

30-045-31189

Schlumberger

Survey Report - Geodetic

Report Date: 18-Nov-2002 Client: BP Field: NM, San Juan County (NAD 83 WZ) Structure / Slot: BP 13 29N 8W (Vandewart Com 3M) No Certified Plat - Have Lat. - Long. / Vandewart Com 3M Well: Vandewart Com 3M Borehole: Original Hole UWI/API#: Survey Name / Date: SurveyEditor / November 18, 2002 Tort / AHD / DDI / ERD ratio: 45.254° / 586.65 ft / 4.427 / 0.073 Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet Location Lat/Long: N 36 43 12.000, W 107 37 24.000 Location Grid N/E Y/X: N 2081463.450 ftUS, E 2784637.531 ftUS Grid Convergence Angle: +0.12556041° Grid Scale Factor: 0.99992100	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 82.340° Vertical Section Origin: N 0.000 ft, E 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 6930.000 ft relative to MSL Sea Bed / Ground Level Elevation: 6916.000 ft relative to MSL Magnetic Declination: +10.858° Total Field Strength: 51498.444 nT Magnetic Dip: 63.667° Declination Date: November 18, 2002 Magnetic Declination Model: BGM 2002 North Reference: True North Total Corr Mag North -> True North: +10.858° Local Coordinates Referenced To: Well Head
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Station ID	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSec (ft)	N-S (ft)	E-W (ft)	DLS (°/100ft)	Grid Coordinates		Geographic Coordinates	
									Northing (ftUS)	Easting (ftUS)	Latitude	Longitude
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00		2081463.45	2784637.53	N 36 43 12.000	W 107 37 24.000
Begin SLB MWD Surveys	553.00	1.17	334.27	552.96	-1.75	5.09	-2.45	0.21	2081468.53	2784635.07	N 36 43 12.050	W 107 37 24.030
	584.00	1.17	344.29	583.96	-1.89	5.68	-2.67	0.66	2081469.12	2784634.84	N 36 43 12.056	W 107 37 24.033
	616.00	1.27	348.79	615.95	-1.96	6.34	-2.83	0.43	2081469.78	2784634.69	N 36 43 12.063	W 107 37 24.035
	648.00	1.58	0.32	647.94	-1.92	7.13	-2.90	1.31	2081470.57	2784634.62	N 36 43 12.070	W 107 37 24.036
	680.00	1.70	13.32	679.93	-1.69	8.03	-2.79	1.22	2081471.47	2784634.73	N 36 43 12.079	W 107 37 24.034
	712.00	1.85	13.50	711.91	-1.33	8.99	-2.56	0.47	2081472.44	2784634.96	N 36 43 12.089	W 107 37 24.031
	743.00	2.22	27.87	742.89	-0.81	10.01	-2.16	2.02	2081473.46	2784635.35	N 36 43 12.099	W 107 37 24.027
	775.00	2.70	33.17	774.86	0.05	11.19	-1.46	1.66	2081474.64	2784636.05	N 36 43 12.111	W 107 37 24.018
	807.00	3.28	38.62	806.82	1.20	12.54	-0.47	2.02	2081475.98	2784637.03	N 36 43 12.124	W 107 37 24.006
	838.00	3.72	45.34	837.76	2.65	13.94	0.80	1.94	2081477.39	2784638.30	N 36 43 12.138	W 107 37 23.990
	870.00	4.18	48.52	869.68	4.44	15.44	2.41	1.59	2081478.89	2784639.90	N 36 43 12.153	W 107 37 23.970
	900.00	4.82	51.74	899.59	6.44	16.94	4.22	2.29	2081480.40	2784641.71	N 36 43 12.168	W 107 37 23.948
	932.00	5.70	53.92	931.46	8.99	18.71	6.56	2.82	2081482.17	2784644.05	N 36 43 12.185	W 107 37 23.919
	964.00	6.45	55.90	963.28	12.00	20.66	9.33	2.43	2081484.12	2784646.81	N 36 43 12.204	W 107 37 23.885
	994.00	7.10	58.49	993.07	15.20	22.57	12.31	2.39	2081486.04	2784649.79	N 36 43 12.223	W 107 37 23.849
	1025.00	7.57	60.45	1023.81	18.85	24.58	15.72	1.72	2081488.06	2784653.19	N 36 43 12.243	W 107 37 23.807
	1057.00	8.57	63.30	1055.50	23.06	26.69	19.68	3.36	2081490.18	2784657.15	N 36 43 12.264	W 107 37 23.758
	1089.00	9.23	65.04	1087.11	27.76	28.84	24.14	2.23	2081492.34	2784661.60	N 36 43 12.285	W 107 37 23.704

