

Schlumberger

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

Surface: 2045/N 2120/E
BNL: 2412/N 1458/E

SUB-SURFACE SURVEY CERTIFICATION REPORT

BP America Inc.

Company

30-045-31195

April 7, 2003

Date

Lease

Ridenour GC 1M

Well Name

San Juan Co., New Mexico

County/State

Survey Depths

180

to

2845 ft

Type of Survey

Measurement While Drilling Surveys

Survey Depths

2935

7275 ft

Type of Survey

GPIT Surveys

Survey Depths

to

ft

Type of Survey

Site Supervisor

G. Johnson

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 9th day of April, 2003.

My commission expires:

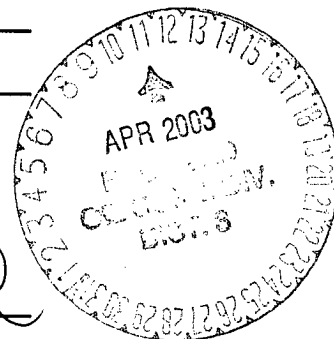
4/4/04

DAMONA BACHMANN

Notary Public

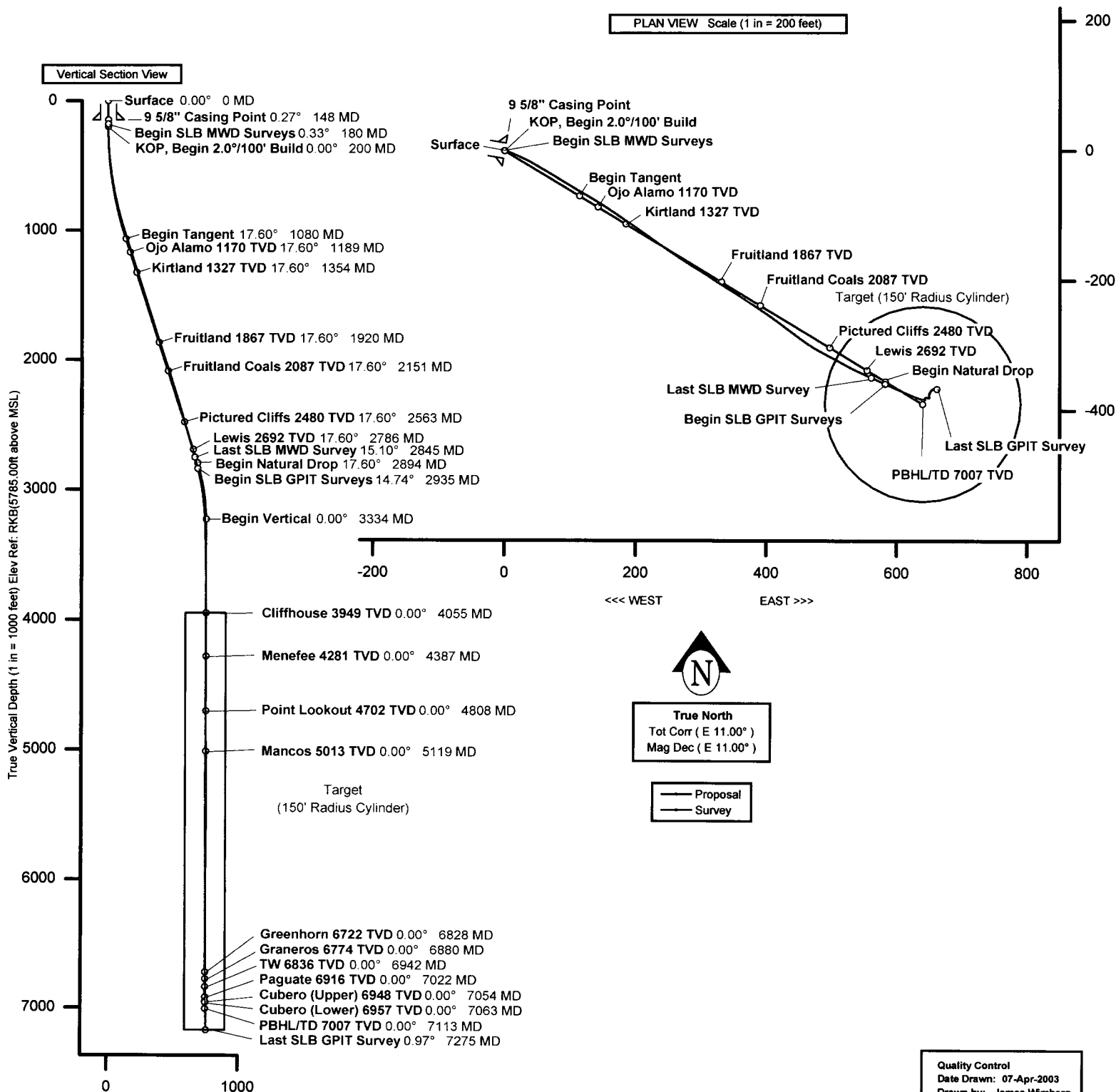
State of Colorado

My Commission Expires on 04/04/2004





WELL	FIELD	RIG
Ridenour Gas Com 1M	San Juan County, New Mexico	Aztec 184
Magnetic Parameters Model: BGGM 2002 Dip: 63.756° Mag Dec: 10.998° Date: February 03, 2003 FS: 51567.1 nT	Surface Location Lat: N36 54 0.792 Lon: W107 56 22.596 North: 2147023.69 ftUS East: 2692017.51 ftUS Grid Conv: -0.0638° Scale Fact: 0.9999	Plan# : Rev0 jok 20-Sep-02 Slot: Ridenour Gas Com 1M Elev Ref: RKB(5785.00ft above MSL) Date Drawn: 10:09:10AM 07-Apr-2003



Quality Control
 Date Drawn: 07-Apr-2003
 Drawn by: James Wimberg
 Checked by: John O'Keefe
 Client OK: _____

