



6501 S. Fiddler's Green Circle, Suite 400
Greenwood Village, CO 80111
(303) 486-3200

SUB-SURFACE SURVEY CERTIFICATION REPORT

BP America Inc.

Company

30-045-31254

May 20, 2002

Date

Lease

Barnes LS 8N

Well Name

San Juan County, New Mexico

County/State

Survey Depths

300

to

3221 ft

Type of Survey

Measurements While Drilling (MWD)

Survey Depths

3221

7860 ft

Type of Survey

SLB-GPIT Surveys

Survey Depths

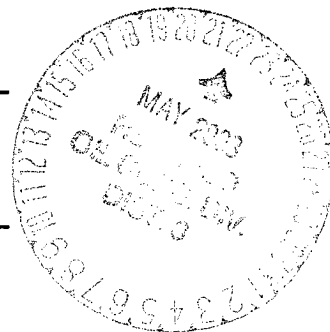
to

ft

Type of Survey

Site Supervisor

John Robb



The data submitted in this report conforms to the standards and procedures as set forth by Schlumberger. This report represents a true and correct directional wellbore survey based on original survey data obtained at the well site.

John O'Keefe

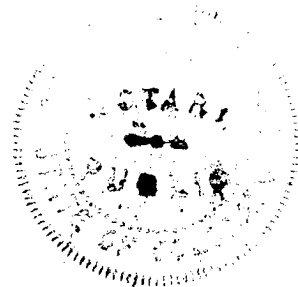
Drilling Engineer

This document has been subscribed and affirmed, or sworn before me in the county of Arapahoe in the state of Colorado, this 20th day of May, 2003.

Christine J. Nelson

My commission expires:

12-12-05



Barnes LS 8N Final Surveys Report

Report Date: May 20, 2003 Client: BP America Inc. Field: NM, San Juan County (NAD 83 WZ) Structure / Slot: BP 26-32N-11W (Barnes LS 8N) / Barnes LS 8N Well: Barnes LS 8N Borehole: Original Hole UWAPI#: Survey Name / Date: Barnes LS 8N Final Surveys / March 8, 2003 Tort / AHD / DDI / ERD ratio: 196.189° / 906.10 ft / 5.256 / 0.117 Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet Location Lat/Long: N 36 57 3.700, W 107 57 16.800 Location Grid NE YX: N 2165526.252 ftUS, E 2687638.631 ftUS Grid Convergence Angle: -0.07293744° Grid Scale Factor: 0.99991810	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 272.620° Vertical Section Origin: N 0.000 ft, E 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 6316.0 ft relative to MSL Sea Bed / Ground Level Elevation: 6302.000 ft relative to MSL Magnetic Declination: 11.011° Total Field Strength: 51686.242 nT Magnetic Dip: 63.794° Declination Date: March 08, 2003 Magnetic Declination Model: BGGM 2002 North Reference: True North Total Corr Mag North -> True North: +11.011° 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)	DLS (deg/100 ft)	Northing (ftUS)	Easting (ftUS)	Latitude	Longitude
Surface	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2165526.25	2687638.63	N 36 57 3.700	W 107 57 16.800
Begin SLB MWD Surveys	300.00	0.32	233.67	300.00	0.65	-0.50	-0.67	0.11	2165525.76	2687637.96	N 36 57 3.695	W 107 57 16.808
	362.00	1.60	300.59	361.99	1.55	-0.16	-1.56	2.43	2165526.10	2687637.07	N 36 57 3.698	W 107 57 16.819
	424.00	3.59	296.47	423.92	4.09	1.15	-4.04	3.22	2165527.40	2687634.59	N 36 57 3.711	W 107 57 16.850
	486.00	6.12	290.54	485.70	9.01	3.17	-8.88	4.15	2165529.44	2687629.76	N 36 57 3.731	W 107 57 16.909
	548.00	8.61	285.14	547.18	16.69	5.54	-16.45	4.16	2165531.82	2687622.19	N 36 57 3.755	W 107 57 17.003
	613.00	11.09	280.02	611.22	27.64	7.90	-27.31	4.04	2165534.19	2687611.34	N 36 57 3.778	W 107 57 17.136
	676.00	13.85	277.74	672.73	41.16	9.97	-40.75	4.45	2165536.28	2687597.90	N 36 57 3.799	W 107 57 17.302
	740.00	15.28	275.50	734.67	57.21	11.81	-56.73	2.40	2165538.14	2687581.92	N 36 57 3.817	W 107 57 17.499
	804.00	16.48	275.31	796.22	74.70	13.46	-74.17	1.88	2165539.81	2687564.49	N 36 57 3.833	W 107 57 17.714
	899.00	17.26	273.93	887.14	102.26	15.68	-101.65	0.92	2165542.06	2687537.01	N 36 57 3.855	W 107 57 18.052
	995.00	16.82	272.19	978.92	130.38	17.18	-129.73	0.70	2165543.60	2687508.93	N 36 57 3.870	W 107 57 18.398
	1090.00	17.72	272.57	1069.64	158.59	18.36	-157.91	0.95	2165544.81	2687480.76	N 36 57 3.881	W 107 57 18.745
	1185.00	16.56	273.40	1160.42	186.58	19.81	-185.87	1.25	2165546.29	2687452.80	N 36 57 3.896	W 107 57 19.090
	1280.00	16.94	273.13	1251.39	213.96	21.37	-213.20	0.41	2165547.89	2687425.47	N 36 57 3.911	W 107 57 19.427
	1376.00	16.18	273.17	1343.40	241.32	22.87	-240.52	0.79	2165549.43	2687398.16	N 36 57 3.926	W 107 57 19.763
	1471.00	16.84	272.76	1434.49	268.31	24.26	-267.49	0.71	2165550.85	2687371.20	N 36 57 3.940	W 107 57 20.095
	1566.00	15.92	277.24	1525.63	295.06	26.57	-294.16	1.64	2165553.19	2687344.53	N 36 57 3.963	W 107 57 20.424
	1662.00	16.46	277.33	1617.83	321.74	29.96	-320.71	0.56	2165556.62	2687317.99	N 36 57 3.996	W 107 57 20.751
	1757.00	17.34	275.83	1708.72	349.29	33.12	-348.14	1.03	2165559.81	2687290.56	N 36 57 4.027	W 107 57 21.089

