

30-015-38448

CAVALOZ DRILLING

P O BOX 1500 (575) 3910699 FAX (575) 391- 3824 HOBBS, NEW MEXICO 88241

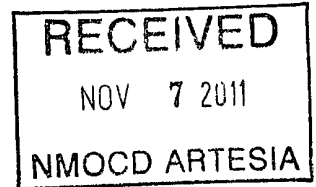
INCLINATION REPORT

DATE: 8/15/11

WELL NAME AND NUMBER SKELLY UNIT # 833
 LOCATION EDDY COUNTY
 OPERATOR: COG LLC
 DRILLING CONTRACTOR: CAVALOZ DRILLING RIG #1

THE UNDERSIGNED HEREBY CERTIFIES THAT HE IS AN AUTHORIZED REPRESENTATIVE OF THE DRILLING CONTRACTOR WHO DRILLED THE ABOVE DESCRIBED WELL AND THAT HE HAS CONDUCTED DEVIATION TEST AND OBTAINED THE FOLLOWING RESULTS:

DEGREE	DEPTH	DEGREE	DEPTH	DEGREE	DEPTH
<u>0 98</u>	<u>264</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0 64</u>	<u>598</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>0 84</u>	<u>1031</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u>1 54</u>	<u>1498</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
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DRILLING CONTRACTOR:
CAVALOZ DRILLING

BY: Bob Wegner
BOB WEGNER
DRILLING SUPERINTENDENT

SUBSCRIBED AND SWORN TO BEFORE ME ON THE 15th DAY OF August, 2011

MY COMMISSION EXPIRES: 03/01/15 Jessica Bueno



OFFICIAL SEAL
JESSICA BUENO
NOTARY PUBLIC - STATE OF NEW MEXICO
My commission expires: 03/01/15

Skelly Unit #833 - Final Survey Report.txt

COG Operating LLC

Skelly Unit #833 - Actual
Eddy County, NM (NAN27 NME)
Ground Elevation: 3897.0'
KB Datum Elevation: 3910.0'

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.
Vertical depths are relative to KB Elev (13'). Northings and Eastings are relative to Site.

The Dogleg Severity is in Degrees per 100 feet.
Vertical Section is from Slot and calculated along an Azimuth of 112.290° (Grid).

Coordinate System is NAD 1927 (NADCON CONUS) US State Plane 1927 (Exact solution), New Mexico East 3001.
Grid Convergence at Surface is 0.260°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 6743.00ft.,
the Bottom Hole Displacement is 164.73ft., in the Direction of 112.290° (Grid).

Survey Tools:

H 100.00 - 1670.00 GYRO SURVEY : KEEPER
H 1950.00 - 4300.00 MWD SURVEY : KEEPER
H 4300.00 - 6743.00 ST MWD SURVEY : MWD

Survey Report:

Measured Depth ft	Incl.	Azim.	Sub-Sea Depth ft	Vertical Depth ft	Local Coordinates Northings ft	Eastings ft	UTM Coordinates Northings (ft)	Eastings (ft)	Vertical Section ft	Dogleg Rate 100 feet
0.00	0.00	0.00	-3910.00	0.00	0.00 N	0.00 E	669372.80 N	647096.70 E	0.00	0.00
100.00	0.49	35.75	-3810.00	100.00	0.35 N	0.25 E	669373.15 N	647096.95 E	0.10	0.49
200.00	0.39	42.36	-3710.00	200.00	0.95 N	0.73 E	669373.75 N	647097.43 E	0.32	0.11
300.00	0.24	41.35	-3610.01	299.99	1.35 N	1.10 E	669374.15 N	647097.80 E	0.50	0.15
400.00	0.17	183.09	-3510.01	399.99	1.36 N	1.23 E	669374.16 N	647097.93 E	0.62	0.39
500.00	0.16	162.58	-3410.01	499.99	1.08 N	1.26 E	669373.88 N	647097.96 E	0.76	0.06
600.00	0.19	190.20	-3310.01	599.99	0.79 N	1.27 E	669373.59 N	647097.97 E	0.88	0.09
700.00	0.42	250.25	-3210.01	699.99	0.50 N	0.90 E	669373.30 N	647097.60 E	0.64	0.36
800.00	0.43	247.35	-3110.01	799.99	0.23 N	0.21 E	669373.03 N	647096.91 E	0.10	0.02
900.00	0.40	236.83	-3010.01	899.99	0.11 S	0.43 W	669372.69 N	647096.27 E	-0.36	0.08
1000.00	0.20	191.19	-2910.01	999.99	0.47 S	0.76 W	669372.33 N	647095.94 E	-0.52	0.30
1100.00	0.12	137.73	-2810.02	1099.98	0.72 S	0.72 W	669372.08 N	647095.98 E	-0.39	0.16
1200.00	0.28	80.39	-2710.02	1199.98	0.75 S	0.41 W	669372.05 N	647096.29 E	-0.09	0.24
1300.00	0.56	57.60	-2610.02	1299.98	0.45 S	0.24 E	669372.35 N	647096.94 E	0.40	0.32
1400.00	0.99	80.75	-2510.03	1399.97	0.05 S	1.51 E	669372.75 N	647098.21 E	1.42	0.52
1500.00	1.37	79.96	-2410.05	1499.95	0.30 N	3.54 E	669373.10 N	647100.24 E	3.16	0.38
1600.00	1.73	81.28	-2310.09	1599.91	0.73 N	6.21 E	669373.53 N	647102.91 E	5.47	0.36