Survey Report - Geodetic

Report Date: 07-Apr-2003		Survey / DLS Computation Method: Minimum Curvature / Lubinski	
Client: BP America Inc		Vertical Section Azimuth: 121.360°	
Field: NM, San Juan County (NAD 83 WZ)		Vertical Section Origin: N 0.000 ft, E 0.000 ft	
Structure / Slot: BP 13 31N 11W (Ridenour Gas Com 1M) No Certified Plat.. Have Lat-Long		TWD Reference Datum: RKB	
Well: Ridenour Gas Com 1M		TVD Reference Elevation: 5785.000 ft relative to MSL	
Borehole: Original Hole		Sea Bed / Ground Level Elevation: 5771.000 ft relative to MSL	
UWI/API#:		Magnetic Declination: +10.998°	
Survey Name / Date: Ridenour GC 1M Final Surveys / April 2, 2003		Total Field Strength: 51567.129 nT	
Tort / AHD / DDI / ERD ratio: 124.110° / 786.50 ft / 4.996 / 0.110		Magnetic Dip: 63.756°	
Grid Coordinate System: NAD83 New Mexico State Planes, Western Zone, US Feet		Declination Date: February 03, 2003	
Location Lat/Long: N 36 54 0.792, W 107 56 22.596		Magnetic Declination Model: BGGM 2002	
Location Grid N/E Y/X: N 2147023.695 ftUS, E 2692017.508 ftUS		North Reference: True North	
Grid Convergence Angle: -0.06381103°		Total Corr Mag North -> True North: +10.998°	
Grid Scale Factor: 0.99991777		Local Coordinates Referenced To: Well Head	

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
Surface	0.00	0.00	99.75	0.00	0.00	0.00	0.00	0.00	2147023.70	2692017.51	N 36 54 0.792	W 107 56 22.596
Begin SLB MWD Surveys	180.00	0.33	99.75	180.00	0.48	-0.09	0.51	0.18	2147023.61	2692018.02	N 36 54 0.791	W 107 56 22.590
	211.00	0.35	97.60	211.00	0.65	-0.12	0.69	0.08	2147023.58	2692018.20	N 36 54 0.791	W 107 56 22.587
	242.00	0.62	90.25	242.00	0.88	-0.13	0.95	0.89	2147023.57	2692018.46	N 36 54 0.791	W 107 56 22.584
	273.00	1.27	100.97	272.99	1.35	-0.19	1.46	2.16	2147023.50	2692018.97	N 36 54 0.790	W 107 56 22.578
	304.00	1.85	101.14	303.98	2.14	-0.36	2.29	1.87	2147023.34	2692019.79	N 36 54 0.788	W 107 56 22.568
	333.00	2.58	105.22	332.96	3.21	-0.62	3.38	2.57	2147023.07	2692020.88	N 36 54 0.786	W 107 56 22.554
	364.00	3.45	109.32	363.92	4.79	-1.11	4.93	2.89	2147022.58	2692022.44	N 36 54 0.781	W 107 56 22.535
	396.00	4.30	111.75	395.84	6.91	-1.87	6.95	2.70	2147021.81	2692024.46	N 36 54 0.773	W 107 56 22.510
	426.00	5.25	113.28	425.74	9.38	-2.83	9.26	3.19	2147020.85	2692026.76	N 36 54 0.764	W 107 56 22.482
	457.00	6.14	113.76	456.59	12.43	-4.06	12.08	2.88	2147019.62	2692029.58	N 36 54 0.752	W 107 56 22.447
	489.00	6.85	114.64	488.38	16.02	-5.55	15.38	2.24	2147018.13	2692032.88	N 36 54 0.737	W 107 56 22.407
	521.00	7.55	114.79	520.13	20.00	-7.22	19.02	2.19	2147016.45	2692036.52	N 36 54 0.721	W 107 56 22.362
	552.00	7.99	114.84	550.84	24.17	-8.98	22.83	1.42	2147014.69	2692040.32	N 36 54 0.703	W 107 56 22.315
	584.00	8.39	114.14	582.52	28.69	-10.87	26.98	1.29	2147012.79	2692044.47	N 36 54 0.685	W 107 56 22.264
	616.00	8.94	115.29	614.15	33.48	-12.89	31.35	1.80	2147010.77	2692048.85	N 36 54 0.665	W 107 56 22.210
	648.00	9.51	116.79	645.74	38.59	-15.14	35.96	1.93	2147008.51	2692053.45	N 36 54 0.642	W 107 56 22.153
	680.00	10.22	119.69	677.26	44.06	-17.74	40.79	2.71	2147005.91	2692058.27	N 36 54 0.617	W 107 56 22.094
	711.00	11.07	120.71	707.73	49.79	-20.62	45.74	2.81	2147003.02	2692063.22	N 36 54 0.588	W 107 56 22.033

