

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED
OMB NO 1004-0135
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No NMLC029415A
2. Name of Operator COG OPERATING LLC		6. If Indian, Allottee or Tribe Name
Contact KANICIA CASTILLO E-Mail: kcastillo@conchoresources.com		7. If Unit or CA/Agreement, Name and/or No
3a. Address 550 WEST TEXAS AVENUE SUITE 100 MIDLAND, TX 79701	3b. Phone No (include area code) Ph: 432-685-4332	8. Well Name and No. PUCKETT 13 8H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 12 T17S R31E SESE Lot P 232FSL 459FEL		9. API Well No 30-015-39658-00-X1
		10. Field and Pool, or Exploratory FREN: <i>Gloria-Yeso 1st</i> <i>(97213)</i>
		11. County or Parish, and State EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Deepen
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Alter Casing
	<input type="checkbox"/> Fracture Treat
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Change Plans
	<input type="checkbox"/> Plug and Abandon
	<input type="checkbox"/> Convert to Injection
	<input type="checkbox"/> Plug Back
	<input type="checkbox"/> Production (Start/Resume)
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Water Disposal
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Well Integrity
	<input checked="" type="checkbox"/> Other Drilling Operations

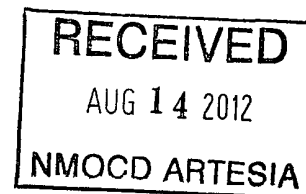
13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

COG Operating LLC respectfully requests to drill a second lateral as follows:
Puckett 13 Federal #8H MIDDLE LATERAL PROGRAM

1. Estimated Tops of Important Geologic Markers
Yeso Group +/- 5323?

2. Estimated Depths of Anticipated Fresh Water, Oil, and Gas
Yeso Group +/- 5323?

This deepening originates in the Yeso and will finish in the Yeso. The entire Yeso group is an oil and gas bearing interval.



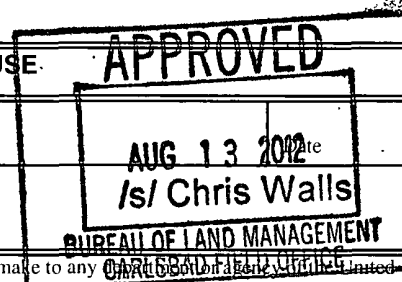
Accepted for record
NMOCD

Original COAs Apply

14. Thereby certify that the foregoing is true and correct.	
Electronic Submission #142753 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Carlsbad Committed to AFMSS for processing by BEVERLY WEATHERFORD on 07/12/2012 (12BMW0283SE)	
Name (Printed/Typed) KANICIA CASTILLO	Title PREPARER
Signature (Electronic Submission)	Date 07/11/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By	Title
Conditions of approval, if any, are attached. Approval of this notice 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.	Office



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 official or agent of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

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
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised July 16, 2010
Submit to Appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-39658	Pool Code 97213	Pool Name Fren; Glorieta-Yeso, East
Property Code 38922	Property Name PUCKETT 13 FEDERAL COM	Well Number 8H
OGRID No. 229137	Operator Name COG OPERATING, LLC	Elevation 3967'

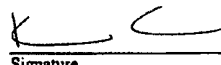
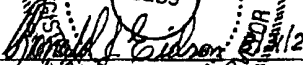
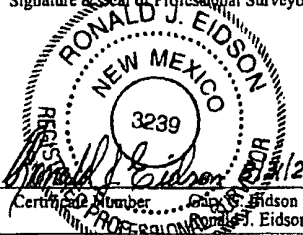
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	12	17-S	31-E		232	SOUTH	459	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
P	13	17-S	31-E		330	SOUTH	330	EAST	EDDY
Dedicated Acres 160	Joint or Infill	Consolidation Code	Order No.						

