

Chisholm Gazelle 32 State Com 1BS 3H MWD 0' to 13646' Survey

Geodetic Report

(Def Survey)



Report Date: August 19, 2019 - 01:09 PM
Client: Chisholm
Field: NM Lea County (NAD 83)
Structure / Slot: Chisholm Gazelle 32 State Com 1BS 3H / New Slot
Well: Chisholm Gazelle 32 State Com 1BS 3H
Borehole: Chisholm Gazelle 32 State Com 1BS 3H
UWI / API#: Unknown / Unknown
Survey Name: Chisholm Gazelle 32 State Com 1BS 3H MWD 0' to 13646'
Survey Date: July 30, 2019
Tort / AHD / DDI / ERD Ratio: 186.210' / 5845.728 ft / 6.225 / 0.660
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 42' 39.16942", W 103° 41' 22.88938"
Location Grid N/E Y/X: N 622950.600 ftUS, E 739305.800 ftUS
CRS Grid Convergence Angle: 0.3478°
Grid Scale Factor: 0.99995397
Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.560° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3791.000 ft above MSL
Seabed / Ground Elevation: 3759.000 ft above MSL
Magnetic Declination: 6.755°
Total Gravity Field Strength: 998.5103mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48199.209 nT
Magnetic Dip Angle: 60.653°
Declination Date: July 30, 2019
Magnetic Declination Model: HDGM 2019
North Reference: Grid North
Grid Convergence Used: 0.3478°
Total Corr Mag North->Grid North: 6.4076°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Closure (ft)	Closure Azimuth (°)
SHL	0.00	0.00	188.08	0.00	0.00	0.00	0.00	N/A	622950.60	739305.80	N 32 42 39.17	W 103 41 22.89	0.00	0.00
	106.00	0.30	261.85	106.00	0.04	-0.04	-0.28	0.29	622950.56	739305.52	N 32 42 39.17	W 103 41 22.89	0.28	261.85
	215.00	0.73	45.29	215.00	-0.41	0.41	-0.07	0.91	622951.01	739305.73	N 32 42 39.17	W 103 41 22.89	0.41	350.36
	281.00	0.75	49.84	280.99	-0.98	0.98	0.56	0.10	622951.58	739306.36	N 32 42 39.18	W 103 41 22.88	1.13	29.71
	375.00	0.96	53.25	374.98	-1.84	1.85	1.66	0.23	622952.45	739307.46	N 32 42 39.19	W 103 41 22.87	2.49	41.93
	470.00	1.00	54.43	469.97	-2.78	2.81	2.97	0.05	622953.41	739308.77	N 32 42 39.20	W 103 41 22.85	4.09	46.64
	564.00	0.81	52.56	563.96	-3.66	3.69	4.17	0.21	622954.29	739309.97	N 32 42 39.21	W 103 41 22.84	5.57	48.49
	659.00	0.80	57.25	658.95	-4.42	4.46	5.26	0.07	622955.06	739311.06	N 32 42 39.21	W 103 41 22.83	6.89	49.73
	735.00	0.48	356.88	734.94	-5.02	5.06	5.69	0.92	622955.66	739311.49	N 32 42 39.22	W 103 41 22.82	7.61	48.36
	828.00	1.29	295.49	828.93	-5.87	5.90	4.71	1.22	622956.50	739310.51	N 32 42 39.23	W 103 41 22.83	7.55	38.60
	924.00	1.19	286.01	923.91	-6.62	6.64	2.79	0.24	622957.24	739308.59	N 32 42 39.23	W 103 41 22.86	7.20	22.83
	1020.00	1.14	288.33	1019.89	-7.21	7.22	0.92	0.07	622957.62	739306.72	N 32 42 39.24	W 103 41 22.88	7.27	7.30
	1114.00	1.31	283.56	1113.87	-7.77	7.76	-1.01	0.21	622958.36	739304.79	N 32 42 39.25	W 103 41 22.90	7.83	352.60