743.00	11.91	120.46	739.09	56.16	-23.86	51.22	2.63	2146999.78	2692068.70	N 36 54 0.556	W 107 56 21.965
775.00	12.44	120.12	770.37	62.91	-27.27	57.05	1.67	2146996.37	2692074.52	N 36 54 0.522	W 107 56 21.894
805.00	13.05	120.64	799.63	69.52	-30.62	62.76	2.07	2146993.01	2692080.23	N 36 54 0.489	W 107 56 21.823
837.00	13.59	121.17	830.77	76.90	-34.40	69.09	1.73	2146989.22	2692086.55	N 36 54 0.452	W 107 56 21.745
869.00	14.41	121.90	861.82	84.64	-38.45	75.68	2.62	2146985.16	2692093.14	N 36 54 0.412	W 107 56 21.664
901.00	15.09	121.84	892.76	92.79	-42.75	82.60	2.13	2146980.85	2692100.06	N 36 54 0.369	W 107 56 21.579
933.00	15.71	121.75	923.61	101.28	-47.23	89.82	1.94	2146976.37	2692107.27	N 36 54 0.325	W 107 56 21.490
965.00	16.35	121.40	954.37	110.12	-51.86	97.35	2.02	2146971.73	2692114.80	N 36 54 0.279	W 107 56 21.397
996.00	16.79	121.23	984.08	118.96	-56.45	104.91	1.43	2146967.13	2692122.34	N 36 54 0.234	W 107 56 21.304
1090.00	17.18	120.12	1073.98	146.42	-70.46	128.52	0.54	2146953.10	2692145.94	N 36 54 0.095	W 107 56 21.014
1184.00	17.36	123.15	1163.75	174.31	-85.09	152.27	0.98	2146938.44	2692169.67	N 36 53 59.951	W 107 56 20.721
1280.00	17.33	124.73	1255.38	202.90	-101.07	176.02	0.49	2146922.44	2692193.40	N 36 53 59.793	W 107 56 20.429
1374.00	17.51	124.77	1345.07	230.99	-117.11	199.14	0.19	2146906.37	2692216.50	N 36 53 59.634	W 107 56 20.144
1470.00	17.42	125.84	1436.64	259.74	-133.76	222.65	0.35	2146889.70	2692239.99	N 36 53 59.469	W 107 56 19.855
1565.00	17.61	124.90	1527.24	288.26	-150.31	245.96	0.36	2146873.12	2692263.28	N 36 53 59.306	W 107 56 19.568
1660.00	17.27	123.84	1617.87	316.69	-166.39	269.46	0.49	2146857.02	2692286.76	N 36 53 59.147	W 107 56 19.279
1755.00	17.30	121.28	1708.58	344.90	-181.57	293.25	0.80	2146841.81	2692310.53	N 36 53 58.997	W 107 56 18.986
1850.00	17.46	123.73	1799.25	373.27	-196.82	317.17	0.79	2146826.54	2692334.43	N 36 53 58.846	W 107 56 18.691
1945.00	17.63	121.47	1889.83	401.89	-212.25	341.30	0.74	2146811.09	2692358.54	N 36 53 58.693	W 107 56 18.394
2040.00	17.82	123.47	1980.32	430.81	-227.77	365.69	0.67	2146795.53	2692382.92	N 36 53 58.540	W 107 56 18.094
2135.00	18.27	124.23	2070.65	460.20	-244.17	390.13	0.53	2146779.12	2692407.33	N 36 53 58.378	W 107 56 17.793
2230.00	17.07	126.20	2161.16	488.97	-260.78	413.69	1.41	2146762.48	2692430.88	N 36 53 58.214	W 107 56 17.503
2324.00	17.79	127.25	2250.85	517.00	-277.62	436.26	0.84	2146745.61	2692453.42	N 36 53 58.047	W 107 56 17.225
2419.00	16.19	125.82	2341.70	544.65	-294.15	458.55	1.74	2146729.05	2692475.69	N 36 53 57.883	W 107 56 16.951
2515.00	15.46	118.88	2434.07	570.77	-308.17	480.61	2.11	2146715.02	2692497.73	N 36 53 57.745	W 107 56 16.679
2577.00	16.11	117.98	2493.73	587.62	-316.20	495.44	1.12	2146706.97	2692512.56	N 36 53 57.666	W 107 56 16.497
2672.00	16.20	118.99	2584.98	614.02	-328.80	518.67	0.31	2146694.34	2692535.77	N 36 53 57.541	W 107 56 16.211
2735.00	16.02	116.07	2645.51	631.45	-336.88	534.17	1.32	2146686.25	2692551.26	N 36 53 57.461	W 107 56 16.020
2798.00	15.99	114.48	2706.06	648.72	-344.30	549.88	0.70	2146678.81	2692566.95	N 36 53 57.388	W 107 56 15.826
2845.00	15.10	114.06	2751.34	661.22	-349.48	561.36	1.91	2146673.62	2692578.43	N 36 53 57.336	W 107 56 15.685
2935.00	14.74	114.67	2838.31	684.22	-359.03	582.47	0.44	2146664.04	2692599.52	N 36 53 57.242	W 107 56 15.425
2955.00	14.04	114.88	2857.68	689.16	-361.12	586.98	3.51	2146661.95	2692604.03	N 36 53 57.221	W 107 56 15.370
2975.00	13.47	114.69	2877.11	693.88	-363.11	591.30	2.86	2146659.96	2692608.35	N 36 53 57.202	W 107 56 15.316
2995.00	12.67	114.86	2896.59	698.38	-365.01	595.40	4.00	2146658.06	2692612.45	N 36 53 57.183	W 107 56 15.266
3015.00	12.02	114.89	2916.13	702.63	-366.80	599.28	3.25	2146656.25	2692616.33	N 36 53 57.165	W 107 56 15.218
3035.00	11.26	114.14	2935.72	706.63	-368.48	602.95	3.87	2146654.58	2692620.00	N 36 53 57.149	W 107 56 15.173
3055.00	10.50	114.23	2955.36	710.38	-370.03	606.40	3.80	2146653.02	2692623.44	N 36 53 57.133	W 107 56 15.131