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

<p>DETAIL</p> <p>3970.6' 3970.4'</p> <p>600'</p> <p>600'</p> <p>3964.6' 3964.4'</p> <p>GEODETIC COORDINATES NAD 27 NME</p> <p>SURFACE LOCATION Y=670589.0 N X=659043.1 E</p> <p>BOTTOM HOLE LOCATION Y=665407.7 N X=659201.9 E</p> <p>SECTION TABLE QUARTER & SIXTEENTH CORNER COORDINATES</p> <p>Ⓐ - Y=671671.3 N, X=658176.4 E Ⓑ - Y=671680.7 N, X=659495.8 E Ⓒ - Y=665070.9 N, X=658213.0 E Ⓓ - Y=665080.1 N, X=659533.8 E</p>	<p>SCALE: 1"=2000'</p> <p>12</p> <p>13</p> <p>PP: 450 FEL & 330 FNL</p> <p>S.L. SEE DETAIL</p> <p>232'</p> <p>459'</p> <p>GRID AZ = 178°14'42"</p> <p>HORIZ. DIST. = 6185.1'</p> <p>8.1'</p> <p>330'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information 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 or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division</p> <p> 7/11/12 Signature Date Kanicia Castillo Printed Name kcastillo@concho.com E-mail Address</p> <p>SURVEYOR CERTIFICATION</p> <p>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 supervision, and that the same is true and correct to the best of my belief.</p> <p>JUNE 25, 2011 Date of Survey</p> <p> 6/24/2011 Signature Date of Professional Surveyor</p> <p> Certification Number 3239 Ronald J. Eidson 12641 DSS REV: 8/9/11</p>
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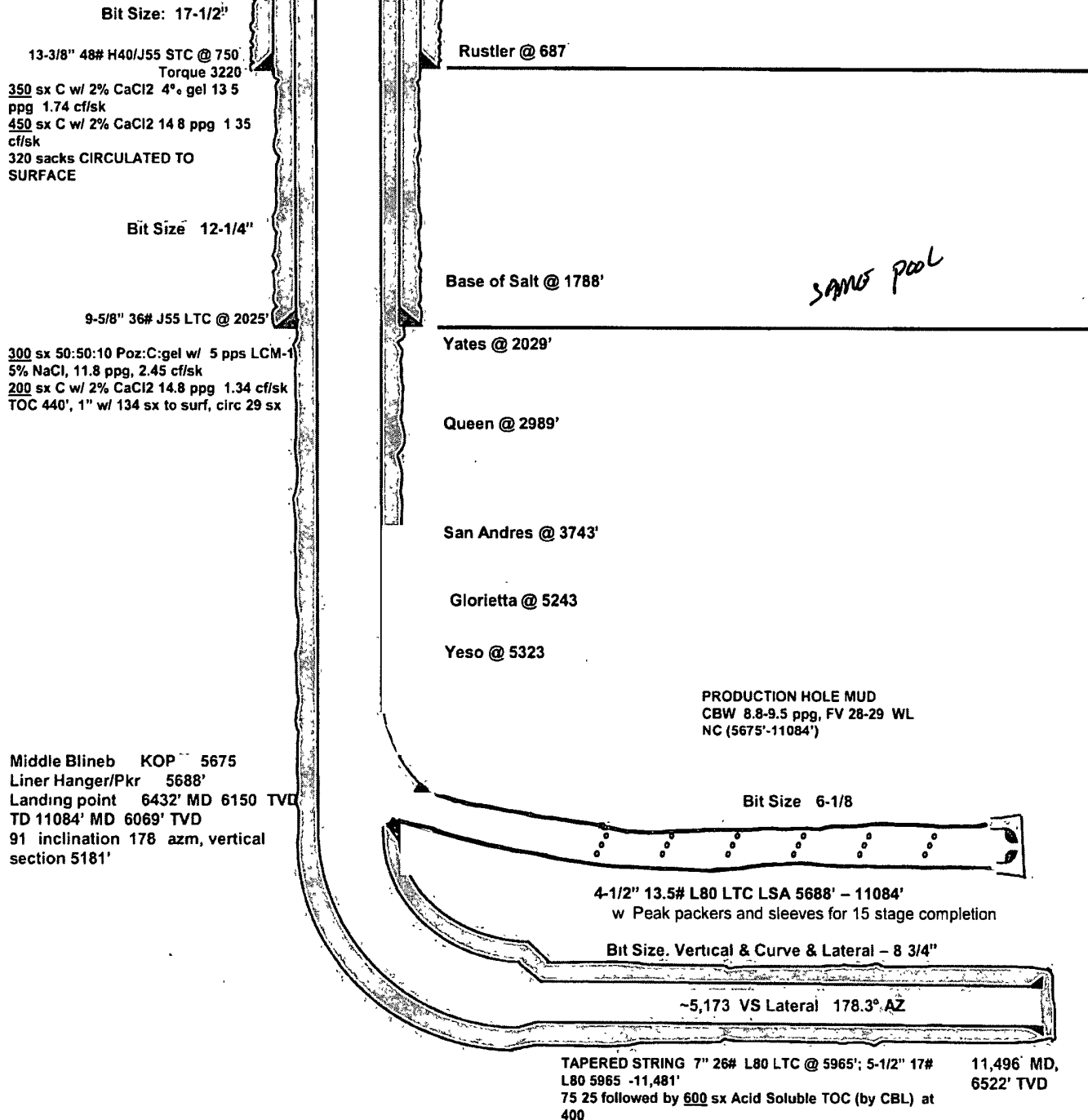
**Puckett 13 Federal #8H
Blinebry/Paddock Horizontal
Eddy County, New Mexico**

