

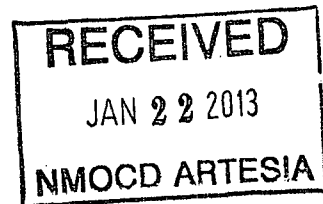


A GYRO TECHNOLOGIES INC. COMPANY

PO Box 261021
Corpus Christi, Texas 78426
(361) 767-0602 • (800) 606-GYRO • Fax (361) 767-0612

October 10, 2012

COG Operating LLC (Concho)
One Concho Center
600 W. Illinois Avenue
Midland, TX 79701



Attn: Kanicia Castillo

15- 40634

Re: **Dodd Federal Unit No. 916H**

Please find enclosed a copy of the survey from 0' to 4,225' ran on the above referenced well.

If I can be of any further service, please do not hesitate to call me at 800-606-4976.

Sincerely,

Keith Havelka
Operations

Company: COG Operating LLC, (Concho)

Lease/Well: Dodd Federal Unit/No. 916H



Rig Name: JW 2

State/County: New Mexico /Eddy

Latitude: 32.84, Longitude: -104.05

GRID North is 0.15 Degrees East of True North

VS-Azi: 0.00 Degrees



Depth Reference : RKB=18.5'

DRILLOG HA GYRO SURVEY CALCULATIONS

Filename: dodd federal unit # 916 h_ed.ut

Minimum Curvature Method

Report Date/Time: 10/10/2012 / 13:44

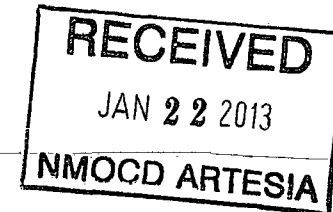
Vaughn Energy Services

Fort Worth, Texas

817-741-3610

Surveyor: Tim Kaczor

Dodd Federal Unit No. 916H / API 30-015-40634



Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W 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	****
100.00	0.16	15.50	100.00	0.13	0.04	0.14	15.50	0.16
200.00	0.20	318.72	200.00	0.40	-0.04	0.40	354.20	0.18
300.00	0.35	350.43	300.00	0.83	-0.21	0.86	346.04	0.21
400.00	0.50	332.77	400.00	1.52	-0.46	1.59	343.23	0.20
500.00	0.47	16.63	499.99	2.31	-0.54	2.37	346.78	0.37
600.00	0.57	32.44	599.99	3.12	-0.16	3.12	357.08	0.17
700.00	0.96	62.05	699.98	3.93	0.84	4.02	12.14	0.54
800.00	0.90	57.49	799.97	4.74	2.25	5.25	25.36	0.09
900.00	0.89	55.24	899.95	5.61	3.55	6.64	32.35	0.04
1000.00	0.91	59.33	999.94	6.46	4.88	8.10	37.06	0.07
1100.00	0.71	52.87	1099.93	7.24	6.06	9.44	39.92	0.22
1200.00	0.70	48.90	1199.92	8.02	7.01	10.65	41.18	0.05
1300.00	0.70	48.29	1299.92	8.83	7.93	11.87	41.94	0.01
1400.00	0.62	46.76	1399.91	9.61	8.78	13.02	42.44	0.09
1500.00	0.43	37.01	1499.91	10.27	9.40	13.93	42.46	0.20
1600.00	0.36	39.38	1599.90	10.82	9.83	14.62	42.25	0.07
1700.00	0.31	55.09	1699.90	11.22	10.26	15.20	42.42	0.11
1800.00	0.23	60.03	1799.90	11.48	10.65	15.66	42.86	0.09

