

Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive Survey

Geodetic Report

(Def Survey)

Report Date:	November 28, 2018 - 07:05 PM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Chisholm Energy Operating, LLC	Vertical Section Azimuth:	179.540 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Minis 1 Fed Com 2BS 11H / Minis 1 Fed Com 2BS 11H	TVD Reference Datum:	RKB = 22R (Nabors M55)
Well:	Minis 1 Fed Com 2BS 11H	TVD Reference Elevation:	3742.000 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3720.000 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.749 °
Survey Name:	Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive	Total Gravity Field Strength:	998.4829mgn (9.80665 Based)
Survey Date:	November 14, 2018	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	379.001 ° / 8302.898 ft / 6.729 / 0.774	Total Magnetic Field Strength:	48195.024 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.403 °
Location Lat / Long:	N 32° 31' 18.97116", W 103° 37' 27.10342"	Declination Date:	November 05, 2018
Location Grid N/E Y/X:	N 554338.400 RUS, E 759909.800 RUS	Magnetic Declination Model:	HDGM 2018
CRS Grid Convergence Angle:	0.3813 °	North Reference:	Grid North
Grid Scale Factor:	0.9999638	Grid Convergence Used:	0.3813 °
Version / Patch:	2.10.715.0	Total Corr Mag North->Grid North:	6.3679 °
		Local Coord Referenced To:	Structure Reference Point

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 ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	554338.40	759909.80	N 32 31 18.97	W 103 37 27.10
	179.00	0.26	338.72	179.00	-0.38	0.38	-0.15	0.15	554338.78	759909.65	N 32 31 18.97	W 103 37 27.11
	325.00	0.53	227.15	325.00	-0.23	0.23	-0.76	0.48	554338.63	759909.04	N 32 31 18.97	W 103 37 27.11
	469.00	0.46	187.97	468.99	0.79	-0.80	-1.33	0.24	554337.80	759908.47	N 32 31 18.96	W 103 37 27.12
	588.00	0.77	198.06	587.99	2.02	-2.03	-1.85	0.27	554336.37	759908.15	N 32 31 18.95	W 103 37 27.12
	781.00	1.00	195.67	780.96	4.87	-4.89	-2.50	0.12	554333.51	759907.30	N 32 31 18.92	W 103 37 27.13
	971.00	1.90	188.61	970.90	9.58	-9.61	-3.31	0.49	554328.79	759906.49	N 32 31 18.88	W 103 37 27.14
	1160.00	0.57	150.93	1159.85	13.52	-13.54	-3.22	0.78	554324.86	759906.58	N 32 31 18.84	W 103 37 27.14
	1349.00	0.74	165.77	1348.84	15.53	-15.55	-2.46	0.13	554322.85	759907.34	N 32 31 18.82	W 103 37 27.13
	1497.00	0.84	187.17	1496.83	17.28	-17.30	-2.33	0.19	554321.10	759907.47	N 32 31 18.80	W 103 37 27.13
	1626.00	0.77	168.98	1625.82	18.84	-18.86	-2.25	0.20	554319.54	759907.55	N 32 31 18.78	W 103 37 27.13
	1816.00	1.80	92.74	1815.78	20.27	-20.27	1.14	0.99	554318.14	759910.94	N 32 31 18.77	W 103 37 27.09
	1911.00	1.29	69.89	1910.74	20.00	-19.97	3.72	0.92	554318.43	759913.52	N 32 31 18.77	W 103 37 27.06
	2006.00	1.37	11.18	2005.72	18.53	-18.49	4.94	1.37	554319.91	759914.74	N 32 31 18.79	W 103 37 27.05