1853.00	17.87	273.42	1800.23	378.30	35.45	-377.08	0.94	2165562.18	2687261.63	N 36 57 4.050	W 107 57 21.445
1949.00	16.96	271.47	1891.83	407.03	36.69	-405.78	1.13	2165563.45	2687232.93	N 36 57 4.063	W 107 57 21.799
2044.00	16.18	274.01	1982.88	434.12	37.97	-432.83	1.12	2165564.77	2687205.88	N 36 57 4.075	W 107 57 22.132
2140.00	16.79	274.24	2074.94	461.35	39.93	-460.00	0.84	2165566.76	2687178.72	N 36 57 4.095	W 107 57 22.467
2235.00	16.64	272.63	2165.92	488.67	41.57	-487.28	0.51	2165568.44	2687151.45	N 36 57 4.111	W 107 57 22.803
2333.00	17.35	273.65	2259.64	517.31	43.14	-515.88	0.79	2165570.05	2687122.85	N 36 57 4.127	W 107 57 23.155
2428.00	16.92	271.51	2350.43	545.29	44.41	-543.83	0.80	2165571.35	2687094.90	N 36 57 4.139	W 107 57 23.500
2524.00	16.64	268.87	2442.34	572.98	44.51	-571.54	0.85	2165571.48	2687067.20	N 36 57 4.140	W 107 57 23.841
2620.00	18.25	271.95	2533.92	601.73	44.75	-600.31	1.93	2165571.76	2687038.43	N 36 57 4.142	W 107 57 24.195
2683.00	18.58	273.36	2593.70	621.63	45.67	-620.19	0.88	2165572.71	2687018.56	N 36 57 4.151	W 107 57 24.440
2746.00	18.44	275.37	2653.44	641.61	47.19	-640.13	1.04	2165574.25	2686998.62	N 36 57 4.167	W 107 57 24.686
2810.00	17.70	273.38	2714.28	661.45	48.71	-659.92	1.51	2165575.80	2686978.83	N 36 57 4.182	W 107 57 24.930
2873.00	15.74	272.26	2774.62	679.58	49.61	-678.02	3.15	2165576.72	2686960.74	N 36 57 4.190	W 107 57 25.153
2934.00	15.17	272.59	2833.41	695.83	50.30	-694.26	0.95	2165577.43	2686944.50	N 36 57 4.197	W 107 57 25.353
2998.00	15.05	273.57	2895.20	712.51	51.20	-710.92	0.44	2165578.35	2686927.84	N 36 57 4.206	W 107 57 25.558
3061.00	14.59	271.91	2956.10	728.63	51.97	-727.01	0.99	2165579.14	2686911.75	N 36 57 4.214	W 107 57 25.756
3125.00	14.32	270.53	3018.08	744.60	52.31	-742.98	0.68	2165579.50	2686895.78	N 36 57 4.217	W 107 57 25.953
3221.00	12.42	270.25	3111.47	766.78	52.47	-765.18	1.98	2165579.69	2686873.58	N 36 57 4.219	W 107 57 26.227
3240.00	12.41	296.66	3130.04	770.69	53.39	-769.05	29.63	2165580.62	2686869.72	N 36 57 4.228	W 107 57 26.274
3270.00	9.88	125.65	3159.84	771.48	53.34	-769.85	74.08	2165580.57	2686868.91	N 36 57 4.227	W 107 57 26.284
3300.00	1.69	138.10	3189.66	769.01	51.51	-767.46	27.47	2165578.73	2686871.30	N 36 57 4.209	W 107 57 26.255
3330.00	10.04	269.52	3219.52	771.32	51.15	-769.79	37.42	2165578.38	2686868.97	N 36 57 4.206	W 107 57 26.283
3360.00	9.86	120.46	3249.35	771.66	49.82	-770.19	63.90	2165577.05	2686868.57	N 36 57 4.192	W 107 57 26.288
3390.00	5.07	296.40	3279.24	770.60	49.10	-769.16	49.72	2165576.33	2686869.60	N 36 57 4.185	W 107 57 26.276
3420.00	3.54	103.51	3309.21	770.90	49.47	-769.45	28.50	2165576.70	2686869.31	N 36 57 4.189	W 107 57 26.279
3450.00	5.72	61.28	3339.12	768.72	49.98	-767.23	13.01	2165577.20	2686871.53	N 36 57 4.194	W 107 57 26.252
3480.00	7.09	92.82	3368.94	765.59	50.60	-764.07	12.39	2165577.82	2686874.69	N 36 57 4.200	W 107 57 26.213
3510.00	5.29	308.26	3398.87	764.86	51.37	-763.31	39.35	2165578.59	2686875.45	N 36 57 4.208	W 107 57 26.204
3540.00	6.42	277.66	3428.72	767.65	52.45	-766.06	10.92	2165579.67	2686872.71	N 36 57 4.219	W 107 57 26.237
3570.00	5.38	276.50	3458.56	770.73	52.84	-769.12	3.50	2165580.06	2686869.65	N 36 57 4.222	W 107 57 26.275
3600.00	4.54	275.49	3488.44	773.32	53.11	-771.70	2.83	2165580.34	2686867.07	N 36 57 4.225	W 107 57 26.307
3630.00	3.90	274.94	3518.36	775.52	53.31	-773.89	2.14	2165580.54	2686864.87	N 36 57 4.227	W 107 57 26.334
3660.00	3.30	272.72	3548.30	777.40	53.44	-775.77	2.05	2165580.67	2686863.00	N 36 57 4.228	W 107 57 26.357
3690.00	2.82	271.66	3578.26	779.00	53.50	-777.37	1.61	2165580.74	2686861.40	N 36 57 4.229	W 107 57 26.377
3720.00	2.39	269.96	3608.23	780.36	53.52	-778.73	1.44	2165580.76	2686860.03	N 36 57 4.229	W 107 57 26.394
3750.00	2.13	263.68	3638.21	781.54	53.46	-779.91	1.21	2165580.70	2686858.85	N 36 57 4.228	W 107 57 26.408
3780.00	1.78	261.20	3668.19	782.55	53.33	-780.93	1.18	2165580.57	2686857.84	N 36 57 4.227	W 107 57 26.421
3810.00	1.54	261.71	3698.18	783.40	53.20	-781.78	0.83	2165580.44	2686856.98	N 36 57 4.226	W 107 57 26.431
3840.00	1.33	264.93	3728.17	784.14	53.11	-782.53	0.72	2165580.35	2686856.23	N 36 57 4.225	W 107 57 26.440
3870.00	1.16	295.45	3758.16	784.77	53.21	-783.15	2.26	2165580.45	2686855.61	N 36 57 4.226	W 107 57 26.448
3900.00	0.91	269.12	3788.16	785.28	53.34	-783.67	1.78	2165580.58	2686855.10	N 36 57 4.227	W 107 57 26.454