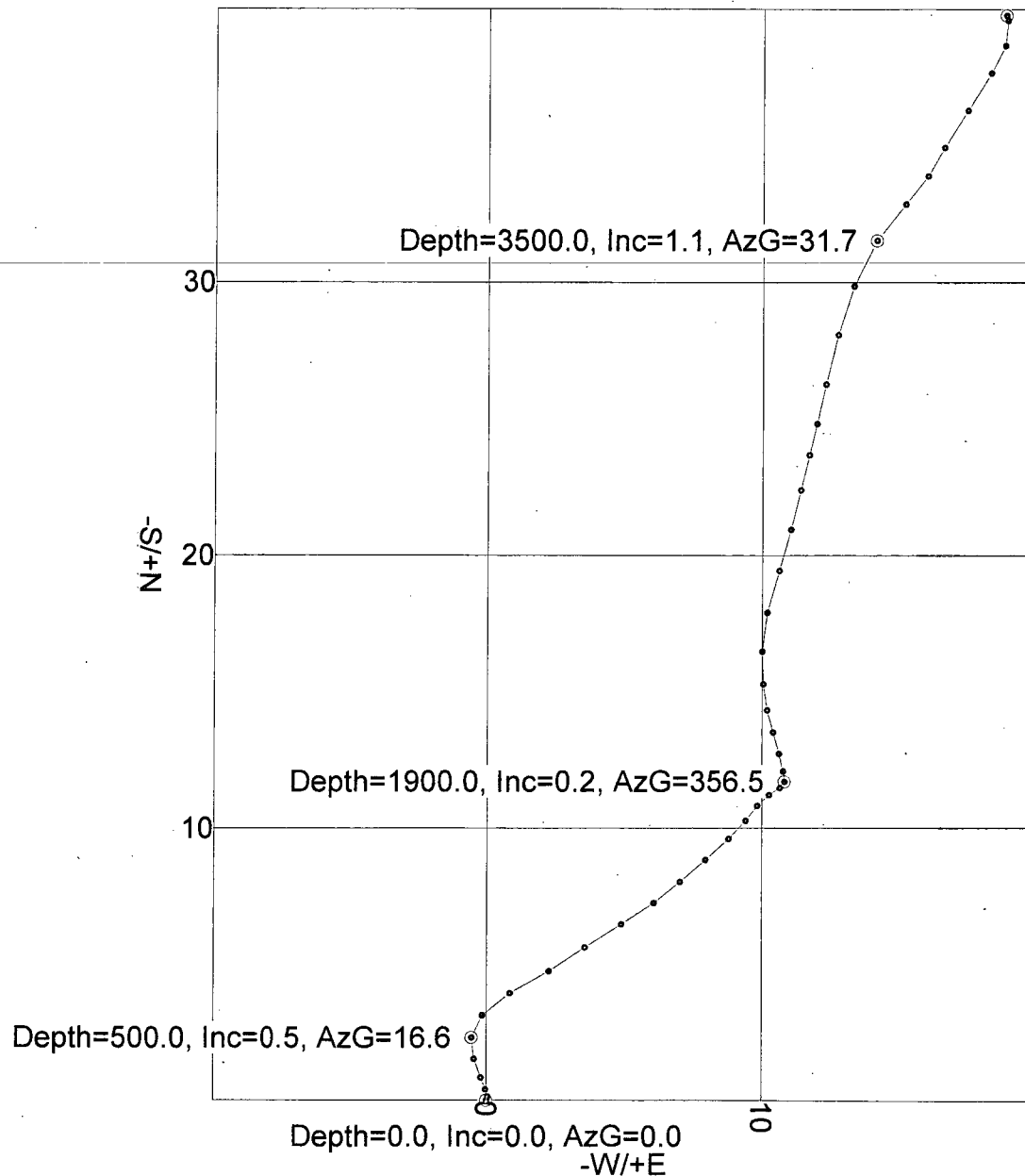
Measured Depth FT	Incl Angle Deg	Drift Direction Deg	TVD FT	+N/-S FT	+E/-W FT	Closure Distance FT	Closure Direction Deg	Dogleg Severity Deg/100'
1900.00	0.15	356.48	1899.90	11.71	10.81	15.94	42.73	0.21
2000.00	0.30	350.32	1999.90	12.09	10.76	16.19	41.67	0.15
2100.00	0.46	345.03	2099.90	12.74	10.62	16.58	39.81	0.17
2200.00	0.48	344.35	2199.89	13.53	10.40	17.06	37.55	0.02
2300.00	0.49	344.68	2299.89	14.34	10.17	17.58	35.36	0.01
2400.00	0.63	357.28	2399.89	15.30	10.04	18.29	33.27	0.19
2500.00	0.75	358.42	2499.88	16.50	9.99	19.29	31.20	0.12
2600.00	0.90	15.04	2599.87	17.91	10.18	20.60	29.61	0.29
2700.00	0.92	16.45	2699.86	19.44	10.61	22.15	28.62	0.03
2800.00	0.87	14.40	2799.84	20.95	11.03	23.67	27.76	0.06
2900.00	0.83	13.68	2899.83	22.39	11.39	25.12	26.96	0.04
3000.00	0.69	12.64	2999.82	23.68	11.69	26.41	26.28	0.14
3100.00	0.65	12.96	3099.82	24.82	11.95	27.54	25.71	0.04
3200.00	1.06	12.37	3199.80	26.27	12.27	28.99	25.04	0.41
3300.00	1.07	15.23	3299.79	28.07	12.72	30.82	24.37	0.06
3400.00	1.07	20.65	3399.77	29.86	13.29	32.68	24.00	0.10
3500.00	1.08	31.65	3499.75	31.53	14.12	34.55	24.12	0.21
3600.00	0.86	46.54	3599.74	32.85	15.16	36.18	24.77	0.33
3700.00	0.65	28.15	3699.73	33.87	15.98	37.45	25.25	0.32
3800.00	0.72	30.90	3799.72	34.92	16.57	38.65	25.39	0.08
3900.00	1.12	32.60	3899.71	36.28	17.42	40.24	25.65	0.39
4000.00	0.72	30.24	3999.70	37.64	18.26	41.84	25.88	0.40
4100.00	0.58	23.52	4099.69	38.65	18.78	42.97	25.91	0.16
4200.00	0.55	345.91	4199.69	39.58	18.86	43.84	25.48	0.36
4225.00	0.35	342.65	4224.68	39.77	18.81	43.99	25.32	0.80



