

Submit 1 Copy To Appropriate District Office
District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-42644
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☐ FEE ☒
2. Name of Operator COG Operating LLC		6. State Oil & Gas Lease No.
3. Address of Operator One Concho Center - 600 W Illinois Ave Midland, TX 79701		7. Lease Name or Unit Agreement Name Pilum 15 Fee
4. Well Location Unit Letter P : 701 feet from the SOUTH line and 450 feet from the EAST line Section 16 Township 18S Range 26E NMPM County EDDY		8. Well Number 2H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3356'		9. OGRID Number 229137
		10. Pool name or Wildcat Atoka; Glorieta Yeso 3250

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

OTHER: **Change SHL** ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

COG Operating LLC submitted APD for this well at this location:
SHL: 701' FSL & 450' FEL, Unit P, Section 16, T18S, R26E
BHL: 330' FSL & 1648' FEL, Unit O, Section 15, T18S, R26E

COG Operating LLC respectfully requests permission to change the SHL:
SHL: 789' FSL & 450' FEL, Unit P, Section 16, T18S, R26E
BHL: 330' FSL & 1648' FEL, Unit O, Section 15, T18S, R26E

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 16 2014

RECEIVED

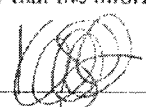
Reason for changing the SHL is the original location is too close to an existing staked well.

A revised C-102 and directional plan are attached for your review.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE **Permitting Tech** DATE **11/25/14**

Type or print name **Kelly J. Holly** E-mail address: **kholly@concho.com** PHONE: **432-685-4384**

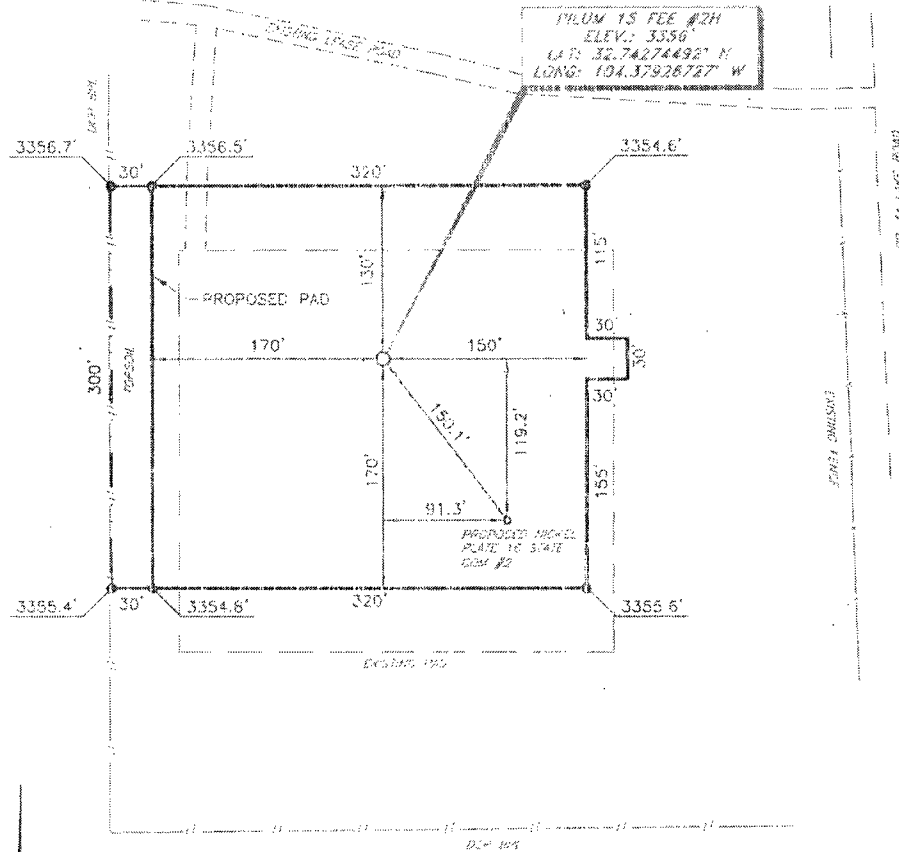
For State Use Only

APPROVED BY:  TITLE **Dist. Supervisor** DATE **12-18-14**

Conditions of Approval (if any):

COG OPERATING, LLC

PILUM 15 FEE #2H
(789' FSL & 450' FEL)
SECTION 16, T18S, R26E,
N. M. P. M., EDDY CO., NEW MEXICO



DIRECTIONS TO LOCATION

From intersection of CR-39 (Four Dinkus) and CR-34 (Lake Road);
Go Southwest on CR-34 (Lake Road) approx. 0.9 miles;
Location is approx. 372 feet West of CR-34 (Lake Road).