Last SLB MWD Survey

Begin SLB GPIT Surveys

3930.00	1.29	284.48	3818.15	785.85	53.42	-784.23	1.59	2165580.66	2686854.53	N 36 57 4.228	W 107 57 26.461
3960.00	0.96	310.49	3848.14	786.38	53.66	-784.75	2.01	2165580.91	2686854.02	N 36 57 4.230	W 107 57 26.468
3990.00	0.68	279.60	3878.14	786.76	53.86	-785.12	1.70	2165581.10	2686853.65	N 36 57 4.232	W 107 57 26.472
4020.00	1.05	288.22	3908.14	787.20	53.97	-785.55	1.28	2165581.22	2686853.21	N 36 57 4.234	W 107 57 26.478
4050.00	0.97	318.85	3938.13	787.64	54.25	-785.98	1.79	2165581.50	2686852.79	N 36 57 4.236	W 107 57 26.483
4080.00	0.42	315.14	3968.13	787.89	54.52	-786.22	1.84	2165581.77	2686852.54	N 36 57 4.239	W 107 57 26.486
4110.00	0.69	283.66	3998.13	788.15	54.64	-786.48	1.34	2165581.89	2686852.29	N 36 57 4.240	W 107 57 26.489
4140.00	0.87	313.45	4028.13	788.50	54.84	-786.82	1.46	2165582.09	2686851.95	N 36 57 4.242	W 107 57 26.493
4170.00	0.57	4.34	4058.12	788.67	55.15	-786.98	2.26	2165582.39	2686851.79	N 36 57 4.245	W 107 57 26.495
4200.00	0.16	5.07	4088.12	788.67	55.34	-786.96	1.37	2165582.59	2686851.81	N 36 57 4.247	W 107 57 26.495
4230.00	0.52	304.29	4118.12	788.78	55.46	-787.07	1.53	2165582.71	2686851.70	N 36 57 4.248	W 107 57 26.496
4260.00	0.70	330.62	4148.12	788.99	55.69	-787.27	1.09	2165582.94	2686851.50	N 36 57 4.251	W 107 57 26.499
4290.00	0.74	359.28	4178.12	789.10	56.05	-787.36	1.20	2165583.30	2686851.41	N 36 57 4.254	W 107 57 26.500
4320.00	0.59	13.26	4208.12	789.08	56.39	-787.33	0.74	2165583.64	2686851.44	N 36 57 4.257	W 107 57 26.499
4350.00	0.34	2.38	4238.12	789.06	56.63	-787.29	0.90	2165583.88	2686851.48	N 36 57 4.260	W 107 57 26.499
4380.00	0.30	330.42	4268.12	789.10	56.79	-787.32	0.60	2165584.04	2686851.45	N 36 57 4.261	W 107 57 26.499
4410.00	0.50	320.49	4298.12	789.23	56.96	-787.45	0.69	2165584.21	2686851.32	N 36 57 4.263	W 107 57 26.501
4440.00	0.76	333.73	4328.11	789.41	57.24	-787.62	0.98	2165584.48	2686851.15	N 36 57 4.266	W 107 57 26.503
4470.00	0.80	350.29	4358.11	789.55	57.62	-787.74	0.76	2165584.87	2686851.03	N 36 57 4.270	W 107 57 26.505
4500.00	0.77	10.95	4388.11	789.57	58.02	-787.74	0.94	2165585.27	2686851.03	N 36 57 4.274	W 107 57 26.505
4530.00	0.66	26.40	4418.11	789.47	58.37	-787.62	0.73	2165585.62	2686851.15	N 36 57 4.277	W 107 57 26.503