	2101.00	1.19	336.58	2100.70	16.51	-16.47	4.77	0.82	554321.93	759914.57	N 32 31 18.81	W 103 37 27.05
	2196.00	1.60	321.47	2195.67	14.56	-14.53	3.55	0.58	554323.87	759913.35	N 32 31 18.83	W 103 37 27.06
	2291.00	2.12	342.98	2290.62	11.83	-11.81	2.21	0.91	554326.59	759912.01	N 32 31 18.85	W 103 37 27.08
	2385.00	2.14	321.96	2384.56	8.77	-8.77	0.62	0.83	554329.63	759910.42	N 32 31 18.88	W 103 37 27.10
	2480.00	0.72	291.63	2479.53	7.14	-7.15	-1.03	1.64	554331.25	759908.77	N 32 31 18.90	W 103 37 27.12
	2575.00	0.95	349.00	2574.52	6.14	-6.16	-1.73	0.87	554332.24	759908.07	N 32 31 18.91	W 103 37 27.12
	2669.00	1.11	34.90	2668.50	4.63	-4.64	-1.36	0.87	554333.76	759908.44	N 32 31 18.93	W 103 37 27.12
	2764.00	2.30	43.56	2763.46	2.51	-2.51	0.48	1.28	554335.89	759910.28	N 32 31 18.95	W 103 37 27.10
	2859.00	2.16	26.31	2858.39	-0.46	0.48	2.59	0.72	554338.88	759912.39	N 32 31 18.98	W 103 37 27.07
	2954.00	1.41	15.14	2953.34	-3.18	3.21	3.68	0.87	554341.61	759913.48	N 32 31 19.00	W 103 37 27.06
	3048.00	0.81	0.25	3047.32	-4.98	4.99	3.99	0.70	554343.39	759913.79	N 32 31 19.02	W 103 37 27.06
	3143.00	0.79	36.67	3142.32	-6.15	6.19	4.38	0.53	554344.59	759914.18	N 32 31 19.03	W 103 37 27.05
	3238.00	1.23	35.81	3237.30	-7.50	7.54	5.37	0.46	554345.94	759915.17	N 32 31 19.05	W 103 37 27.04
	3333.00	1.11	30.73	3332.28	-9.11	9.16	6.44	0.17	554347.56	759916.24	N 32 31 19.06	W 103 37 27.03
	3427.00	1.51	298.81	3426.28	-10.49	10.54	5.62	2.03	554348.94	759915.82	N 32 31 19.08	W 103 37 27.03
	3522.00	2.20	276.39	3521.21	-11.32	11.34	2.91	1.04	554349.74	759912.71	N 32 31 19.08	W 103 37 27.07
	3617.00	2.25	275.66	3616.14	-11.74	11.73	-0.76	0.06	554350.13	759909.04	N 32 31 19.09	W 103 37 27.11
	3712.00	2.60	264.96	3711.06	-11.76	11.73	-4.76	0.80	554350.13	759905.04	N 32 31 19.09	W 103 37 27.16
	3806.00	2.56	269.32	3804.96	-11.59	11.51	-8.98	0.21	554349.91	759900.82	N 32 31 19.09	W 103 37 27.21
	3901.00	2.31	285.56	3899.88	-12.11	12.00	-12.95	0.77	554350.40	759896.85	N 32 31 19.09	W 103 37 27.25
	3996.00	2.94	285.70	3994.78	-13.31	13.17	-17.14	0.66	554351.57	759892.96	N 32 31 19.10	W 103 37 27.30
	4091.00	3.54	282.57	4089.63	-14.65	14.47	-22.35	0.66	554352.87	759887.45	N 32 31 19.12	W 103 37 27.36
	4186.00	4.38	285.51	4184.40	-16.31	16.08	-28.71	0.91	554354.48	759881.09	N 32 31 19.13	W 103 37 27.44
	4285.00	3.97	286.22	4283.14	-18.33	18.05	-35.64	0.42	554356.45	759874.16	N 32 31 19.15	W 103 37 27.52
	4379.00	2.75	287.69	4376.97	-19.97	19.84	-40.91	1.30	554358.04	759868.89	N 32 31 19.17	W 103 37 27.58
	4474.00	1.46	278.53	4471.91	-20.87	20.52	-44.28	1.40	554358.91	759865.52	N 32 31 19.18	W 103 37 27.62
	4569.00	1.80	265.71	4566.87	-20.97	20.60	-46.80	0.39	554358.99	759863.00	N 32 31 19.18	W 103 37 27.65
	4664.00	2.16	268.72	4661.82	-20.86	20.46	-49.91	0.80	554358.86	759859.89	N 32 31 19.18	W 103 37 27.68