SCALE: 1" = 100'
0 50 100
BEARINGS ARE
NAD 83 GRID - NM EAST
DISTANCES ARE
GROUND.

Firm No. 18 10193638 NAD 83/451

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NO.	REVISION	DATE
JOB NO.: LS140541		
DWG. NO.: 140541PAD		

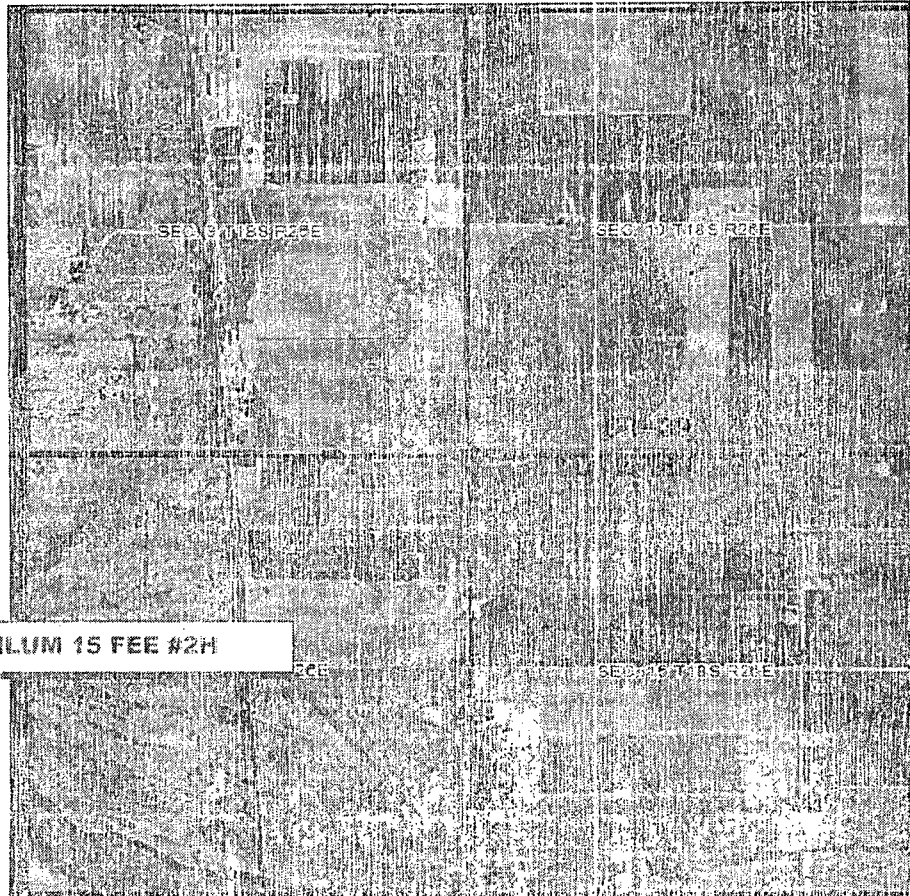
RRC

308 W. BROADWAY ST., ROSEB, NM 88240 (575) 964-8200

SCALE: 1" = 100'
DATE: 11-18-14
SURVEYED BY: GB/IE
DRAWN BY: ARJ
APPROVED BY: RMH
SHEET: 1 OF 1

VICINITY MAP

NOT TO SCALE



SECTION 16, TWP. 18 SOUTH, RGE. 26 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: COG Operating, LLC

LOCATION: 789' FS' & 450' FEL

LEASE: Pilum 15 Fee

ELEVATION: 3356'