Surface 580/S 1255/E
 BHL 704/S 698/E

	1120.00	9.73	67.14	1117.69	32.67	30.91	28.80	1.96	2081494.42	2784666.26	N 36 43 12.306	W 107 37 23.646
	1152.00	10.32	69.54	1149.20	38.07	32.96	33.98	2.26	2081496.48	2784671.44	N 36 43 12.326	W 107 37 23.583
	1183.00	10.63	72.49	1179.68	43.60	34.79	39.31	2.00	2081498.33	2784676.76	N 36 43 12.344	W 107 37 23.517
	1215.00	10.57	75.74	1211.14	49.42	36.40	44.97	1.88	2081499.95	2784682.42	N 36 43 12.360	W 107 37 23.448
	1247.00	10.43	77.42	1242.60	55.22	37.76	50.64	1.05	2081501.32	2784688.08	N 36 43 12.373	W 107 37 23.378
	1341.00	10.40	79.74	1335.05	72.17	41.12	67.29	0.45	2081504.72	2784704.73	N 36 43 12.407	W 107 37 23.173
	1435.00	10.23	79.02	1427.53	88.98	44.22	83.84	0.23	2081507.85	2784721.26	N 36 43 12.437	W 107 37 22.970
	1530.00	10.80	79.29	1520.94	106.29	47.48	100.86	0.60	2081511.15	2784738.28	N 36 43 12.470	W 107 37 22.761
	1623.00	11.00	78.29	1612.26	123.84	50.90	118.11	0.30	2081514.61	2784755.52	N 36 43 12.503	W 107 37 22.549
	1716.00	11.18	81.29	1703.52	141.71	54.07	135.71	0.65	2081517.81	2784773.11	N 36 43 12.535	W 107 37 22.333
	1811.00	10.90	81.29	1796.76	159.90	56.83	153.70	0.29	2081520.61	2784791.09	N 36 43 12.562	W 107 37 22.112
	1907.00	11.20	80.97	1890.98	178.29	59.66	171.88	0.32	2081523.48	2784809.26	N 36 43 12.590	W 107 37 21.889
	2002.00	10.93	81.87	1984.22	196.52	62.38	189.90	0.34	2081526.25	2784827.28	N 36 43 12.617	W 107 37 21.668
	2097.00	11.43	79.97	2077.42	214.94	65.30	208.09	0.65	2081529.20	2784845.46	N 36 43 12.646	W 107 37 21.444
	2192.00	11.18	78.49	2170.57	233.53	68.77	226.38	0.40	2081532.72	2784863.74	N 36 43 12.680	W 107 37 21.219
	2287.00	11.38	77.49	2263.74	252.06	72.64	244.56	0.29	2081536.62	2784881.91	N 36 43 12.718	W 107 37 20.996
	2382.00	11.07	78.09	2356.92	270.49	76.56	262.63	0.35	2081540.57	2784899.97	N 36 43 12.757	W 107 37 20.774
	2476.00	11.15	77.72	2449.16	288.55	80.35	280.34	0.11	2081544.41	2784917.67	N 36 43 12.794	W 107 37 20.557
	2573.00	10.60	81.07	2544.42	306.82	83.73	298.32	0.86	2081547.83	2784935.64	N 36 43 12.828	W 107 37 20.336
