



Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949' Survey Geodetic Report



(Def Survey)

HOBBS OCD
 DEC 31 2019
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Report Date: August 22, 2019 - 04:26 PM
Client: Chisholm
Field: NM Lea County (NAD 83)
Structure / Slot: Chisholm Minis 1 Fed Com 3BS 6H / New Slot
Well: Chisholm Minis 1 Fed Com 3BS 6H
Borehole: Original Borehole
UWI / APIs: Unknown / Unknown
Survey Name: Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949'
Survey Date: July 30, 2019
Tort / AHD / DDI / ERD Ratio: 274.359 * / 8270.551 ft / 6.572 / 0.717
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 31' 17.68314", W 103° 37' 25.93507"
Location Grid N/E Y/X: N 554208.900 RUS, E 760010.700 RUS
CRS Grid Convergence Angle: 0.3814 *
Grid Scale Factor: 0.99998385
Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.550 * (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3753.000 ft above MSL
Seabed / Ground Elevation: 3722.000 ft above MSL
Magnetic Declination: 6.684 *
Total Gravity Field Strength: 998.4818mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48121.616 nT
Magnetic Dip Angle: 60.385 *
Declination Date: July 30, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3814 *
Total Corr Mag North->Grid North: 6.2824 *
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (*/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	177.10	0.00	0.00	0.00	0.00	N/A	554208.90	760010.70	N 32 31 17.68 W 103 37 25.94	
	180.00	0.73	262.13	189.99	0.16	-0.17	-1.20	0.38	554208.73	760009.50	N 32 31 17.68 W 103 37 25.95	
	290.00	0.44	267.03	289.99	0.28	-0.27	-2.21	0.29	554208.63	760008.49	N 32 31 17.68 W 103 37 25.96	
	384.00	0.57	243.89	383.99	0.47	-0.50	-2.99	0.25	554208.40	760007.71	N 32 31 17.68 W 103 37 25.97	
	478.00	0.51	269.54	475.98	0.67	-0.70	-3.81	0.27	554208.20	760006.89	N 32 31 17.68 W 103 37 25.98	
	573.00	0.75	278.17	572.98	0.60	-0.64	-4.88	0.26	554208.26	760005.82	N 32 31 17.68 W 103 37 25.99	
	688.00	0.79	260.38	687.97	0.83	-0.68	-6.14	0.23	554208.22	760004.56	N 32 31 17.68 W 103 37 26.01	
	737.00	0.98	21.08	736.96	0.17	-0.22	-6.40	2.21	554208.68	760004.30	N 32 31 17.68 W 103 37 26.01	
	832.00	2.34	34.21	831.92	-2.17	2.13	-5.03	1.50	554211.03	760005.67	N 32 31 17.70 W 103 37 25.99	
	927.00	2.02	35.16	926.85	-5.12	5.10	-2.97	0.34	554214.00	760007.73	N 32 31 17.73 W 103 37 25.97	
	1021.00	1.84	37.98	1020.80	-7.85	7.84	-1.09	0.22	554216.54	760009.61	N 32 31 17.76 W 103 37 25.95	
	1115.00	1.95	30.66	1114.75	-10.20	10.21	0.68	0.28	554219.11	760011.38	N 32 31 17.78 W 103 37 25.93	
	1210.00	1.68	41.35	1209.70	-12.63	12.64	2.40	0.45	554221.54	760013.10	N 32 31 17.81 W 103 37 25.91	
	1305.00	1.38	38.41	1304.67	-14.54	14.57	4.02	0.35	554223.47	760014.72	N 32 31 17.83 W 103 37 25.89	
	1392.00	1.37	29.72	1391.64	-16.24	16.29	5.18	0.24	554225.16	760015.88	N 32 31 17.84 W 103 37 25.87	
