

PATRIOT DRILLING, LLC

OPERATOR: COG Operating, LLC
WELL/LEASE: Jack Federal # 3 H
COUNTY: Eddy Co., New Mexico
Section 31, T25S, R37E

LED

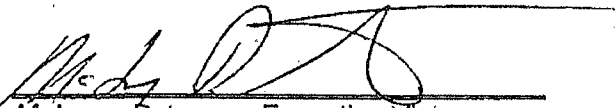
27E

**STATE OF NEW MEXICO
DEVIATION REPORT**

<u>Depth</u>	<u>Deviation</u>	<u>Depth</u>	<u>Deviation</u>
411	1	3,152	1
610	1 1/2	4,134	1
789	1 1/4	5,117	2
979	2	5,878	2
1,646	1 1/4	6,343	1 3/4
1,931	1 1/4	6,827	2
2,480	1 1/2		

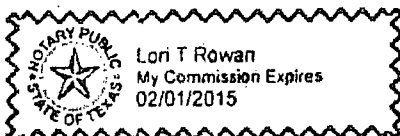
30-015-42133

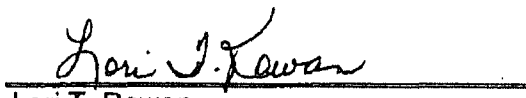
Patriot Drilling, LLC


M. Leroy Peterson, Executive Vice-
President

The foregoing instrument was acknowledged before me on this 8th day of August, 2014 by M. Leroy Peterson, Executive Vice-President of Patriot Drilling, LLC.

My Commission Expires: 02/01/2015




Lori T. Rowan
Notary Public for Ector Co., Texas



September 15, 2014

Concho Resources, Inc.
One Concho Center
600 W. Illinois Avenue
Midland, Texas 79701

Attn: Kanicia Castillo

RE: Jack Federal No. 003H

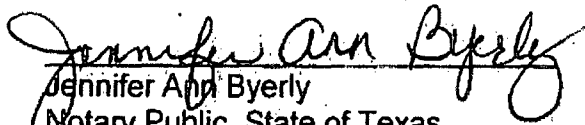
Please find enclosed a copy of the survey from 0.00' to 6868.00' ran on the above referenced well.

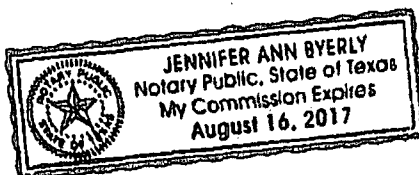
Sincerely,


Keith Havelka
Operations

STATE OF TEXAS §
 §
COUNTY OF NUECES §

This instrument was acknowledged before me on the 15 day of September A.D., 2014, by Keith Havelka.


Jennifer Ann Byerly
Notary Public, State of Texas





Company: COG Operating, LLC (Concho)
Lease/Well: Jack Federal /No. 003H
Location: Sec31 T25S R27E
Rig Name: Patriot 2
State/County: New Mexico/Eddy
Latitude: 32.09, Longitude: -104.23
GRID North is 0.05 Degrees East of True North
VS-Azi: 0.00 Degrees



Depth Reference : RKB = 16 Feet

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: Jack federal #3h gyro-de_01.ut