	2666.00	11.00	81.79	2635.77	324.24	86.33	315.55	0.45	2081550.46	2784952.87	N 36 43 12.854	W 107 37 20.124
	2760.00	11.75	79.64	2727.92	342.77	89.33	333.84	0.92	2081553.50	2784971.15	N 36 43 12.883	W 107 37 19.900
	2855.00	11.25	79.64	2821.02	361.69	92.73	352.47	0.53	2081556.95	2784989.77	N 36 43 12.917	W 107 37 19.671
	2947.00	10.85	80.37	2911.31	379.31	95.80	369.84	0.46	2081560.05	2785007.13	N 36 43 12.947	W 107 37 19.457
	3043.00	10.50	78.99	3005.65	397.07	98.98	387.33	0.45	2081563.27	2785024.62	N 36 43 12.979	W 107 37 19.243
	3138.00	10.07	80.17	3099.12	414.01	102.05	404.01	0.50	2081566.38	2785041.29	N 36 43 13.009	W 107 37 19.038
	3232.00	9.48	83.29	3191.76	429.96	104.36	419.80	0.84	2081568.72	2785057.07	N 36 43 13.032	W 107 37 18.844
Last SLB MWD Survey Begin Wireline Surveys	3326.00	9.88	80.67	3284.42	445.77	106.57	435.45	0.63	2081570.96	2785072.71	N 36 43 13.054	W 107 37 18.652
	3422.00	9.40	81.97	3379.06	461.84	109.00	451.34	0.55	2081573.43	2785088.59	N 36 43 13.078	W 107 37 18.456
	3450.00	9.31	81.97	3406.69	466.39	109.63	455.84	0.34	2081574.07	2785093.09	N 36 43 13.084	W 107 37 18.401
	3480.00	9.38	81.97	3436.29	471.26	110.31	460.66	0.25	2081574.76	2785097.91	N 36 43 13.091	W 107 37 18.342
	3510.00	9.45	81.97	3465.89	476.16	111.00	465.52	0.22	2081575.46	2785102.77	N 36 43 13.098	W 107 37 18.282
	3540.00	9.21	81.97	3495.49	481.03	111.68	470.34	0.79	2081576.15	2785107.58	N 36 43 13.104	W 107 37 18.223
	3570.00	8.72	81.97	3525.13	485.70	112.33	474.97	1.61	2081576.81	2785112.21	N 36 43 13.111	W 107 37 18.166
	3600.00	8.04	81.97	3554.81	490.07	112.94	479.30	2.30	2081577.43	2785116.54	N 36 43 13.117	W 107 37 18.113
	3630.00	7.81	81.97	3584.52	494.21	113.52	483.39	0.75	2081578.02	2785120.63	N 36 43 13.122	W 107 37 18.063
	3660.00	7.63	81.97	3614.25	498.24	114.08	487.38	0.61	2081578.59	2785124.62	N 36 43 13.128	W 107 37 18.014
	3690.00	7.65	81.97	3643.98	502.22	114.64	491.33	0.07	2081579.16	2785128.57	N 36 43 13.134	W 107 37 17.965