4560.00	0.46	40.23	4448.10	789.32	58.62	-787.47	0.79	2165585.87	2686851.31	N 36 57 4.280	W 107 57 26.501
4590.00	0.31	30.38	4478.10	789.21	58.78	-787.35	0.57	2165586.03	2686851.42	N 36 57 4.281	W 107 57 26.500
4620.00	0.11	352.02	4508.10	789.18	58.88	-787.31	0.76	2165586.13	2686851.46	N 36 57 4.282	W 107 57 26.499
4650.00	0.23	317.72	4538.10	789.23	58.96	-787.36	0.50	2165586.21	2686851.42	N 36 57 4.283	W 107 57 26.500
4680.00	0.43	337.10	4568.10	789.32	59.11	-787.44	0.76	2165586.35	2686851.33	N 36 57 4.284	W 107 57 26.501
4710.00	0.56	344.62	4598.10	789.41	59.35	-787.52	0.48	2165586.60	2686851.25	N 36 57 4.287	W 107 57 26.502
4740.00	0.62	351.21	4628.10	789.49	59.65	-787.59	0.31	2165586.90	2686851.19	N 36 57 4.290	W 107 57 26.503
4770.00	0.64	356.99	4658.10	789.54	59.98	-787.62	0.22	2165587.23	2686851.15	N 36 57 4.293	W 107 57 26.503
4800.00	0.66	2.46	4688.10	789.56	60.32	-787.62	0.22	2165587.57	2686851.15	N 36 57 4.296	W 107 57 26.503
4830.00	0.66	6.97	4718.09	789.54	60.67	-787.59	0.18	2165587.92	2686851.18	N 36 57 4.300	W 107 57 26.502
4860.00	0.70	9.98	4748.09	789.51	61.02	-787.54	0.18	2165588.27	2686851.23	N 36 57 4.303	W 107 57 26.502
4890.00	0.69	16.70	4778.09	789.44	61.37	-787.46	0.27	2165588.62	2686851.32	N 36 57 4.307	W 107 57 26.501
4920.00	0.72	17.85	4808.09	789.35	61.72	-787.35	0.12	2165588.97	2686851.43	N 36 57 4.310	W 107 57 26.500
4950.00	0.73	19.58	4838.09	789.24	62.08	-787.23	0.08	2165589.33	2686851.55	N 36 57 4.314	W 107 57 26.498
4980.00	0.71	18.69	4868.08	789.14	62.44	-787.10	0.06	2165589.69	2686851.67	N 36 57 4.317	W 107 57 26.497
5010.00	0.78	25.91	4898.08	789.00	62.80	-786.96	0.38	2165590.05	2686851.82	N 36 57 4.321	W 107 57 26.495
5040.00	0.70	17.05	4928.08	788.88	63.16	-786.81	0.46	2165590.40	2686851.97	N 36 57 4.324	W 107 57 26.493
5070.00	0.65	15.90	4958.08	788.79	63.49	-786.71	0.17	2165590.74	2686852.07	N 36 57 4.328	W 107 57 26.492
5100.00	0.81	24.80	4988.07	788.67	63.85	-786.58	0.66	2165591.10	2686852.20	N 36 57 4.331	W 107 57 26.490
5130.00	0.91	32.25	5018.07	788.48	64.25	-786.36	0.49	2165591.49	2686852.42	N 36 57 4.335	W 107 57 26.488
5160.00	0.94	35.47	5048.07	788.22	64.65	-786.09	0.20	2165591.89	2686852.69	N 36 57 4.339	W 107 57 26.484