	1208.00	1.07	273.28	1207.85	-8.09	8.06	-2.93	0.34	622958.66	739302.87	N 32 42 39.25	W 103 41 22.92	8.58	340.05
	1303.00	1.11	279.18	1302.83	-8.30	8.28	-4.72	0.12	622958.86	739301.08	N 32 42 39.25	W 103 41 22.94	9.51	330.26
	1393.00	0.92	282.47	1392.82	-8.60	8.56	-6.28	0.22	622959.15	739299.52	N 32 42 39.25	W 103 41 22.96	10.61	323.71
	1491.00	0.50	277.43	1490.81	-8.84	8.78	-7.48	0.43	622959.38	739298.32	N 32 42 39.26	W 103 41 22.98	11.53	319.58
	1588.00	2.45	266.47	1585.77	-8.79	8.71	-9.92	2.08	622959.31	739295.88	N 32 42 39.26	W 103 41 23.00	13.20	311.28
	1681.00	3.16	265.42	1680.66	-8.49	8.38	-14.56	0.74	622958.98	739291.24	N 32 42 39.25	W 103 41 23.06	16.80	299.91
	1775.00	2.97	262.28	1774.52	-7.99	7.84	-19.55	0.27	622958.44	739286.25	N 32 42 39.25	W 103 41 23.12	21.07	291.85
	1870.00	3.88	267.97	1869.35	-7.59	7.40	-25.20	1.01	622958.00	739280.60	N 32 42 39.24	W 103 41 23.18	26.27	286.36
	1965.00	4.10	268.36	1964.12	-7.43	7.19	-31.81	0.24	622957.79	739273.99	N 32 42 39.24	W 103 41 23.26	32.61	282.73
	2060.00	5.92	272.61	2058.76	-7.62	7.31	-40.10	1.95	622957.91	739265.70	N 32 42 39.24	W 103 41 23.36	40.76	280.33
	2155.00	6.36	273.50	2153.21	-8.24	7.86	-50.24	0.47	622958.46	739255.56	N 32 42 39.25	W 103 41 23.48	50.85	278.89
	2250.00	5.88	275.15	2247.67	-9.08	8.61	-60.34	0.54	622959.21	739245.46	N 32 42 39.26	W 103 41 23.59	60.95	278.12
	2345.00	5.65	276.99	2342.19	-10.15	9.62	-69.83	0.31	622960.22	739235.98	N 32 42 39.27	W 103 41 23.71	70.49	277.84
	2440.00	6.80	276.92	2436.63	-11.48	10.87	-80.05	1.21	622961.46	739225.75	N 32 42 39.28	W 103 41 23.83	80.79	277.73
	2533.00	6.93	278.20	2528.96	-13.03	12.33	-91.07	0.22	622962.93	739214.73	N 32 42 39.30	W 103 41 23.95	91.91	277.71
	2627.00	6.56	279.19	2622.31	-14.78	14.00	-101.99	0.42	622964.60	739203.81	N 32 42 39.31	W 103 41 24.08	102.95	277.81
	2722.00	6.29	278.76	2716.71	-16.52	15.66	-112.49	0.28	622966.25	739193.31	N 32 42 39.33	W 103 41 24.20	113.58	277.92
	2818.00	5.91	279.72	2812.17	-18.23	17.29	-122.56	0.42	622967.89	739183.24	N 32 42 39.35	W 103 41 24.32	123.78	278.03
	2911.00	5.54	266.74	2904.71	-18.85	17.84	-131.77	1.44	622968.44	739174.04	N 32 42 39.35	W 103 41 24.43	132.97	277.71
	3004.00	5.14	264.08	2997.30	-18.24	17.16	-140.39	0.51	622967.76	739165.41	N 32 42 39.35	W 103 41 24.53	141.44	276.97
	3100.00	5.04	271.04	3092.93	-17.93	16.79	-148.88	0.65	622967.39	739156.93	N 32 42 39.34	W 103 41 24.63	149.82	276.43
	3194.00	6.10	268.11	3186.48	-17.91	16.70	-158.00	1.18	622967.30	739147.81	N 32 42 39.34	W 103 41 24.74	158.88	276.03
	3289.00	6.07	267.91	3280.95	-17.64	16.35	-168.07	0.04	622966.95	739137.74	N 32 42 39.34	W 103 41 24.86	168.86	275.56