<u>Surface</u>	<u>Lateral Terminus</u>
232' FSL	330' FSL
459' FEL	330' FEL
S-12	S-13
T17S, R31E	

Proposed Wellbore

API: 30-015-39658

**KB: 14'
GL: 3967'**



Puckett 13 Federal #8H MIDDLE LATERAL PROGRAM

1. Estimated Tops of Important Geologic Markers

Yeso Group +/- 5323'

2. Estimated Depths of Anticipated Fresh Water, Oil, and Gas

Yeso Group +/- 5323'

This deepening originates in the Yeso and will finish in the Yeso. The entire Yeso group is an oil and gas bearing interval.

3. Casing Program

Hole Size	Interval	OD Casing	Weight	Grade**	Jt./Condition	Burst/collapse/tension
6-1/8"	5688'-11084'	4.5"	13.5#	L-80	LTC/New	3.98/4.09/3.21 (L80)

4. Cement Program

4.5" Liner: No cement planned; external packers will be used for stimulation isolation.

NOTE: COG OPERATING LLC REQUESTS A VARIANCE TO THE LINER TOP FLUID ENTRY OR PRESSURE TEST BECAUSE THE NEW LATERAL WILL BE COMPLETED IN THE SAME ZONE AS THE CURRENT PERFS AND THE ENTIRE INTERVAL IS RECOGNIZED BY THE OCD AS ONE INTERVAL (YESO). AS PER ONSHORE ORDER NO. 2 SECT III: REQUIREMENTS, PART B. CASING AND CEMENTING REQUIREMENTS, SUBPART b. "NO TEST SHALL BE REQUIRED FOR LINERS THAT DO NOT INCORPORATE OR NEED A SEAL MECHANISM." COG BELIEVES WE MEET THE CRITERIA TO NOT BE REQUIRED TESTING THE LINER TOP BECAUSE THERE IS NO NEED FOR A SEAL MECHANISM.

NOTE: COG OPERATING LLC REQUESTS A VARIANCE TO THE 200' MINIMUM TIE BACK TO THE PRODUCTION CASING BECAUSE THE BOTTOM LATERAL IS PRODUCTIVE FROM THE YESO BELOW THIS PROPOSED LATERAL, COG DESIRES TO NOT COVER THAT OR MAKE IT INACCESSIBLE WITH A LINER OVERLAP.

5. Minimum Specifications for Pressure Control

The BOP equipment will be a 2000 psi double ram type hydraulically operated preventer. This equipment will be nipped up to a 7-1/16" 3K flange. The pipe rams are located above blind rams. The BOP is tested to 2000 psi prior to drilling new formation. Access to the annulus will be through the valves on the 7-1/16" casing head.

6. Types and Characteristics of the Proposed Mud System

This well will be drilled from the window that is cut in the 7" casing to TD with FW/CBW drilling mud.

7. Auxiliary Well Control and Monitoring Equipment

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

8. Logging, Testing, and Coring Program

- A. The electric logging program will consist of MWD GR, which will be run from TD to 7" production casing sidetrack.
- B. No drill stem tests.
- C. No conventional coring anticipated.