WELL NO.: 2H

Firm No.: TX 10193836 / M 4505451

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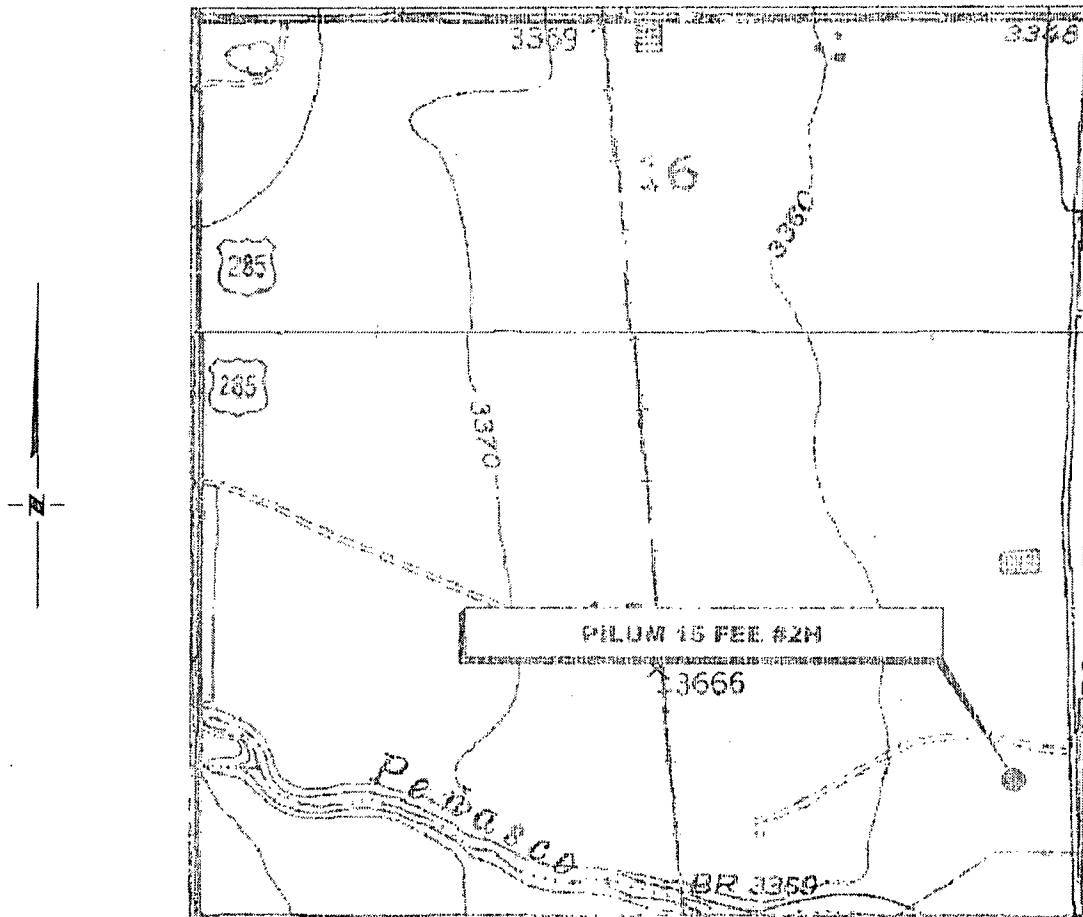
NO.	REVISION	DATE
JOB NO.: LS140541		
DWG. NO.: 140541VM		

RRC

308 W. BROADWAY ST., HOUSTON, TX 77002 (575) 964-6200

SCALE: N.T.S.
DATE: 11-18-14
SURVEYED BY: GB/IE
DRAWN BY: ARJ
APPROVED BY: RMH
SHEET : 1 OF 1

LOCATION VERIFICATION MAP



SECTION 16, TWP. 18 SOUTH, RGE. 26 EAST,
N. M. P. M., EDDY COUNTY, NEW MEXICO

OPERATOR: COG Operating, LLC

LEASE: Pilum 15 Fee

WELL NO.: 2H

ELEVATION: 3356'

LOCATION: 789' FSL & 450' FEL

CONTOUR INTERVAL: 10'

USGS TOPO. SOURCE MAP:

Dayton, N. M. (1955)

Firm No.: TX 10193836 NM 4655451

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NO.	REVISION	DATE

RRC

JOB NO.: LS140541

DWG. NO.: 140541LVM

308 W. BROADWAY ST., HOORS, NM 88240 (575) 964-8200

SCALE: 1" = 1000'