Last SLB MWD Survey
Begin SLB GPIT Surveys

3075.00	9.90	114.01	2975.04	713.89	-371.47	609.63	3.01	2146651.57	2692626.67	N 36 53 57.119	W 107 56 15.091
3095.00	9.23	113.78	2994.76	717.19	-372.82	612.67	3.36	2146650.22	2692629.71	N 36 53 57.106	W 107 56 15.053
3115.00	8.45	113.53	3014.53	720.23	-374.05	615.48	3.90	2146648.99	2692632.52	N 36 53 57.093	W 107 56 15.019
3135.00	7.80	113.30	3034.32	723.03	-375.18	618.08	3.25	2146647.86	2692635.11	N 36 53 57.082	W 107 56 14.987
3155.00	7.10	112.98	3054.16	725.60	-376.20	620.46	3.51	2146646.84	2692637.50	N 36 53 57.072	W 107 56 14.957
3175.00	6.48	112.80	3074.02	727.94	-377.12	622.64	3.10	2146645.92	2692639.67	N 36 53 57.063	W 107 56 14.931
3195.00	5.86	112.40	3093.90	730.06	-377.94	624.62	3.11	2146645.09	2692641.66	N 36 53 57.055	W 107 56 14.906
3215.00	5.26	111.83	3113.81	731.97	-378.67	626.42	3.01	2146644.36	2692643.45	N 36 53 57.048	W 107 56 14.884
3235.00	4.78	111.92	3133.73	733.70	-379.32	628.04	2.40	2146643.70	2692645.07	N 36 53 57.041	W 107 56 14.864
3255.00	4.29	111.13	3153.67	735.26	-379.91	629.51	2.47	2146643.12	2692646.54	N 36 53 57.036	W 107 56 14.846
3275.00	3.85	110.71	3173.62	736.65	-380.41	630.84	2.21	2146642.61	2692647.87	N 36 53 57.031	W 107 56 14.830
3295.00	3.41	110.04	3193.58	737.90	-380.85	632.03	2.21	2146642.17	2692649.06	N 36 53 57.026	W 107 56 14.815
3315.00	3.11	109.68	3213.54	739.01	-381.24	633.10	1.50	2146641.78	2692650.13	N 36 53 57.022	W 107 56 14.802
3335.00	2.79	108.26	3233.52	740.02	-381.58	634.07	1.64	2146641.45	2692651.10	N 36 53 57.019	W 107 56 14.790
3355.00	2.57	108.13	3253.49	740.93	-381.87	634.96	1.10	2146641.15	2692651.99	N 36 53 57.016	W 107 56 14.779
3375.00	2.26	106.89	3273.48	741.75	-382.12	635.76	1.57	2146640.90	2692652.79	N 36 53 57.014	W 107 56 14.769
3395.00	2.06	106.85	3293.46	742.48	-382.34	636.48	1.00	2146640.68	2692653.51	N 36 53 57.012	W 107 56 14.760
3415.00	1.82	106.71	3313.45	743.13	-382.54	637.13	1.20	2146640.48	2692654.16	N 36 53 57.010	W 107 56 14.752
3435.00	1.63	105.18	3333.44	743.71	-382.70	637.71	0.98	2146640.32	2692654.74	N 36 53 57.008	W 107 56 14.745
3455.00	1.52	104.79	3353.43	744.24	-382.84	638.24	0.55	2146640.17	2692655.27	N 36 53 57.007	W 107 56 14.739
3475.00	1.36	104.65	3373.43	744.72	-382.97	638.73	0.80	2146640.04	2692655.75	N 36 53 57.005	W 107 56 14.733
3495.00	1.21	105.53	3393.42	745.15	-383.09	639.16	0.76	2146639.93	2692656.19	N 36 53 57.004	W 107 56 14.727
3515.00	1.12	105.90	3413.42	745.54	-383.20	639.55	0.45	2146639.82	2692656.58	N 36 53 57.003	W 107 56 14.722
3535.00	1.00	105.91	3433.42	745.90	-383.30	639.91	0.60	2146639.72	2692656.93	N 36 53 57.002	W 107 56 14.718
3555.00	0.90	102.41	3453.41	746.22	-383.38	640.23	0.58	2146639.63	2692657.25	N 36 53 57.001	W 107 56 14.714
3575.00	0.86	91.72	3473.41	746.50	-383.42	640.53	0.84	2146639.59	2692657.56	N 36 53 57.001	W 107 56 14.710
3595.00	0.86	85.30	3493.41	746.75	-383.41	640.83	0.48	2146639.60	2692657.86	N 36 53 57.001	W 107 56 14.707
3615.00	0.68	82.60	3513.41	746.96	-383.38	641.10	0.92	2146639.63	2692658.12	N 36 53 57.001	W 107 56 14.703
3635.00	0.70	120.15	3533.40	747.18	-383.43	641.32	2.22	2146639.58	2692658.35	N 36 53 57.001	W 107 56 14.701
3655.00	1.06	94.70	3553.40	747.46	-383.51	641.61	2.62	2146639.51	2692658.64	N 36 53 57.000	W 107 56 14.697
3675.00	0.94	76.85	3573.40	747.75	-383.48	641.96	1.66	2146639.53	2692658.98	N 36 53 57.000	W 107 56 14.693
3695.00	0.78	68.77	3593.40	747.95	-383.40	642.24	1.00	2146639.61	2692659.27	N 36 53 57.001	W 107 56 14.689
3715.00	0.43	64.98	3613.40	748.07	-383.32	642.44	1.76	2146639.70	2692659.46	N 36 53 57.002	W 107 56 14.687
3735.00	0.63	121.59	3633.40	748.22	-383.34	642.60	2.66	2146639.67	2692659.63	N 36 53 57.002	W 107 56 14.685
3755.00	0.87	80.23	3653.39	748.45	-383.37	642.84	2.88	2146639.64	2692659.87	N 36 53 57.001	W 107 56 14.682
3775.00	0.56	61.24	3673.39	748.61	-383.30	643.08	1.93	2146639.71	2692660.10	N 36 53 57.002	W 107 56 14.679
3795.00	0.20	136.98	3693.39	748.69	-383.28	643.19	2.73	2146639.73	2692660.21	N 36 53 57.002	W 107 56 14.678
3815.00	0.71	100.80	3713.39	748.84	-383.33	643.33	2.81	2146639.68	2692660.36	N 36 53 57.002	W 107 56 14.676