Minimum Curvature Method

Report Date/Time: 9/15/2014 / 15:52

VES Surey International

West Texas

(432) 563-5444

Surveyor: Chris Bankson

Jack Federal No. 003H / API 30-015-42133

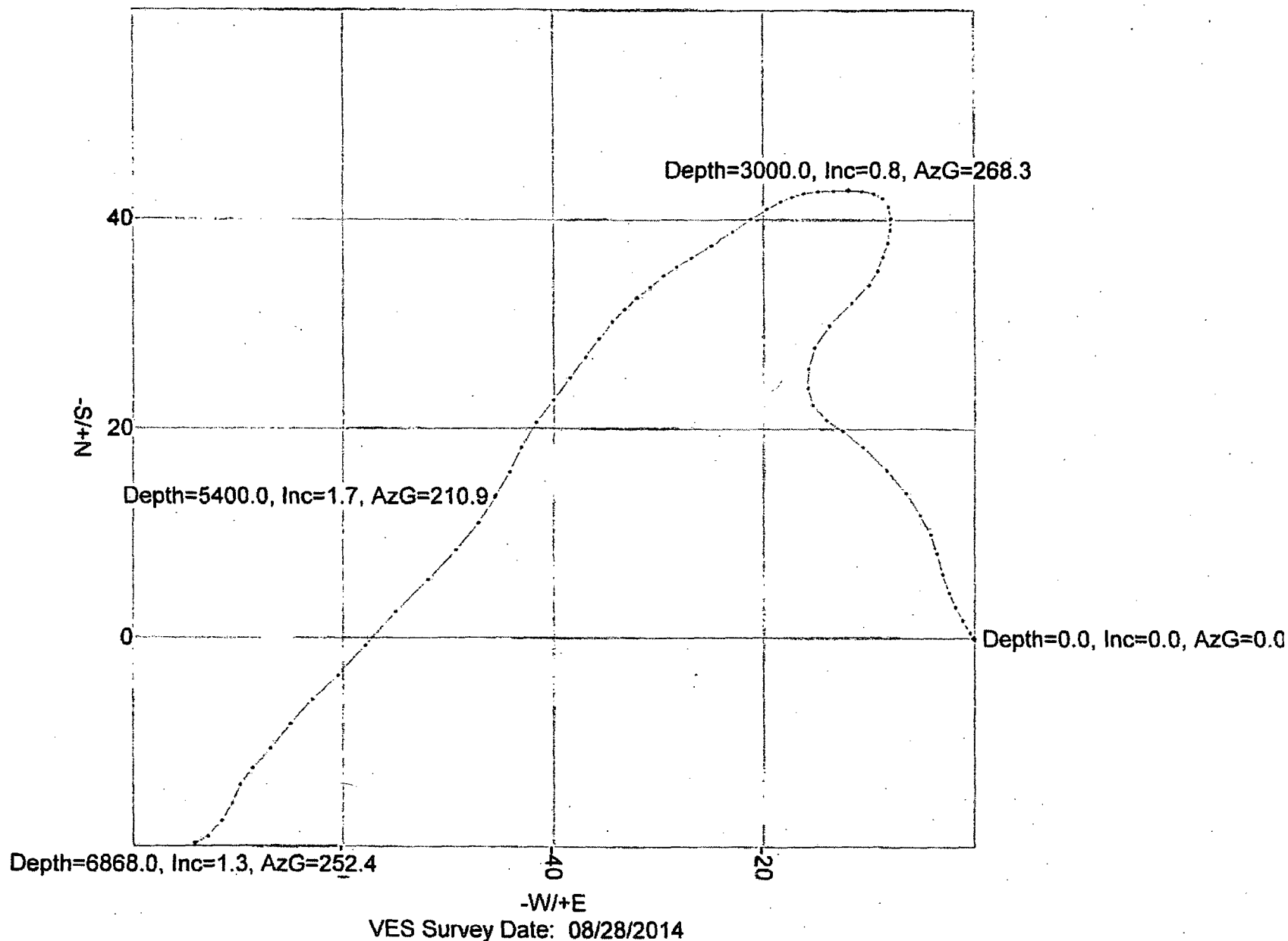
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	****
100.00	0.79	323.30	100.00	0.56	-0.41	0.56	0.69	323.30	0.79
200.00	0.80	333.27	199.99	1.74	-1.14	1.74	2.08	326.65	0.14
300.00	0.82	333.46	299.98	3.01	-1.78	3.01	3.49	329.37	0.02
400.00	0.90	337.85	399.97	4.38	-2.40	4.38	4.99	331.29	0.10
500.00	1.24	343.02	499.95	6.14	-3.01	6.14	6.84	333.90	0.36
600.00	1.09	347.71	599.93	8.11	-3.53	8.11	8.85	336.48	0.18
700.00	1.07	333.45	699.91	9.88	-4.15	9.88	10.71	337.21	0.27
800.00	1.33	332.66	799.89	11.74	-5.10	11.74	12.80	336.53	0.26
900.00	1.48	322.22	899.86	13.79	-6.42	13.79	15.22	335.03	0.30
1000.00	1.90	318.82	999.81	16.06	-8.31	16.06	18.08	332.66	0.43
1100.00	1.77	310.21	1099.76	18.30	-10.57	18.30	21.14	329.98	0.31
1200.00	1.05	303.84	1199.73	19.81	-12.52	19.81	23.43	327.72	0.73
1300.00	1.13	303.64	1299.71	20.87	-14.10	20.87	25.18	325.96	0.07
1400.00	1.16	334.35	1399.70	22.32	-15.35	22.32	27.09	325.48	0.61
1500.00	0.84	358.98	1499.68	23.96	-15.80	23.96	28.71	326.60	0.53
1600.00	1.19	4.76	1599.66	25.73	-15.73	25.73	30.16	328.56	0.37
1700.00	1.28	25.63	1699.64	27.77	-15.16	27.77	31.84	331.37	0.45
1800.00	1.67	39.29	1799.61	29.90	-13.76	29.90	32.91	335.29	0.52

measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
1900.00	1.81	49.02	1899.56	32.06	-11.64	32.06	34.11	340.04	0.33
2000.00	0.95	35.11	1999.53	33.78	-9.97	33.78	35.22	343.55	0.92
2100.00	0.85	25.52	2099.52	35.13	-9.18	35.13	36.31	345.36	0.18
2200.00	0.76	19.89	2199.51	36.43	-8.63	36.43	37.44	346.67	0.12
2300.00	0.89	16.28	2299.50	37.80	-8.18	37.80	38.68	347.79	0.14
2400.00	0.52	5.43	2399.49	39.00	-7.92	39.00	39.80	348.52	0.39
2500.00	0.73	359.82	2499.49	40.10	-7.88	40.10	40.87	348.88	0.22
2600.00	0.63	340.89	2599.48	41.26	-8.06	41.26	42.04	348.94	0.25
2700.00	0.57	304.57	2699.47	42.06	-8.65	42.06	42.94	348.38	0.38
2800.00	0.55	285.76	2799.47	42.47	-9.52	42.47	43.53	347.36	0.18
2900.00	0.71	279.59	2899.46	42.71	-10.60	42.71	44.00	346.06	0.18
3000.00	0.79	268.30	2999.46	42.79	-11.90	42.79	44.42	344.45	0.17
3100.00	0.83	266.71	3099.45	42.73	-13.32	42.73	44.76	342.69	0.05
3200.00	0.88	270.18	3199.43	42.69	-14.81	42.69	45.19	340.87	0.07
3300.00	0.71	251.25	3299.42	42.49	-16.16	42.49	45.46	339.18	0.31
3400.00	0.58	253.97	3399.42	42.16	-17.23	42.16	45.54	337.77	0.13
3500.00	0.76	243.15	3499.41	41.71	-18.31	41.71	45.56	336.30	0.22
3600.00	0.97	240.15	3599.40	40.99	-19.64	40.99	45.45	334.39	0.21
3700.00	1.10	237.20	3699.38	40.05	-21.18	40.05	45.31	332.12	0.13
3800.00	1.30	234.11	3799.36	38.86	-22.91	38.86	45.12	329.48	0.22
3900.00	1.49	238.19	3899.33	37.51	-24.94	37.51	45.04	326.38	0.21
4000.00	1.05	238.87	3999.31	36.35	-26.83	36.35	45.18	323.57	0.44
4100.00	0.85	239.57	4099.29	35.50	-28.25	35.50	45.37	321.49	0.20
4200.00	0.89	230.92	4199.28	34.64	-29.49	34.64	45.49	319.58	0.14
4300.00	0.98	229.06	4299.27	33.59	-30.74	33.59	45.53	317.53	0.09
4400.00	0.91	230.00	4399.25	32.52	-32.00	32.52	45.62	315.46	0.07
4500.00	0.92	225.63	4499.24	31.44	-33.18	31.44	45.71	313.46	0.07
4600.00	1.00	221.52	4599.23	30.23	-34.33	30.23	45.74	311.36	0.10
4700.00	1.35	216.64	4699.21	28.63	-35.61	28.63	45.70	308.80	0.36
4800.00	1.21	217.92	4799.18	26.86	-36.96	26.86	45.69	306.00	0.15
4900.00	1.56	215.11	4899.16	24.92	-38.39	24.92	45.77	302.98	0.36
5000.00	1.52	218.67	4999.12	22.77	-40.00	22.77	46.03	299.65	0.10
5100.00	1.61	216.41	5099.08	20.60	-41.66	20.60	46.48	296.31	0.11
5200.00	1.60	203.42	5199.04	18.19	-43.05	18.19	46.74	292.90	0.36
5300.00	1.39	207.59	5299.01	15.83	-44.17	15.83	46.92	289.72	0.24
5400.00	1.70	210.93	5398.97	13.49	-45.49	13.49	47.45	286.51	0.33
5500.00	1.73	214.18	5498.93	10.96	-47.11	10.96	48.36	283.10	0.10
5600.00	2.11	223.49	5598.87	8.37	-49.22	8.37	49.93	279.65	0.49
5700.00	2.33	223.63	5698.79	5.56	-51.89	5.56	52.19	276.12	0.22

measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Vertical Section FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100
5800.00	2.63	226.38	5798.70	2.51	-54.96	2.51	55.02	272.61	0.32
5900.00	2.37	216.87	5898.60	-0.73	-57.86	-0.73	57.87	269.28	0.48
6000.00	2.13	226.07	5998.53	-3.68	-60.44	-3.68	60.56	266.52	0.43
6100.00	1.71	227.86	6098.47	-5.97	-62.89	-5.97	63.17	264.58	0.42
6200.00	1.91	216.56	6198.42	-8.31	-64.99	-8.31	65.52	262.71	0.41
6300.00	1.60	219.32	6298.37	-10.74	-66.88	-10.74	67.73	260.88	0.32
6400.00	1.34	227.29	6398.34	-12.61	-68.62	-12.61	69.77	259.58	0.34
6500.00	1.00	203.83	6498.32	-14.20	-69.83	-14.20	71.26	258.60	0.58
6600.00	1.12	204.91	6598.30	-15.89	-70.60	-15.89	72.36	257.31	0.12
6700.00	1.15	215.77	6698.28	-17.59	-71.60	-17.59	73.73	256.19	0.22
6800.00	1.11	227.58	6798.26	-19.06	-72.90	-19.06	75.35	255.35	0.24
6868.00	1.34	252.37	6866.25	-19.75	-74.14	-19.75	76.73	255.09	0.84



VES Surey International
West Texas
(432) 563-5444
Surveyor: Chris Bankson
Jack Federal No. 003H / API 30-015-42133





COG Operating LLC

Eddy County, NM

Jack Federal

#3H

OH

Survey: MWD #1

Survey Report - Geographic

04 September, 2014



Wellplanning Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #3H
Project:	Eddy County, NM	TVD Reference:	WELL @ 3284.3usft (Original Well Elev)
Site:	Jack Federal	MD Reference:	WELL @ 3284.3usft (Original Well Elev)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Project:	Eddy County, NM		
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:	Jack Federal
Site Position:	Northing: 397,388.50 usft Latitude: 32° 5' 34.989 N
From: Map	Easting: 530,085.10 usft Longitude: 104° 14' 10.500 W
Position Uncertainty: 0.0 usft	Slot Radius: 13-3/16 " Grid Convergence: 0.05 °

Well:	#3H
Well Position	+N-S 0.0 usft Northing: 397,523.80 usft Latitude: 32° 5' 34.320 N
	+E-W 0.0 usft Easting: 532,046.80 usft Longitude: 104° 13' 47.461 W
Position Uncertainty	0.0 usft Wellhead Elevation: usft Ground Level: 3,267.3 usft

Wellbore:	OH
Magnetics	Model Name Sample Date Declination Dip Angle Field Strength
	IGRF2010 8/28/2014 (°) (°) (nT)
	7.48 59.87 48,147

Design:	OH
Audit Notes:	
Version: 1.0	Phase: ACTUAL Tie On Depth: 0.0
Vertical Section:	Depth From (TVD) +N-S +E-W Direction
	(usft) (usft) (usft) (°)
	0.0 0.0 0.0 184.67

Survey Program	Date 9/4/2014
From To	Survey (Wellbore) Tool Name Description
100.0 8,868.0	GYRO (OH) MWD MWD - Standard
8,916.0 12,027.0	MWD #1 (OH) MWD MWD - Standard