Vaughn Energy Services
Fort Worth, Texas
817-741-3610
Surveyor: Tim Kaczor
Dodd Federal Unit No. 916H / API 30-015-40634



Depth=4225.0, Inc=0.3, AzG=342.6



VES Survey Date: 10/9/2012



Company: COG Operating, LLC

Well: Dodd Federal Unit 916H

Location: Eddy County, New Mexico

Rig: JW #2

Job Date: 10/09/2012 - 10/17/2012

Job Number: 03926-433-22

Mag Decl.: 7.54

Dir Driller: Cody Styles

MWD Eng: Raul Lopez/Justin Warnack

Calculation Method

Minimum Curvature

Proposed Azimuth

88.7

Depth Reference

KBG

Tie Into: Previous MWD Survey

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
Tie In	4225.00	0.35	342.65	0	4224.7	19.7	39.80 N	18.81 E					
1	4280	0.7	65.0	55	4279.70	19.98	40.10 N	19.06 E	44.40	25.43	1.35	0.64	-504.82
2	4311	2.4	82.1	31	4310.69	20.79	40.27 N	19.88 E	44.91	26.27	5.62	5.48	55.16
3	4342	4.4	87.3	31	4341.63	22.63	40.42 N	21.71 E	45.88	28.24	6.52	6.45	16.77
4	4374	6.5	92.4	32	4373.48	25.66	40.40 N	24.75 E	47.38	31.49	6.73	6.56	15.94
5	4405	9.1	90.9	31	4404.19	29.86	40.29 N	28.95 E	49.61	35.70	8.41	8.39	-4.84
6	4436	11.3	92.4	31	4434.70	35.35	40.12 N	34.44 E	52.87	40.64	7.15	7.10	4.84
7	4467	14.2	93.0	31	4464.93	42.17	39.79 N	41.27 E	57.33	46.04	9.36	9.35	1.94
8	4499	17.6	93.0	32	4495.71	50.91	39.34 N	50.02 E	63.64	51.82	10.62	10.63	0.00
9	4530	21.0	93.7	31	4524.96	61.12	38.73 N	60.25 E	71.63	57.26	10.99	10.97	2.26
10	4561	24.5	93.7	31	4553.54	73.06	37.96 N	72.21 E	81.58	62.27	11.29	11.29	0.00
11	4592	27.9	92.2	31	4581.35	86.71	37.27 N	85.88 E	93.61	66.54	11.17	10.97	-4.84
12	4623	31.9	91.2	31	4608.22	102.14	36.82 N	101.32 E	107.80	70.03	13.00	12.90	-3.23
13	4654	35.6	91.2	31	4633.99	119.34	36.45 N	118.54 E	124.02	72.91	11.94	11.94	0.00
14	4686	39.3	91.5	32	4659.39	138.77	35.99 N	137.99 E	142.60	75.38	11.58	11.56	0.94
15	4717	43.1	91.5	31	4682.71	159.16	35.46 N	158.39 E	162.31	77.38	12.26	12.26	0.00
16	4748	46.8	91.7	31	4704.65	181.03	34.85 N	180.28 E	183.62	79.06	11.94	11.94	0.65
17	4779	50.6	91.8	31	4725.11	204.28	34.14 N	203.56 E	206.40	80.48	12.26	12.26	0.32
18	4811	54.1	92.2	32	4744.65	229.57	33.25 N	228.87 E	231.28	81.73	10.98	10.94	1.25
19	4842	57.5	92.1	31	4762.07	255.16	32.29 N	254.49 E	256.53	82.77	10.97	10.97	-0.32
20	4873	60.6	92.2	31	4778.01	281.70	31.29 N	281.06 E	282.79	83.65	10.00	10.00	0.32
21	4904	64.3	91.9	31	4792.35	309.13	30.31 N	308.52 E	310.00	84.39	11.97	11.94	-0.97
22	4935	67.8	91.7	31	4804.93	337.42	29.42 N	336.83 E	338.11	85.01	11.31	11.29	-0.65
23	4966	71.6	91.7	31	4815.68	366.44	28.56 N	365.89 E	367.00	85.54	12.26	12.26	0.00
24	4997	74.5	91.8	31	4824.72	396.05	27.65 N	395.52 E	396.49	86.00	9.36	9.35	0.32
25	5028	77.3	92.2	31	4832.27	426.06	26.60 N	425.57 E	426.40	86.42	9.12	9.03	1.29
26	5059	79.6	92.4	31	4838.48	456.37	25.38 N	455.91 E	456.62	86.81	7.45	7.42	0.65
27	5091	81.9	93.0	32	4843.62	487.88	23.89 N	487.46 E	488.05	87.19	7.42	7.19	1.87
28	5122	85.4	93.7	31	4847.05	518.58	22.09 N	518.21 E	518.68	87.56	11.51	11.29	2.26
29	5153	88.1	94.0	31	4848.81	549.40	20.02 N	549.09 E	549.45	87.91	8.76	8.71	0.97
30	5184	88.6	94.1	31	4849.70	580.26	17.83 N	580.00 E	580.27	88.24	1.64	1.61	0.32
31	5201	88.6	94.0	17	4850.12	597.18	16.63 N	596.95 E	597.18	88.40	0.59	0.00	-0.59
32	5296	88.8	91.7	95	4852.27	691.90	11.90 N	691.80 E	691.91	89.01	2.43	0.21	-2.42
33	5391	91.2	91.7	95	4852.27	786.76	9.09 N	786.75 E	786.81	89.34	2.53	2.53	0.00
34	5485	91.3	91.4	94	4850.22	880.62	6.54 N	880.70 E	880.72	89.57	0.34	0.11	-0.32
35	5578	91.7	91.1	93	4847.79	973.49	4.52 N	973.64 E	973.65	89.73	0.54	0.43	-0.32
36	5672	91.4	91.0	94	4845.24	1067.38	2.79 N	1067.59 E	1067.60	89.85	0.34	-0.32	-0.11