3835.00	0.35	44.46	3733.39	748.97	-383.31	643.50	2.96	2146639.70	2692660.52	N 36 53 57.002	W 107 56 14.674
3855.00	0.29	176.81	3753.39	749.01	-383.32	643.54	2.93	2146639.70	2692660.57	N 36 53 57.002	W 107 56 14.673
3875.00	0.55	86.44	3773.39	749.12	-383.36	643.64	3.12	2146639.65	2692660.67	N 36 53 57.001	W 107 56 14.672
3895.00	0.18	336.38	3793.39	749.17	-383.33	643.72	3.17	2146639.69	2692660.75	N 36 53 57.002	W 107 56 14.671
3915.00	0.41	147.47	3813.39	749.21	-383.36	643.75	2.94	2146639.65	2692660.78	N 36 53 57.001	W 107 56 14.671
3935.00	0.39	56.67	3833.39	749.30	-383.38	643.85	2.85	2146639.63	2692660.87	N 36 53 57.001	W 107 56 14.670
3955.00	0.22	245.97	3853.39	749.31	-383.36	643.87	3.04	2146639.65	2692660.89	N 36 53 57.001	W 107 56 14.669
3975.00	0.41	107.04	3873.39	749.36	-383.39	643.90	2.97	2146639.62	2692660.93	N 36 53 57.001	W 107 56 14.669
3995.00	0.26	328.45	3893.39	749.39	-383.38	643.95	3.14	2146639.63	2692660.97	N 36 53 57.001	W 107 56 14.668
4015.00	0.33	178.59	3913.39	749.38	-383.40	643.92	2.85	2146639.61	2692660.95	N 36 53 57.001	W 107 56 14.669
4035.00	0.28	38.66	3933.39	749.42	-383.42	643.95	2.87	2146639.59	2692660.98	N 36 53 57.001	W 107 56 14.668
4055.00	0.38	241.82	3953.39	749.39	-383.41	643.93	3.23	2146639.60	2692660.95	N 36 53 57.001	W 107 56 14.669
4075.00	0.26	104.01	3973.39	749.40	-383.45	643.91	2.99	2146639.56	2692660.94	N 36 53 57.001	W 107 56 14.669
4095.00	0.34	287.22	3993.39	749.38	-383.44	643.90	3.00	2146639.57	2692660.93	N 36 53 57.001	W 107 56 14.669
4115.00	0.30	168.78	4013.39	749.36	-383.48	643.85	2.75	2146639.53	2692660.88	N 36 53 57.000	W 107 56 14.669
4135.00	0.26	330.97	4033.39	749.36	-383.49	643.84	2.77	2146639.52	2692660.87	N 36 53 57.000	W 107 56 14.670
4155.00	0.39	209.83	4053.39	749.32	-383.51	643.79	2.85	2146639.50	2692660.81	N 36 53 57.000	W 107 56 14.670
4175.00	0.17	34.98	4073.39	749.32	-383.54	643.77	2.80	2146639.47	2692660.80	N 36 53 57.000	W 107 56 14.670
4195.00	0.43	243.68	4093.39	749.29	-383.55	643.72	2.92	2146639.46	2692660.74	N 36 53 57.000	W 107 56 14.671
4215.00	0.19	121.43	4113.39	749.28	-383.60	643.68	2.78	2146639.41	2692660.71	N 36 53 56.999	W 107 56 14.672
4235.00	0.37	281.94	4133.39	749.25	-383.61	643.64	2.76	2146639.40	2692660.67	N 36 53 56.999	W 107 56 14.672
4255.00	0.28	170.97	4153.39	749.22	-383.64	643.59	2.69	2146639.37	2692660.62	N 36 53 56.999	W 107 56 14.673
4275.00	0.27	317.16	4173.39	749.21	-383.66	643.56	2.63	2146639.35	2692660.59	N 36 53 56.999	W 107 56 14.673
4295.00	0.34	193.55	4193.39	749.18	-383.68	643.52	2.69	2146639.33	2692660.54	N 36 53 56.998	W 107 56 14.674
4315.00	0.21	355.93	4213.39	749.18	-383.70	643.50	2.72	2146639.31	2692660.53	N 36 53 56.998	W 107 56 14.674
4335.00	0.38	235.48	4233.39	749.13	-383.70	643.45	2.60	2146639.31	2692660.47	N 36 53 56.998	W 107 56 14.674
4355.00	0.33	62.71	4253.39	749.13	-383.71	643.44	3.54	2146639.30	2692660.47	N 36 53 56.998	W 107 56 14.674
4375.00	0.40	322.47	4273.39	749.10	-383.63	643.45	2.81	2146639.38	2692660.48	N 36 53 56.999	W 107 56 14.674
4395.00	0.14	128.70	4293.39	749.06	-383.59	643.43	2.69	2146639.42	2692660.45	N 36 53 56.999	W 107 56 14.675
4415.00	0.57	2.81	4313.39	749.03	-383.51	643.45	3.31	2146639.50	2692660.48	N 36 53 57.000	W 107 56 14.674
4435.00	0.15	281.71	4333.39	748.96	-383.40	643.43	2.83	2146639.61	2692660.46	N 36 53 57.001	W 107 56 14.675
4455.00	0.55	33.61	4353.38	748.94	-383.32	643.46	3.11	2146639.69	2692660.48	N 36 53 57.002	W 107 56 14.674
4475.00	0.43	330.88	4373.38	748.88	-383.17	643.47	2.60	2146639.84	2692660.50	N 36 53 57.003	W 107 56 14.674
4495.00	0.31	60.18	4393.38	748.84	-383.08	643.48	2.64	2146639.93	2692660.51	N 36 53 57.004	W 107 56 14.674
4515.00	0.69	3.73	4413.38	748.81	-382.93	643.54	2.90	2146640.08	2692660.57	N 36 53 57.006	W 107 56 14.673
4535.00	0.19	345.45	4433.38	748.73	-382.78	643.54	2.57	2146640.23	2692660.57	N 36 53 57.007	W 107 56 14.673
4555.00	0.76	21.22	4453.38	748.68	-382.62	643.58	3.08	2146640.39	2692660.61	N 36 53 57.009	W 107 56 14.673

4575.00	0.49	340.54	4473.38	748.59	-382.42	643.60	2.51	2146640.59	2692660.63	N 36 53 57.011	W 107 56 14.673
4595.00	0.60	38.81	4493.38	748.54	-382.26	643.64	2.70	2146640.75	2692660.66	N 36 53 57.012	W 107 56 14.672
4615.00	0.69	349.26	4513.38	748.47	-382.06	643.68	2.73	2146640.95	2692660.71	N 36 53 57.014	W 107 56 14.672
4635.00	0.45	39.67	4533.38	748.40	-381.88	643.71	2.66	2146641.13	2692660.73	N 36 53 57.016	W 107 56 14.671
4655.00	0.84	357.25	4553.38	748.33	-381.67	643.75	2.96	2146641.34	2692660.78	N 36 53 57.018	W 107 56 14.671
4675.00	0.37	17.43	4573.38	748.24	-381.46	643.76	2.54	2146641.55	2692660.79	N 36 53 57.020	W 107 56 14.671
4695.00	0.94	8.36	4593.37	748.16	-381.24	643.80	2.89	2146641.77	2692660.83	N 36 53 57.022	W 107 56 14.670
4715.00	0.48	353.50	4613.37	748.04	-380.99	643.82	2.46	2146642.02	2692660.85	N 36 53 57.025	W 107 56 14.670
4735.00	0.73	50.27	4633.37	748.03	-380.83	643.91	3.08	2146642.18	2692660.94	N 36 53 57.026	W 107 56 14.669
4755.00	0.44	357.02	4653.37	748.03	-380.67	644.00	2.92	2146642.34	2692661.03	N 36 53 57.028	W 107 56 14.668
4775.00	0.56	86.46	4673.37	748.07	-380.59	644.10	3.54	2146642.42	2692661.12	N 36 53 57.029	W 107 56 14.666
4795.00	0.65	27.90	4693.37	748.14	-380.48	644.25	2.98	2146642.53	2692661.28	N 36 53 57.030	W 107 56 14.665
4815.00	0.44	104.80	4713.37	748.21	-380.40	644.37	3.49	2146642.61	2692661.40	N 36 53 57.031	W 107 56 14.663
4835.00	0.75	49.51	4733.37	748.32	-380.34	644.55	3.08	2146642.67	2692661.58	N 36 53 57.031	W 107 56 14.661
4855.00	0.27	73.50	4753.37	748.39	-380.24	644.69	2.58	2146642.77	2692661.72	N 36 53 57.032	W 107 56 14.659
4875.00	0.87	100.65	4773.37	748.57	-380.25	644.89	3.21	2146642.76	2692661.92	N 36 53 57.032	W 107 56 14.657
4895.00	0.78	63.12	4793.36	748.78	-380.22	645.16	2.69	2146642.79	2692662.19	N 36 53 57.032	W 107 56 14.653
4915.00	0.43	78.68	4813.36	748.91	-380.14	645.35	1.92	2146642.87	2692662.38	N 36 53 57.033	W 107 56 14.651
4935.00	1.02	117.50	4833.36	749.14	-380.21	645.58	3.68	2146642.80	2692662.61	N 36 53 57.033	W 107 56 14.648
4955.00	0.91	90.05	4853.36	749.45	-380.29	645.90	2.35	2146642.72	2692662.93	N 36 53 57.032	W 107 56 14.644
4975.00	0.85	86.35	4873.36	749.71	-380.28	646.21	0.41	2146642.72	2692663.24	N 36 53 57.032	W 107 56 14.640
4995.00	0.85	93.31	4893.35	749.96	-380.28	646.50	0.52	2146642.73	2692663.53	N 36 53 57.032	W 107 56 14.637
5015.00	0.90	97.11	4913.35	750.24	-380.31	646.81	0.38	2146642.70	2692663.84	N 36 53 57.032	W 107 56 14.633
5035.00	0.93	101.03	4933.35	750.53	-380.36	647.12	0.35	2146642.65	2692664.15	N 36 53 57.031	W 107 56 14.629
5055.00	0.90	103.58	4953.35	750.83	-380.43	647.43	0.25	2146642.58	2692664.46	N 36 53 57.030	W 107 56 14.625
5075.00	0.94	105.20	4973.34	751.14	-380.51	647.75	0.24	2146642.50	2692664.77	N 36 53 57.030	W 107 56 14.622
5095.00	0.99	105.62	4993.34	751.46	-380.60	648.07	0.25	2146642.41	2692665.10	N 36 53 57.029	W 107 56 14.618
5115.00	0.98	105.23	5013.34	751.80	-380.69	648.40	0.06	2146642.32	2692665.43	N 36 53 57.028	W 107 56 14.613
5135.00	0.81	102.25	5033.34	752.09	-380.76	648.70	0.88	2146642.24	2692665.73	N 36 53 57.027	W 107 56 14.610
5155.00	0.48	118.65	5053.33	752.31	-380.83	648.92	1.87	2146642.17	2692665.94	N 36 53 57.026	W 107 56 14.607
5175.00	0.98	102.46	5073.33	752.56	-380.91	649.16	2.68	2146642.09	2692666.19	N 36 53 57.026	W 107 56 14.604
5195.00	0.58	64.34	5093.33	752.77	-380.90	649.41	3.17	2146642.10	2692666.44	N 36 53 57.026	W 107 56 14.601
5215.00	0.43	125.18	5113.33	752.90	-380.90	649.57	2.64	2146642.10	2692666.60	N 36 53 57.026	W 107 56 14.599
5235.00	0.66	48.19	5133.33	753.01	-380.87	649.71	3.51	2146642.13	2692666.74	N 36 53 57.026	W 107 56 14.597
5255.00	0.07	24.25	5153.33	753.04	-380.78	649.81	2.98	2146642.22	2692666.83	N 36 53 57.027	W 107 56 14.596
5275.00	0.67	59.21	5173.33	753.10	-380.71	649.91	3.07	2146642.29	2692666.94	N 36 53 57.028	W 107 56 14.595
5295.00	0.26	342.04	5193.33	753.12	-380.61	650.00	3.31	2146642.39	2692667.03	N 36 53 57.029	W 107 56 14.594
5315.00	0.55	70.68	5213.33	753.14	-380.53	650.07	3.01	2146642.47	2692667.10	N 36 53 57.029	W 107 56 14.593