DATE: 11-18-14

SURVEYED BY: GB/IE

DRAWN BY: ARJ

APPROVED BY: RMH

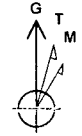
SHEET: 1 OF 1



Project: Eddy County, NM (NAD27 NME)
Site: Pilum 15 Fee
Well: #2H
Wellbore: WB1
Design: Plan #4 11-25-14
Rig: Silver Oak 3



PHOENIX
TECHNOLOGY SERVICES



Azimuths to Grid North
True North: 0.03°
Magnetic North: 7.60°
Magnetic Field
Strength: 48495.25nT
Dip Angle: 60.44°
Date: 11/25/2014
Model: IGRF2010_14

WELL DETAILS

True S	True W	Northing	Ground Level	3356.00	Latitude	Longitude
0.00	0.00	533924.60	Easting	455876.70	32° 44' 33.88166 N	104° 22' 45.36216 W

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
2660.50	2672.29	TL 2665 TVD @ 0 VZ, 90.5° Inc	-0.56	95.34

Map System US State Plane 1927 (Exact solution)
Datum NAD 1927 (NADCON CONUS)
Ellipsoid Clarke 1856
Zone Name New Mexico East 3001

Local Origin Well #2H, Grid North

Latitude 32° 44' 33.88166 N
Longitude 104° 22' 45.36216 W

Grid East 455876.70
Grid North 533924.60
Scale Factor 1.000

Geomagnetic Model IGRF2010_14

Sample Date 25-Nov-14

Magnetic Declination 7.57°

Dip Angle from Horizontal 60.44°

Magnetic Field Strength 48495

To convert a Magnetic Direction to a Grid Direction, Add 7.60°
To convert a Magnetic Direction to a True Direction, Add 7.57° East
To convert a True Direction to a Grid Direction, Add 0.02°

SECTION DETAILS

Sec	MD	Inc	Ac	TVD	True S	True W	Dleg	TFace	VSeal	Target	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP Start 11'100' Build
2	2159.66	0.00	0.00	2159.66	0.00	0.00	0.00	0.00	0.00	0.00	LP Hold 90.5° Inc, 96.29° Azm
3	2682.39	90.50	96.29	2680.51	-57.54	522.25	11.00	06.29	525.40		TD at 6553.48' MD
4	6553.41	90.50	96.29	2549.12	-418.50	4071.70	0.00	0.00	4086.37	BHL-Pilum 15 Fee #2H v4	