Company: COG Operating, LLC
 Well: Dodd Federal Unit 916H
 Location: Eddy County, New Mexico
 Rig: JW #2
 Job Date: 10/09/2012 - 10/17/2012

Job Number: 03926-433-22
 Mag Decl.: 7.54
 Dir Driller: Cody Styles
 MWD Eng: Raul Lopez/Justin Warnack

Calculation Method: Minimum Curvature
 Proposed Azimuth: 88.7
 Depth Reference: KBG
 Tie Into: Previous MWD Survey

Survey Number	Survey Depth (ft)	Inclination (deg)	Azimuth (deg)	Course Length (ft)	True Vertical Depth (ft)	Vertical Section (ft)	Coordinates		Closure		Dogleg Severity (d/100')	Build Rate (d/100')	Walk Rate (d/100')
							N/S (ft)	E/W (ft)	Distance (ft)	Direction Azimuth			
37	5766	91.3	91.2	94	4843.03	1161.27	0.99 N	1161.55 E	1161.55	89.95	0.24	-0.11	0.21
38	5860	91.3	91.1	94	4840.90	1255.16	0.90 S	1255.51 E	1255.51	90.04	0.11	0.00	-0.11
39	5953	91.2	91.0	93	4838.87	1348.06	2.60 S	1348.47 E	1348.47	90.11	0.15	-0.11	-0.11
40	6047	91.7	91.1	94	4836.49	1441.95	4.32 S	1442.42 E	1442.43	90.17	0.54	0.53	0.11
41	6140	91.6	90.9	93	4833.81	1534.83	5.94 S	1535.37 E	1535.38	90.22	0.24	-0.11	-0.22
42	6234	91.9	90.6	94	4830.94	1628.73	7.17 S	1629.32 E	1629.33	90.25	0.45	0.32	-0.32
43	6327	92.0	90.4	93	4827.78	1721.63	7.98 S	1722.26 E	1722.28	90.27	0.24	0.11	-0.22
44	6420	90.8	91.2	93	4825.50	1814.53	9.28 S	1815.22 E	1815.24	90.29	1.55	-1.29	0.86
45	6513	91.1	91.5	93	4823.96	1907.42	11.47 S	1908.18 E	1908.22	90.34	0.46	0.32	0.32
46	6607	91.4	91.7	94	4821.91	2001.28	14.10 S	2002.12 E	2002.17	90.40	0.38	0.32	0.21
47	6701	91.4	91.7	94	4819.61	2095.12	16.89 S	2096.05 E	2096.12	90.46	0.00	0.00	0.00
48	6794	89.6	92.0	93	4818.80	2187.97	19.89 S	2189.00 E	2189.09	90.52	1.96	-1.94	0.32
49	6888	90.6	88.4	94	4818.64	2281.92	20.22 S	2282.98 E	2283.07	90.51	3.97	1.06	-3.83
50	6981	91.0	87.8	93	4817.34	2374.91	17.13 S	2375.92 E	2375.98	90.41	0.78	0.43	-0.65
51	7075	91.0	87.5	94	4815.70	2468.88	13.28 S	2469.83 E	2469.86	90.31	0.32	0.00	-0.32