N-S E-W

3720.00	7.55	81.97	3673.72	506.19	115.19	495.26	0.32	2081579.72	2785132.49	N 36 43 13.139	W 107 37 17.917
3750.00	7.50	81.97	3703.46	510.12	115.74	499.15	0.18	2081580.28	2785136.38	N 36 43 13.144	W 107 37 17.869
3780.00	7.16	81.97	3733.21	513.95	116.28	502.94	1.11	2081580.82	2785140.17	N 36 43 13.150	W 107 37 17.823
3810.00	6.91	81.97	3762.99	517.62	116.79	506.57	0.86	2081581.34	2785143.81	N 36 43 13.155	W 107 37 17.778
3840.00	6.91	81.97	3792.77	521.23	117.30	510.15	0.00	2081581.85	2785147.38	N 36 43 13.160	W 107 37 17.734
3870.00	6.79	81.97	3822.56	524.80	117.79	513.69	0.39	2081582.36	2785150.92	N 36 43 13.165	W 107 37 17.691
3900.00	6.35	81.97	3852.36	528.23	118.27	517.08	1.47	2081582.85	2785154.31	N 36 43 13.169	W 107 37 17.649
3930.00	5.68	81.97	3882.20	531.38	118.71	520.19	2.22	2081583.29	2785157.42	N 36 43 13.174	W 107 37 17.611
3960.00	5.00	81.97	3912.06	534.17	119.10	522.96	2.26	2081583.69	2785160.19	N 36 43 13.178	W 107 37 17.577
3990.00	4.42	81.97	3941.96	536.63	119.45	525.40	1.94	2081584.04	2785162.62	N 36 43 13.181	W 107 37 17.547
4020.00	3.72	81.97	3971.89	538.76	119.74	527.51	2.33	2081584.34	2785164.73	N 36 43 13.184	W 107 37 17.521
4050.00	3.34	81.97	4001.83	540.61	120.00	529.34	1.26	2081584.60	2785166.56	N 36 43 13.187	W 107 37 17.498
4080.00	3.07	81.97	4031.78	542.29	120.24	531.00	0.90	2081584.84	2785168.22	N 36 43 13.189	W 107 37 17.478
4110.00	2.69	81.97	4061.75	543.79	120.45	532.49	1.29	2081585.05	2785169.71	N 36 43 13.191	W 107 37 17.460
4140.00	2.36	81.97	4091.72	545.12	120.63	533.80	1.08	2081585.24	2785171.02	N 36 43 13.193	W 107 37 17.444
4170.00	2.20	81.97	4121.69	546.31	120.80	534.98	0.54	2081585.41	2785172.21	N 36 43 13.194	W 107 37 17.429
4200.00	1.79	81.97	4151.67	547.36	120.95	536.02	1.36	2081585.56	2785173.24	N 36 43 13.196	W 107 37 17.416
4230.00	1.44	81.97	4181.66	548.20	121.06	536.86	1.18	2081585.68	2785174.08	N 36 43 13.197	W 107 37 17.406
4260.00	1.22	81.97	4211.65	548.90	121.16	537.55	0.72	2081585.78	2785174.77	N 36 43 13.198	W 107 37 17.398
4290.00	1.06	81.97	4241.65	549.50	121.24	538.14	0.54	2081585.86	2785175.36	N 36 43 13.199	W 107 37 17.390
4320.00	0.86	81.97	4271.64	550.00	121.31	538.64	0.68	2081585.93	2785175.86	N 36 43 13.199	W 107 37 17.384
4350.00	0.76	81.97	4301.64	550.42	121.37	539.06	0.32	2081585.99	2785176.28	N 36 43 13.200	W 107 37 17.379
4380.00	0.71	81.97	4331.64	550.81	121.43	539.44	0.18	2081586.05	2785176.66	N 36 43 13.201	W 107 37 17.374
4410.00	0.64	81.97	4361.64	551.16	121.48	539.79	0.22	2081586.10	2785177.01	N 36 43 13.201	W 107 37 17.370
4440.00	0.50	81.97	4391.63	551.46	121.52	540.08	0.47	2081586.14	2785177.30	N 36 43 13.202	W 107 37 17.366
4470.00	0.45	81.97	4421.63	551.71	121.55	540.33	0.18	2081586.18	2785177.55	N 36 43 13.202	W 107 37 17.363
4500.00	0.62	81.97	4451.63	551.99	121.59	540.61	0.57	2081586.22	2785177.82	N 36 43 13.202	W 107 37 17.360
4530.00	0.51	81.97	4481.63	552.29	121.63	540.90	0.36	2081586.26	2785178.12	N 36 43 13.203	W 107 37 17.356
4560.00	0.41	81.97	4511.63	552.53	121.67	541.14	0.36	2081586.29	2785178.36	N 36 43 13.203	W 107 37 17.353
4590.00	0.31	81.97	4541.63	552.71	121.69	541.32	0.32	2081586.32	2785178.54	N 36 43 13.203	W 107 37 17.351
4620.00	0.27	81.97	4571.63	552.86	121.71	541.47	0.14	2081586.34	2785178.69	N 36 43 13.203	W 107 37 17.349
4650.00	0.20	81.97	4601.63	552.98	121.73	541.59	0.22	2081586.36	2785178.81	N 36 43 13.204	W 107 37 17.348
4680.00	0.20	81.97	4631.63	553.09	121.75	541.70	0.00	2081586.37	2785178.91	N 36 43 13.204	W 107 37 17.347
4710.00	0.31	81.97	4661.63	553.22	121.76	541.83	0.36	2081586.39	2785179.05	N 36 43 13.204	W 107 37 17.345
4740.00	0.30	81.97	4691.63	553.38	121.79	541.98	0.04	2081586.41	2785179.20	N 36 43 13.204	W 107 37 17.343
4770.00	0.27	81.97	4721.63	553.53	121.81	542.13	0.11	2081586.44	2785179.35	N 36 43 13.204	W 107 37 17.341
4800.00	0.25	81.97	4751.63	553.66	121.83	542.26	0.04	2081586.45	2785179.48	N 36 43 13.205	W 107 37 17.340
4830.00	0.06	81.97	4781.63	553.75	121.84	542.35	0.65	2081586.47	2785179.57	N 36 43 13.205	W 107 37 17.339