5190.00	0.96	36.37	5078.06	787.95	65.05	-785.80	0.07	2165592.30	2686852.98	N 36 57 4.343	W 107 57 26.481
5220.00	0.97	39.60	5108.06	787.66	65.45	-785.49	0.19	2165592.69	2686853.29	N 36 57 4.347	W 107 57 26.477
5250.00	0.99	34.92	5138.05	787.37	65.86	-785.18	0.28	2165593.10	2686853.60	N 36 57 4.351	W 107 57 26.479
5280.00	0.98	37.81	5168.05	787.08	66.27	-784.87	0.17	2165593.52	2686853.91	N 36 57 4.355	W 107 57 26.469
5310.00	0.88	42.69	5198.05	786.78	66.64	-784.56	0.43	2165593.89	2686854.22	N 36 57 4.359	W 107 57 26.465
5340.00	0.63	34.24	5228.04	786.55	66.95	-784.31	0.91	2165594.19	2686854.47	N 36 57 4.362	W 107 57 26.462
5370.00	0.76	10.40	5258.04	786.44	67.28	-784.18	1.04	2165594.52	2686854.60	N 36 57 4.365	W 107 57 26.461
5400.00	1.27	3.98	5288.04	786.40	67.80	-784.12	1.74	2165595.05	2686854.66	N 36 57 4.370	W 107 57 26.460
5430.00	1.77	17.48	5318.03	786.28	68.58	-783.96	2.04	2165595.82	2686854.82	N 36 57 4.378	W 107 57 26.458
5460.00	1.71	8.74	5348.01	786.11	69.46	-783.75	0.90	2165596.71	2686855.03	N 36 57 4.387	W 107 57 26.455
5490.00	2.17	7.49	5377.99	786.01	70.47	-783.61	1.52	2165597.71	2686855.18	N 36 57 4.397	W 107 57 26.454
5520.00	1.81	9.46	5407.98	785.91	71.50	-783.46	1.21	2165598.74	2686855.33	N 36 57 4.407	W 107 57 26.452
5550.00	1.88	7.06	5437.96	785.81	72.45	-783.32	0.34	2165599.70	2686855.47	N 36 57 4.416	W 107 57 26.450
5580.00	1.92	10.05	5467.94	785.71	73.43	-783.17	0.36	2165600.68	2686855.62	N 36 57 4.426	W 107 57 26.448
5610.00	1.61	14.15	5497.93	785.56	74.34	-782.98	1.11	2165601.58	2686855.81	N 36 57 4.435	W 107 57 26.446
5640.00	1.32	10.12	5527.92	785.43	75.09	-782.82	1.00	2165602.33	2686855.97	N 36 57 4.442	W 107 57 26.444
5670.00	1.09	0.96	5557.91	785.40	75.71	-782.75	1.01	2165602.95	2686856.04	N 36 57 4.449	W 107 57 26.443
5700.00	0.97	355.22	5587.91	785.44	76.25	-782.77	0.51	2165603.49	2686856.02	N 36 57 4.454	W 107 57 26.443
5730.00	0.92	355.98	5617.90	785.50	76.75	-782.81	0.18	2165603.99	2686855.99	N 36 57 4.459	W 107 57 26.444
5760.00	0.73	1.65	5647.90	785.53	77.18	-782.82	0.69	2165604.42	2686855.98	N 36 57 4.463	W 107 57 26.444
5790.00	0.66	356.27	5677.90	785.55	77.54	-782.83	0.32	2165604.78	2686855.97	N 36 57 4.467	W 107 57 26.444
