

30-015-26754 RM



SEP 15 2009

Scientific Drilling

Gyroscopic Survey Report
for
C.O.G.

Well Location	EDDY COUNTY, NEW MEXICO
Well Name	G J WEST COOP UNIT #97
Rig Name	ARIES P/U
Survey Date	7/29/2009
Latitude	32.82 deg
North Reference	True North
Grid Correction	0.00 deg
Depth Reference	RKB
Calculation Method	Minimum Curvature
Section (VS) Ref	0.00N (ft), 0.00E (ft), 254.49Azim (deg)
Definitive Survey	FINAL SURVEY
Operator	LEO GARZA

Comments

ZERO REFERENCE IS AT SENSOR K.B. OF 11 FOOT



Survey Report

SEP 15 2009

Well Name: G J WEST COOP UNIT #97
 Survey: FINAL SURVEY
 Survey Date: 7/29/2009

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
0.00	0 00	0 00	0.00	0.00	0 00	0 00	Invalid	0.00	0 00
100.00	0 70	285 77	100.00	0 52	0 17	-0 59	0.70	0 61	285 77
200.00	1.42	250.73	199.98	2 28	-0 08	-2 34	0.94	2.34	268.10
300.00	1 46	254.12	299.95	4.78	-0 83	-4 73	0.09	4.81	260.00
400.00	1 30	256.23	399.92	7.19	-1.45	-7.06	0.17	7 21	258 37
500.00	0.66	255 16	499.90	8 91	-1.87	-8 72	0.64	8.92	257.89
600.00	0 35	216 27	599.90	9.73	-2.27	-9.47	0.45	9.74	256 52
700.00	0 36	177.66	699.90	10.04	-2 83	-9.64	0.24	10.04	253 62
800.00	0.31	182.62	799.90	10.20	-3.42	-9.64	0.06	10 23	250 45
900.00	0.41	197 67	899.90	10.48	-4 03	-9.76	0.13	10 56	247 54
1000.00	0.42	208 52	999 89	10.93	-4 69	-10.04	0 08	11.08	244.94
1100.00	0 37	208 76	1099 89	11 41	-5 30	-10.37	0.05	11 64	242.94
1200.00	0 53	314 01	1199 89	11 87	-5.25	-10 86	0.72	12 06	244.18
1300.00	0.50	281 15	1299 88	12.49	-4 84	-11.62	0.29	12.59	247 37
1400.00	0.55	284 51	1399.88	13.30	-4 64	-12 51	0 06	13.35	249 66
1500.00	0.39	244 87	1499 88	14.05	-4 66	-13 29	0 35	14.08	250 66
1600.00	0 42	247.90	1599.88	14 75	-4 95	-13 94	0.04	14 79	250.46
1700.00	0.54	249 73	1699 87	15.59	-5 25	-14 72	0.11	15.63	250.38
1800.00	0 41	258.01	1799.87	16 41	-5 48	-15 51	0 14	16 45	250.53
1900.00	0.48	236.79	1899.87	17 17	-5 79	-16 21	0 18	17 21	250.35
2000.00	0 43	257.61	1999.86	17 94	-6 10	-16 92	0 17	17 99	250 19
2100.00	0.57	246 56	2099 86	18 80	-6.37	-17.74	0 17	18 85	250 24
2200.00	0.25	220 81	2199 86	19 47	-6.74	-18 34	0.36	19 54	249 83
2300.00	0.32	248.76	2299.85	19 94	-7 00	-18 74	0 16	20 01	249 51
2400.00	0.40	284.03	2399.85	20 52	-7 02	-19 35	0.23	20.58	250 05
2500.00	0 83	298.85	2499 85	21 34	-6 59	-20 32	0 45	21.36	252 03
2600.00	0 74	302 96	2599.84	22 29	-5 89	-21.50	0 10	22.29	254 68
2700.00	0.87	302 27	2699.83	23 23	-5 13	-22.68	0 13	23.25	257.26
2800.00	0.98	296.60	2799.81	24.37	-4.34	-24.09	0.14	24.48	259 79
2900.00	1 03	294 65	2899.80	25.70	-3 58	-25.67	0.06	25.92	262.06
3000.00	0.96	297.33	2999 78	26.99	-2.82	-27 23	0.09	27 38	264.08
3100.00	0 81	304.54	3099 77	28 06	-2 04	-28.56	0.18	28.63	265.92
3200.00	0 73	336 91	3199 76	28.60	-1 05	-29 39	0 44	29.41	267.95
3300.00	0 74	347 94	3299 76	28.65	0 16	-29.77	0 14	29 77	270.31
3400.00	0 63	355 60	3399 75	28.50	1 34	-29.95	0.14	29.98	272 56
3500.00	0.51	355 20	3499.74	28.31	2.33	-30.03	0.11	30.12	274 44
3600.00	0.21	19.24	3599.74	28.13	2 95	-30.01	0 34	30 15	275.61
3700.00	0.19	20.48	3699.74	27 93	3.27	-29.89	0 02	30 07	276 25
3800.00	0.13	114.06	3799 74	27.74	3.38	-29.73	0.23	29.92	276 49



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Survey Date: 7/29/2009

MD ft	Inc deg	Azim deg	TVD ft	VS ft	Northing ft	Easting ft	DLS deg/100ft	Closure Distance ft	Closure Angle deg
3900.00	0.21	136.56	3899.74	27.57	3.20	-29.50	0.10	29.68	276.19
4000.00	0.24	130.43	3999.74	27.37	2.93	-29.22	0.04	29.37	275.73
4100.00	0.60	217.37	4099.74	27.67	2.38	-29.38	0.64	29.47	274.63
4200.00	0.58	218.17	4199.73	28.50	1.56	-30.01	0.02	30.05	272.97
4300.00	0.49	192.59	4299.73	29.12	0.74	-30.42	0.25	30.43	271.39
4400.00	0.31	185.50	4399.72	29.41	0.05	-30.54	0.19	30.54	270.10
4500.00	0.45	189.91	4499.72	29.68	-0.60	-30.63	0.14	30.64	268.88
4600.00	0.29	218.83	4599.72	30.05	-1.18	-30.86	0.24	30.88	267.81
4700.00	0.10	252.31	4699.72	30.35	-1.41	-31.11	0.22	31.14	267.41
4800.00	0.35	181.98	4799.72	30.53	-1.74	-31.20	0.33	31.25	266.81
4900.00	0.36	186.02	4899.72	30.74	-2.36	-31.25	0.03	31.34	265.68
5000.00	0.75	189.93	4999.71	31.14	-3.32	-31.39	0.39	31.57	263.96
5100.00	0.86	182.22	5099.70	31.65	-4.72	-31.54	0.15	31.89	261.49
5200.00	1.18	210.88	5199.69	32.62	-6.35	-32.10	0.59	32.72	258.81
5300.00	0.90	229.05	5299.67	34.08	-7.75	-33.22	0.43	34.11	256.87
5400.00	0.90	211.40	5399.66	35.36	-8.94	-34.22	0.28	35.36	255.37
5450.00	0.99	215.52	5449.65	35.98	-9.62	-34.67	0.23	35.98	254.49