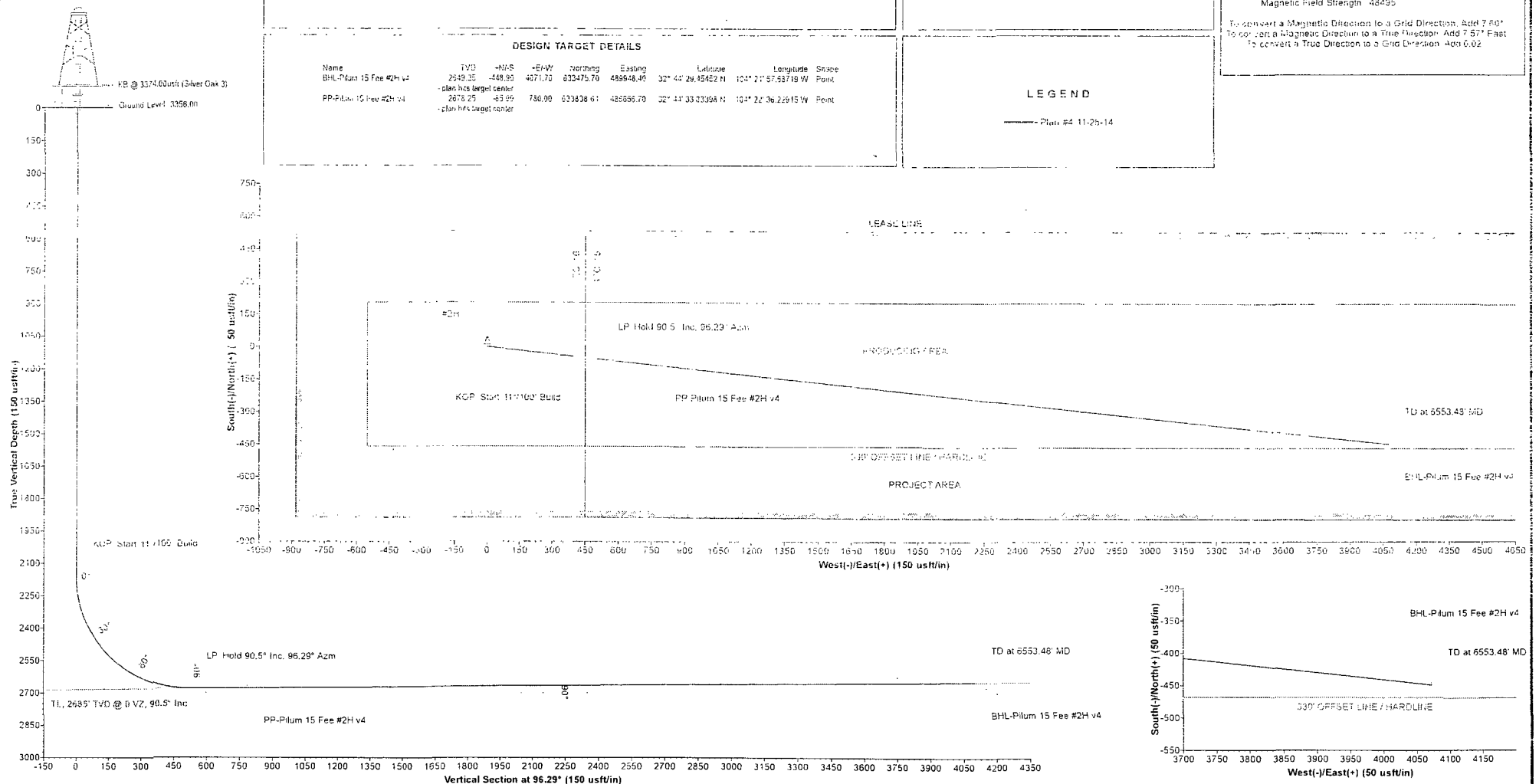
DESIGN TARGET DETAILS

Name	TVD	True S	True W	Northing	Easting	Latitude	Longitude	Shape
BHL-Pilum 15 Fee #2H v4	2549.35	-448.95	4071.70	533924.70	455876.40	32° 44' 29.45422 N	104° 22' 57.58719 W	Point
PP-Pilum 15 Fee #2H v4	2676.25	-43.09	736.00	533838.61	455896.70	32° 44' 33.33368 N	104° 22' 36.22915 W	Point

plan hits target center
plan hits target center

LEGEND

Plan #4 11-25-14





COG Operating LLC

Eddy County, NM (NAD27 NME)

Pilum 15 Fee

#2H

WB1

Plan: Plan #4 11-25-14

Surface: 789' FSL, 450' FEL, Sec 16, T18S, R26E, Unit P

PP: 633' FSL, 330' FWL, Sec 15, T18S, R26E, Unit M

BHL: 350' FSL, 1648' FEL, Sec 15, T18S, R26E, Unit O

Standard Planning Report

25 November, 2014





Planning Report



Database: Compass 5000 GCR
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Pilum 15 Fee
Well: #2H
Wellbore: WB1
Design: Plan #4 11-25-14

Local Co-ordinate Reference: Well #2H
TVD Reference: KB @ 3374.00usft (Silver Oak 3)
MD Reference: KB @ 3374.00usft (Silver Oak 3)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Project: Eddy County, NM (NAD27 NME)
Map System: US State Plane 1927 (Exact solution) System Datum: Mean Sea Level
Geo Datum: NAD 1927 (NADCON CONUS)
Map Zone: New Mexico East 3001

Site: Pilum 15 Fee
Site Position: Northing: 632,879.50 usft Latitude: 32° 44' 23.54811 N
From: Map Easting: 487,953.90 usft Longitude: 104° 22' 20.97828 W
Position Uncertainty: 0.00 usft Slot Radius: 13-3/16" Grid Convergence: -0.02°

Well: #2H
Well Position: +N/-S 1,045.10 usft Northing: 633,924.60 usft Latitude: 32° 44' 33.88168 N
+E/-W -2,082.20 usft Easting: 485,876.70 usft Longitude: 104° 22' 45.36216 W
Position Uncertainty: 0.00 usft Wellhead Elevation: Ground Level: 3,356.00 usft