N-S E-W

4860.00	0.43	81.97	4811.63	553.87	121.86	542.47	1.22	2081586.48	2785179.69	N 36 43 13.205	W 107 37 17.337
4890.00	0.35	81.97	4841.63	554.08	121.88	542.67	0.25	2081586.51	2785179.89	N 36 43 13.205	W 107 37 17.335
4920.00	0.19	81.97	4871.63	554.22	121.90	542.81	0.54	2081586.53	2785180.03	N 36 43 13.205	W 107 37 17.333
4950.00	0.19	81.97	4901.63	554.32	121.92	542.91	0.00	2081586.55	2785180.13	N 36 43 13.205	W 107 37 17.332
4980.00	0.28	81.97	4931.63	554.44	121.93	543.03	0.29	2081586.56	2785180.25	N 36 43 13.206	W 107 37 17.330
5010.00	0.34	81.97	4961.63	554.60	121.96	543.19	0.22	2081586.59	2785180.41	N 36 43 13.206	W 107 37 17.328
5040.00	0.25	81.97	4991.62	554.76	121.98	543.35	0.29	2081586.61	2785180.57	N 36 43 13.206	W 107 37 17.326
5070.00	0.33	81.97	5021.62	554.91	122.00	543.50	0.25	2081586.63	2785180.72	N 36 43 13.206	W 107 37 17.324
5100.00	0.30	81.97	5051.62	555.08	122.02	543.66	0.11	2081586.65	2785180.88	N 36 43 13.207	W 107 37 17.322
5130.00	0.33	81.97	5081.62	555.24	122.05	543.82	0.11	2081586.68	2785181.04	N 36 43 13.207	W 107 37 17.320
5160.00	0.29	81.97	5111.62	555.40	122.07	543.98	0.14	2081586.70	2785181.20	N 36 43 13.207	W 107 37 17.318
5190.00	0.33	81.97	5141.62	555.56	122.09	544.14	0.14	2081586.72	2785181.36	N 36 43 13.207	W 107 37 17.317
5220.00	0.38	81.97	5171.62	555.75	122.12	544.33	0.18	2081586.75	2785181.55	N 36 43 13.207	W 107 37 17.314
5250.00	0.41	81.97	5201.62	555.96	122.15	544.53	0.07	2081586.78	2785181.75	N 36 43 13.208	W 107 37 17.312
5280.00	0.44	81.97	5231.62	556.18	122.18	544.75	0.11	2081586.81	2785181.97	N 36 43 13.208	W 107 37 17.309
5310.00	0.33	81.97	5261.62	556.38	122.21	544.95	0.36	2081586.84	2785182.17	N 36 43 13.208	W 107 37 17.307
5340.00	0.39	81.97	5291.62	556.57	122.23	545.14	0.22	2081586.87	2785182.36	N 36 43 13.209	W 107 37 17.304
5370.00	0.29	81.97	5321.62	556.75	122.26	545.32	0.36	2081586.89	2785182.53	N 36 43 13.209	W 107 37 17.302
5400.00	0.19	81.97	5351.62	556.87	122.27	545.44	0.32	2081586.91	2785182.66	N 36 43 13.209	W 107 37 17.301
5430.00	0.13	81.97	5381.62	556.95	122.29	545.52	0.22	2081586.92	2785182.74	N 36 43 13.209	W 107 37 17.300
5460.00	0.19	81.97	5411.62	557.04	122.30	545.60	0.22	2081586.93	2785182.82	N 36 43 13.209	W 107 37 17.299
5490.00	0.29	81.97	5441.62	557.16	122.31	545.73	0.32	2081586.95	2785182.94	N 36 43 13.209	W 107 37 17.297
5520.00	0.24	81.97	5471.62	557.30	122.33	545.86	0.14	2081586.97	2785183.08	N 36 43 13.210	W 107 37 17.295
5550.00	0.22	81.97	5501.62	557.42	122.35	545.98	0.07	2081586.99	2785183.20	N 36 43 13.210	W 107 37 17.294
5580.00	0.33	81.97	5531.62	557.57	122.37	546.13	0.36	2081587.01	2785183.34	N 36 43 13.210	W 107 37 17.292
5610.00	-0.05	81.97	5561.62	557.64	122.38	546.20	1.26	2081587.02	2785183.42	N 36 43 13.210	W 107 37 17.291
5640.00	0.01	81.97	5591.62	557.63	122.38	546.19	0.18	2081587.02	2785183.41	N 36 43 13.210	W 107 37 17.291
5670.00	0.05	81.97	5621.62	557.64	122.38	546.21	0.14	2081587.02	2785183.42	N 36 43 13.210	W 107 37 17.291
5700.00	-0.06	81.97	5651.62	557.64	122.38	546.20	0.36	2081587.02	2785183.42	N 36 43 13.210	W 107 37 17.291
5730.00	-0.05	81.97	5681.62	557.61	122.38	546.18	0.04	2081587.01	2785183.39	N 36 43 13.210	W 107 37 17.292
5760.00	0.14	81.97	5711.62	557.64	122.38	546.20	0.61	2081587.02	2785183.42	N 36 43 13.210	W 107 37 17.291
5790.00	-0.18	81.97	5741.62	557.63	122.38	546.19	1.04	2081587.02	2785183.41	N 36 43 13.210	W 107 37 17.291
5820.00	0.14	81.97	5771.62	557.62	122.38	546.18	1.04	2081587.02	2785183.40	N 36 43 13.210	W 107 37 17.292
5850.00	0.20	81.97	5801.62	557.71	122.39	546.27	0.22	2081587.03	2785183.48	N 36 43 13.210	W 107 37 17.290
5880.00	0.21	81.97	5831.62	557.81	122.41	546.37	0.04	2081587.04	2785183.59	N 36 43 13.210	W 107 37 17.289
5910.00	0.13	81.97	5861.62	557.90	122.42	546.46	0.29	2081587.06	2785183.68	N 36 43 13.210	W 107 37 17.288
5940.00	0.24	81.97	5891.62	558.00	122.43	546.56	0.39	2081587.07	2785183.77	N 36 43 13.211	W 107 37 17.287