	4758.00	2.68	267.66	4755.74	-20.78	20.33	-53.88	0.56	554358.73	759855.92	N 32 31 19.18	W 103 37 27.73
	4853.00	3.12	274.65	4850.82	-20.92	20.45	-58.68	0.59	554358.84	759851.13	N 32 31 19.18	W 103 37 27.79
	4947.00	1.95	285.67	4944.52	-21.59	21.09	-62.77	1.34	554359.48	759847.04	N 32 31 19.18	W 103 37 27.83
	5041.00	1.72	304.48	5038.48	-22.84	22.32	-65.47	0.68	554360.71	759844.33	N 32 31 19.20	W 103 37 27.87
	5136.00	2.34	305.86	5133.41	-24.81	24.26	-68.21	0.65	554362.66	759841.59	N 32 31 19.22	W 103 37 27.90
	5231.00	2.73	297.16	5228.32	-27.00	26.43	-71.80	0.58	554364.83	759838.00	N 32 31 19.24	W 103 37 27.94
	5326.00	1.48	302.69	5323.26	-28.72	28.12	-74.65	1.33	554366.52	759834.96	N 32 31 19.25	W 103 37 27.98
	5421.00	1.32	295.76	5418.23	-29.88	29.26	-76.86	0.24	554367.66	759832.94	N 32 31 19.27	W 103 37 28.00
	5516.00	1.26	290.20	5513.20	-30.73	30.10	-78.83	0.15	554368.50	759830.97	N 32 31 19.27	W 103 37 28.02
	5611.00	1.36	289.09	5608.18	-31.48	30.83	-80.87	0.11	554369.23	759828.93	N 32 31 19.28	W 103 37 28.05
	5705.00	1.55	284.33	5702.15	-32.17	31.51	-83.16	0.24	554369.91	759826.64	N 32 31 19.29	W 103 37 28.07
	5742.00	1.61	285.84	5739.13	-32.45	31.77	-84.15	0.20	554370.17	759825.66	N 32 31 19.29	W 103 37 28.08
	5799.00	1.68	287.06	5796.11	-32.95	32.27	-85.81	0.48	554370.66	759823.99	N 32 31 19.30	W 103 37 28.10
	5894.00	0.73	156.84	5891.09	-32.88	32.17	-87.06	2.55	554370.57	759822.74	N 32 31 19.30	W 103 37 28.12
	5988.00	1.19	131.13	5985.08	-31.67	30.97	-86.09	0.66	554369.37	759823.72	N 32 31 19.28	W 103 37 28.11
	6083.00	1.22	125.46	6080.06	-30.42	29.74	-84.52	0.13	554368.14	759825.28	N 32 31 19.27	W 103 37 28.09
	6178.00	1.25	134.73	6175.04	-29.09	28.42	-82.96	0.21	554366.82	759826.84	N 32 31 19.26	W 103 37 28.07
	6273.00	1.33	129.63	6270.01	-27.64	26.99	-81.37	0.15	554365.39	759828.43	N 32 31 19.24	W 103 37 28.05
	6368.00	1.09	130.02	6364.99	-26.35	25.71	-79.83	0.25	554364.11	759829.87	N 32 31 19.23	W 103 37 28.03
	6463.00	1.10	131.60	6459.97	-25.15	24.52	-78.46	0.03	554362.92	759831.31	N 32 31 19.22	W 103 37 28.02
	6558.00	1.04	130.37	6554.96	-23.97	23.36	-77.12	0.07	554361.76	759832.68	N 32 31 19.21	W 103 37 28.00
	6650.00	0.80	121.63	6646.94	-23.04	22.44	-75.87	0.22	554360.84	759833.93	N 32 31 19.20	W 103 37 27.99
	6745.00	1.06	140.04	6741.93	-21.97	21.37	-74.87	0.37	554359.77	759835.13	N 32 31 19.19	W 103 37 27.97

...Minis 1 Fed Com 2BS 11H\Original Borehole\Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive

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 ° ' ")
	6839.00	0.79	143.12	6835.92	-20.78	20.19	-73.72	0.29	554358.59	759836.08	N 32 31 19.18	W 103 37 27.96
	6934.00	1.12	148.07	6930.91	-19.48	18.88	-72.84	0.36	554357.27	759836.96	N 32 31 19.18	W 103 37 27.95
	7029.00	0.92	153.30	7025.89	-17.98	17.41	-72.01	0.23	554355.81	759837.80	N 32 31 19.15	W 103 37 27.94