52	7169	91.0	87.6	94	4814.06	2562.84	9.26 S	2563.73 E	2563.74	90.21	0.11	0.00	0.11
53	7263	90.8	87.6	94	4812.58	2656.82	5.33 S	2657.63 E	2657.64	90.11	0.21	-0.21	0.00
54	7357	90.5	87.5	94	4811.52	2750.79	1.31 S	2751.54 E	2751.54	90.03	0.34	-0.32	-0.11
55	7450	90.1	87.7	93	4811.03	2843.77	2.59 N	2844.46 E	2844.46	89.95	0.48	-0.43	0.22
56	7543	90.3	86.3	93	4810.71	2936.73	7.45 N	2937.33 E	2937.34	89.85	1.52	0.22	-1.51
57	7636	90.3	85.9	93	4810.22	3029.63	13.78 N	3030.11 E	3030.14	89.74	0.43	0.00	-0.43
58	7729	90.4	85.9	93	4809.65	3122.52	20.43 N	3122.87 E	3122.94	89.63	0.11	0.11	0.00
59	7823	91.4	86.3	94	4808.17	3216.41	26.82 N	3216.64 E	3216.75	89.52	1.15	1.06	0.43
60	7917	90.7	85.2	94	4806.45	3310.27	33.79 N	3310.36 E	3310.53	89.42	1.39	-0.74	-1.17
61	8011	91.0	86.7	94	4805.06	3404.15	40.42 N	3404.11 E	3404.35	89.32	1.63	0.32	1.60
62	8105	91.4	87.0	94	4803.09	3498.08	45.59 N	3497.95 E	3498.25	89.25	0.53	0.43	0.32
63	8198	91.4	86.8	93	4800.82	3591.01	50.62 N	3590.79 E	3591.14	89.19	0.21	0.00	-0.22
64	8292	91.6	86.4	94	4798.35	3684.91	56.19 N	3684.59 E	3685.02	89.13	0.48	0.21	-0.43
65	8386	91.6	86.3	94	4795.73	3778.80	62.17 N	3778.36 E	3778.87	89.06	0.11	0.00	-0.11
66	8480	91.3	85.9	94	4793.35	3872.67	68.56 N	3872.11 E	3872.72	88.99	0.53	-0.32	-0.43
67	8573	91.2	85.9	93	4791.32	3965.54	75.21 N	3964.85 E	3965.57	88.91	0.11	-0.11	0.00
68	8666	91.1	85.5	93	4789.46	4058.39	82.18 N	4057.57 E	4058.41	88.84	0.44	-0.11	-0.43
69	8759	91.3	87.3	93	4787.51	4151.29	88.02 N	4150.37 E	4151.30	88.79	1.95	0.22	1.94
70	8854	91.5	87.3	95	4785.19	4246.24	92.49 N	4245.23 E	4246.24	88.75	0.21	0.21	0.00
71	8948	92.0	87.8	94	4782.32	4340.17	96.51 N	4339.10 E	4340.17	88.73	0.75	0.53	0.53
72	9042	92.4	88.0	94	4778.71	4434.10	99.95 N	4432.97 E	4434.10	88.71	0.48	0.43	0.21
73	9161	92.6	88.0	119	4773.52	4552.97	104.10 N	4551.78 E	4552.97	88.69	0.17	0.17	0.00
Proj.	9221	92.6	88.0	60	4770.80	4612.91	106.19 N	4611.69 E	4612.91	88.68	0.00	0.00	0.00