- D. Further testing procedures will be determined after the 4-1/2" casing has been run to TD, based on drill shows and log evaluation.

9. Abnormal Conditions, Pressure, Temperatures, and Potential Hazards

No abnormal pressures or temperatures are anticipated. The estimated bottomhole temperature at TD is 110 degrees and the estimated maximum bottomhole pressure is 2300 psig. The drilling starts in the Yeso and ends in the Yeso. The section of Yeso being drilled has very low permeability (less than 1 md).

10. Anticipated Starting Date and Duration of Operations

There will be no road or location work required as this is an existing well location. Once commenced, drilling operations should be finished in approximately 20 days. If the well is productive, an additional 30-90 days will be required for completion and testing before a decision is made to remove the whipstock and RBP separating the laterals, to commingle the production from the two laterals.

11. Centralizer Program

Centralizers will not be run or required due to the lack of cement and the centralizing nature of the external casing packers.

12. Summary Drilling and Completion Program

Preparatory/2ND Lateral Procedure

1. Pull test anchors. MIRU pulling unit.
2. TOH with production equipment (tally and stand back tubing) and LD.
3. PU 6-1/8" bit and scraper, TIH to 5900'. TOH.
4. RU wireline. Run GR/CCL correlation log from 5900' to 5200'.
5. Set RBP at +/- 5775'. RU pump truck, test casing and RBP to 1000 psi for 30 minutes. TIH OE, spot 15' sand on RBP. TOH, LD tubing, RD BOPE, RD pulling unit.
6. MIRU Key or Basic workover rig & horizontal package. NU hydraulic 6" 3M double BOP w/2-7/8" pipe rams on top & blind rams on bottom. Wellhead has 6" 900 series flanged connection. Move in and rig up pumps, closed loop solids control equipment, power swivel, frac tanks, generators, pipe racks, and other equipment. Use rig pump to test BOP, casing & RBP to 500 psi for 30 minutes, close blind rams in BOP and test BOP above rams to 1000/200 psi for 30 minutes and document on report.
Independent Tester 2009/250
7. PU & TIH w/spacer, anchor, retrievable whipstock (3° slide), starting mill, & UBHO on workstring. (Line up UBHO & whipstock face on surface. Gyro stinger should be inserted into UBHO to check for compatibility and orientation.) TIH to within 20' of setting depth. Pull up to next connection & RU Gyro. Take check shot & orient whipstock while working out all torque.
8. If orientation is satisfactory, set anchor (bottom of anchor 2' above casing collar, at approximately 5675'). Pull 5,000# upstrain to check anchor set, then set down 20-30,000# weight to shear running bolt. RD Gyro.

9. After obtaining free torque, record Pick-Up & Slack-Off weights. Make starting cut through casing wall (approximately 30" total). Sweep with high viscosity polymer pills (if needed) to clean hole. Install two (2) or more ditch magnets at flowline. TOH.
10. TIH with window mill, watermelon mill, & string mill on workstring. Mill window from 5661' to 5670', plus 5' of open hole (KOP - +/-5675')(or depth required by directional company). Circulate hole clean. TOH. (Trip & ream through finished window several times to make sure it is fully open. Check mill gauges after laying down.) Fax in the fisherman's diagram of the window. Verify that the depths on the diagram match the depths on the morning report.
11. PU 6-1/8" bit, downhole motor, muleshoe (UBHO sub), (2) monel drill collars (Install MWD probe inside NMDC and obtain offset), XO flow sub, & muleshoe sub f/gyro on workstring. Surface test motor and MWD. TIH to btm filling pipe as necessary.
12. PU swivel and establish circulation (130 gpm). RU Gyro. Time drill away from casing using continuous readout gyro for checking well path and tool face. Magnetic interference may occur, particularly while motor is in the window. If necessary, use gyro single shots for drilling away from casing. Once MWD readouts can function without magnetic influence from casing, RD Gyro & drill remaining curve at 164-200 GPM to EOC (+6,432' MD 6,150' TVD) using MWD.
13. Build curve at 12.0°/100' BUR to planned inclination of 91.0° and azimuth (after gyro correction) of 178.07°. Survey as needed to ensure curve is built according to plan. Sweep hole with high viscosity polymer pills (if needed) for good hole cleaning. Sweep hole at least once per day.
14. At EOC, TOH. PU & TIH w/6-1/8" PDC bit, downhole motor, muleshoe (UBHO sub), (2) monel drill collars (Install MWD probe inside NMDC and obtain offset) & XO flow sub on 3-1/2" drill pipe or PH-6 workstring. TIH very carefully with bit through the casing window to prevent bit damage. Ream curve as necessary to remove any severe "kinks" or doglegs.
15. Drill the lateral section with the angle hold motor in the oriented and rotary mode as necessary. Drill at 91.0° inclination, 178.07° azimuth for a total of 5181' vertical section at lease line (estimated to be at 11,084' MD, 6,069' TVD). Take surveys every 30' or as needed to maintain inclination and direction.
16. At TD, circ hole clean. Make reamer runs as required. TOH, LD DP and tools.
17. Run 4.5", 13.5# L-80 EUE 8rd LTC casing. With external casing packers for zonal stage treatment isolation (+/-15 stages), open hole liner hanger/packer at +/-5688', J-latch at +/-5685'; casing to surface. Set packers and liner hanger.
18. ND BOPE, NU WH w/cap.
19. RDMO rig.