	7123.00	0.91	150.84	7119.88	-16.65	16.08	-71.30	0.04	554354.48	759838.50	N 32 31 19.13	W 103 37 27.93
	7218.00	1.51	28.00	7214.87	-17.09	16.53	-70.35	2.26	554354.93	759839.46	N 32 31 19.14	W 103 37 27.92
	7313.00	1.77	28.94	7309.83	-19.49	18.94	-69.09	0.28	554357.34	759840.71	N 32 31 19.16	W 103 37 27.91
	7407.00	1.52	32.85	7403.79	-21.82	21.28	-67.76	0.32	554359.68	759842.04	N 32 31 19.19	W 103 37 27.89
	7501.00	1.56	32.65	7497.75	-23.94	23.41	-66.39	0.04	554361.80	759843.41	N 32 31 19.21	W 103 37 27.88
	7595.00	1.60	33.79	7591.72	-26.09	25.57	-64.97	0.05	554363.97	759844.83	N 32 31 19.23	W 103 37 27.86
	7690.00	1.58	39.87	7686.68	-28.19	27.88	-63.40	0.18	554366.08	759846.41	N 32 31 19.25	W 103 37 27.84
	7784.00	1.44	40.41	7780.65	-30.07	29.57	-61.80	0.15	554367.97	759848.00	N 32 31 19.27	W 103 37 27.82
	7878.00	0.67	301.16	7874.64	-31.25	30.76	-61.50	1.79	554369.16	759848.30	N 32 31 19.28	W 103 37 27.82
	7973.00	0.72	288.29	7969.63	-31.73	31.23	-62.55	0.17	554369.63	759847.26	N 32 31 19.28	W 103 37 27.83
	8068.00	0.81	298.62	8062.62	-32.24	31.73	-63.68	0.18	554370.13	759846.12	N 32 31 19.29	W 103 37 27.84
	8161.00	0.77	298.27	8157.61	-32.82	32.36	-64.83	0.04	554370.75	759844.97	N 32 31 19.30	W 103 37 27.86
	8255.00	0.85	316.92	8251.61	-33.69	33.16	-65.86	0.29	554371.58	759843.94	N 32 31 19.30	W 103 37 27.87
	8351.00	0.99	320.35	8347.59	-34.86	34.32	-66.88	0.16	554372.72	759842.92	N 32 31 19.32	W 103 37 27.88
	8445.00	0.86	335.84	8441.58	-36.13	35.59	-67.69	0.30	554373.99	759842.12	N 32 31 19.33	W 103 37 27.89
	8540.00	0.59	317.80	8536.57	-37.15	36.60	-68.31	0.37	554375.00	759841.50	N 32 31 19.34	W 103 37 27.90
	8635.00	0.41	329.22	8631.57	-37.81	37.28	-68.81	0.22	554375.66	759840.99	N 32 31 19.34	W 103 37 27.90
	8730.00	0.15	315.94	8726.57	-38.19	37.64	-69.07	0.28	554376.04	759840.73	N 32 31 19.35	W 103 37 27.91
	8825.00	0.58	129.51	8821.57	-37.97	37.42	-68.78	0.77	554375.82	759841.02	N 32 31 19.35	W 103 37 27.90
	8919.00	1.50	134.95	8915.55	-36.79	36.25	-67.55	0.98	554374.65	759842.26	N 32 31 19.33	W 103 37 27.89
	9014.00	1.46	131.93	9010.52	-35.09	34.56	-65.77	0.09	554372.96	759844.04	N 32 31 19.32	W 103 37 27.87
	9108.00	1.75	155.66	9104.48	-32.97	32.46	-64.28	0.76	554370.86	759845.52	N 32 31 19.30	W 103 37 27.85
	9203.00	0.86	208.32	9199.48	-31.17	30.85	-63.95	1.52	554369.05	759845.88	N 32 31 19.28	W 103 37 27.85
	9297.00	0.88	161.06	9293.48	-30.16	29.65	-64.02	0.57	554368.05	759845.78	N 32 31 19.27	W 103 37 27.85
	9391.00	1.17	154.72	9387.44	-28.78	28.25	-63.43	0.53	554366.65	759846.37	N 32 31 19.25	W 103 37 27.84
	9486.00	0.89	156.45	9482.43	-27.20	26.70	-62.72	0.30	554365.10	759847.08	N 32 31 19.24	W 103 37 27.83
	9580.00	0.78	162.30	9576.42	-25.92	25.42	-62.23	0.15	554363.82	759847.57	N 32 31 19.23	W 103 37 27.83
	9675.00	0.76	152.32	9671.41	-24.74	24.25	-61.75	0.14	554362.65	759848.06	N 32 31 19.22	W 103 37 27.82