	1487.00	1.60	38.10	1486.61	-18.26	18.32	6.56	0.33	554227.21	760017.26	N 32 31 17.86 W 103 37 25.86	
	1551.00	1.47	45.07	1550.59	-19.54	19.60	7.69	0.38	554228.50	760018.39	N 32 31 17.88 W 103 37 25.84	
	1683.00	3.15	48.85	1682.48	-23.09	23.18	11.62	1.28	554232.08	760022.32	N 32 31 17.91 W 103 37 25.80	
	1778.00	3.92	55.75	1777.30	-26.60	26.73	16.27	0.82	554235.63	760026.97	N 32 31 17.95 W 103 37 25.74	
	1872.00	3.69	56.69	1871.09	-30.03	30.20	21.45	0.25	554239.09	760032.15	N 32 31 17.98 W 103 37 25.68	
	1987.00	5.16	55.34	1985.80	-34.09	34.30	27.52	1.55	554243.20	760038.22	N 32 31 18.02 W 103 37 25.61	
	2081.00	5.60	55.84	2059.39	-39.00	39.28	34.80	0.47	554248.18	760045.50	N 32 31 18.07 W 103 37 25.53	
	2155.00	5.54	54.60	2152.94	-44.14	44.47	42.30	0.15	554253.37	760053.00	N 32 31 18.12 W 103 37 25.44	
	2250.00	7.51	52.91	2247.32	-50.47	50.87	50.99	2.08	554259.77	760061.69	N 32 31 18.18 W 103 37 25.34	
	2344.00	7.70	54.27	2340.50	-57.78	58.28	61.00	0.28	554267.15	760071.70	N 32 31 18.26 W 103 37 25.22	
	2439.00	7.63	53.18	2434.65	-65.19	65.75	71.22	0.17	554274.65	760081.91	N 32 31 18.33 W 103 37 25.10	
	2533.00	7.76	53.25	2527.80	-72.65	73.29	81.30	0.14	554282.19	760091.99	N 32 31 18.40 W 103 37 24.98	
	2628.00	7.95	54.18	2621.91	-80.25	80.97	91.76	0.24	554289.87	760102.46	N 32 31 18.48 W 103 37 24.86	
	2722.00	8.27	54.46	2714.97	-87.90	88.71	102.53	0.34	554297.60	760113.23	N 32 31 18.55 W 103 37 24.73	
	2817.00	8.38	54.76	2808.97	-95.78	96.67	113.75	0.12	554305.57	760124.44	N 32 31 18.63 W 103 37 24.60	
	2911.00	8.43	55.30	2901.96	-103.58	104.55	125.01	0.10	554313.44	760135.70	N 32 31 18.71 W 103 37 24.47	
	3008.00	8.60	55.79	2895.91	-111.43	112.50	136.61	0.19	554321.40	760147.30	N 32 31 18.79 W 103 37 24.33	
	3101.00	7.84	58.99	3089.94	-118.67	119.84	148.03	0.83	554328.73	760158.73	N 32 31 18.86 W 103 37 24.20	
	3195.00	7.42	61.65	3183.10	-124.77	126.02	158.87	0.58	554334.82	760169.58	N 32 31 18.92 W 103 37 24.07	
	3290.00	7.02	60.60	3277.35	-130.45	131.78	169.33	0.44	554340.68	760180.02	N 32 31 18.98 W 103 37 23.93	
	3384.00	6.84	58.18	3370.66	-136.14	137.56	179.09	0.38	554346.45	760189.78	N 32 31 19.03 W 103 37 23.85	
	3478.00	6.48	56.44	3464.03	-141.86	143.44	188.26	0.44	554352.33	760198.96	N 32 31 19.09 W 103 37 23.73	
	3573.00	6.12	56.10	3558.46	-147.68	149.23	198.83	0.38	554358.12	760207.63	N 32 31 19.15 W 103 37 23.62	
	3667.00	5.66	54.05	3651.96	-153.13	154.74	204.85	0.54	554363.64	760215.54	N 32 31 19.20 W 103 37 23.53	
	3762.00	5.73	47.78	3746.49	-159.01	160.68	212.15	0.66	554369.57	760222.84	N 32 31 19.26 W 103 37 23.44	
	3856.00	6.12	46.58	3839.99	-165.55	167.28	219.26	0.44	554376.17	760229.96	N 32 31 19.32 W 103 37 23.36	
	3951.00	5.87	45.70	3934.47	-172.37	174.15	226.42	0.28	554383.04	760237.11	N 32 31 19.39 W 103 37 23.28	