Measured	Inclination	Azimuth	Vertical	+N-S	+E-W	Map	Map	Latitude	Longitude
Depth	(°)	(°)	Depth	(usft)	(usft)	Northing	Easting		
(usft)			(usft)			(usft)	(usft)		
8,868.0	1.34	252.37	8,866.3	-18.8	-74.1	397,504.05	531,972.69	32° 5' 34.125 N	104° 13' 48.323 W
8,916.0	1.60	251.80	8,914.2	-20.1	-75.3	397,503.67	531,971.52	32° 5' 34.121 N	104° 13' 48.337 W
8,948.0	1.80	237.70	8,946.2	-20.5	-76.1	397,503.26	531,970.67	32° 5' 34.117 N	104° 13' 48.347 W
6,980.0	3.70	224.40	6,976.2	-21.5	-77.3	397,502.25	531,969.53	32° 5' 34.107 N	104° 13' 48.360 W
7,011.0	5.60	217.30	7,009.1	-23.5	-78.9	397,500.34	531,967.91	32° 5' 34.088 N	104° 13' 48.379 W
7,043.0	7.00	208.20	7,040.9	-26.4	-80.8	397,497.39	531,966.01	32° 5' 34.059 N	104° 13' 48.401 W
7,074.0	9.00	204.70	7,071.6	-30.3	-82.7	397,493.54	531,964.08	32° 5' 34.021 N	104° 13' 48.423 W
7,106.0	11.40	201.20	7,103.1	-35.5	-84.9	397,488.32	531,961.89	32° 5' 33.989 N	104° 13' 48.449 W
7,138.0	14.40	204.00	7,134.3	-42.1	-87.7	397,481.73	531,959.13	32° 5' 33.904 N	104° 13' 48.481 W
7,169.0	18.00	204.00	7,164.0	-50.2	-91.3	397,473.60	531,955.50	32° 5' 33.824 N	104° 13' 48.523 W
7,201.0	23.20	204.00	7,193.8	-60.7	-96.0	397,463.07	531,950.82	32° 5' 33.720 N	104° 13' 48.578 W