	9735.00	0.80	159.96	9731.40	-23.99	23.50	-61.42	0.19	554361.90	759848.39	N 32 31 19.21	W 103 37 27.82
	9785.00	0.39	248.69	9781.40	-23.60	23.11	-61.46	1.76	554361.51	759848.35	N 32 31 19.20	W 103 37 27.82
	9816.00	1.88	290.17	9812.40	-23.75	23.25	-62.03	5.19	554361.65	759847.77	N 32 31 19.21	W 103 37 27.83
	9848.00	4.58	286.62	9844.34	-24.31	23.80	-63.75	8.46	554362.19	759846.05	N 32 31 19.21	W 103 37 27.85
	9879.00	8.25	286.00	9875.14	-25.30	24.76	-67.07	11.84	554363.16	759842.73	N 32 31 19.22	W 103 37 27.88
	9910.00	12.34	285.76	9905.64	-26.86	26.28	-72.40	13.19	554364.68	759837.40	N 32 31 19.24	W 103 37 27.95
	9942.00	17.14	285.36	9936.58	-29.10	28.46	-80.24	15.00	554366.85	759829.56	N 32 31 19.26	W 103 37 28.04
	9974.00	21.17	283.94	9966.80	-31.82	31.10	-90.40	12.68	554369.50	759819.40	N 32 31 19.28	W 103 37 28.16
	10005.00	23.81	278.82	9995.44	-34.22	33.41	-102.02	10.80	554371.80	759807.78	N 32 31 19.31	W 103 37 28.29
	10036.00	26.60	272.76	10023.49	-35.82	34.70	-115.14	12.25	554373.10	759794.66	N 32 31 19.32	W 103 37 28.45
	10068.00	29.45	268.15	10051.74	-35.83	34.79	-130.17	11.18	554373.19	759779.84	N 32 31 19.32	W 103 37 28.62
	10100.00	32.44	265.82	10079.18	-35.09	33.91	-146.59	10.06	554372.31	759763.21	N 32 31 19.32	W 103 37 28.81
	10131.00	34.18	264.52	10105.08	-33.79	32.47	-163.56	6.07	554370.87	759746.25	N 32 31 19.30	W 103 37 29.01
	10163.00	35.81	262.29	10131.30	-31.82	30.36	-181.78	6.47	554368.76	759728.02	N 32 31 19.28	W 103 37 29.22
	10194.00	37.86	259.99	10158.11	-29.09	27.49	-200.14	7.97	554365.89	759709.67	N 32 31 19.26	W 103 37 29.44
	10226.00	40.81	256.67	10180.88	-25.13	23.37	-219.99	11.32	554361.77	759689.82	N 32 31 19.22	W 103 37 29.67
	10257.00	44.18	254.45	10203.72	-20.08	18.14	-240.26	11.90	554356.54	759669.55	N 32 31 19.17	W 103 37 29.91
	10289.00	47.64	254.03	10225.98	-14.00	11.69	-262.38	10.85	554350.29	759647.43	N 32 31 19.11	W 103 37 30.17
	10321.00	51.38	253.50	10248.76	-7.38	5.09	-285.74	11.76	554343.49	759624.07	N 32 31 19.04	W 103 37 30.44
	10352.00	53.67	249.74	10265.69	0.18	-2.66	-309.03	11.53	554335.74	759600.79	N 32 31 18.97	W 103 37 30.71
	10384.00	53.67	245.87	10284.72	9.71	-12.38	-332.84	9.77	554326.02	759578.97	N 32 31 18.87	W 103 37 30.99
	10415.00	53.57	242.99	10303.11	20.30	-23.15	-355.35	7.49	554315.25	759554.48	N 32 31 18.77	W 103 37 31.26
	10446.00	53.38	239.71	10321.56	32.06	-35.09	-377.21	8.52	554303.31	759532.61	N 32 31 18.65	W 103 37 31.51
	10478.00	53.65	235.92	10340.59	45.59	-48.79	-398.97	9.56	554289.61	759510.84	N 32 31 18.51	W 103 37 31.77
	10509.00	54.06	233.13	10358.88	59.95	-63.32	-419.36	7.39	554275.08	759490.46	N 32 31 18.37	W 103 37 32.01
	10541.00	54.46	230.75	10377.58	75.80	-79.33	-439.80	6.16	554259.07	759470.01	N 32 31 18.22	W 103 37 32.25
	10573.00	54.68	229.44	10396.13	92.36	-96.06	-459.80	3.41	554242.35	759450.01	N 32 31 18.05	W 103 37 32.48