	4045.00	5.76	45.60	4027.99	-178.97	180.81	233.23	0.12	554389.70	760243.92	N 32 31 19.46 W 103 37 23.20	
	4140.00	5.45	43.13	4122.53	-185.55	187.44	239.72	0.41	554396.33	760250.41	N 32 31 19.52 W 103 37 23.12	
	4234.00	5.40	41.12	4216.11	-192.09	194.03	245.68	0.21	554402.92	760256.37	N 32 31 19.59 W 103 37 23.05	
	4329.00	5.23	38.52	4310.70	-198.80	200.78	251.32	0.31	554409.67	760262.01	N 32 31 19.65 W 103 37 22.98	
	4423.00	5.10	37.35	4404.32	-205.43	207.45	256.52	0.18	554416.35	760267.21	N 32 31 19.72 W 103 37 22.92	
	4518.00	5.76	42.42	4498.89	-212.28	214.33	262.30	0.86	554423.22	760272.89	N 32 31 19.79 W 103 37 22.86	
	4612.00	5.66	43.64	4592.43	-219.04	221.16	268.69	0.18	554430.05	760278.38	N 32 31 19.85 W 103 37 22.78	
	4706.00	5.57	44.81	4685.98	-225.58	227.75	275.10	0.12	554436.84	760283.79	N 32 31 19.92 W 103 37 22.70	
	4801.00	5.51	44.74	4780.53	-232.05	234.27	281.55	0.06	554443.18	760289.24	N 32 31 19.98 W 103 37 22.63	
	4895.00	4.92	49.49	4874.14	-237.83	240.09	287.79	0.78	554448.98	760294.48	N 32 31 20.04 W 103 37 22.56	
	4990.00	3.57	66.70	4968.89	-241.60	243.91	293.61	1.94	554452.80	760304.30	N 32 31 20.08 W 103 37 22.49	
	5085.00	1.88	89.88	5083.78	-242.74	245.08	297.72	2.24	554453.97	760308.41	N 32 31 20.09 W 103 37 22.44	
	5179.00	0.83	162.35	5157.77	-242.08	244.44	299.30	1.74	554453.33	760309.89	N 32 31 20.08 W 103 37 22.42	
	5273.00	0.93	172.43	5251.75	-240.67	243.03	299.61	0.20	554451.82	760310.30	N 32 31 20.07 W 103 37 22.42	
	5368.00	0.89	164.08	5346.74	-239.20	241.56	299.91	0.15	554450.45	760310.60	N 32 31 20.05 W 103 37 22.41	
	5462.00	1.06	168.61	5440.73	-237.64	240.00	300.29	0.20	554448.89	760310.97	N 32 31 20.04 W 103 37 22.41	
	5557.00	1.13	175.65	5535.71	-235.84	238.21	300.53	0.16	554447.10	760311.22	N 32 31 20.02 W 103 37 22.41	
	5652.00	1.03	173.47	5630.69	-234.06	236.43	300.70	0.11	554445.32	760311.39	N 32 31 20.00 W 103 37 22.40	
	5737.00	1.04	184.30	5715.68	-232.53	234.90	300.73	0.23	554443.79	760311.42	N 32 31 19.99 W 103 37 22.40	
	5890.00	1.29	171.05	5868.65	-229.44	231.81	300.89	0.24	554440.70	760311.58	N 32 31 19.96 W 103 37 22.40	
	5985.00	1.01	163.22	5963.63	-227.58	229.95	301.30	0.34	554438.84	760311.99	N 32 31 19.94 W 103 37 22.40	
	6079.00	1.08	168.61	6057.61	-225.92	228.29	301.71	0.13	554437.18	760312.40	N 32 31 19.92 W 103 37 22.39	
	6174.00	1.12	161.48	6152.60	-224.15	226.53	302.18	0.15	554435.43	760312.87	N 32 31 19.90 W 103 37 22.39	
	6268.00	0.48	22.81	6246.59	-223.64	226.03	302.63	1.81	554434.92	760313.32	N 32 31 19.90 W 103 37 22.38	
	6363.00	0.82	13.31	6341.59	-224.51	226.89	302.90	0.18	554435.78	760313.59	N 32 31 19.91 W 103 37 22.38	
	6457.00	0.52	30.74	6435.58	-225.37	227.75	303.24	0.21	554436.65	760313.93	N 32 31 19.92 W 103 37 22.38	
	6552.00	0.55	33.38	6530.58	-226.11	228.51	303.71	0.04	554437.40	760314.40	N 32 31 19.92 W 103 37 22.37	
