

30-015-37582



Job Number: 700000149 WT-WT
 Company: Marbob
 Lease/Well: Grave Digger State Com #2H
 Location: Lat 32.608703, Long -104.457114
 Rig Name: Cavaloz #1
 RKB: 14
 G.L. or M.S.L.: 3464

State/Country: New Mexico / USA
 Declination: 8.10
 Grid: .07
 File name: C:\WINSERVE\00149.SVY
 Date/Time: 08-Sep-10 / 23:09
 Curve Name: Pathfinder MWD Surveys

Pathfinder

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 180.21
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

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Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	Dogleg Severity Deg/100	BUILD RATE Deg/100	WALK RATE Deg/100
Gyro Tie-In									
2100.00	.48	330.04	2099.85	-23.47	23.47	.07	.00	.00	.00
2129.00	.18	14.42	2128.85	-23.62	23.62	.02	1.29	-1.03	153.03
2161.00	1.49	159.88	2160.85	-23.28	23.28	.18	5.13	4.09	454.56
2192.00	4.84	177.02	2191.80	-21.59	21.59	.38	11.11	10.81	55.29
2224.00	8.35	182.47	2223.58	-17.92	17.92	.35	11.13	10.97	17.03
2255.00	11.96	182.82	2254.09	-12.46	12.46	.10	11.65	11.65	1.13
2287.00	15.12	184.49	2285.19	-4.99	4.99	-.39	9.95	9.87	5.22
2319.00	18.38	184.84	2315.83	4.21	-4.20	-1.14	10.19	10.19	1.09
2350.00	21.46	182.47	2344.98	14.75	-14.74	-1.80	10.27	9.94	-7.65
2382.00	24.45	181.85	2374.44	27.22	-27.21	-2.27	9.37	9.34	-1.94
2413.00	28.14	181.41	2402.23	40.94	-40.93	-2.65	11.92	11.90	-1.42
2445.00	31.57	181.50	2429.97	56.87	-56.86	-3.06	10.72	10.72	.28

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	Dogleg Severity Deg/100	BUILD RATE Deg/100	WALK RATE Deg/100
2477.00	34.47	181.59	2456.80	74.30	-74.29	-3.53	9.06	9.06	.28
2509.00	37.99	181.85	2482.61	93.20	-93.19	-4.10	11.01	11.00	.81
2540.00	40.98	181.32	2506.53	112.91	-112.89	-4.64	9.71	9.65	-1.71
2572.00	44.41	180.71	2530.05	134.60	-134.58	-5.02	10.80	10.72	-1.91
2604.00	48.10	180.09	2552.17	157.71	-157.70	-5.18	11.62	11.53	-1.94
2636.00	52.14	180.09	2572.69	182.26	-182.25	-5.22	12.62	12.63	.00
2667.00	56.10	179.92	2590.85	207.38	-207.36	-5.22	12.78	12.77	-.55
2698.00	59.62	179.92	2607.34	233.62	-233.60	-5.18	11.35	11.35	.00
2729.00	63.22	180.45	2622.17	260.84	-260.82	-5.27	11.71	11.61	1.71
2761.00	65.86	180.27	2635.92	289.73	-289.71	-5.45	8.27	8.25	-.56
2793.00	68.85	180.36	2648.24	319.26	-319.24	-5.62	9.35	9.34	.28
2824.00	72.63	180.45	2658.47	348.52	-348.50	-5.82	12.20	12.19	.29
2856.00	76.68	180.97	2666.93	379.37	-379.35	-6.21	12.75	12.66	1.63
2888.00	79.58	180.27	2673.51	410.68	-410.66	-6.55	9.31	9.06	-2.19
2919.00	82.83	180.18	2678.25	441.31	-441.29	-6.67	10.49	10.48	-.29
2951.00	86.97	180.27	2681.10	473.18	-473.16	-6.79	12.94	12.94	.28
2983.00	89.52	180.97	2682.08	505.16	-505.14	-7.14	8.26	7.97	2.19
3014.00	90.66	180.89	2682.03	536.16	-536.13	-7.64	3.69	3.68	-.26
3046.00	90.57	180.62	2681.69	568.15	-568.13	-8.06	.89	-.28	-.84
3142.00	90.57	180.53	2680.73	664.15	-664.12	-9.03	.09	.00	-.09
3237.00	89.96	181.06	2680.29	759.14	-759.11	-10.34	.85	-.64	.56
3332.00	89.87	180.18	2680.43	854.14	-854.10	-11.37	.93	-.09	-.93
3426.00	89.34	179.57	2681.08	948.13	-948.10	-11.17	.86	-.56	-.65
3520.00	90.57	179.74	2681.15	1042.13	-1042.09	-10.60	1.32	1.31	.18
3615.00	91.36	179.83	2679.55	1137.11	-1137.08	-10.24	.84	.83	.09
3710.00	91.10	179.48	2677.51	1232.08	-1232.06	-9.67	.46	-.27	-.37
3806.00	90.84	179.21	2675.89	1328.06	-1328.04	-8.57	.39	-.27	-.28
3902.00	91.36	179.30	2674.05	1424.03	-1424.01	-7.33	.55	.54	.09
3997.00	90.04	178.86	2672.89	1519.00	-1518.99	-5.80	1.46	-1.39	-.46
4092.00	89.78	179.30	2673.03	1613.98	-1613.97	-4.28	.54	-.27	.46
4187.00	89.25	180.01	2673.84	1708.97	-1708.97	-3.70	.93	-.56	.75
4282.00	89.87	179.74	2674.57	1803.97	-1803.97	-3.50	.71	.65	-.28
4377.00	89.08	180.01	2675.44	1898.96	-1898.96	-3.29	.88	-.83	.28