Completion Procedure

1. RU frac valve. Frac as per Completion Engineer's design, pumping down balls to open frac sleeves to treat zones isolated between open-hole packers. Rig down frac company.
2. After frac, rig up coiled tubing unit. Drill out sleeves.
3. Flow well back until fluid recovery reduces to 10 barrel/hour. Test well, including running pumping equipment as required for long-term lateral production testing.
4. Rig up Pulling unit. NU BOPE.
5. Release frac string from liner hanger. TOH. PU work string and TIH.
6. Retrieve whipstock. Retrieve RBP at +/-5775'.
7. Run production equipment & place on pump with both laterals commingled.
8. Report test results.

Closed Loop Operation & Maintenance Procedure

All drilling fluids are circulated over shakers and through steel work-over tanks.

Fines from shaker are dropped into stand by metal tank.

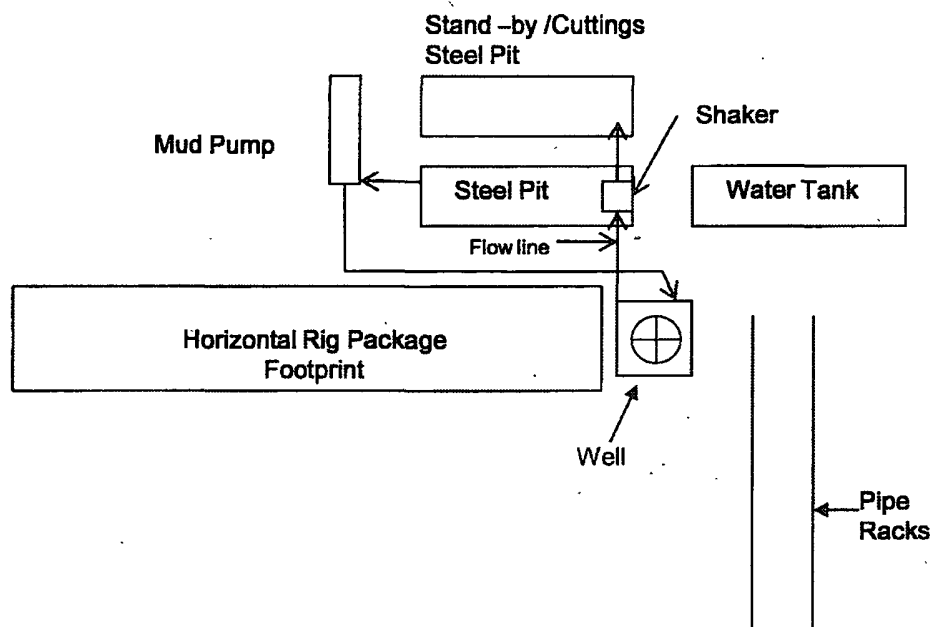
Additional tanks are used to capture unused drilling fluid or cement returns from casing jobs as necessary.