5820.00	0.68	356.65	5707.90	785.59	77.89	-782.85	0.07	2165605.13	2686855.95	N 36 57 4.470	W 107 57 26.444
5850.00	0.71	0.88	5737.89	785.61	78.26	-782.85	0.19	2165605.50	2686855.94	N 36 57 4.474	W 107 57 26.444
5880.00	0.86	5.52	5767.89	785.61	78.67	-782.83	0.56	2165605.91	2686855.97	N 36 57 4.478	W 107 57 26.444
5910.00	1.05	3.27	5797.89	785.59	79.16	-782.79	0.62	2165606.40	2686856.01	N 36 57 4.483	W 107 57 26.444
5940.00	1.07	358.61	5827.88	785.61	79.72	-782.78	0.30	2165606.96	2686856.01	N 36 57 4.488	W 107 57 26.444
5970.00	1.18	352.73	5857.88	785.68	80.31	-782.83	0.53	2165607.55	2686855.97	N 36 57 4.494	W 107 57 26.444
6000.00	1.18	346.63	5887.87	785.82	80.91	-782.94	0.42	2165608.16	2686855.86	N 36 57 4.500	W 107 57 26.445
6030.00	1.12	338.24	5917.86	786.03	81.49	-783.12	0.60	2165608.73	2686855.68	N 36 57 4.506	W 107 57 26.448
6060.00	1.17	328.59	5947.86	786.32	82.02	-783.39	0.66	2165609.26	2686855.41	N 36 57 4.511	W 107 57 26.451
6090.00	1.30	324.83	5977.85	786.70	82.56	-783.75	0.50	2165609.81	2686855.06	N 36 57 4.516	W 107 57 26.455
6120.00	1.46	325.23	6007.84	787.14	83.15	-784.16	0.52	2165610.40	2686854.64	N 36 57 4.522	W 107 57 26.460
6150.00	1.43	325.91	6037.83	787.60	83.78	-784.59	0.12	2165611.02	2686854.22	N 36 57 4.528	W 107 57 26.466
6180.00	1.55	325.97	6067.82	788.06	84.42	-785.02	0.40	2165611.66	2686853.78	N 36 57 4.535	W 107 57 26.471
6210.00	1.47	328.06	6097.81	788.52	85.08	-785.45	0.31	2165612.33	2686853.35	N 36 57 4.541	W 107 57 26.476
6240.00	1.45	332.63	6127.80	788.93	85.75	-785.83	0.39	2165612.99	2686852.98	N 36 57 4.548	W 107 57 26.481
6270.00	1.56	333.86	6157.79	789.31	86.45	-786.18	0.37	2165613.70	2686852.62	N 36 57 4.555	W 107 57 26.485
6300.00	1.71	335.19	6187.78	789.72	87.22	-786.55	0.52	2165614.47	2686852.26	N 36 57 4.562	W 107 57 26.490
6330.00	1.33	335.42	6217.77	790.08	87.94	-786.88	1.27	2165615.19	2686851.93	N 36 57 4.569	W 107 57 26.494
6360.00	1.19	327.62	6247.76	790.42	88.52	-787.19	0.74	2165615.77	2686851.62	N 36 57 4.575	W 107 57 26.498
6390.00	1.20	316.42	6277.76	790.82	89.01	-787.58	0.78	2165616.26	2686851.23	N 36 57 4.580	W 107 57 26.503
6420.00	1.48	311.40	6307.75	791.35	89.49	-788.08	1.01	2165616.74	2686850.73	N 36 57 4.585	W 107 57 26.509