5335.00	0.37	339.54	5233.33	753.15	-380.44	650.14	3.34	2146642.56	2692667.17	N 36 53 57.030	W 107 56 14.592
5355.00	0.36	93.83	5253.33	753.16	-380.39	650.18	3.07	2146642.62	2692667.21	N 36 53 57.031	W 107 56 14.592
5375.00	0.30	322.61	5273.33	753.16	-380.35	650.21	3.01	2146642.66	2692667.24	N 36 53 57.031	W 107 56 14.591
5395.00	0.37	81.70	5293.33	753.17	-380.30	650.25	2.89	2146642.71	2692667.27	N 36 53 57.032	W 107 56 14.591
5415.00	0.35	328.97	5313.33	753.16	-380.24	650.28	3.00	2146642.77	2692667.31	N 36 53 57.032	W 107 56 14.590
5435.00	0.36	70.53	5333.33	753.15	-380.16	650.31	2.75	2146642.84	2692667.33	N 36 53 57.033	W 107 56 14.590
5455.00	0.32	322.45	5353.33	753.13	-380.10	650.33	2.75	2146642.91	2692667.36	N 36 53 57.034	W 107 56 14.590
5475.00	0.46	51.51	5373.33	753.11	-380.00	650.36	2.78	2146643.00	2692667.39	N 36 53 57.035	W 107 56 14.589
5495.00	0.28	319.81	5393.33	753.09	-379.92	650.39	2.73	2146643.09	2692667.42	N 36 53 57.035	W 107 56 14.589
5515.00	0.57	38.23	5413.32	753.06	-379.80	650.42	2.91	2146643.20	2692667.45	N 36 53 57.037	W 107 56 14.589
5535.00	0.30	326.70	5433.32	753.02	-379.68	650.45	2.77	2146643.33	2692667.48	N 36 53 57.038	W 107 56 14.588
5555.00	0.61	31.33	5453.32	752.97	-379.54	650.48	2.76	2146643.46	2692667.51	N 36 53 57.039	W 107 56 14.588
5575.00	0.19	327.20	5473.32	752.94	-379.42	650.52	2.77	2146643.58	2692667.55	N 36 53 57.040	W 107 56 14.587
5595.00	0.68	9.20	5493.32	752.87	-379.28	650.52	2.77	2146643.72	2692667.55	N 36 53 57.042	W 107 56 14.587
5615.00	0.11	355.42	5513.32	752.81	-379.14	650.54	2.87	2146643.86	2692667.57	N 36 53 57.043	W 107 56 14.587
5635.00	0.69	348.39	5533.32	752.72	-379.01	650.51	2.90	2146644.00	2692667.54	N 36 53 57.044	W 107 56 14.587
5655.00	0.16	38.21	5553.32	752.64	-378.87	650.50	3.00	2146644.14	2692667.53	N 36 53 57.046	W 107 56 14.588
5675.00	0.63	325.03	5573.32	752.54	-378.75	650.46	3.02	2146644.25	2692667.49	N 36 53 57.047	W 107 56 14.588
5695.00	0.46	30.83	5593.32	752.44	-378.59	650.44	3.05	2146644.41	2692667.47	N 36 53 57.049	W 107 56 14.588
5715.00	0.55	320.62	5613.32	752.35	-378.45	650.42	2.93	2146644.55	2692667.45	N 36 53 57.050	W 107 56 14.589
5735.00	0.58	20.34	5633.32	752.24	-378.28	650.39	2.82	2146644.72	2692667.42	N 36 53 57.052	W 107 56 14.589
5755.00	0.50	315.50	5653.32	752.14	-378.13	650.36	2.91	2146644.88	2692667.40	N 36 53 57.053	W 107 56 14.589
5775.00	0.71	7.90	5673.32	752.00	-377.94	650.32	2.83	2146645.06	2692667.35	N 36 53 57.055	W 107 56 14.590
5795.00	0.33	317.23	5693.32	751.90	-377.78	650.30	2.81	2146645.23	2692667.33	N 36 53 57.057	W 107 56 14.590
5815.00	0.81	347.25	5713.31	751.74	-377.60	650.23	2.75	2146645.41	2692667.26	N 36 53 57.058	W 107 56 14.591
5835.00	0.30	15.53	5733.31	751.63	-377.41	650.21	2.82	2146645.60	2692667.24	N 36 53 57.060	W 107 56 14.591
5855.00	0.67	326.79	5753.31	751.51	-377.26	650.16	2.62	2146645.74	2692667.19	N 36 53 57.062	W 107 56 14.592
5875.00	0.72	14.20	5773.31	751.37	-377.04	650.13	2.80	2146645.96	2692667.16	N 36 53 57.064	W 107 56 14.592
5895.00	0.45	327.11	5793.31	751.26	-376.85	650.12	2.64	2146646.15	2692667.15	N 36 53 57.066	W 107 56 14.592
5915.00	0.95	2.03	5813.31	751.11	-376.62	650.08	3.18	2146646.38	2692667.11	N 36 53 57.068	W 107 56 14.593
5935.00	0.40	12.04	5833.31	751.00	-376.39	650.10	2.80	2146646.62	2692667.13	N 36 53 57.070	W 107 56 14.593
5955.00	1.03	1.27	5853.31	750.89	-376.14	650.12	3.21	2146646.87	2692667.15	N 36 53 57.073	W 107 56 14.592
5975.00	0.54	14.83	5873.30	750.77	-375.87	650.15	2.60	2146647.14	2692667.18	N 36 53 57.076	W 107 56 14.592
5995.00	1.17	10.31	5893.30	750.67	-375.57	650.21	3.17	2146647.43	2692667.24	N 36 53 57.078	W 107 56 14.591
6015.00	0.88	6.07	5913.30	750.54	-375.22	650.26	1.50	2146647.78	2692667.29	N 36 53 57.082	W 107 56 14.591
6035.00	1.24	38.46	5933.30	750.50	-374.90	650.41	3.42	2146648.10	2692667.45	N 36 53 57.085	W 107 56 14.589
6055.00	1.30	18.33	5953.29	750.47	-374.51	650.62	2.24	2146648.49	2692667.65	N 36 53 57.089	W 107 56 14.586