Wellplanning
Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #3H
Project:	Eddy County, NM	TVD Reference:	WELL @ 3284.3usft (Original Well Elev)
Site:	Jack Federal	MD Reference:	WELL @ 3284.3usft (Original Well Elev)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	N/S (usft)	E/W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
7,232.0	26.20	208.20	7,222.0	-72.3	-101.7	397,451.48	531,845.10	32° 5' 33.605 N	104° 13' 48.644 W
7,284.0	30.80	207.80	7,250.1	-85.8	-108.9	397,437.98	531,837.94	32° 5' 33.471 N	104° 13' 48.728 W
7,286.0	35.50	207.80	7,276.9	-101.3	-117.0	397,422.51	531,929.78	32° 5' 33.318 N	104° 13' 48.823 W
7,328.0	40.10	207.50	7,302.1	-118.7	-126.1	397,405.14	531,920.68	32° 5' 33.147 N	104° 13' 48.929 W
7,359.0	45.00	208.40	7,325.0	-137.3	-135.6	397,388.45	531,911.18	32° 5' 32.982 N	104° 13' 49.039 W
7,391.0	50.00	208.10	7,348.6	-158.5	-146.0	397,365.30	531,900.76	32° 5' 32.752 N	104° 13' 49.161 W
7,422.0	54.40	204.00	7,365.8	-180.7	-158.4	397,343.11	531,890.41	32° 5' 32.533 N	104° 13' 49.281 W
7,454.0	59.10	201.20	7,383.1	-205.4	-166.7	397,319.41	531,880.14	32° 5' 32.289 N	104° 13' 49.401 W
7,486.0	63.50	198.70	7,398.5	-231.8	-178.2	397,292.03	531,870.58	32° 5' 32.028 N	104° 13' 49.512 W
7,518.0	68.10	196.90	7,411.6	-259.6	-185.1	397,264.24	531,861.67	32° 5' 31.753 N	104° 13' 49.618 W
7,549.0	72.70	194.10	7,422.0	-287.7	-192.9	397,236.11	531,853.88	32° 5' 31.474 N	104° 13' 49.707 W
7,578.0	76.60	193.10	7,429.1	-313.0	-199.0	397,210.81	531,847.76	32° 5' 31.224 N	104° 13' 49.779 W
7,607.0	80.40	191.70	7,435.3	-342.7	-205.6	397,181.14	531,841.24	32° 5' 30.931 N	104° 13' 49.855 W
7,639.0	83.20	192.00	7,439.9	-373.6	-212.1	397,150.15	531,834.74	32° 5' 30.624 N	104° 13' 49.931 W
7,671.0	86.20	192.70	7,442.8	-404.8	-218.9	397,119.03	531,827.92	32° 5' 30.318 N	104° 13' 50.010 W
7,702.0	89.20	191.70	7,444.1	-435.0	-225.4	397,088.76	531,821.38	32° 5' 30.016 N	104° 13' 50.087 W
7,734.0	90.40	191.00	7,444.2	-466.4	-231.7	397,057.38	531,815.08	32° 5' 29.708 N	104° 13' 50.180 W
7,861.0	89.70	187.80	7,444.1	-591.7	-252.5	396,932.11	531,794.34	32° 5' 28.466 N	104° 13' 50.403 W
7,958.0	88.20	186.00	7,445.8	-686.0	-263.9	396,837.82	531,782.93	32° 5' 27.533 N	104° 13' 50.536 W
8,051.0	88.30	183.20	7,448.7	-780.6	-271.5	396,743.18	531,775.31	32° 5' 26.597 N	104° 13' 50.626 W
8,147.0	88.90	181.10	7,451.1	-878.5	-275.1	396,647.28	531,771.71	32° 5' 25.848 N	104° 13' 50.669 W
8,242.0	90.40	180.40	7,451.7	-971.5	-276.3	396,552.29	531,770.47	32° 5' 24.708 N	104° 13' 50.684 W
8,337.0	88.90	180.40	7,452.2	-1,066.5	-277.0	396,457.30	531,769.81	32° 5' 23.768 N	104° 13' 50.693 W
8,432.0	87.80	181.50	7,455.0	-1,161.4	-278.6	396,362.35	531,768.23	32° 5' 22.828 N	104° 13' 50.712 W
8,527.0	89.20	181.50	7,457.5	-1,258.4	-281.1	396,267.42	531,765.75	32° 5' 21.889 N	104° 13' 50.742 W
8,622.0	88.20	182.50	7,459.6	-1,351.3	-284.4	396,172.51	531,762.43	32° 5' 20.949 N	104° 13' 50.782 W
8,717.0	89.90	182.50	7,461.2	-1,446.2	-288.5	396,077.61	531,758.29	32° 5' 20.010 N	104° 13' 50.831 W
8,812.0	88.20	181.80	7,462.8	-1,541.1	-292.1	395,982.70	531,754.73	32° 5' 19.071 N	104° 13' 50.874 W
8,912.0	89.60	181.10	7,464.7	-1,641.0	-294.6	395,882.75	531,752.20	32° 5' 18.082 N	104° 13' 50.904 W
9,007.0	90.60	180.80	7,464.5	-1,738.0	-296.2	395,787.76	531,750.62	32° 5' 17.142 N	104° 13' 50.924 W
9,102.0	89.60	180.10	7,464.4	-1,831.0	-296.9	395,692.77	531,749.88	32° 5' 16.202 N	104° 13' 50.933 W
9,197.0	91.00	179.70	7,463.9	-1,928.0	-296.8	395,597.77	531,750.04	32° 5' 15.261 N	104° 13' 50.932 W
9,293.0	89.20	181.10	7,463.7	-2,022.0	-297.4	395,501.78	531,749.37	32° 5' 14.311 N	104° 13' 50.941 W
9,388.0	91.00	180.80	7,463.5	-2,117.0	-299.0	395,406.80	531,747.80	32° 5' 13.371 N	104° 13' 50.961 W
9,483.0	89.40	181.10	7,463.2	-2,212.0	-300.6	395,311.82	531,746.22	32° 5' 12.432 N	104° 13' 50.980 W
9,578.0	90.80	180.40	7,463.0	-2,307.0	-301.8	395,216.83	531,744.98	32° 5' 11.491 N	104° 13' 50.995 W
9,673.0	88.30	180.80	7,463.8	-2,402.0	-302.6	395,121.84	531,743.98	32° 5' 10.551 N	104° 13' 51.008 W
9,769.0	89.70	180.40	7,465.4	-2,497.9	-303.8	395,025.87	531,742.98	32° 5' 9.602 N	104° 13' 51.021 W
9,864.0	88.30	180.80	7,467.1	-2,592.9	-304.8	394,930.89	531,741.98	32° 5' 8.662 N	104° 13' 51.033 W
9,959.0	89.70	180.40	7,468.8	-2,687.9	-305.8	394,835.91	531,740.99	32° 5' 7.722 N	104° 13' 51.046 W
10,053.0	87.60	180.40	7,471.0	-2,781.9	-306.5	394,741.94	531,740.33	32° 5' 6.792 N	104° 13' 51.055 W
10,149.0	88.90	180.10	7,473.9	-2,877.8	-306.9	394,645.99	531,739.81	32° 5' 5.842 N	104° 13' 51.061 W
10,244.0	90.10	179.40	7,474.7	-2,972.8	-306.5	394,551.00	531,740.33	32° 5' 4.902 N	104° 13' 51.057 W
10,340.0	89.70	180.80	7,474.9	-3,068.8	-306.8	394,455.00	531,740.18	32° 5' 3.952 N	104° 13' 51.060 W
10,435.0	91.00	181.10	7,474.3	-3,163.8	-308.2	394,360.02	531,738.59	32° 5' 3.012 N	104° 13' 51.079 W
10,530.0	88.50	180.80	7,474.7	-3,258.8	-309.8	394,265.04	531,737.01	32° 5' 2.072 N	104° 13' 51.099 W
10,625.0	88.20	182.20	7,477.5	-3,353.7	-312.3	394,170.11	531,734.53	32° 5' 1.133 N	104° 13' 51.129 W
10,720.0	89.40	181.80	7,479.5	-3,448.6	-315.6	394,075.19	531,731.21	32° 5' 0.193 N	104° 13' 51.168 W
10,815.0	90.60	181.50	7,479.5	-3,543.6	-318.3	393,980.24	531,728.48	32° 4' 59.254 N	104° 13' 51.201 W
10,910.0	89.70	181.80	7,479.2	-3,638.5	-321.1	393,885.28	531,725.74	32° 4' 58.314 N	104° 13' 51.234 W
11,005.0	87.30	182.50	7,481.7	-3,733.4	-324.6	393,790.38	531,722.18	32° 4' 57.375 N	104° 13' 51.276 W
11,101.0	88.00	181.80	7,485.6	-3,829.3	-328.2	393,694.53	531,718.58	32° 4' 56.426 N	104° 13' 51.319 W
11,195.0	88.30	180.80	7,488.7	-3,923.2	-330.4	393,600.61	531,716.45	32° 4' 55.467 N	104° 13' 51.345 W
11,290.0	90.10	180.80	7,490.0	-4,018.2	-331.7	393,505.63	531,715.12	32° 4' 54.557 N	104° 13' 51.361 W
11,385.0	89.60	181.10	7,490.2	-4,113.2	-333.3	393,410.64	531,713.55	32° 4' 53.617 N	104° 13' 51.381 W