	10604.00	54.87	227.91	10414.01	108.93	-112.78	-478.82	4.08	554225.63	759431.00	N 32 31 17.89	W 103 37 32.70
	10636.00	55.74	225.95	10432.22	126.74	-130.75	-498.04	5.72	554207.66	759411.78	N 32 31 17.71	W 103 37 32.93
	10667.00	56.93	223.88	10449.41	144.87	-149.02	-516.25	6.80	554189.39	759393.57	N 32 31 17.53	W 103 37 33.14
	10698.00	58.42	221.92	10465.99	163.92	-168.21	-534.07	7.15	554170.19	759375.75	N 32 31 17.34	W 103 37 33.35
	10729.00	59.67	220.29	10481.93	183.81	-188.25	-551.55	6.05	554150.16	759358.28	N 32 31 17.14	W 103 37 33.58
	10761.00	60.76	218.45	10497.83	205.14	-209.72	-569.16	6.04	554128.69	759340.66	N 32 31 16.93	W 103 37 33.77
	10792.00	61.67	217.08	10512.76	226.48	-231.19	-585.80	4.86	554107.22	759324.03	N 32 31 16.72	W 103 37 33.96
	10824.00	63.40	214.91	10527.52	249.32	-254.17	-602.48	8.09	554084.24	759307.34	N 32 31 16.50	W 103 37 34.16
	10855.00	65.67	212.79	10540.84	272.44	-277.41	-618.06	9.58	554061.00	759291.76	N 32 31 16.27	W 103 37 34.34
	10887.00	67.92	209.97	10553.45	297.42	-302.52	-633.37	10.73	554035.89	759276.46	N 32 31 16.02	W 103 37 34.52
	10919.00	70.29	208.23	10564.87	323.42	-328.64	-647.90	8.98	554009.78	759261.92	N 32 31 15.76	W 103 37 34.70
	10950.00	71.97	207.66	10574.89	349.23	-354.55	-661.65	5.69	553983.86	759248.18	N 32 31 15.51	W 103 37 34.88
	10982.00	73.36	206.70	10584.43	376.29	-381.72	-675.60	5.20	553956.69	759234.23	N 32 31 15.24	W 103 37 35.02
	11013.00	74.22	206.91	10593.08	402.75	-408.29	-689.02	2.85	553930.12	759220.80	N 32 31 14.98	W 103 37 35.18
	11045.00	74.31	206.70	10601.76	430.13	-435.78	-702.91	0.69	553902.63	759206.91	N 32 31 14.71	W 103 37 35.35
	11110.00	76.80	205.41	10617.97	486.45	-492.33	-730.56	4.29	553846.09	759179.27	N 32 31 14.15	W 103 37 35.67
	11141.00	77.48	203.33	10624.67	513.87	-519.85	-743.02	6.90	553818.66	759166.80	N 32 31 13.88	W 103 37 35.82
	11173.00	78.57	200.61	10631.51	542.81	-548.88	-754.73	8.99	553789.54	759155.10	N 32 31 13.59	W 103 37 35.96
	11204.00	79.34	197.77	10637.45	571.48	-577.61	-764.73	9.33	553760.81	759145.10	N 32 31 13.31	W 103 37 36.08

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 ° ' ")
	13583.00	87.91	178.82	10667.47	2940.99	-2947.53	-803.38	3.69	551390.88	759108.47	N 32 30 49.88	W 103 37 36.71
	13678.00	87.88	178.87	10671.13	3035.92	-3042.46	-802.28	1.13	551298.06	759107.56	N 32 30 48.92	W 103 37 36.71
	13773.00	87.76	179.07	10674.91	3130.84	-3137.38	-801.40	0.85	551201.14	759108.43	N 32 30 47.98	W 103 37 36.71
	13868.00	87.31	178.86	10678.99	3225.75	-3232.27	-799.88	0.52	551106.25	759110.15	N 32 30 47.04	W 103 37 36.89
	13963.00	86.87	183.09	10683.82	3320.57	-3327.11	-801.30	4.47	551011.41	759108.53	N 32 30 46.10	W 103 37 36.72
	14057.00	87.85	181.91	10688.31	3414.34	-3420.91	-805.39	1.50	550917.82	759104.44	N 32 30 45.18	W 103 37 36.77