	6647.00	0.64	15.02	6625.57	-227.00	229.40	304.10	0.22	554438.29	760314.79	N 32 31 19.93 W 103 37 22.37	
	6741.00	0.41	56.92	6719.57	-227.69	230.09	304.51	0.46	554438.98	760315.20	N 32 31 19.94 W 103 37 22.36	
	6836.00	0										

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S)	Longitude (E/W)
	7592.00	0.60	15.77	7570.51	-221.87	224.41	310.04	0.84	554453.30	760320.73	N 32 31 19.88	W 103 37 22.30
	7696.00	1.20	0.87	7684.49	-223.68	226.02	310.24	0.50	554434.82	760320.82	N 32 31 19.90	W 103 37 22.29
	7781.00	1.24	2.55	7759.47	-225.80	228.05	310.30	0.06	554436.94	760321.69	N 32 31 19.82	W 103 37 22.29
	7875.00	1.03	8.28	7853.45	-227.45	229.90	310.48	0.26	554438.79	760321.17	N 32 31 19.84	W 103 37 22.29
	7969.00	1.21	5.80	7947.44	-229.27	231.72	310.72	0.20	554440.61	760321.41	N 32 31 19.86	W 103 37 22.29
	8064.00	1.12	359.52	8042.42	-231.20	233.64	310.81	0.16	554442.53	760321.50	N 32 31 19.87	W 103 37 22.29
	8158.00	0.89	342.45	8138.40	-232.81	235.28	310.58	0.40	554444.15	760321.77	N 32 31 19.89	W 103 37 22.29
	8252.00	1.12	341.72	8230.39	-234.38	236.83	310.07	0.25	554445.72	760320.78	N 32 31 20.01	W 103 37 22.30
	8347.00	1.12	344.73	8325.37	-236.17	238.60	309.54	0.06	554447.49	760320.23	N 32 31 20.02	W 103 37 22.30
	8441.00	1.23	329.40	8419.35	-237.93	240.38	308.78	0.35	554449.25	760319.47	N 32 31 20.04	W 103 37 22.31
	8536.00	0.94	335.66	8514.33	-239.52	241.85	307.94	0.33	554450.84	760318.83	N 32 31 20.06	W 103 37 22.32
	8630.00	0.68	308.94	8608.32	-240.59	243.01	307.20	0.47	554451.90	760317.89	N 32 31 20.07	W 103 37 22.33
	8725.00	0.80	299.58	8703.32	-241.28	243.70	306.19	0.19	554452.56	760318.88	N 32 31 20.07	W 103 37 22.34
	8819.00	1.12	272.25	8797.30	-241.66	244.08	304.70	0.59	554452.95	760315.39	N 32 31 20.08	W 103 37 22.36
	8913.00	1.46	252.10	8891.28	-241.34	243.72	302.64	0.60	554452.61	760313.33	N 32 31 20.07	W 103 37 22.38
	9008.00	1.32	243.46	8986.25	-240.50	242.86	300.51	0.26	554451.75	760311.20	N 32 31 20.07	W 103 37 22.41
	9103.00	1.28	258.54	9081.23	-239.83	242.18	298.49	0.39	554451.07	760309.18	N 32 31 20.06	W 103 37 22.43
	9197.00	1.01	252.29	9175.21	-239.40	241.74	296.67	0.33	554450.63	760307.36	N 32 31 20.06	W 103 37 22.45
	9292.00	0.53	190.05	9270.20	-238.72	241.05	295.79	0.94	554449.94	760306.48	N 32 31 20.05	W 103 37 22.46
	9386.00	0.85	158.24	9364.19	-237.57	239.90	296.01	0.61	554448.79	760306.70	N 32 31 20.04	W 103 37 22.46
	9480.00	1.31	133.35	9458.18	-236.10	238.44	297.08	0.64	554447.33	760307.77	N 32 31 20.02	W 103 37 22.45
	9575.00	1.43	109.32	9553.15	-234.95	237.30	298.99	0.61	554446.19	760309.67	N 32 31 20.01	W 103 37 22.42
	9669.00	1.35	91.06	9647.12	-234.52	236.89	301.20	0.48	554445.78	760311.89	N 32 31 20.01	W 103 37 22.40
	9764.00	0.70	94.75	9742.11	-234.44	236.82	302.90	0.69	554445.71	760313.58	N 32 31 20.01	W 103 37 22.38
	9858.00	0.56	118.16	9836.10	-234.18	236.57	303.88	0.29	554445.48	760314.57	N 32 31 20.00	W 103 37 22.37