Wellbore: WB1
Magnetics: Model Name Sample Date Declination Dip Angle Field Strength
IGRF2010_14 11/25/2014 7.57 60.44 48,495

Design: Plan #4 11-25-14
Audit Notes:
Version: Phase: PLAN Tie On Depth: 0.00
Vertical Section: Depth From (TVD) +N/-S +E/-W Direction
(usft) (usft) (usft) (°)
0.00 0.00 0.00 96.29

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,159.66	0.00	0.00	2,159.66	0.00	0.00	0.00	0.00	0.00	0.00	
2,982.39	90.50	96.29	2,680.51	-57.58	522.25	11.00	11.00	0.00	96.29	
6,553.48	90.50	96.29	2,649.35	-448.90	4,071.70	0.00	0.00	0.00	0.00	BHL-Pilum 15 Fee #2



Planning Report



Database: Compass 5000 GCR
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Pilum 15 Fee
Well: #2H
Wellbore: WB1
Design: Plan #4 11-25-14

Local Co-ordinate Reference: Well #2H
TVD Reference: KB @ 3374.00usft (Silver Oak 3)
MD Reference: KB @ 3374.00usft (Silver Oak 3)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	E-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,159.66	0.00	0.00	2,159.66	0.00	0.00	0.00	0.00	0.00	0.00
KOP, Start 11°/100' Build									
2,200.00	4.44	96.29	2,199.96	-0.17	1.55	1.56	11.00	11.00	0.00
2,300.00	15.44	96.29	2,298.31	-2.06	13.68	13.79	11.00	11.00	0.00
2,400.00	26.44	96.29	2,391.56	-5.97	54.14	54.47	11.00	11.00	0.00
2,500.00	37.44	96.29	2,476.29	-11.76	106.64	107.29	11.00	11.00	0.00
2,600.00	48.44	96.29	2,549.39	-19.21	174.25	175.30	11.00	11.00	0.00
2,700.00	59.44	96.29	2,608.17	-28.06	254.47	256.02	11.00	11.00	0.00
2,800.00	70.44	96.29	2,650.47	-37.97	344.38	346.46	11.00	11.00	0.00
2,900.00	81.44	96.29	2,674.73	-48.58	440.65	443.32	11.00	11.00	0.00
2,972.29	89.39	96.29	2,660.50	-56.47	512.22	515.32	11.00	11.00	0.00
TL, 2685' TVD @ 0 VZ, 90.5° Inc									
2,982.39	90.50	96.29	2,680.51	-57.58	522.25	525.42	11.00	11.00	0.00
LP, Hold 90.5° Inc, 96.29° Azm									
3,000.00	90.50	96.29	2,680.36	-59.51	539.76	543.03	0.00	0.00	0.00
3,100.00	90.50	96.29	2,679.49	-70.47	639.15	643.02	0.00	0.00	0.00
3,200.00	90.50	96.29	2,678.61	-81.42	738.54	743.02	0.00	0.00	0.00
3,300.00	90.50	96.29	2,677.74	-92.38	837.94	843.01	0.00	0.00	0.00
3,400.00	90.50	96.29	2,676.87	-103.34	937.35	943.01	0.00	0.00	0.00
3,500.00	90.50	96.29	2,676.00	-114.30	1,036.73	1,043.01	0.00	0.00	0.00
3,600.00	90.50	96.29	2,675.12	-125.26	1,136.12	1,143.00	0.00	0.00	0.00
3,700.00	90.50	96.29	2,674.25	-136.21	1,235.51	1,243.00	0.00	0.00	0.00
3,800.00	90.50	96.29	2,673.38	-147.17	1,334.91	1,343.00	0.00	0.00	0.00
3,900.00	90.50	96.29	2,672.51	-158.13	1,434.30	1,442.99	0.00	0.00	0.00
4,000.00	90.50	96.29	2,671.63	-169.09	1,533.70	1,542.99	0.00	0.00	0.00
4,100.00	90.50	96.29	2,670.76	-180.05	1,633.09	1,642.98	0.00	0.00	0.00
4,200.00	90.50	96.29	2,669.89	-191.00	1,732.48	1,742.98	0.00	0.00	0.00
4,300.00	90.50	96.29	2,669.02	-201.96	1,831.88	1,842.98	0.00	0.00	0.00
4,400.00	90.50	96.29	2,668.14	-212.92	1,931.27	1,942.97	0.00	0.00	0.00
4,500.00	90.50	96.29	2,667.27	-223.88	2,030.66	2,042.97	0.00	0.00	0.00
4,600.00	90.50	96.29	2,666.40	-234.84	2,130.06	2,142.96	0.00	0.00	0.00
4,700.00	90.50	96.29	2,665.52	-245.79	2,229.45	2,242.96	0.00	0.00	0.00
4,800.00	90.50	96.29	2,664.65	-256.75	2,328.85	2,342.96	0.00	0.00	0.00
4,900.00	90.50	96.29	2,663.78	-267.71	2,428.24	2,442.95	0.00	0.00	0.00
5,000.00	90.50	96.29	2,662.91	-278.67	2,527.63	2,542.95	0.00	0.00	0.00
5,100.00	90.50	96.29	2,662.03	-289.63	2,627.03	2,642.95	0.00	0.00	0.00
5,200.00	90.50	96.29	2,661.16	-300.58	2,726.42	2,742.94	0.00	0.00	0.00
5,300.00	90.50	96.29	2,660.29	-311.54	2,825.82	2,842.94	0.00	0.00	0.00
5,400.00	90.50	96.29	2,659.42	-322.50	2,925.21	2,942.93	0.00	0.00	0.00
5,500.00	90.50	96.29	2,658.54	-333.46	3,024.60	3,042.93	0.00	0.00	0.00
5,600.00	90.50	96.29	2,657.67	-344.42	3,124.00	3,142.93	0.00	0.00	0.00
5,700.00	90.50	96.29	2,656.80	-355.38	3,223.39	3,242.92	0.00	0.00	0.00
5,800.00	90.50	96.29	2,655.93	-366.33	3,322.79	3,342.92	0.00	0.00	0.00
5,900.00	90.50	96.29	2,655.05	-377.29	3,422.18	3,442.92	0.00	0.00	0.00
6,000.00	90.50	96.29	2,654.18	-388.25	3,521.57	3,542.91	0.00	0.00	0.00
6,100.00	90.50	96.29	2,653.31	-399.21	3,620.97	3,642.91	0.00	0.00	0.00
6,200.00	90.50	96.29	2,652.43	-410.17	3,720.36	3,742.90	0.00	0.00	0.00
6,300.00	90.50	96.29	2,651.56	-421.12	3,819.76	3,842.90	0.00	0.00	0.00
6,400.00	90.50	96.29	2,650.69	-432.08	3,919.15	3,942.90	0.00	0.00	0.00
6,500.00	90.50	96.29	2,649.82	-443.04	4,018.54	4,042.89	0.00	0.00	0.00
6,553.48	90.50	96.29	2,649.35	-448.90	4,071.70	4,096.37	0.00	0.00	0.00