Wellplanning Survey Report - Geographic

Company:	COG Operating LLC	Local Co-ordinate Reference:	Well #3H
Project:	Eddy County, NM	TVD Reference:	WELL @ 3284.3usft (Original Well Elev)
Site:	Jack Federal	MD Reference:	WELL @ 3284.3usft (Original Well Elev)
Well:	#3H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.1 Single User Db

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
11,480.0	91.00	181.10	7,489.8	-4,208.1	-335.1	393,315.67	531,711.72	32° 4' 52.677 N	104° 13' 51.403 W
11,575.0	90.10	182.20	7,488.8	-4,303.1	-337.8	393,220.71	531,708.99	32° 4' 51.737 N	104° 13' 51.438 W
11,671.0	88.70	182.90	7,489.8	-4,399.0	-342.1	393,124.81	531,704.72	32° 4' 50.789 N	104° 13' 51.487 W
11,768.0	89.90	182.90	7,491.0	-4,493.9	-346.9	393,029.95	531,699.91	32° 4' 49.849 N	104° 13' 51.543 W
11,861.0	91.10	182.90	7,490.2	-4,588.7	-351.7	392,935.07	531,695.11	32° 4' 48.910 N	104° 13' 51.600 W
12,027.0	91.10	182.90	7,487.0	-4,754.5	-380.1	392,769.32	531,686.71	32° 4' 47.270 N	104° 13' 51.700 W
PBHL(JF#3H)									

Checked By:	Approved By:	Date:
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