	9953.00	0.52	2.37	9931.10	-234.40	236.80	304.32	0.85	554445.69	760315.00	N 32 31 20.01	W 103 37 22.36
	10047.00	0.52	330.57	10025.10	-235.20	237.60	304.12	0.30	554446.49	760314.81	N 32 31 20.01	W 103 37 22.38
	10142.00	0.72	351.99	10120.09	-236.17	238.56	303.83	0.32	554447.45	760314.52	N 32 31 20.02	W 103 37 22.37
	10236.00	0.65	353.12	10214.08	-237.28	239.68	303.68	0.08	554448.57	760314.37	N 32 31 20.03	W 103 37 22.37
	10331.00	0.48	4.21	10309.08	-238.22	240.61	303.65	0.21	554449.50	760314.34	N 32 31 20.04	W 103 37 22.37
	10425.00	0.50	347.45	10403.07	-239.01	241.40	303.59	0.15	554450.29	760314.28	N 32 31 20.05	W 103 37 22.37
	10519.00	0.96	324.46	10497.07	-240.06	242.44	303.04	0.57	554451.33	760313.73	N 32 31 20.06	W 103 37 22.38
	10613.00	1.43	285.13	10591.05	-241.21	243.58	301.52	0.81	554452.47	760312.21	N 32 31 20.07	W 103 37 22.39
	10709.00	1.19	224.91	10687.03	-241.02	243.39	299.73	1.58	554452.28	760310.42	N 32 31 20.07	W 103 37 22.42
	10730.00	1.25	219.28	10708.02	-240.69	243.05	299.43	0.64	554451.94	760310.12	N 32 31 20.07	W 103 37 22.42
	10812.00	3.94	174.48	10789.94	-237.20	239.58	299.14	3.87	554448.45	760309.83	N 32 31 20.03	W 103 37 22.42
	10857.00	9.46	164.88	10834.61	-232.08	234.44	300.25	12.48	554443.33	760310.94	N 32 31 19.98	W 103 37 22.41
	10906.00	13.34	168.41	10882.84	-222.63	225.02	302.44	8.04	554433.81	760313.13	N 32 31 19.89	W 103 37 22.39
	10953.00	13.54	174.65	10928.35	-211.83	214.23	304.04	3.11	554423.12	760314.73	N 32 31 19.78	W 103 37 22.37
	11001.00	17.06	172.15	10974.65	-199.25	201.65	305.53	7.46	554410.54	760316.22	N 32 31 19.66	W 103 37 22.35
	11048.00	21.18	169.83	11019.04	-184.03	186.48	307.97	8.91	554395.35	760316.66	N 32 31 19.51	W 103 37 22.32
	11095.00	25.39	169.60	11062.21	-165.73	168.18	311.29	8.98	554377.08	760321.98	N 32 31 19.33	W 103 37 22.29
	11142.00	29.70	175.52	11103.88	-144.18	146.65	314.02	10.85	554355.54	760324.71	N 32 31 19.11	W 103 37 22.26
	11190.00	31.40	181.49	11145.22	-119.81	122.29	314.63	7.24	554331.16	760325.31	N 32 31 18.87	W 103 37 22.25
	11237.00	33.59	182.82	11184.86	-94.59	97.06	313.87	4.90	554305.95	760324.36	N 32 31 18.62	W 103 37 22.28
	11284.00	39.80	182.66	11222.53	-68.56	69.02	312.33	13.21	554277.82	760323.02	N 32 31 18.35	W 103 37 22.28
	11331.00	46.79	182.64	11256.72	-34.40	36.84	310.84	14.87	554245.74	760321.53	N 32 31 18.03	W 103 37 22.30
	11379.00	51.78	181.82	11288.02	1.83	0.50	309.43	10.48	554209.40	760320.12	N 32 31 17.67	W 103 37 22.32
	11474.00	61.71	180.51	11340.05	81.24	-78.82	307.87	10.52	554130.08	760318.58	N 32 31 16.88	W 103 37 22.35
	11571.00	65.94	181.02	11360.78	123.40	-120.99	307.31	9.05	554087.91	760317.99	N 32 31 16.47	W 103 37 22.36
	11668.00	68.80	181.27	11378.88	166.78	-164.38	306.44	6.10	554044.55	760317.13	N 32 31 16.04	W 103 37 22.37
