0	0	0	0			
†	1500	0	0	1500	0	0	0	0			
†	1600	0	0	1600	0	0	0	0			
†	1700	0	0	1700	0	0	0	0			
†	1800	0	0	1800	0	0	0	0			
†	1875	0	269.996	1875	0	0	0	0		Queen	
†	1900	0	0	1900	0	0	0	0			
†	2000	0	0	2000	0	0	0	0			
†	2100	0	0	2100	0	0	0	0			
†	2200	0	0	2200	0	0	0	0			
†	2300	0	0	2300	0	0	0	0			
†	2400	0	0	2400	0	0	0	0			
†	2500	0	0	2500	0	0	0	0			
†	2600	0	0	2600	0	0	0	0			
†	2650	0	269.996	2650	0	0	0	0		San Andres	
†	2700	0	0	2700	0	0	0	0			
†	2800	0	0	2800	0	0	0	0			
†	2900	0	0	2900	0	0	0	0			
†	3000	0	0	3000	0	0	0	0			
†	3100	0	0	3100	0	0	0	0			
†	3200	0	0	3200	0	0	0	0			
†	3300	0	0	3300	0	0	0	0			
†	3400	0	0	3400	0	0	0	0			

†	3500	0	0	3500	0	0	0	0	
†	3600	0	0	3600	0	0	0	0	
†	3700	0	0	3700	0	0	0	0	
†	3800	0	0	3800	0	0	0	0	
†	3900	0	0	3900	0	0	0	0	
†	4000	0	0	4000	0	0	0	0	
†	4100	0	0	4100	0	0	0	0	
†	4200	0	0	4200	0	0	0	0	
†	4300	0	0	4300	0	0	0	0	
†	4400	0	0	4400	0	0	0	0	
†	4500	0	0	4500	0	0	0	0	
†	4600	0	0	4600	0	0	0	0	
†	4700	0	0	4700	0	0	0	0	
†	4800	0	0	4800	0	0	0	0	
†	4900	0	0	4900	0	0	0	0	
†	5000	0	0	5000	0	0	0	0	
†	5100	0	0	5100	0	0	0	0	
†	5200	0	0	5200	0	0	0	0	
†	5300	0	0	5300	0	0	0	0	
†	5370	0	269.996	5370	0	0	0	0	Tubb
†	5400	0	0	5400	0	0	0	0	
†	5500	0	0	5500	0	0	0	0	
†	5600	0	0	5600	0	0	0	0	
†	5700	0	0	5700	0	0	0	0	
†	5800	0	0	5800	0	0	0	0	
†	5900	0	0	5900	0	0	0	0	
†	6000	0	0	6000	0	0	0	0	
†	6050	0	269.996	6050	0	0	0	0	Abo
†	6100	0	0	6100	0	0	0	0	
†	6200	0	0	6200	0	0	0	0	
†	6300	0	0	6300	0	0	0	0	
†	6400	0	0	6400	0	0	0	0	
†	6500	0	0	6500	0	0	0	0	
†	6600	0	0	6600	0	0	0	0	
†	6700	0	0	6700	0	0	0	0	
†	6800	0	0	6800	0	0	0	0	
	6860	0	269.996	6860	0	0	0	0	KOP
†	6900	4.772	269.996	6899.95	1.66	0	-1.66	11.93	
†	7000	16.702	269.996	6998.03	20.26	0	-20.26	11.93	
†	7100	28.632	269.996	7090.14	58.73	0	-58.73	11.93	
†	7200	40.562	269.996	7172.3	115.41	-0.01	-115.41	11.93	
†	7300	52.492	269.996	7240.98	187.85	-0.01	-187.85	11.93	
†	7400	64.422	269.996	7293.2	272.92	-0.02	-272.92	11.93	