	14152.00	88.77	182.06	10691.28	3509.20	-3515.81	-808.68	1.19	550822.73	759101.15	N 32 30 44.24	W 103 37 36.82
	14246.00	89.03	181.15	10693.08	3603.12	-3609.75	-811.31	1.01	550728.78	759098.52	N 32 30 43.31	W 103 37 36.86
	14341.00	89.31	180.16	10694.46	3698.09	-3704.74	-812.40	1.08	550633.80	759097.43	N 32 30 42.37	W 103 37 36.88
	14436.00	89.20	178.38	10695.69	3793.05	-3799.67	-809.53	3.98	550538.88	759100.30	N 32 30 41.43	W 103 37 36.85
	14530.00	88.80	178.30	10697.33	3886.96	-3893.55	-805.17	2.09	550445.00	759104.66	N 32 30 40.50	W 103 37 36.81
	14624.00	89.51	178.91	10698.72	3980.89	-3987.45	-801.24	1.66	550351.10	759108.59	N 32 30 39.57	W 103 37 36.77
	14719.00	89.34	179.61	10699.67	4075.85	-4082.40	-798.38	2.85	550256.16	759111.47	N 32 30 38.63	W 103 37 36.74
	14814.00	90.06	175.60	10700.17	4170.78	-4177.29	-794.39	4.29	550161.27	759115.44	N 32 30 37.69	W 103 37 36.70
	14909.00	89.28	176.95	10700.72	4265.82	-4272.09	-788.22	1.64	550066.48	759121.81	N 32 30 36.75	W 103 37 36.64
	15004.00	88.80	179.97	10702.48	4360.58	-4367.02	-785.66	3.26	549971.54	759124.17	N 32 30 35.81	W 103 37 36.62
	15098.00	90.00	182.33	10703.63	4454.52	-4460.99	-787.55	2.92	549877.58	759122.28	N 32 30 34.88	W 103 37 36.65
	15193.00	90.46	181.47	10703.24	4549.44	-4555.93	-790.70	1.03	549782.64	759119.13	N 32 30 33.94	W 103 37 36.69
	15287.00	90.80	177.88	10702.21	4643.42	-4649.91	-790.17	3.84	549688.67	759119.66	N 32 30 33.01	W 103 37 36.69
	15382.00	89.31	180.51	10702.12	4738.41	-4744.89	-788.83	3.18	549593.69	759121.00	N 32 30 32.07	W 103 37 36.68
	15477.00	88.51	184.22	10703.93	4833.26	-4839.78	-792.75	3.99	549498.81	759117.08	N 32 30 31.14	W 103 37 36.74
	15571.00	89.57	185.38	10705.50	4928.84	-4933.43	-800.62	1.67	549405.16	759109.21	N 32 30 30.21	W 103 37 36.84
	15666.00	90.89	181.36	10705.12	5021.61	-5028.24	-806.20	4.45	549310.35	759103.63	N 32 30 29.27	W 103 37 36.91
	15760.00	90.26	178.99	10704.18	5115.58	-5122.21	-804.85	4.70	549216.39	759104.98	N 32 30 28.34	W 103 37 36.90
	15855.00	89.05	180.39	10704.75	5210.55	-5217.16	-802.67	3.80	549121.44	759107.18	N 32 30 27.40	W 103 37 36.88
	15950.00	89.80	182.80	10705.70	5305.48	-5312.11	-805.32	2.66	549026.48	759104.51	N 32 30 26.48	W 103 37 36.92
	16045.00	90.23	178.68	10705.68	5400.44	-5407.09	-806.55	4.36	548931.52	759103.29	N 32 30 25.52	W 103 37 36.94
	16139.00	89.31	179.20	10706.05	5494.43	-5501.07	-804.81	1.12	548837.54	759105.02	N 32 30 24.59	W 103 37 36.93
	16234.00	90.40	180.74	10706.29	5589.42	-5596.06	-804.76	1.99	548742.55	759105.07	N 32 30 23.65	W 103 37 36.94
	16329.00	90.09	178.62	10705.89	5684.39	-5691.02	-802.57	4.35	548647.87	759107.26	N 32 30 22.71	W 103 37 36.92
	16424.00	89.17	180.02	10706.50	5779.35	-5785.96	-799.78	3.71	548552.66	759110.05	N 32 30 21.77	W 103 37 36.89
	16519.00	89.97	181.54	10707.22	5874.32	-5880.94	-801.08	1.81	548457.88	759108.75	N 32 30 20.83	W 103 37 36.91