TD at 6553.48' MD



Planning Report



Database: Compass 5000 GCR
Company: COG Operating LLC
Project: Eddy County, NM (NAD27 NME)
Site: Pilum 15 Fee
Well: #2H
Wellbore: WB1
Design: Plan #4 11-25-14

Local Co-ordinate Reference: Well #2H
TVD Reference: KB @ 3374.00usft (Silver Oak 3)
MD Reference: KB @ 3374.00usft (Silver Oak 3)
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL-Pilum 15 Fee #2H v	0.00	360.00	2,649.35	-448.90	4,071.70	633,475.70	489,348.40	32° 44' 29.45452 N	104° 21' 57.68719 W
- plan hits target center									
- Point									
PP-Pilum 15 Fee #2H v	0.00	0.00	2,678.25	-85.99	1,500.00	633,838.61	486,656.70	32° 44' 33.03398 N	104° 22' 36.22915 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,972.29	2,680.50	TL, 2685' TVD @ 0 VZ, 90.5° Inc		-0.50	95.34

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,159.66	2,159.66	0.00	0.00	KOP, Start 11°/100' Build
2,982.39	2,680.51	-57.58	522.25	LP, Hold 90.5° Inc, 96.29° Azm
6,553.48	2,649.35	-448.90	4,071.70	TD at 6553.48' MD