5970.00	0.14	81.97	5921.62	558.10	122.45	546.65	0.36	2081587.08	2785183.87	N 36 43 13.211	W 107 37 17.286
6000.00	0.07	81.97	5951.62	558.15	122.45	546.71	0.22	2081587.09	2785183.92	N 36 43 13.211	W 107 37 17.285
6030.00	0.08	81.97	5981.62	558.19	122.46	546.75	0.04	2081587.10	2785183.96	N 36 43 13.211	W 107 37 17.285
6060.00	-0.06	81.97	6011.62	558.20	122.46	546.75	0.47	2081587.10	2785183.97	N 36 43 13.211	W 107 37 17.284
6090.00	-0.32	81.97	6041.62	558.10	122.45	546.66	0.86	2081587.08	2785183.87	N 36 43 13.211	W 107 37 17.286
6120.00	-0.24	81.97	6071.62	557.95	122.43	546.51	0.25	2081587.06	2785183.73	N 36 43 13.210	W 107 37 17.287
6150.00	-0.24	81.97	6101.61	557.83	122.41	546.39	0.00	2081587.05	2785183.61	N 36 43 13.210	W 107 37 17.289
6180.00	-0.23	81.97	6131.61	557.71	122.39	546.27	0.04	2081587.03	2785183.48	N 36 43 13.210	W 107 37 17.290
6210.00	-0.19	81.97	6161.61	557.60	122.38	546.16	0.14	2081587.01	2785183.38	N 36 43 13.210	W 107 37 17.292
6240.00	-0.15	81.97	6191.61	557.51	122.36	546.07	0.11	2081587.00	2785183.29	N 36 43 13.210	W 107 37 17.293
6270.00	-0.03	81.97	6221.61	557.46	122.36	546.02	0.43	2081586.99	2785183.24	N 36 43 13.210	W 107 37 17.293
6300.00	0.19	81.97	6251.61	557.50	122.36	546.07	0.72	2081587.00	2785183.28	N 36 43 13.210	W 107 37 17.293
6330.00	0.15	81.97	6281.61	557.59	122.37	546.15	0.14	2081587.01	2785183.37	N 36 43 13.210	W 107 37 17.292
6360.00	0.27	81.97	6311.61	557.70	122.39	546.26	0.39	2081587.03	2785183.48	N 36 43 13.210	W 107 37 17.291
6390.00	0.25	81.97	6341.61	557.84	122.41	546.39	0.04	2081587.05	2785183.61	N 36 43 13.210	W 107 37 17.289
6420.00	0.27	81.97	6371.61	557.97	122.43	546.53	0.04	2081587.07	2785183.75	N 36 43 13.210	W 107 37 17.287
6450.00	0.13	81.97	6401.61	558.07	122.44	546.63	0.47	2081587.08	2785183.85	N 36 43 13.211	W 107 37 17.286
6480.00	0.21	81.97	6431.61	558.16	122.45	546.72	0.29	2081587.09	2785183.94	N 36 43 13.211	W 107 37 17.285
6510.00	0.20	81.97	6461.61	558.27	122.47	546.82	0.04	2081587.11	2785184.04	N 36 43 13.211	W 107 37 17.284
