

Survey Report

Report Date: May 24, 2005 Client: Nearburg Field: Eddy County, NM Structure / Slot: Mckittrick 24 #2 / Mckittrick 24 #2 Well: Mckittrick 24 #2 Borehole: Mckittrick 24 #2 UW/API#: Survey Name / Date: 24 #2_surveys / May 5, 2005 Tort / AHD / DDI / ERD ratio: 89.815° / 2432.72 ft / 5.363 / 0.293 Grid Coordinate System: NAD27 New Mexico State Planes, Eastern Zone, US Feet Location Lat/Long: N 32 23 33.000, W 104 27 24.000 Location Grid N/E Y/X: N 506528.123 nUS, E 461931.068 nUS Grid Convergence Angle: -0.06607175° Grid Scale Factor: 0.99991075	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 227.710° Vertical Section Origin: N 0.000 ft, E 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 0.0 ft relative to Sea Bed / Ground Level Elevation: 0.000 ft relative to Magnetic Declination: 8.711° Total Field Strength: 49262.347 nT Magnetic Dip: 60.330° Declination Date: May 05, 2005 Magnetic Declination Model: IGRF 2005 North Reference: Grid North Total Corr Mag North -> Grid North: +8.777° Local Coordinates Referenced To: Well Head
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Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
Tie-In	1475.00	3.40	151.89	1473.49	1.89	-36.48	30.64	47.64	139.98	0.00	167.10M
	1689.00	2.50	167.10	1687.21	5.73	-46.63	34.67	58.11	143.37	0.55	163.80M
	1780.00	2.30	163.80	1778.13	7.51	-50.32	35.62	61.65	144.70	0.27	175.50M
	1821.00	2.40	175.50	1819.09	8.40	-51.96	35.92	63.17	145.35	1.19	-174.00M
	1851.00	2.60	186.00	1849.06	9.29	-53.27	35.90	64.23	146.02	1.66	-163.00M
	1881.00	3.10	197.00	1879.03	10.49	-54.72	35.59	65.27	146.96	2.46	-156.40M
	1912.00	3.90	203.60	1909.97	12.18	-56.49	34.92	66.41	148.28	2.89	-152.90M
	1944.00	4.60	207.10	1941.88	14.37	-58.63	33.90	67.72	149.96	2.33	-147.50M
	1976.00	5.00	212.50	1973.77	16.92	-60.94	32.57	69.10	151.88	1.88	56.86G
	2007.00	5.50	219.80	2004.64	19.69	-63.23	30.89	70.37	153.96	2.69	43.63G
	2039.00	6.20	225.70	2036.47	22.94	-65.61	28.67	71.60	156.40	2.88	3.93G
	2070.00	7.10	226.20	2067.26	26.53	-68.11	26.09	72.93	159.04	2.91	21.32G
	2101.00	7.80	228.20	2098.00	30.55	-70.83	23.14	74.52	161.91	2.41	53.19G
	2133.00	8.20	231.80	2129.69	34.99	-73.69	19.73	76.29	165.01	2.00	21.02G
	2165.00	8.80	233.30	2161.34	39.71	-76.57	15.97	78.21	168.22	2.00	3.58G
	2197.00	9.60	233.60	2192.93	44.80	-79.61	11.86	80.49	171.53	2.50	-23.60G
	2229.00	10.30	231.90	2224.45	50.30	-82.96	7.46	83.30	174.86	2.37	-5.40G
	2261.00	10.90	231.60	2255.90	56.18	-86.61	2.84	86.65	178.12	1.88	-7.23G
	2292.00	11.70	231.10	2286.30	62.24	-90.40	-1.90	90.42	181.21	2.60	19.60G
	2324.00	12.30	232.10	2317.60	68.88	-94.53	-7.12	94.80	184.31	1.98	8.47G
	2355.00	12.90	232.50	2347.85	75.62	-98.67	-12.47	99.45	187.20	1.96	42.67G
	2387.00	13.20	233.70	2379.03	82.81	-103.00	-18.25	104.61	190.05	1.26	-13.34G
	2419.00	13.70	233.20	2410.15	90.21	-107.44	-24.23	110.14	192.71	1.60	-6.09G
	2450.00	14.40	232.90	2440.22	97.71	-111.96	-30.24	115.97	195.11	2.27	-17.17G
	2482.00	14.90	232.30	2471.18	105.77	-116.88	-36.67	122.50	197.42	1.63	30.43G