†	7474.38	73.296	269.996	7320	342.22	-0.03	-342.22	11.93		Wolfcamp
†	7500	76.352	269.996	7326.71	366.94	-0.03	-366.94	11.93		
†	7600	88.282	269.996	7340.05	465.87	-0.04	-465.87	11.93		
	7620.22	90.694	269.996	7340.23	486.08	-0.04	-486.08	11.93	EOC	
†	7700	90.694	269.996	7339.26	565.86	-0.04	-565.86	0		
†	7800	90.694	269.996	7338.05	665.85	-0.05	-665.85	0		
†	7900	90.694	269.996	7336.84	765.85	-0.06	-765.85	0		
†	8000	90.694	269.996	7335.63	865.84	-0.07	-865.84	0		
†	8100	90.694	269.996	7334.42	965.83	-0.08	-965.83	0		
†	8200	90.694	269.996	7333.21	1065.82	-0.08	-1065.82	0		
†	8300	90.694	269.996	7332	1165.82	-0.09	-1165.82	0		
†	8400	90.694	269.996	7330.79	1265.81	-0.1	-1265.81	0		
†	8500	90.694	269.996	7329.58	1365.8	-0.11	-1365.8	0		
†	8600	90.694	269.996	7328.37	1465.79	-0.11	-1465.79	0		
†	8700	90.694	269.996	7327.15	1565.79	-0.12	-1565.79	0		
†	8800	90.694	269.996	7325.94	1665.78	-0.13	-1665.78	0		
†	8900	90.694	269.996	7324.73	1765.77	-0.14	-1765.77	0		
†	9000	90.694	269.996	7323.52	1865.76	-0.14	-1865.76	0		
†	9100	90.694	269.996	7322.31	1965.76	-0.15	-1965.76	0		
†	9200	90.694	269.996	7321.1	2065.75	-0.16	-2065.75	0		
†	9300	90.694	269.996	7319.89	2165.74	-0.17	-2165.74	0		
†	9400	90.694	269.996	7318.68	2265.74	-0.18	-2265.74	0		
†	9500	90.694	269.996	7317.47	2365.73	-0.18	-2365.73	0		
†	9600	90.694	269.996	7316.25	2465.72	-0.19	-2465.72	0		
†	9700	90.694	269.996	7315.04	2565.71	-0.2	-2565.71	0		
†	9800	90.694	269.996	7313.83	2665.71	-0.21	-2665.71	0		
†	9900	90.694	269.996	7312.62	2765.7	-0.21	-2765.7	0		
†	10000	90.694	269.996	7311.41	2865.69	-0.22	-2865.69	0		
†	10097.35	90.694	269.996	7310.23	2963.04	-0.23	-2963.04	0		Wolfcamp
†	10100	90.694	269.996	7310.2	2965.68	-0.23	-2965.68	0		
†	10200	90.694	269.996	7308.99	3065.68	-0.24	-3065.68	0		
†	10300	90.694	269.996	7307.78	3165.67	-0.25	-3165.67	0		
†	10400	90.694	269.996	7306.57	3265.66	-0.25	-3265.66	0		
†	10500	90.694	269.996	7305.35	3365.65	-0.26	-3365.65	0		
†	10600	90.694	269.996	7304.14	3465.65	-0.27	-3465.65	0		
†	10700	90.694	269.996	7302.93	3565.64	-0.28	-3565.64	0		
†	10800	90.694	269.996	7301.72	3665.63	-0.28	-3665.63	0		
†	10900	90.694	269.996	7300.51	3765.63	-0.29	-3765.63	0		
†	11000	90.694	269.996	7299.3	3865.62	-0.3	-3865.62	0		
†	11100	90.694	269.996	7298.09	3965.61	-0.31	-3965.61	0		
†	11200	90.694	269.996	7296.88	4065.6	-0.32	-4065.6	0		
†	11300	90.694	269.996	7295.67	4165.6	-0.32	-4165.6	0		
†	11400	90.694	269.996	7294.46	4265.59	-0.33	-4265.59	0		

†	11500	90.694	269.996	7293.24	4365.58	-0.34	-4365.58	0		
†	11600	90.694	269.996	7292.03	4465.57	-0.35	-4465.57	0		
†	11700	90.694	269.996	7290.82	4565.57	-0.35	-4565.57	0		
	11767.86	90.694	269.996	7290	4633.43	-0.36	-4633.43	0	#2H BHL	1

HOLE AND CASING SECTIONS Ref Wellbore: #2H PWB Ref Wellpath: Plan #1

String/Dian	Start MD	End MD	Interval	Start TVD	End TVD	Start N/S	End N/S	Start E/W	End E/W
	feet	feet	feet	feet	feet				
8.75in Ope	6860	7620.22	760.22	6860	7340.23	0	0	-0.04	-486.09
7.875in Op	7620.22	11767.86	4147.64	7340.23	7290	-0.04	-486.09	-0.36	-4633.42

TARGETS

Name	MD	TVD	North	East	Grid East	Grid North	Latitude	Longitude	Shape	Comment	Design Comments
	feet	feet	feet	feet	us survey f	us survey f	DegMinSec	DegMinSec			
(1) #2H BH	11767.86	7290	-0.36	-4633.43	627389	689254.2	32 53 40.0(	104 03 10.	point		

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 #2H
NEW DRILL WELL
SL: 2030' FNL & 530' FEL, Unit H
BHL: 2030' FNL & 330' FWL, Unit E
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:

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

Calculation for the 500 ppm ROE:

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

(H2S concentrations in decimal form)

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

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 #2H
SL: 2030' FNL & 530' FEL, Unit H
BHL: 2030' FNL & 330' FWL, Unit E
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 #097874

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: ConocoPhillips PO Box 7500, Bartlesville, OK 74005

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
Undesignated (Wolfcamp)

PROPOSED TOTAL DEPTH
This well will be drilled to a Total Vertical Depth of approximately 7323' and a Measured Depth of approximately 11,950'.

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 5.2 miles to proposed lease rd.

ACCESS ROADS

A. Length and Width: 228.1' long and 30' wide. The access road will be built and is shown on Exhibit E-1 and 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 228.1' in length. (See Exhibit E-1, and 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.