6540.00	0.14	81.97	6491.61	558.36	122.48	546.91	0.22	2081587.12	2785184.13	N 36 43 13.211	W 107 37 17.283
6570.00	0.16	81.97	6521.61	558.43	122.49	546.99	0.07	2081587.13	2785184.21	N 36 43 13.211	W 107 37 17.282
6600.00	0.31	81.97	6551.61	558.56	122.51	547.11	0.50	2081587.15	2785184.33	N 36 43 13.211	W 107 37 17.280
6630.00	0.35	81.97	6581.61	558.73	122.53	547.28	0.14	2081587.17	2785184.50	N 36 43 13.212	W 107 37 17.278
6660.00	0.45	81.97	6611.61	558.94	122.56	547.49	0.32	2081587.20	2785184.70	N 36 43 13.212	W 107 37 17.275
6690.00	0.48	81.97	6641.61	559.18	122.60	547.73	0.11	2081587.24	2785184.94	N 36 43 13.212	W 107 37 17.273
6720.00	0.31	81.97	6671.61	559.39	122.63	547.93	0.57	2081587.27	2785185.15	N 36 43 13.212	W 107 37 17.270
6750.00	0.28	81.97	6701.61	559.54	122.65	548.08	0.11	2081587.29	2785185.30	N 36 43 13.213	W 107 37 17.268
6780.00	0.27	81.97	6731.61	559.68	122.67	548.22	0.04	2081587.31	2785185.44	N 36 43 13.213	W 107 37 17.266
6810.00	0.32	81.97	6761.61	559.84	122.69	548.38	0.18	2081587.33	2785185.59	N 36 43 13.213	W 107 37 17.265
6840.00	0.33	81.97	6791.61	560.01	122.71	548.54	0.04	2081587.35	2785185.76	N 36 43 13.213	W 107 37 17.262
6870.00	0.25	81.97	6821.61	560.16	122.73	548.70	0.25	2081587.38	2785185.91	N 36 43 13.214	W 107 37 17.261
6900.00	0.39	81.97	6851.61	560.33	122.76	548.86	0.47	2081587.40	2785186.08	N 36 43 13.214	W 107 37 17.259
6930.00	0.22	81.97	6881.61	560.49	122.78	549.02	0.57	2081587.42	2785186.24	N 36 43 13.214	W 107 37 17.257
6960.00	0.19	81.97	6911.61	560.60	122.79	549.13	0.11	2081587.44	2785186.35	N 36 43 13.214	W 107 37 17.255
6990.00	0.13	81.97	6941.61	560.68	122.81	549.21	0.22	2081587.45	2785186.43	N 36 43 13.214	W 107 37 17.254
7020.00	0.07	81.97	6971.61	560.73	122.81	549.26	0.18	2081587.46	2785186.48	N 36 43 13.214	W 107 37 17.254
7050.00	0.15	81.97	7001.61	560.79	122.82	549.32	0.25	2081587.47	2785186.54	N 36 43 13.214	W 107 37 17.253
7080.00	0.13	81.97	7031.61	560.86	122.83	549.39	0.07	2081587.48	2785186.61	N 36 43 13.214	W 107 37 17.252