6075.00	1.10	20.00	5973.29	750.38	-374.12	650.75	1.02	2146648.88	2692667.79	N 36 53 57.093	W 107 56 14.584
6095.00	0.98	23.34	5993.28	750.32	-373.78	650.89	0.67	2146649.22	2692667.92	N 36 53 57.096	W 107 56 14.583
6115.00	0.93	21.02	6013.28	750.27	-373.47	651.01	0.32	2146649.53	2692668.05	N 36 53 57.099	W 107 56 14.581
6135.00	1.07	23.32	6033.28	750.21	-373.15	651.14	0.73	2146649.85	2692668.18	N 36 53 57.102	W 107 56 14.580
6155.00	1.08	25.01	6053.27	750.17	-372.81	651.30	0.17	2146650.19	2692668.34	N 36 53 57.106	W 107 56 14.578
6175.00	0.99	24.47	6073.27	750.12	-372.48	651.45	0.45	2146650.52	2692668.49	N 36 53 57.109	W 107 56 14.576
6195.00	0.92	23.98	6093.27	750.08	-372.18	651.59	0.35	2146650.83	2692668.62	N 36 53 57.112	W 107 56 14.574
6215.00	0.91	26.60	6113.27	750.05	-371.89	651.72	0.22	2146651.11	2692668.76	N 36 53 57.115	W 107 56 14.573
6235.00	0.88	27.19	6133.26	750.03	-371.61	651.86	0.16	2146651.39	2692668.90	N 36 53 57.118	W 107 56 14.571
6255.00	0.94	28.83	6153.26	750.01	-371.33	652.01	0.33	2146651.67	2692669.05	N 36 53 57.120	W 107 56 14.569
6275.00	0.91	30.29	6173.26	750.00	-371.05	652.17	0.19	2146651.95	2692669.21	N 36 53 57.123	W 107 56 14.567
6295.00	0.83	30.98	6193.26	749.99	-370.79	652.33	0.40	2146652.21	2692669.37	N 36 53 57.126	W 107 56 14.565
6315.00	0.85	32.62	6213.25	750.00	-370.54	652.48	0.16	2146652.46	2692669.52	N 36 53 57.128	W 107 56 14.563
6335.00	0.92	35.26	6233.25	750.01	-370.28	652.65	0.40	2146652.72	2692669.69	N 36 53 57.131	W 107 56 14.561
6355.00	0.98	37.69	6253.25	750.04	-370.01	652.85	0.36	2146652.99	2692669.89	N 36 53 57.133	W 107 56 14.559
6375.00	1.01	37.83	6273.25	750.08	-369.74	653.06	0.15	2146653.26	2692670.10	N 36 53 57.136	W 107 56 14.556
6395.00	1.04	37.65	6293.24	750.12	-369.46	653.28	0.15	2146653.54	2692670.32	N 36 53 57.139	W 107 56 14.553
6415.00	1.01	37.09	6313.24	750.16	-369.17	653.50	0.16	2146653.83	2692670.54	N 36 53 57.142	W 107 56 14.551
6435.00	0.95	39.40	6333.24	750.20	-368.90	653.71	0.36	2146654.10	2692670.75	N 36 53 57.144	W 107 56 14.548
6455.00	0.98	43.35	6353.23	750.25	-368.65	653.93	0.36	2146654.35	2692670.98	N 36 53 57.147	W 107 56 14.545
6475.00	0.99	45.78	6373.23	750.33	-368.41	654.18	0.21	2146654.59	2692671.22	N 36 53 57.149	W 107 56 14.542
6495.00	1.02	47.72	6393.23	750.43	-368.17	654.43	0.23	2146654.83	2692671.47	N 36 53 57.152	W 107 56 14.539
6515.00	1.03	48.14	6413.22	750.53	-367.93	654.70	0.06	2146655.07	2692671.74	N 36 53 57.154	W 107 56 14.536
6535.00	0.98	48.58	6433.22	750.63	-367.69	654.96	0.25	2146655.30	2692672.00	N 36 53 57.156	W 107 56 14.533
6555.00	0.98	48.30	6453.22	750.73	-367.47	655.21	0.02	2146655.53	2692672.26	N 36 53 57.159	W 107 56 14.530
6575.00	1.01	47.93	6473.21	750.83	-367.23	655.47	0.15	2146655.76	2692672.52	N 36 53 57.161	W 107 56 14.526
6595.00	1.01	49.58	6493.21	750.94	-367.00	655.74	0.15	2146655.99	2692672.78	N 36 53 57.163	W 107 56 14.523
6615.00	0.98	49.91	6513.21	751.05	-366.78	656.00	0.15	2146656.22	2692673.05	N 36 53 57.165	W 107 56 14.520
6635.00	0.90	53.07	6533.21	751.16	-366.57	656.26	0.48	2146656.42	2692673.30	N 36 53 57.167	W 107 56 14.517
6655.00	0.67	65.82	6553.20	751.28	-366.43	656.49	1.44	2146656.56	2692673.54	N 36 53 57.169	W 107 56 14.514
6675.00	1.03	87.47	6573.20	751.50	-366.37	656.78	2.38	2146656.62	2692673.82	N 36 53 57.169	W 107 56 14.510
6695.00	0.96	58.24	6593.20	751.72	-366.28	657.10	2.53	2146656.72	2692674.14	N 36 53 57.170	W 107 56 14.506
6715.00	0.73	52.48	6613.20	751.85	-366.11	657.34	1.22	2146656.88	2692674.39	N 36 53 57.172	W 107 56 14.503
6735.00	0.37	70.34	6633.20	751.93	-366.01	657.51	1.97	2146656.98	2692674.55	N 36 53 57.173	W 107 56 14.501
6755.00	0.95	86.12	6653.19	752.11	-365.98	657.73	3.01	2146657.01	2692674.78	N 36 53 57.173	W 107 56 14.499
6775.00	0.75	58.11	6673.19	752.30	-365.90	658.01	2.27	2146657.09	2692675.05	N 36 53 57.174	W 107 56 14.495
6795.00	0.48	53.14	6693.19	752.39	-365.78	658.19	1.37	2146657.21	2692675.23	N 36 53 57.175	W 107 56 14.493
6815.00	0.34	116.08	6713.19	752.48	-365.76	658.31	2.22	2146657.24	2692675.35	N 36 53 57.175	W 107 56 14.491