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	Vertical Section FT	N-S FT	E-W FT	Dogleg Severity Deg/100	BUILD RATE Deg/100	WALK RATE Deg/100
4471.00	89.87	180.09	2676.30	1992.95	-1992.96	-3.37	.84	.84	.09
4566.00	89.60	180.29	2676.74	2087.95	-2087.95	-3.69	.35	-.28	.21
4660.00	88.29	180.30	2678.47	2181.94	-2181.93	-4.17	1.39	-1.39	.01
4756.00	89.60	180.60	2680.24	2277.92	-2277.91	-4.92	1.40	1.36	.31
4851.00	88.90	181.46	2681.48	2372.90	-2372.89	-6.63	1.17	-.74	.91
4945.00	90.04	181.23	2682.35	2466.87	-2466.86	-8.84	1.24	1.21	-.24
5040.00	88.99	181.65	2683.16	2561.85	-2561.82	-11.23	1.19	-1.11	.44
5136.00	89.69	181.76	2684.26	2657.81	-2657.77	-14.08	.74	.73	.11
5230.00	90.31	182.15	2684.26	2751.76	-2751.72	-17.29	.78	.66	.41
5325.00	91.28	182.40	2682.94	2846.69	-2846.63	-21.06	1.05	1.02	.26
5420.00	90.48	181.82	2681.48	2941.63	-2941.55	-24.56	1.04	-.84	-.61
5515.00	91.19	181.87	2680.10	3036.58	-3036.49	-27.61	.75	.75	.05
5606.00	90.13	181.84	2679.05	3127.53	-3127.44	-30.56	1.17	-1.16	-.03
5700.00	90.40	180.69	2678.62	3221.51	-3221.41	-32.64	1.26	.29	-1.22
5794.00	89.69	179.65	2678.54	3315.51	-3315.41	-32.91	1.34	-.76	-1.11
5888.00	89.16	178.93	2679.49	3409.49	-3409.40	-31.75	.95	-.56	-.77
5982.00	87.58	178.34	2682.16	3503.42	-3503.33	-29.51	1.79	-1.68	-.63
6076.00	88.29	178.31	2685.55	3597.30	-3597.23	-26.77	.76	.76	-.03
6169.00	88.99	177.53	2687.75	3690.20	-3690.14	-23.39	1.13	.75	-.84
6263.00	89.69	177.72	2688.84	3784.10	-3784.05	-19.50	.77	.74	.20
6357.00	90.40	177.39	2688.76	3878.00	-3877.97	-15.49	.83	.76	-.35
6450.00	90.31	177.93	2688.19	3970.90	-3970.89	-11.69	.59	-.10	.58
6544.00	90.57	178.74	2687.47	4064.85	-4064.84	-8.96	.90	.28	.86
6638.00	90.92	180.32	2686.24	4158.83	-4158.83	-8.19	1.72	.37	1.68
6731.00	91.63	180.16	2684.17	4251.81	-4251.80	-8.58	.78	.76	-.17
6825.00	90.66	180.35	2682.30	4345.79	-4345.78	-8.99	1.05	-1.03	.20
6919.00	91.01	180.52	2680.93	4439.78	-4439.77	-9.71	.41	.37	.18
7014.00	91.36	180.76	2678.96	4534.75	-4534.74	-10.77	.45	.37	.25
PTB									
7060.00	91.36	180.76	2677.87	4580.74	-4580.73	-11.38	.00	.00	.00

Sur face 330 FAL 1980 FAL
 Bottom 4910.7 FAL 1968.6 FAL
 3416 FSL 1968.6 FAL