	2513.00	15.40	233.40	2501.10	113.84	-121.77	-43.13	129.18	199.50	1.86	-5.15G
	2545.00	15.70	233.30	2531.93	122.38	-126.89	-50.01	136.39	201.51	0.94	-32.85G
	2577.00	16.00	232.60	2562.72	131.08	-132.16	-56.99	143.92	203.33	1.11	0.00G
	2608.00	16.80	232.60	2592.45	139.80	-137.47	-63.94	151.61	204.94	2.58	-41.60G
	2640.00	17.10	231.70	2623.06	149.10	-143.20	-71.30	159.97	206.47	1.25	28.66G
	2672.00	17.60	232.60	2653.61	158.62	-149.05	-78.84	168.62	207.88	1.77	-50.95G
	2703.00	17.80	231.80	2683.14	168.01	-154.83	-86.29	177.25	209.13	1.02	-37.21G
	2734.00	18.30	230.60	2712.61	177.60	-160.85	-93.77	186.19	210.24	2.01	0.00G
	2766.00	19.00	230.60	2742.93	187.82	-167.34	-101.68	195.81	211.28	2.19	-18.57G
	2796.00	19.60	230.00	2771.25	197.72	-173.68	-109.31	205.21	212.19	2.11	3.29G
	2828.00	20.20	230.10	2801.34	208.61	-180.67	-117.66	215.60	213.07	1.88	-29.58G
	2859.00	20.70	229.30	2830.38	219.43	-187.68	-125.92	226.00	213.86	1.85	36.04G
	2891.00	21.20	230.30	2860.27	230.86	-195.06	-134.66	237.03	214.62	1.92	-38.91G
	2923.00	21.90	228.80	2890.03	242.61	-202.69	-143.60	248.40	215.32	2.78	90.00G
	2953.00	21.90	229.00	2917.87	253.80	-210.04	-152.03	259.29	215.90	0.25	-20.54G
	2985.00	22.00	228.90	2947.55	265.76	-217.90	-161.05	270.96	216.47	0.33	-69.49G

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
	3047.00	22.10	228.20	3005.01	289.03	-233.31	-178.50	293.76	217.42	0.45	175.79G
	3110.00	21.60	228.30	3063.49	312.48	-248.92	-195.99	316.82	218.22	0.80	-46.11G
	3173.00	22.00	227.20	3121.98	335.87	-264.65	-213.31	339.91	218.87	0.91	-62.47G
	3235.00	22.20	226.20	3179.43	359.19	-280.65	-230.28	363.03	219.37	0.69	143.23G
	3297.00	22.00	226.60	3236.87	382.51	-296.74	-247.17	386.19	219.79	0.40	-79.02G
	3360.00	22.10	225.30	3295.26	406.15	-313.18	-264.17	409.72	220.15	0.79	0.00G
	3424.00	22.10	225.30	3354.56	430.21	-330.12	-281.28	433.70	220.43	0.00	-124.57G
	3488.00	21.70	223.70	3413.94	454.04	-347.14	-298.02	457.51	220.65	1.12	90.00G
	3551.00	21.70	225.80	3472.48	477.30	-363.68	-314.41	480.75	220.84	1.23	167.76G
	3614.00	21.20	226.10	3531.11	500.33	-379.70	-330.97	503.70	221.08	0.81	100.05G
	3678.00	21.10	227.80	3590.80	523.41	-395.46	-347.84	526.67	221.33	0.97	73.30G
	3741.00	21.20	228.70	3649.56	546.14	-410.60	-364.80	549.24	221.62	0.54	13.74G
	3804.00	21.50	228.90	3708.24	569.08	-425.70	-382.06	572.01	221.91	0.49	-16.17G
	3867.00	22.70	228.00	3766.61	592.78	-441.43	-399.79	595.56	222.17	1.98	-90.00G
	3930.00	22.70	226.70	3824.73	617.09	-457.90	-417.67	619.78	222.37	0.80	-38.11G
	3993.00	23.00	226.10	3882.78	641.54	-474.77	-435.39	644.18	222.52	0.60	79.48G
	4057.00	23.10	227.40	3941.67	666.60	-491.94	-453.64	669.17	222.68	0.81	135.90G
	4126.00	22.90	227.90	4005.19	693.56	-510.10	-473.57	696.04	222.87	0.41	-117.48G
	4189.00	22.80	227.40	4063.25	718.02	-526.58	-491.65	720.42	223.04	0.35	101.11G
	4253.00	22.70	228.80	4122.27	742.77	-543.11	-510.06	745.07	223.20	0.86	75.96G
	4316.00	22.80	229.80	4180.37	767.12	-558.99	-528.53	769.30	223.40	0.63	117.83G