	3384.00	5.45	268.74	3375.47	-17.43	16.07	-177.60	0.66	622966.67	739128.21	N 32 42 39.34	W 103 41 24.97	178.32	275.17

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)	Closure (ft)	Closure Azimuth (°)
	3478.00	5.32	266.52	3469.05	-17.14	15.71	-186.42	0.26	622966.31	739119.39	N 32 42 39.34	W 103 41 25.07	187.08	274.82
	3573.00	5.05	268.41	3563.66	-16.82	15.32	-195.00	0.34	622965.92	739110.81	N 32 42 39.33	W 103 41 25.17	195.60	274.49
	3688.00	6.42	273.68	3658.19	-17.12	15.55	-204.48	1.54	622966.15	739101.33	N 32 42 39.34	W 103 41 25.28	205.07	274.35
	3763.00	6.40	272.67	3752.59	-17.79	16.14	-215.07	0.12	622966.74	739090.74	N 32 42 39.34	W 103 41 25.41	215.67	274.29
	3858.00	5.89	270.61	3847.04	-18.16	16.44	-225.24	0.59	622967.03	739080.58	N 32 42 39.35	W 103 41 25.52	225.83	274.17
	3953.00	5.47	269.85	3941.58	-18.28	16.48	-234.64	0.45	622967.08	739071.17	N 32 42 39.35	W 103 41 25.63	235.22	274.02
	4048.00	5.27	269.29	4036.16	-18.28	16.41	-243.53	0.22	622967.01	739062.28	N 32 42 39.35	W 103 41 25.74	244.08	273.85
	4144.00	5.71	269.65	4131.72	-18.27	16.33	-252.72	0.46	622966.93	739053.09	N 32 42 39.35	W 103 41 25.85	253.24	273.70
	4237.00	5.60	271.03	4224.27	-18.39	16.38	-261.89	0.19	622966.98	739043.93	N 32 42 39.35	W 103 41 25.95	262.40	273.58
	4331.00	5.28	268.58	4317.84	-18.43	16.35	-270.80	0.42	622966.95	739035.02	N 32 42 39.35	W 103 41 26.06	271.29	273.46
	4424.00	5.74	271.37	4410.41	-18.51	16.36	-279.72	0.57	622966.96	739026.09	N 32 42 39.35	W 103 41 26.16	280.20	273.35
	4518.00	5.67	274.74	4503.95	-19.08	16.86	-289.04	0.36	622967.46	739016.77	N 32 42 39.35	W 103 41 26.27	289.54	273.34
	4613.00	5.36	274.02	4598.51	-19.84	17.56	-298.15	0.33	622968.15	739007.67	N 32 42 39.36	W 103 41 26.38	298.66	273.37
	4708.00	5.17	275.52	4693.11	-20.63	18.28	-306.83	0.25	622968.88	738998.98	N 32 42 39.37	W 103 41 26.48	307.37	273.41
	4802.00	5.03	276.31	4786.74	-21.56	19.14	-315.14	0.16	622969.74	738990.68	N 32 42 39.38	W 103 41 26.58	315.72	273.48
	4897.00	6.40	278.56	4881.26	-22.87	20.38	-324.51	1.47	622970.98	738981.30	N 32 42 39.39	W 103 41 26.69	325.15	273.59
	4992.00	6.68	281.11	4975.64	-24.81	22.24	-335.17	0.42	622972.83	738970.64	N 32 42 39.41	W 103 41 26.81	335.91	273.80
	5086.00	6.55	278.61	5069.02	-26.75	24.09	-345.84	0.33	622974.69	738959.98	N 32 42 39.43	W 103 41 26.94	346.68	273.98
	5181.00	6.58	279.85	5163.40	-28.57	25.83	-356.56	0.15	622976.43	738949.25	N 32 42 39.45	W 103 41 27.06	357.50	274.14
	5275.00	6.42	280.90	5256.79	-30.57	27.75	-367.03	0.21	622978.35	738938.78	N 32 42 39.47	W 103 41 27.18	368.08	274.32
	5370.00	6.48	282.06	5351.19	-32.77	29.87	-377.50	0.15	622980.47	738928.32	N 32 42 39.49	W 103 41 27.31	378.68	274.52
	5465.00	6.46	282.83	5445.58	-35.16	32.18	-387.95	0.09	622982.78	738917.86	N 32 42 39.51	W 103 41 27.43	389.29	274.74