	16614.00	89.57	179.59	10707.60	5969.30	-5975.93	-802.01	2.10	548362.70	759107.82	N 32 30 19.90	W 103 37 36.93
	16708.00	89.68	180.84	10708.23	6063.29	-6069.93	-802.20	1.12	548268.70	759107.63	N 32 30 18.97	W 103 37 36.94
	16803.00	89.80	176.99	10708.68	6158.27	-6164.89	-800.24	3.84	548173.74	759109.59	N 32 30 18.03	W 103 37 36.93
	16898.00	89.94	176.54	10708.89	6253.16	-6259.74	-794.88	0.50	548078.90	759114.85	N 32 30 17.09	W 103 37 36.87
	16991.00	89.89	175.70	10709.03	6345.99	-6352.53	-788.58	0.90	547986.12	759121.25	N 32 30 16.17	W 103 37 36.80
	17086.00	89.40	175.59	10709.62	6440.77	-6447.25	-781.37	0.53	547891.40	759126.46	N 32 30 15.23	W 103 37 36.73
	17181.00	89.66	178.32	10710.40	6535.66	-6542.10	-776.32	2.89	547796.55	759133.50	N 32 30 14.29	W 103 37 36.68
	17275.00	89.60	178.61	10711.00	6629.64	-6636.07	-773.81	0.32	547702.59	759138.02	N 32 30 13.36	W 103 37 36.65
	17369.00	89.80	178.52	10711.50	6723.63	-6730.04	-771.45	0.23	547608.62	759138.38	N 32 30 12.43	W 103 37 36.63
	17464.00	89.60	179.16	10711.99	6818.62	-6825.02	-769.53	0.71	547513.85	759140.30	N 32 30 11.49	W 103 37 36.62
	17558.00	89.46	178.40	10712.77	6912.61	-6918.99	-767.53	0.82	547419.67	759142.30	N 32 30 10.56	W 103 37 36.60
	17652.00	89.57	177.30	10713.56	7006.56	-7012.92	-764.00	1.18	547325.75	759145.83	N 32 30 9.63	W 103 37 36.57
	17747.00	89.48	178.60	10714.35	7101.52	-7107.85	-760.60	1.37	547230.82	759149.23	N 32 30 8.69	W 103 37 36.54
	17842.00	89.11	182.05	10715.52	7196.49	-7202.83	-761.14	3.65	547135.85	759148.69	N 32 30 7.75	W 103 37 36.55
	18030.00	89.11	181.35	10718.44	7384.33	-7390.72	-766.72	0.37	546947.96	759143.11	N 32 30 5.89	W 103 37 36.63
	18125.00	89.74	180.62	10719.39	7479.29	-7485.70	-768.35	1.01	546852.98	759141.48	N 32 30 4.95	W 103 37 36.66
	18173.00	89.51	180.33	10719.71	7527.29	-7533.70	-768.75	0.77	546804.99	759141.08	N 32 30 4.48	W 103 37 36.66
Proj. to TD	18273.00	89.51	180.33	10720.56	7627.27	-7633.70	-769.33	0.00	546705.00	759140.50	N 32 30 3.49	W 103 37 36.68

Survey Type: Non-Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 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	22.000	1/98.425	30.000	30.000	NAL_MWD-NON_SLB-Depth Only	Original Borehole / Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive
	1	22.000	22.000	Act Stns	30.000	30.000	NAL_MWD-NON_SLB-Depth Only	Original Borehole / Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive
	1	22.000	11708.000	Act Stns	30.000	30.000	NAL_MWD-NON_SLB	Original Borehole / Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive
	1	11708.000	18273.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	Original Borehole / Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive

...Minis 1 Fed Com 2BS 11H\Original Borehole\Chisholm Minis 1 Fed Com 2BS 11H 0ft to 18273ft Definitive