	4380.00	22.30	232.40	4239.47	791.62	-574.41	-547.63	793.62	223.63	1.74	-90.00G
	4440.00	22.30	231.50	4294.99	814.32	-588.44	-565.56	816.16	223.86	0.57	-62.60G
	4504.00	22.80	229.10	4354.09	838.83	-604.12	-584.43	840.55	224.05	1.64	-80.02G
	4567.00	23.00	226.50	4412.13	863.34	-620.58	-602.59	865.00	224.16	1.64	156.61G
	4629.00	22.30	227.30	4469.35	887.22	-636.90	-620.02	888.85	224.23	1.23	102.34G
	4691.00	22.10	230.00	4526.75	910.63	-652.37	-637.60	912.21	224.34	1.68	39.87G
	4756.00	23.00	231.90	4586.78	935.52	-668.07	-656.96	936.97	224.52	1.78	90.00G
	4819.00	23.00	232.10	4644.78	960.06	-683.22	-676.36	961.38	224.71	0.12	-135.44G
	4880.00	22.50	230.80	4701.03	983.60	-697.92	-694.81	984.81	224.87	1.16	-38.18G
	4942.00	23.00	229.80	4758.21	1007.55	-713.24	-713.25	1008.68	225.00	1.02	60.19G
	5003.00	23.30	231.10	4814.30	1031.50	-728.50	-731.74	1032.55	225.13	0.97	90.00G
	5067.00	23.30	231.20	4873.08	1056.77	-744.38	-751.46	1057.73	225.27	0.06	-105.25G
	5130.00	23.00	228.10	4931.01	1081.52	-760.41	-770.33	1082.42	225.37	1.99	142.59G
	5193.00	22.60	228.90	4989.08	1105.93	-776.59	-788.61	1106.80	225.44	0.80	66.89G
	5257.00	23.00	231.20	5048.08	1130.70	-792.51	-807.62	1131.51	225.54	1.53	0.00G
	5320.00	23.40	231.20	5105.99	1155.48	-808.06	-826.97	1156.21	225.66	0.63	-122.66G
	5383.00	23.20	230.40	5163.85	1180.36	-823.81	-846.28	1181.04	225.77	0.59	-100.31G
	5445.00	23.10	228.90	5220.86	1204.72	-839.59	-864.85	1205.35	225.85	0.96	133.57G
	5509.00	22.70	230.00	5279.82	1229.61	-855.78	-883.77	1230.21	225.92	0.92	165.75G
	5572.00	22.40	230.20	5338.00	1253.75	-871.28	-902.31	1254.31	226.00	0.49	-159.31G
	5635.00	22.20	230.00	5396.29	1277.63	-886.61	-920.65	1278.15	226.08	0.34	-127.54G
	5697.00	22.00	229.30	5453.73	1300.95	-901.71	-938.42	1301.43	226.14	0.53	83.74G
	5760.00	22.10	231.40	5512.12	1324.57	-916.80	-956.63	1325.02	226.22	1.26	90.00G
	5823.00	22.10	232.40	5570.50	1348.21	-931.43	-975.28	1348.60	226.32	0.60	-101.42G
	5886.00	22.00	231.00	5628.89	1371.80	-946.08	-993.84	1372.15	226.41	0.85	-58.81G
	5950.00	22.50	228.90	5688.12	1396.01	-961.68	-1012.39	1396.34	226.47	1.47	129.64G
	6011.00	22.10	230.20	5744.56	1419.14	-976.70	-1030.00	1419.45	226.52	1.04	146.07G
	6074.00	21.40	231.50	5803.08	1442.45	-991.44	-1048.10	1442.73	226.59	1.35	140.11G
	6137.00	21.10	232.20	5861.79	1465.23	-1005.54	-1066.05	1465.47	226.67	0.62	25.08G
	6200.00	21.90	233.20	5920.41	1488.23	-1019.53	-1084.42	1488.43	226.77	1.40	111.32G
	6264.00	21.80	233.90	5979.81	1511.92	-1033.68	-1103.58	1512.08	226.87	0.44	137.48G
	6327.00	21.60	234.40	6038.35	1535.07	-1047.33	-1122.46	1535.19	226.98	0.43	-13.97G
	6391.00	21.90	234.20	6097.79	1558.63	-1061.16	-1141.72	1558.72	227.09	0.48	-117.58G
	6454.00	21.60	232.60	6156.31	1581.86	-1075.08	-1160.46	1581.92	227.19	1.05	-107.25G
	6518.00	21.50	231.70	6215.83	1605.29	-1089.50	-1179.03	1605.34	227.26	0.54	-148.98G
	6579.00	21.20	231.20	6272.65	1627.45	-1103.34	-1196.39	1627.49	227.32	0.58	44.53G