7110.00	0.19	81.97	7061.61	560.94	122.84	549.47	0.22	2081587.49	2785186.69	N 36 43 13.215	W 107 37 17.251
7140.00	0.14	81.97	7091.61	561.03	122.86	549.56	0.18	2081587.50	2785186.77	N 36 43 13.215	W 107 37 17.250
7170.00	0.20	81.97	7121.61	561.12	122.87	549.64	0.22	2081587.51	2785186.86	N 36 43 13.215	W 107 37 17.249
7200.00	0.14	81.97	7151.61	561.20	122.88	549.73	0.22	2081587.52	2785186.95	N 36 43 13.215	W 107 37 17.248
7230.00	0.14	81.97	7181.61	561.28	122.89	549.80	0.00	2081587.53	2785187.02	N 36 43 13.215	W 107 37 17.247
7260.00	0.17	81.97	7211.61	561.36	122.90	549.88	0.11	2081587.55	2785187.10	N 36 43 13.215	W 107 37 17.246
7290.00	0.17	81.97	7241.61	561.44	122.91	549.97	0.00	2081587.56	2785187.18	N 36 43 13.215	W 107 37 17.245
7320.00	0.10	81.97	7271.61	561.51	122.92	550.04	0.22	2081587.57	2785187.25	N 36 43 13.215	W 107 37 17.244
7350.00	0.25	81.97	7301.60	561.61	122.94	550.13	0.50	2081587.58	2785187.35	N 36 43 13.216	W 107 37 17.243
7380.00	0.18	81.97	7331.60	561.72	122.95	550.24	0.25	2081587.60	2785187.46	N 36 43 13.216	W 107 37 17.242
7410.00	0.23	81.97	7361.60	561.83	122.97	550.35	0.18	2081587.61	2785187.57	N 36 43 13.216	W 107 37 17.240
7440.00	0.33	81.97	7391.60	561.98	122.99	550.50	0.32	2081587.63	2785187.71	N 36 43 13.216	W 107 37 17.239
7470.00	0.39	81.97	7421.60	562.17	123.01	550.68	0.22	2081587.66	2785187.90	N 36 43 13.216	W 107 37 17.236
7500.00	0.45	81.97	7451.60	562.39	123.04	550.90	0.18	2081587.69	2785188.12	N 36 43 13.217	W 107 37 17.234
7530.00	0.32	81.97	7481.60	562.59	123.07	551.10	0.43	2081587.72	2785188.32	N 36 43 13.217	W 107 37 17.231
7560.00	0.46	81.97	7511.60	562.79	123.10	551.30	0.47	2081587.75	2785188.52	N 36 43 13.217	W 107 37 17.229
7590.00	0.63	81.97	7541.60	563.08	123.14	551.59	0.57	2081587.79	2785188.80	N 36 43 13.218	W 107 37 17.225
7620.00	0.64	81.97	7571.60	563.41	123.19	551.92	0.04	2081587.84	2785189.13	N 36 43 13.218	W 107 37 17.221
7650.00	0.76	81.97	7601.60	563.78	123.24	552.28	0.39	2081587.89	2785189.49	N 36 43 13.219	W 107 37 17.217
7680.00	0.37	81.97	7631.59	564.07	123.28	552.57	1.29	2081587.93	2785189.79	N 36 43 13.219	W 107 37 17.213
7710.00	0.57	81.97	7661.59	564.32	123.31	552.82	0.65	2081587.97	2785190.03	N 36 43 13.219	W 107 37 17.210
7740.00	0.47	81.97	7691.59	564.59	123.35	553.08	0.32	2081588.00	2785190.30	N 36 43 13.220	W 107 37 17.207
7770.00	0.76	81.97	7721.59	564.91	123.40	553.40	0.97	2081588.05	2785190.62	N 36 43 13.220	W 107 37 17.203
7800.00	0.41	81.97	7751.59	565.22	123.44	553.71	1.18	2081588.09	2785190.92	N 36 43 13.221	W 107 37 17.199
7830.00	0.48	81.97	7781.59	565.45	123.47	553.94	0.25	2081588.13	2785191.15	N 36 43 13.221	W 107 37 17.196
7860.00	0.76	81.97	7811.59	565.78	123.52	554.26	0.93	2081588.17	2785191.47	N 36 43 13.221	W 107 37 17.192
7890.00	0.76	81.97	7841.58	566.17	123.57	554.65	0.00	2081588.23	2785191.87	N 36 43 13.222	W 107 37 17.187
7920.00	0.57	81.97	7871.58	566.52	123.62	555.00	0.65	2081588.28	2785192.21	N 36 43 13.222	W 107 37 17.183
7950.00	0.70	81.97	7901.58	566.85	123.67	555.32	0.43	2081588.33	2785192.54	N 36 43 13.223	W 107 37 17.179
7980.00	0.43	81.97	7931.58	567.15	123.71	555.61	0.90	2081588.37	2785192.83	N 36 43 13.223	W 107 37 17.176
8010.00	0.63	81.97	7961.58	567.42	123.75	555.89	0.68	2081588.41	2785193.10	N 36 43 13.224	W 107 37 17.172
8040.00	0.57	81.97	7991.58	567.74	123.79	556.20	0.22	2081588.45	2785193.41	N 36 43 13.224	W 107 37 17.168
8070.00	0.27	81.97	8021.57	567.95	123.82	556.41	1.00	2081588.48	2785193.63	N 36 43 13.224	W 107 37 17.166
8100.00	0.32	81.97	8051.57	568.11	123.84	556.56	0.18	2081588.50	2785193.78	N 36 43 13.224	W 107 37 17.164
Last Wireline Survey	8130.00	0.32	81.97	8081.57	568.27	123.87	0.00	2081588.53	2785193.94	N 36 43 13.225	W 107 37 17.162

N-S E-W

Survey Error Model: Topographic 3-D 19.87% Confidence 1.0000 sigma

Surveying Programme:

MD From (ft)

0.00
553.00
3422.00

MD To (ft) EOU Freq Survey Tool Type

553.00 Act-Stns Blind Drilling
3422.00 Act-Stns MWD1
8130.00 Act-Stns GPIT