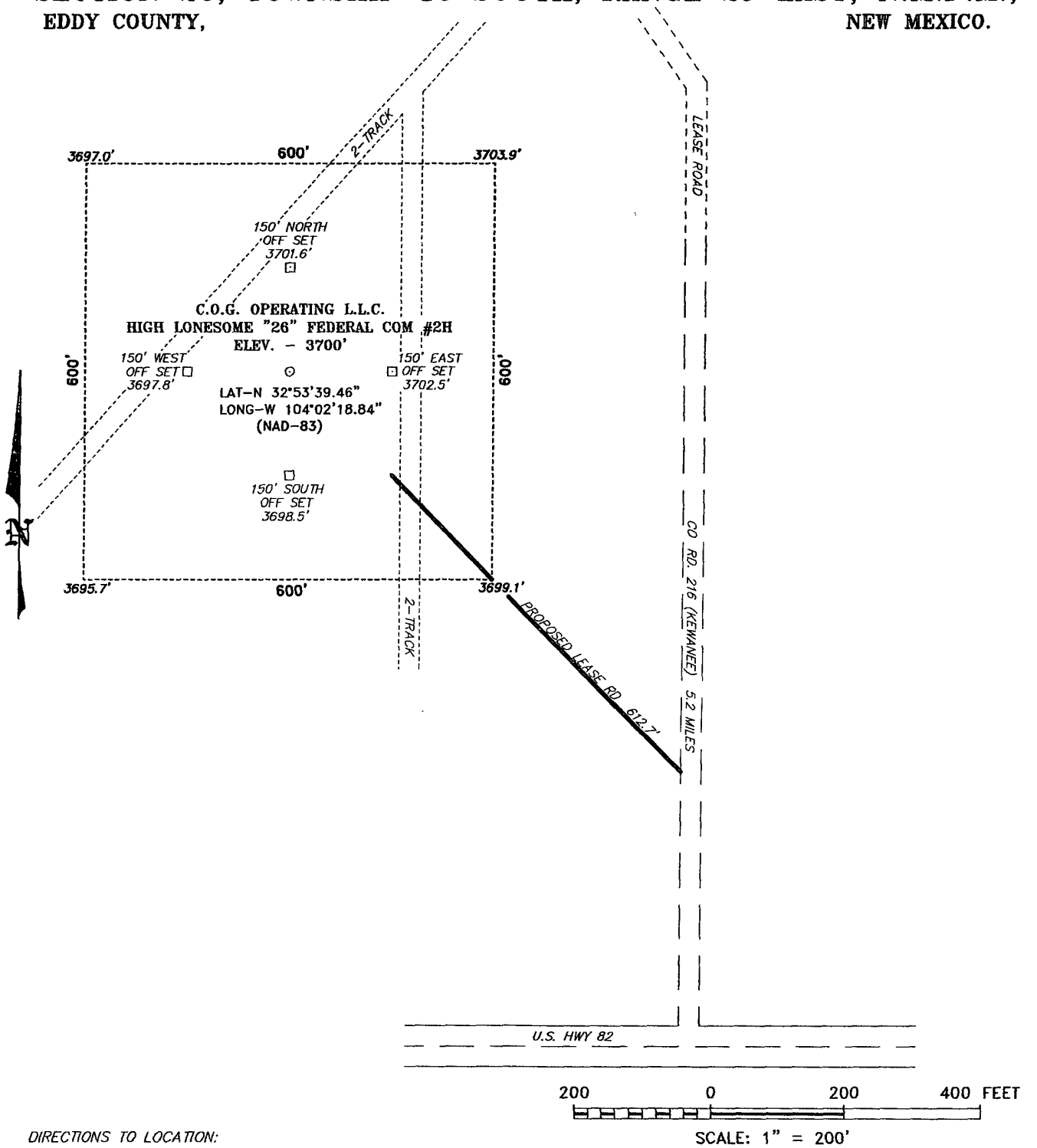
8-7-07
Date

John Coffman
C.O.G. Operating, LLC

EXHIBIT "E"

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. 5.0 MILES TO PROPOSED LEASE ROAD.

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

REF: HIGH LONESOME "26" FED COM #2H / Well Pad Topo

THE HIGH LONESOME "26" FED COM #2H LOCATED 2030' FROM THE NORTH LINE AND 530' 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: 18628	Drawn By: J. M. SMALL		
Date: 09-24-2007	Disk: JMS 18628W	Survey Date: 09-24-2007	Sheet 1 of 1 Sheets

VII. DRILLING

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 shall be set **a minimum of 25 feet into the Rustler Anhydrite and above the salt at approximately 400** feet and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

    b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

Possible lost circulation in the Grayburg and San Andres formations.
Possible high pressure gas bursts in the Wolfcamp.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

   ☒ Cement to surface. If cement does not circulate see B.1.a-d above.

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 achieve this height of cement.**

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.

e. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation **if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days**. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

f. A variance to test the surface casing and BOP/BOPE to the reduced pressure of **1000** psi with the rig pumps is approved.

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 092507