6835.00	0.87	79.63	6733.19	752.65	-365.75	658.51	3.15	2146657.24	2692675.55	N 36 53 57.175	W 107 56 14.489
6855.00	0.55	56.45	6753.19	752.81	-365.67	658.74	2.12	2146657.32	2692675.78	N 36 53 57.176	W 107 56 14.486
6875.00	0.32	55.41	6773.19	752.87	-365.59	658.87	1.15	2146657.40	2692675.91	N 36 53 57.177	W 107 56 14.485
6895.00	0.37	143.32	6793.19	752.95	-365.61	658.95	2.40	2146657.38	2692675.99	N 36 53 57.177	W 107 56 14.484
6915.00	0.71	90.06	6813.19	753.12	-365.66	659.11	2.86	2146657.33	2692676.16	N 36 53 57.176	W 107 56 14.482
6935.00	0.66	64.48	6833.18	753.29	-365.61	659.34	1.54	2146657.38	2692676.38	N 36 53 57.177	W 107 56 14.479
6955.00	0.40	64.82	6853.18	753.39	-365.53	659.51	1.30	2146657.46	2692676.55	N 36 53 57.178	W 107 56 14.477
6975.00	0.24	146.24	6873.18	753.47	-365.54	659.59	2.17	2146657.45	2692676.64	N 36 53 57.178	W 107 56 14.476
6995.00	0.75	131.62	6893.18	753.63	-365.66	659.71	2.61	2146657.33	2692676.76	N 36 53 57.176	W 107 56 14.474
7015.00	0.75	99.92	6913.18	753.88	-365.77	659.94	2.05	2146657.22	2692676.99	N 36 53 57.175	W 107 56 14.471
7035.00	0.60	86.65	6933.18	754.09	-365.79	660.17	1.08	2146657.21	2692677.22	N 36 53 57.175	W 107 56 14.468
7055.00	0.77	120.86	6953.18	754.31	-365.85	660.39	2.17	2146657.14	2692677.44	N 36 53 57.175	W 107 56 14.466
7075.00	0.70	97.11	6973.18	754.56	-365.93	660.63	1.55	2146657.06	2692677.68	N 36 53 57.174	W 107 56 14.463
7095.00	0.55	96.34	6993.18	754.76	-365.96	660.85	0.75	2146657.03	2692677.89	N 36 53 57.173	W 107 56 14.460
7115.00	0.36	102.40	7013.18	754.90	-365.98	661.00	0.98	2146657.01	2692678.05	N 36 53 57.173	W 107 56 14.458
7135.00	0.39	117.11	7033.17	755.03	-366.03	661.13	0.50	2146656.96	2692678.17	N 36 53 57.173	W 107 56 14.457
7155.00	0.36	144.98	7053.17	755.16	-366.11	661.22	0.91	2146656.88	2692678.27	N 36 53 57.172	W 107 56 14.456
7175.00	0.31	126.40	7073.17	755.27	-366.19	661.30	0.59	2146656.80	2692678.35	N 36 53 57.171	W 107 56 14.455
7195.00	0.29	137.74	7093.17	755.37	-366.26	661.38	0.31	2146656.73	2692678.42	N 36 53 57.170	W 107 56 14.454
7215.00	0.29	127.43	7113.17	755.47	-366.33	661.45	0.26	2146656.66	2692678.50	N 36 53 57.170	W 107 56 14.453
7235.00	0.31	141.60	7133.17	755.57	-366.40	661.53	0.38	2146656.59	2692678.57	N 36 53 57.169	W 107 56 14.452
7255.00	0.62	155.63	7153.17	755.71	-366.54	661.61	1.64	2146656.44	2692678.65	N 36 53 57.168	W 107 56 14.451
7265.00	0.92	146.57	7163.17	755.83	-366.66	661.67	3.23	2146656.33	2692678.72	N 36 53 57.167	W 107 56 14.450
7275.00	0.97	152.16	7173.17	755.97	-366.80	661.76	1.05	2146656.19	2692678.80	N 36 53 57.165	W 107 56 14.449

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

Surveying Programme:	
MD From (ft)	MD To (ft)
0.00	180.00
180.00	2845.00
2845.00	
	Act-Stns Blind Drilling
	Act-Stns MWD1
	Act-Stns GPIT

Last SLB GPIT Survey