6450.00	1.85	311.92	6337.74	792.03	90.08	-788.74	1.25	2165617.32	2686850.08	N 36 57 4.591	W 107 57 26.517
6480.00	1.94	325.13	6367.72	792.71	90.82	-789.39	1.48	2165618.07	2686849.43	N 36 57 4.598	W 107 57 26.525
6510.00	1.73	314.11	6397.70	793.36	91.55	-790.00	1.37	2165618.80	2686848.81	N 36 57 4.605	W 107 57 26.532
6540.00	2.26	312.32	6427.69	794.16	92.26	-790.77	1.78	2165619.51	2686848.05	N 36 57 4.612	W 107 57 26.542
6570.00	2.22	310.13	6457.66	795.07	93.03	-791.65	0.31	2165620.29	2686847.17	N 36 57 4.620	W 107 57 26.553
6600.00	2.36	313.20	6487.64	796.00	93.83	-792.54	0.61	2165621.08	2686846.28	N 36 57 4.628	W 107 57 26.564
6630.00	2.68	314.12	6517.61	797.00	94.74	-793.49	1.09	2165622.00	2686845.32	N 36 57 4.637	W 107 57 26.575
6660.00	2.97	318.33	6547.57	798.06	95.81	-794.51	1.17	2165623.07	2686844.31	N 36 57 4.647	W 107 57 26.588
6690.00	3.06	321.62	6577.53	799.13	97.02	-795.53	0.65	2165624.27	2686843.29	N 36 57 4.659	W 107 57 26.601
6720.00	3.03	322.97	6607.49	800.16	98.28	-796.50	0.25	2165625.54	2686842.32	N 36 57 4.672	W 107 57 26.613
6750.00	2.95	322.77	6637.45	801.16	99.52	-797.45	0.29	2165626.78	2686841.38	N 36 57 4.684	W 107 57 26.624
6780.00	2.70	322.30	6667.41	802.11	100.70	-798.34	0.82	2165627.96	2686840.48	N 36 57 4.696	W 107 57 26.635
6810.00	2.29	327.24	6697.38	802.92	101.76	-799.10	1.54	2165629.02	2686839.73	N 36 57 4.706	W 107 57 26.645
6840.00	2.48	323.83	6727.36	803.67	102.79	-799.81	0.78	2165630.05	2686839.02	N 36 57 4.716	W 107 57 26.653
6870.00	2.23	320.56	6757.33	804.47	103.77	-800.56	0.94	2165631.03	2686838.27	N 36 57 4.726	W 107 57 26.663
6900.00	2.21	321.14	6787.31	805.24	104.67	-801.30	0.11	2165631.93	2686837.54	N 36 57 4.735	W 107 57 26.672
6930.00	2.12	321.51	6817.29	805.99	105.55	-802.01	0.29	2165632.82	2686836.83	N 36 57 4.744	W 107 57 26.680
6960.00	1.81	325.15	6847.27	806.64	106.37	-802.62	1.13	2165633.64	2686836.21	N 36 57 4.752	W 107 57 26.688
6990.00	2.25	324.77	6877.25	807.29	107.24	-803.23	1.47	2165634.51	2686835.60	N 36 57 4.760	W 107 57 26.695
7020.00	1.98	316.40	6907.23	808.03	108.10	-803.93	1.37	2165635.37	2686834.91	N 36 57 4.769	W 107 57 26.704
7050.00	2.10	313.75	6937.21	808.82	108.85	-804.68	0.53	2165636.12	2686834.16	N 36 57 4.776	W 107 57 26.713
7080.00	2.06	315.48	6967.19	809.63	109.62	-805.46	0.26	2165636.89	2686833.38	N 36 57 4.784	W 107 57 26.723
7110.00	2.10	315.02	6997.17	810.43	110.39	-806.22	0.15	2165637.66	2686832.62	N 36 57 4.791	W 107 57 26.732
7140.00	2.01	316.24	7027.15	811.21	111.16	-806.98	0.34	2165638.43	2686831.87	N 36 57 4.799	W 107 57 26.742
7170.00	1.89	318.29	7057.14	811.94	111.91	-807.67	0.45	2165639.18	2686831.17	N 36 57 4.806	W 107 57 26.750
7200.00	2.23	321.57	7087.12	812.67	112.74	-808.36	1.20	2165640.01	2686830.48	N 36 57 4.815	W 107 57 26.759
7230.00	1.74	317.96	7117.10	813.37	113.53	-809.03	1.68	2165640.81	2686829.81	N 36 57 4.822	W 107 57 26.767
7260.00	2.16	317.68	7147.08	814.09	114.29	-809.72	1.37	2165641.56	2686829.13	N 36 57 4.830	W 107 57 26.775
7290.00	1.77	315.97	7177.06	814.83	115.04	-810.42	1.30	2165642.31	2686828.43	N 36 57 4.837	W 107 57 26.784
7320.00	2.24	322.42	7207.05	815.54	115.84	-811.10	1.75	2165643.11	2686827.75	N 36 57 4.845	W 107 57 26.792
7350.00	1.90	311.52	7237.03	816.31	116.63	-811.83	1.73	2165643.91	2686827.02	N 36 57 4.853	W 107 57 26.801
7380.00	1.61	310.33	7267.01	817.03	117.24	-812.52	0.99	2165644.51	2686826.33	N 36 57 4.859	W 107 57 26.810
7410.00	2.09	313.71	7297.00	817.78	117.89	-813.24	1.64	2165645.16	2686825.61	N 36 57 4.865	W 107 57 26.819
7440.00	1.51	306.47	7326.98	818.52	118.50	-813.95	2.07	2165645.78	2686824.90	N 36 57 4.872	W 107 57 26.828
7470.00	1.91	313.62	7356.97	819.23	119.08	-814.63	1.51	2165646.36	2686824.22	N 36 57 4.877	W 107 57 26.836
7500.00	1.46	313.21	7386.95	819.89	119.69	-815.27	1.51	2165646.97	2686823.58	N 36 57 4.883	W 107 57 26.844
7530.00	1.93	311.23	7416.94	820.58	120.28	-815.93	1.57	2165647.56	2686822.92	N 36 57 4.889	W 107 57 26.852
7560.00	1.51	326.85	7446.93	821.20	120.94	-816.53	2.08	2165648.23	2686822.33	N 36 57 4.896	W 107 57 26.859
7590.00	1.58	309.00	7476.92	821.77	121.54	-817.06	1.61	2165648.82	2686821.79	N 36 57 4.902	W 107 57 26.866
7620.00	1.72	324.00	7506.90	822.38	122.16	-817.65	1.51	2165649.44	2686821.21	N 36 57 4.908	W 107 57 26.873
7650.00	1.11	312.40	7536.90	822.88	122.72	-818.13	2.23	2165650.00	2686820.73	N 36 57 4.913	W 107 57 26.879