	11815.00	71.65	181.15	11394.68	210.99	-208.60	305.50	6.49	554000.31	760316.19	N 32 31 15.60	W 103 37 22.38
	11663.00	78.27	180.80	11407.88	257.12	-254.74	304.72	9.23	553958.17	760315.41	N 32 31 15.14	W 103 37 22.40
	11710.00	79.58	180.08	11417.69	303.07	-300.69	304.37	7.20	553908.22	760315.06	N 32 31 14.69	W 103 37 22.40
	11757.00	80.95	179.47	11426.64	349.39	-347.01	304.55	3.18	553861.90	760315.24	N 32 31 14.23	W 103 37 22.41
	11852.00	88.82	178.87	11435.67	443.81	-441.42	306.09	6.34	553787.49	760316.78	N 32 31 13.30	W 103 37 22.39
	11946.00	88.82	178.28	11439.16	537.73	-535.32	308.59	2.06	553673.60	760318.28	N 32 31 12.37	W 103 37 22.37
	12047.00	88.93	178.42	11441.15	638.63	-636.19	312.26	1.84	553572.74	760323.94	N 32 31 11.37	W 103 37 22.33
	12141.00	89.22	178.54	11442.68	732.48	-730.00	316.03	0.33	553478.93	760328.72	N 32 31 10.44	W 103 37 22.27
	12235.00	87.19	179.72	11445.81	826.39	-823.89	322.09	4.01	553385.05	760332.78	N 32 31 9.51	W 103 37 22.24
	12330.00	90.62	179.51	11447.42	921.36	-918.85	322.73	3.62	553290.08	760333.42	N 32 31 8.57	W 103 37 22.24
	12424.00	88.37	182.08	11448.25	1015.32	-1012.82	321.43	3.83	553198.11	760332.12	N 32 31 7.64	W 103 37 22.26
	12519.00	91.01	178.32	11448.77	1110.29	-1107.80	321.10	4.84	553101.14	760331.79	N 32 31 6.70	W 103 37 22.27
	12614.00	87.03	180.45	11450.39	1205.25	-1202.75	322.12	4.75	553006.18	760332.81	N 32 31 5.76	W 103 37 22.27
	12708.00	90.39	182.75	11452.51	1299.14	-1296.67	319.49	4.33	552912.28	760330.18	N 32 31 4.83	W 103 37 22.30
	12803.00	90.73	179.20	11451.58	1394.09	-1391.64	317.88	3.75	552817.31	760328.56	N 32 31 3.89	W 103 37 22.33
	12897.00	89.44	177.62	11451.44	1488.07	-1485.60	320.49	2.17	552723.38	760331.17	N 32 31 2.96	W 103 37 22.31
	12994.00	88.94	176.79	11452.81	1584.98	-1582.47	325.21	1.00	552628.49	760335.80	N 32 31 2.00	W 103 37 22.28
	13086.00	88.49	175.80	11454.87	1676.80	-1674.28	331.16	1.18	552534.71	760341.85	N 32 31 1.10	W 103 37 22.20
	13181.00	88.71	175.34	11457.20	1771.55	-1768.94	338.49	0.54	552440.02	760349.18	N 32 31 0.16	W 103 37 22.12
	13276.00	88.37	174.38	11459.62	1866.20	-1863.53	347.02	1.09	552345.44	760357.70	N 32 30 59.22	W 103 37 22.03
	13370.00	88.65	174.48	11462.06	1959.79	-1957.05	356.16	0.32	552251.92	760366.84	N 32 30 58.30	W 103 37 21.93
	13464.00	89.61	178.90	11463.49	2053.63	-2050.88	361.58	4.81	552158.12	760372.27	N 32 30 57.37	W 103 37 21.87
	13559.00	90.00	182.49	11463.81	2148.60	-2145.84	360.43	3.80	552063.15	760371.11	N 32 30 56.43	W 103 37 21.89
	13654.00	90.17	185.41	11463.67	2243.31	-2240.60	353.68	3.08	551969.39	760369.47	N 32 30 55.49	W 103 37 21.98
	13748.00	90.11	185.51	11463.44	2338.81	-2334.17	344.94	0.12	551874.82	760365.63		

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
	16963.00	89.27	180.80	11510.78	5545.19	-5542.70	338.71	0.84	548666.41	760350.40	N 32 30 22.82	W 103 37 22.40