At end of job drilling fluid is disposed in a proper off location 3rd party injection well while fines are disposed of at a proper 3rd party waste disposal site.

This equipment will be maintained by rig crews that are on location.

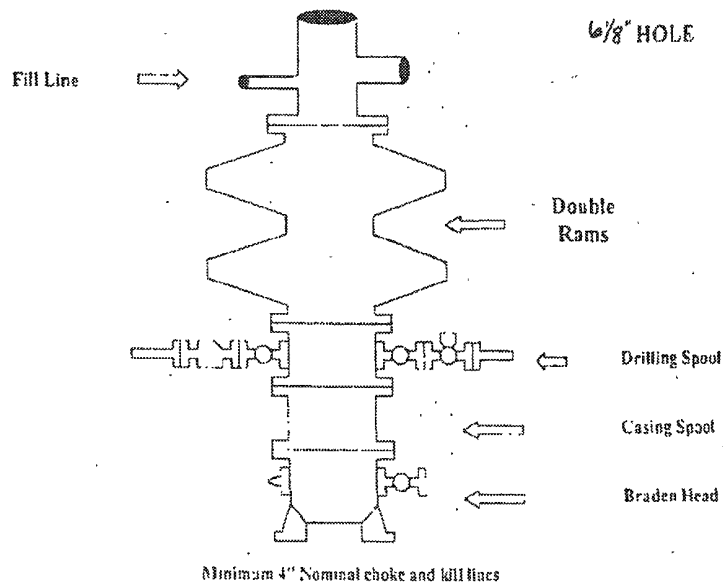
COG Operating LLC

**Closed Loop Equipment Diagram –
Yeso Horizontal Reentry**



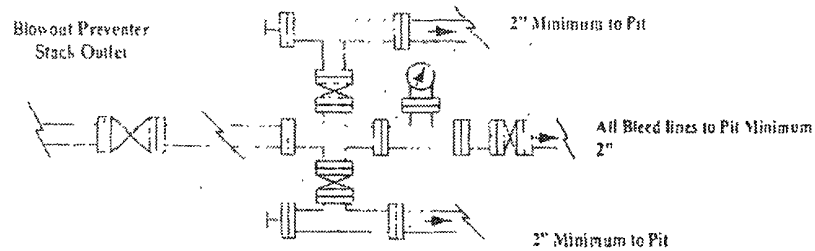
COG Operating LLC

BOPE and Choke Schematic



Choke Manifold Requirement (2000 psi WP)
No Annular Required

Adjustable Choke



Adjustable Choke
(or Positive)

NOTES REGARDING THE BLOWOUT PREVENTERS

Master Drilling Plan
Eddy County, New Mexico

- 1 Drilling nipple to be so constructed that it can be removed without use of a welder through rotary table opening, with minimum ID equal to preventer bore
- 2 Wear ring to be properly installed in head.
- 3 Blow out preventer and all fittings must be in good condition, 2000 psi WP minimum
- 4 All fittings to be flanged.
- 5 Safety valve must be available on rig floor at all times with proper connections, valve to be full 2000 psi WP minimum
- 6 All choke and fill lines to be securely anchored especially ends of choke lines
- 7 Equipment through which bit must pass shall be at least as large as the diameter of the casing being drilled through.
- 8 Kelly cock on Kelly.
- 9 Extension wrenches and bands wheels to be properly installed.
- 10 Blow out preventer control to be located as close to driller's position as feasible
- 11 Blow out preventer closing equipment to include minimum 40-gallon accumulator, two independent sources of pump power on each closing unit, installation all API specifications.