7680.00	1.36	305.30	7566.89	823.40	123.12	-818.63	0.97	2165650.40	2686820.23	N 36 57 4.917	W 107 57 26.885
7710.00	1.48	327.73	7596.88	823.92	123.65	-819.13	1.88	2165650.93	2686819.73	N 36 57 4.922	W 107 57 26.891
7740.00	0.91	316.05	7626.87	824.32	124.15	-819.50	2.05	2165651.43	2686819.36	N 36 57 4.927	W 107 57 26.896
7770.00	0.89	309.10	7656.87	824.68	124.46	-819.84	0.37	2165651.75	2686819.02	N 36 57 4.931	W 107 57 26.900
7800.00	1.02	334.91	7686.87	824.99	124.85	-820.14	1.49	2165652.14	2686818.72	N 36 57 4.934	W 107 57 26.904
7830.00	1.32	316.68	7716.86	825.36	125.35	-820.49	1.58	2165652.63	2686818.37	N 36 57 4.939	W 107 57 26.908
7860.00	1.12	314.17	7746.85	825.83	125.80	-820.94	0.69	2165653.09	2686817.92	N 36 57 4.944	W 107 57 26.914

Last SLB GPIT Survey/ITD

Survey Type: Definitive Survey

Survey Error Model: SLB ISCWSA 3-D 95.00% Confidence 2.7955 sigma

Surveying Prog:

<u>MD From (ft)</u>	<u>MD To (ft)</u>	<u>EOU Freq</u>	<u>Survey Tool Type</u>
0.00	3221.00	Act-Stns	SLB_MWD-STD
3221.00	7860.00	Act-Stns	SLB_GPIT

**Italicized stations are NOT used in position calculations.*