	17057.00	89.27	180.81	11511.85	5639.16	-5636.68	338.39	0.01	548572.44	760349.08	N 32 30 21.89	W 103 37 22.42
	17151.00	89.10	182.85	11513.29	5733.07	-5730.62	335.39	2.18	548478.50	760346.08	N 32 30 20.98	W 103 37 22.46
	17246.00	89.68	180.33	11514.32	5828.00	-5825.57	332.76	2.72	548383.55	760343.44	N 32 30 20.02	W 103 37 22.50
	17340.00	89.50	177.43	11515.01	5921.98	-5919.54	334.59	3.09	548289.59	760345.28	N 32 30 19.09	W 103 37 22.49
	17435.00	89.16	177.47	11516.12	6016.91	-6014.44	338.82	0.36	548194.69	760349.51	N 32 30 18.15	W 103 37 22.45
	17529.00	89.44	178.65	11517.27	6110.81	-6108.30	343.64	0.52	548100.83	760354.33	N 32 30 17.22	W 103 37 22.40
	17623.00	88.89	177.78	11518.55	6204.73	-6202.18	348.20	1.30	548006.95	760358.69	N 32 30 16.29	W 103 37 22.35
	17717.00	89.44	178.59	11519.84	6298.64	-6296.06	352.81	1.36	547913.08	760363.49	N 32 30 15.36	W 103 37 22.30
	17812.00	89.16	177.01	11521.00	6393.52	-6390.90	358.11	0.53	547818.24	760368.80	N 32 30 14.42	W 103 37 22.25
	17908.00	89.94	178.22	11521.74	6487.39	-6484.74	363.66	1.18	547724.41	760374.35	N 32 30 13.50	W 103 37 22.19
	18001.00	89.89	173.86	11521.88	6582.09	-6579.37	371.87	2.48	547629.78	760382.58	N 32 30 12.58	W 103 37 22.10
	18095.00	89.61	175.03	11522.29	6675.72	-6672.93	380.97	1.28	547536.23	760391.66	N 32 30 11.63	W 103 37 22.01
	18189.00	89.50	177.25	11523.02	6769.54	-6766.71	387.30	2.36	547442.45	760397.98	N 32 30 10.70	W 103 37 21.94
	18284.00	89.89	178.85	11523.53	6864.50	-6861.65	390.63	1.73	547347.51	760401.22	N 32 30 9.77	W 103 37 21.91
	18378.00	89.38	178.41	11524.13	6958.49	-6955.62	392.78	0.72	547253.55	760403.48	N 32 30 8.84	W 103 37 21.89
	18472.00	89.63	179.44	11524.78	7052.48	-7049.60	394.54	1.20	547159.57	760405.23	N 32 30 7.91	W 103 37 21.88
	18566.00	89.66	178.02	11525.19	7146.47	-7143.57	396.63	1.52	547065.60	760407.31	N 32 30 6.98	W 103 37 21.88
	18661.00	89.83	178.83	11525.62	7241.45	-7238.54	399.15	0.87	546970.64	760409.84	N 32 30 6.04	W 103 37 21.84
	18755.00	88.89	182.19	11526.58	7335.41	-7332.51	398.24	3.58	546876.67	760408.92	N 32 30 5.11	W 103 37 21.86
Last SLB MWD Survey	18850.00	88.71	185.62	11528.49	7430.11	-7427.26	391.77	3.62	546781.92	760402.45	N 32 30 4.17	W 103 37 21.94
PTB	18949.00	88.71	185.62	11530.72	7528.53	-7525.76	382.08	0.00	546683.43	760392.76	N 32 30 3.19	W 103 37 22.06

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 85.000% Confidence 2.7855 sigma
 Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	31.000	1/88.425	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	Original Borehole / Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949'
	1	31.000	31.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	Original Borehole / Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to 18949'
	1	31.000	18949.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	Original Borehole / Chisholm Minis 1 Fed Com 3BS 6H MWD 0' to