	6643.00	21.50	232.00	6332.25	1650.70	-1117.82	-1214.65	1650.73	227.38	0.65	90.00G

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
	6706.00	21.50	233.90	6390.87	1673.69	-1131.73	-1233.08	1673.70	227.45	1.11	85.21G
	6774.00	21.70	238.40	6454.10	1698.43	-1145.66	-1253.86	1698.44	227.58	2.45	-114.04G
	6837.00	21.20	235.10	6512.74	1721.17	-1158.28	-1273.12	1721.17	227.70	2.07	-98.33G
	6898.00	21.00	229.60	6569.66	1743.04	-1171.67	-1290.49	1743.04	227.76	3.26	-107.59G
	6963.00	20.60	225.60	6630.42	1766.11	-1187.22	-1307.53	1766.11	227.76	2.27	-76.68G
	7026.00	20.90	222.40	6689.34	1788.37	-1203.28	-1323.03	1788.37	227.71	1.86	-40.81G
	7089.00	21.50	221.00	6748.07	1811.03	-1220.29	-1338.18	1811.03	227.64	1.25	104.87G
	7151.00	21.20	224.50	6805.82	1833.51	-1236.86	-1353.49	1833.51	227.58	2.11	80.60G
	7214.00	21.40	227.40	6864.52	1856.37	-1252.76	-1369.94	1856.38	227.56	1.70	18.33G
	7276.00	22.20	228.10	6922.09	1879.40	-1268.24	-1386.98	1879.40	227.56	1.36	-46.22G
	7339.00	23.00	226.00	6980.25	1903.60	-1284.74	-1404.70	1903.61	227.55	1.80	-115.23G
	7402.00	22.60	223.70	7038.33	1927.98	-1302.04	-1421.91	1927.99	227.52	1.55	159.15G
	7462.00	22.40	223.90	7093.76	1950.89	-1318.62	-1437.80	1950.90	227.48	0.36	82.22G
	7526.00	22.70	228.40	7152.87	1975.41	-1335.60	-1455.50	1975.42	227.46	2.74	33.53G
	7590.00	23.30	229.40	7211.78	2000.41	-1352.04	-1474.34	2000.42	227.48	1.12	-29.54G
	7652.00	23.80	228.70	7268.62	2025.17	-1368.27	-1493.05	2025.18	227.50	0.92	-22.06G
	7716.00	23.90	228.60	7327.15	2051.05	-1385.37	-1512.48	2051.06	227.51	0.17	-90.00G
	7779.00	23.90	227.80	7384.75	2076.57	-1402.38	-1531.50	2076.58	227.52	0.51	-45.71G
	7841.00	24.10	227.30	7441.39	2101.79	-1419.40	-1550.11	2101.80	227.52	0.46	-45.25G
	7905.00	24.60	226.10	7499.70	2128.17	-1437.50	-1569.31	2128.18	227.51	1.10	-82.21G
	7968.00	24.70	224.50	7556.96	2154.42	-1455.98	-1587.99	2154.43	227.48	1.07	-70.45G
	8031.00	24.90	223.20	7614.15	2180.78	-1475.04	-1606.29	2180.81	227.44	0.92	-137.96G
	8094.00	24.40	222.10	7671.41	2206.95	-1494.36	-1624.09	2206.99	227.38	1.08	-164.24G
	8156.00	21.90	220.20	7728.41	2231.17	-1512.70	-1640.15	2231.22	227.31	4.21	159.18G
	8220.00	18.80	223.90	7788.41	2253.30	-1529.25	-1655.00	2253.36	227.26	5.24	106.67G
	8282.00	18.40	228.80	7847.18	2273.05	-1542.90	-1669.30	2273.12	227.25	2.60	101.39G
	8347.00	18.30	230.50	7908.87	2293.50	-1556.14	-1684.89	2293.56	227.27	0.84	76.97G
	8411.00	18.50	233.00	7969.60	2313.64	-1568.65	-1700.75	2313.70	227.31	1.27	163.67G
	8473.00	17.10	234.40	8028.63	2332.49	-1579.87	-1716.02	2332.54	227.37	2.36	-174.50G
	8537.00	16.80	234.30	8089.85	2351.03	-1590.75	-1731.18	2351.06	227.42	0.47	-16.30G
	8600.00	17.00	234.10	8150.13	2369.22	-1601.46	-1746.03	2369.24	227.47	0.33	3.44G
	8662.00	17.50	234.20	8209.34	2387.49	-1612.23	-1760.94	2387.51	227.52	0.81	-67.82G
	8724.00	17.80	231.90	8268.42	2406.21	-1623.53	-1775.96	2406.21	227.57	1.22	0.00G
	8765.00	17.80	231.90	8307.46	2418.71	-1631.26	-1785.82	2418.71	227.59	0.00	0.00G

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