keeper (1)

skelly Unit #833 - Final Survey Report.txt											
1670.00	1.95	82.26	-2240.12	1669.88	1.06 N	8.43 E	669373.86 N	647105.13 E	7.40	0.32	Gyro Tie-in Keeper (2)
1950.00	1.93	77.44	-1960.28	1949.72	2.72 N	17.76 E	669375.52 N	647114.46 E	15.40	0.06	
2023.00	2.49	79.26	-1887.34	2022.66	3.29 N	20.51 E	669376.09 N	647117.21 E	17.73	0.77	
2086.00	2.96	91.17	-1824.41	2085.59	3.51 N	23.48 E	669376.31 N	647120.18 E	20.40	1.16	
2148.00	3.63	94.82	-1762.51	2147.49	3.31 N	27.04 E	669376.11 N	647123.74 E	23.77	1.13	
2210.00	2.99	112.11	-1700.61	2209.39	2.54 N	30.49 E	669375.34 N	647127.19 E	27.25	1.90	
2304.00	3.47	112.64	-1606.76	2303.24	0.52 N	35.39 E	669373.32 N	647132.09 E	32.55	0.51	
2398.00	4.32	115.00	-1512.98	2397.02	2.07 S	41.23 E	669370.73 N	647137.93 E	38.93	0.92	
2491.00	4.44	123.04	-1420.25	2489.75	5.52 S	47.42 E	669367.28 N	647144.12 E	45.97	0.67	
2585.00	3.86	126.68	-1326.50	2583.50	9.39 S	53.01 E	669363.41 N	647149.71 E	52.61	0.68	
2680.00	3.24	129.69	-1231.68	2678.32	13.01 S	57.64 E	669359.79 N	647154.34 E	58.27	0.68	
2773.00	3.20	117.02	-1138.83	2771.17	15.87 S	61.97 E	669356.93 N	647158.67 E	63.36	0.76	
2867.00	3.52	115.84	-1044.99	2865.01	18.32 S	66.91 E	669354.48 N	647163.61 E	68.86	0.35	
2960.00	4.47	116.29	-952.21	2957.79	21.17 S	72.72 E	669351.63 N	647169.42 E	75.32	1.02	
3052.00	3.70	117.96	-860.45	3049.55	24.15 S	78.56 E	669348.65 N	647175.26 E	81.85	0.85	
3147.00	4.06	112.69	-765.67	3144.33	26.89 S	84.37 E	669345.91 N	647181.07 E	88.26	0.53	
3241.00	4.01	108.69	-671.90	3238.10	29.22 S	90.55 E	669343.58 N	647187.25 E	94.87	0.30	
3334.00	3.74	114.61	-579.11	3330.89	31.53 S	96.39 E	669341.27 N	647193.09 E	101.15	0.52	
3428.00	3.46	108.47	-485.30	3424.70	33.70 S	101.87 E	669339.10 N	647198.57 E	107.04	0.51	
3523.00	3.83	115.22	-390.49	3519.51	35.96 S	107.46 E	669336.84 N	647204.16 E	113.07	0.60	
3617.00	4.00	115.70	-296.71	3613.29	38.72 S	113.25 E	669334.08 N	647209.95 E	119.48	0.18	
3711.00	3.60	113.49	-202.92	3707.08	41.32 S	118.91 E	669331.48 N	647215.61 E	125.70	0.45	
3804.00	4.37	117.81	-110.14	3799.86	44.14 S	124.73 E	669328.66 N	647221.43 E	132.15	0.89	
3898.00	4.36	121.77	-16.41	3893.59	47.69 S	130.93 E	669325.11 N	647227.63 E	139.24	0.32	
3991.00	4.54	124.35	76.31	3986.31	51.63 S	136.98 E	669321.17 N	647233.68 E	146.32	0.29	
4086.00	4.60	120.66	171.01	4081.01	55.69 S	143.36 E	669317.11 N	647240.06 E	153.77	0.32	
4179.00	4.48	120.88	263.71	4173.71	59.46 S	149.68 E	669313.34 N	647246.38 E	161.05	0.13	
4274.00	4.46	121.79	358.42	4268.42	63.31 S	156.01 E	669309.49 N	647252.71 E	168.36	0.08	
4300.00	4.47	122.32	384.35	4294.35	64.38 S	157.72 E	669308.42 N	647254.42 E	170.36	0.17	Tie-in MWD (3)
4363.00	5.28	122.40	447.12	4357.12	67.25 S	162.25 E	669305.55 N	647258.95 E	175.63	1.28	
4395.00	5.56	121.57	478.97	4388.97	68.85 S	164.81 E	669303.95 N	647261.51 E	178.61	0.91	
4496.00	6.95	111.11	579.37	4489.37	73.61 S	174.68 E	669299.19 N	647271.38 E	189.55	1.77	
4589.00	7.03	104.60	671.68	4581.68	77.07 S	185.44 E	669295.73 N	647282.14 E	200.82	0.86	
4652.00	6.51	99.78	734.24	4644.24	78.65 S	192.69 E	669294.15 N	647289.39 E	208.12	1.22	
4745.00	5.82	91.49	826.71	4736.71	79.67 S	202.60 E	669293.13 N	647299.30 E	217.68	1.21	
4811.00	5.19	89.76	892.40	4802.40	79.75 S	208.93 E	669293.05 N	647305.63 E	223.56	0.99	
4872.00	4.75	89.49	953.17	4863.17	79.71 S	214.21 E	669293.09 N	647310.91 E	228.44	0.72	
4935.00	4.04	80.97	1015.99	4925.99	79.34 S	219.01 E	669293.46 N	647315.71 E	232.74	1.53	
4998.00	3.52	77.10	1078.85	4988.85	78.56 S	223.09 E	669294.24 N	647319.79 E	236.22	0.92	
5062.00	2.73	73.58	1142.76	5052.76	77.69 S	226.47 E	669295.11 N	647323.17 E	239.01	1.27	
5125.00	2.11	63.48	1205.70	5115.70	76.75 S	228.94 E	669296.05 N	647325.64 E	240.95	1.19	
5218.00	2.54	4.30	1298.64	5208.64	73.93 S	230.63 E	669298.87 N	647327.33 E	241.44	2.50	
5312.00	2.73	346.84	1392.54	5302.54	69.67 S	230.28 E	669303.13 N	647326.98 E	239.50	0.87	
5406.00	3.08	334.44	1486.42	5396.42	65.21 S	228.68 E	669307.59 N	647325.38 E	236.33	0.76	
5502.00	3.69	315.55	1582.25	5492.25	60.68 S	225.40 E	669312.12 N	647322.10 E	231.57	1.32	
5597.00	4.14	320.03	1677.03	5587.03	55.87 S	221.06 E	669316.93 N	647317.76 E	225.73	0.57	
5691.00	3.78	304.56	1770.81	5680.81	51.51 S	216.33 E	669321.29 N	647313.03 E	219.70	1.19	
5786.00	3.78	305.35	1865.60	5775.60	47.93 S	211.19 E	669324.87 N	647307.89 E	213.59	0.05	