COG Operating LLC

Eddy County, NM

Puckett 13 Federal Com 8H

Puckett 13 Federal Com 8H

Middle Horizontal - Upper Blinebry

Plan: ML Plan #1

Surface: 232' FSL, 459' FEL, Sec 12, T17S, R31E, Unit P

BHL: 330' FSL, 330' FEL, Sec 13, T17S, R31E, Unit P

Standard Planning Report

15 June, 2012

Planning Report

Database: Houston R5000 Database
Company: COG Operating LLC
Project: Eddy County NM
Site: Puckett 13 Federal Com 8H
Well: Puckett 13 Federal Com 8H
Wellbore: Middle Horizontal Upper B eb
Design: ML Plan #1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method

Site Puckett 13 Federal Com 8H
 WELL @ 3981 00ft (United #40)
 WELL @ 3981 00ft (United #40)
 Grid
 Minimum Curvature

Planned Survey

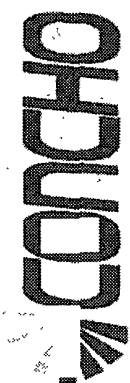
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (100ft)	Turn Rate (100ft)
10 700 00	91 00	178 07	6 075 87	-4 797 32	145 83	4 99 54	0 00	0 00	0 00
10 800 00	91 00	178 07	6 07 14	-4 897 25	149 21	4 899 52	0 00	0 00	0 00
10 900 00	91 00	178 07	6 072 40	-4 997 18	152 58	4 999 51	0 00	0 00	0 00
11 000 00	91 00	178 07	6 070 66	-5 097 11	155 96	5 099 49	0 00	0 00	0 00
11 084 25	91 00	178 07	6 069 20	-5 181 30	158 80	5 183 73	0 00	0 00	0 00
1	.25 MD,	.20' TVD - PBHL (Puck		o	ML Pla 1				

Design Targets

Target Name hit/miss target Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
PBHL (Puckett 13 Feder - plan hits target center Point	0 00	0 00	6 069 20	-5 181 30	158 80	665 407 70	659 201 90	32 82821578	-103 81506468

Plan Annotations

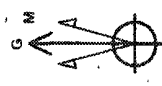
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
5 675 60	5 674 85	46 49	11 55	KOP Start Build @ 12 00 100
6 431 66	6 150 00	532 06	1 76	Landing Point - Hold @ 90 99 INC 1 8 0 AZ
11 084 25	6 069 20	-5 181 30	158 80	TD @ 11084 25 MD 6069 20 TVD



KOP - Start Build @ 12 00 110'

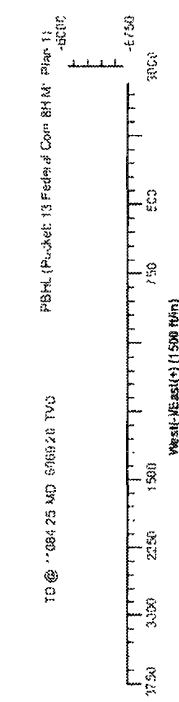
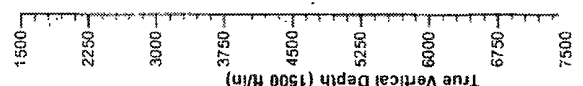
Landing Point - Hold @ 90.99' INC, 178.07' AZ

Azimuths to Grid North
True North 0.28
Magnetic North 7.34
Magnetic Field
Strength 4885.7 Gauss
Dip Angle 60.69
Date 6/ 2012
Model IGRF2010



South(-)/North(+) (1500 ft/in)

True Vertical Depth (1500 ft/in)



West-Head(+) (1500 ft/in)

TD @ 11084.25 MD 6069.20 TVD

PBHL (Puckett 13 Federal Com BH ML Plan 1)

KOP - Start Build @ 12 00 110'

Landing Point - Hold @ 90.99' INC, 178.07' AZ

TD @ 11084.25 MD 6069.20 TVD

PBHL (Puckett 13 Federal Com BH ML Plan 1)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	4E/W	Deg	Iface	VSeal	Annotation
1	5675.60	0.45	231.97	5674.85	-41.55	0.00	0.00	46.11	KOP - Start Build @ 12.00' 110'
2	8431.66	91.00	178.07	8150.00	-532.06	1.76	12.00	-53.80	Landing Point - Hold @ 90.99' INC, 178.07' AZ
3	11084.25	91.00	178.07	6069.20	-5181.30	158.60	0.00	5183.73	TD @ 11084.25 MD, 6069.20' TVD

Vertical Section at 11084.25 MD 6069.20 TVD