North East

5880.00	3.61	305.53	1959.41	5869.41
5975.00	3.69	309.39	2054.21	5964.21
6069.00	3.52	306.14	2148.03	6058.03
6162.00	3.87	309.39	2240.83	6150.83
6256.00	3.52	308.52	2334.64	6244.64
6351.00	3.61	313.53	2429.46	6339.46
6444.00	3.78	311.86	2522.26	6432.26
6538.00	3.87	313.61	2616.05	6526.05
6631.00	3.52	312.65	2708.86	6618.86
6692.00	3.46	312.23	2769.75	6679.75
6743.00	3.46	312.23	2820.65	6730.65

Skelly Unit #833 - Final Survey Report.txt

44.41 S	206.26 E	669328.39 N	647302.96 E	207.69	0.18
40.73 S	201.46 E	669332.07 N	647298.16 E	201.86	0.27
37.11 S	196.79 E	669335.69 N	647293.49 E	196.16	0.28
33.44 S	192.06 E	669339.36 N	647288.76 E	190.39	0.44
29.63 S	187.35 E	669343.17 N	647284.05 E	184.59	0.38
25.75 S	182.90 E	669347.05 N	647279.60 E	179.00	0.34
21.69 S	178.50 E	669351.11 N	647275.20 E	173.38	0.22
17.43 S	173.89 E	669355.37 N	647270.59 E	167.51	0.16
13.33 S	169.52 E	669359.47 N	647266.22 E	161.91	0.38
10.83 S	166.78 E	669361.97 N	647263.48 E	158.42	0.11
8.76 S	164.50 E	669364.04 N	647261.20 E	155.53	0.00

Last ST MWD Survey
Projection to Bit