	5605.00	6.21	282.79	5584.73	-38.70	35.61	-403.03	0.18	622986.21	738902.79	N 32 42 39.55	W 103 41 27.60	404.60	275.05
	5700.00	6.21	281.44	5679.17	-40.94	37.77	-413.08	0.15	622988.37	738892.74	N 32 42 39.57	W 103 41 27.72	414.80	275.22
	5795.00	5.76	281.18	5773.65	-42.96	39.71	-422.80	0.48	622990.31	738883.02	N 32 42 39.59	W 103 41 27.83	424.66	275.37
	5890.00	5.37	281.00	5868.20	-44.80	41.48	-431.84	0.41	622992.08	738873.98	N 32 42 39.61	W 103 41 27.94	433.83	275.49
	5986.00	5.25	279.80	5963.79	-46.47	43.09	-440.58	0.17	622993.69	738865.24	N 32 42 39.62	W 103 41 28.04	442.68	275.59
	6080.00	5.31	279.07	6057.39	-47.95	44.51	-449.12	0.09	622995.11	738856.71	N 32 42 39.64	W 103 41 28.14	451.31	275.66
	6175.00	5.17	279.86	6151.99	-49.45	45.93	-457.67	0.17	622996.53	738848.15	N 32 42 39.65	W 103 41 28.24	459.97	275.73
	6270.00	5.06	277.60	6246.62	-50.80	47.22	-466.03	0.24	622997.82	738839.79	N 32 42 39.66	W 103 41 28.34	468.42	275.79
	6364.00	6.63	274.24	6340.13	-51.82	48.17	-475.56	1.71	622998.77	738830.27	N 32 42 39.67	W 103 41 28.45	477.99	275.78
	6459.00	6.67	273.41	6434.49	-52.64	48.90	-486.54	0.11	622999.50	738819.29	N 32 42 39.68	W 103 41 28.58	488.99	275.74
	6554.00	6.64	272.91	6528.85	-53.33	49.51	-497.53	0.07	623000.11	738808.29	N 32 42 39.69	W 103 41 28.71	499.99	275.68
	6648.00	6.55	271.94	6622.22	-53.87	49.97	-508.32	0.15	623000.56	738797.50	N 32 42 39.69	W 103 41 28.83	510.77	275.61
	6744.00	6.35	272.12	6717.61	-54.33	50.35	-519.10	0.21	623000.95	738786.72	N 32 42 39.70	W 103 41 28.96	521.54	275.54
	6839.00	6.26	270.52	6812.04	-54.65	50.59	-529.53	0.21	623001.19	738776.30	N 32 42 39.70	W 103 41 29.08	531.94	275.46
	6934.00	6.13	270.19	6906.49	-54.80	50.65	-539.78	0.13	623001.25	738766.05	N 32 42 39.70	W 103 41 29.20	542.15	275.36
	7029.00	6.11	269.65	7000.94	-54.86	50.64	-549.91	0.07	623001.24	738755.92	N 32 42 39.70	W 103 41 29.32	552.23	275.26
	7123.00	5.85	269.31	7094.43	-54.85	50.55	-559.69	0.28	623001.15	738746.13	N 32 42 39.70	W 103 41 29.44	561.97	275.16
	7218.00	5.65	268.30	7188.96	-54.73	50.36	-569.21	0.23	623000.95	738736.62	N 32 42 39.70	W 103 41 29.55	571.43	275.06
	7312.00	5.45	268.89	7282.52	-54.57	50.13	-578.29	0.22	623000.73	738727.53	N 32 42 39.70	W 103 41 29.65	580.46	274.95
	7407.00	4.83	273.41	7377.13	-54.79	50.28	-586.80	0.78	623000.88	738719.03	N 32 42 39.70	W 103 41 29.75	588.95	274.90
	7502.00	4.34	280.94	7471.83	-55.76	51.20	-594.32	0.82	623001.80	738711.51	N 32 42 39.71	W 103 41 29.84	596.52	274.92
	7597.00	4.09	285.47	7566.57	-57.40	52.79	-601.11	0.44	623003.39	738704.72	N 32 42 39.73	W 103 41 29.92	603.42	275.02
	7691.00	3.82	287.99	7660.35	-59.31	54.65	-607.32	0.34	623005.25	738698.51	N 32 42 39.75	W 103 41 29.99	609.77	275.14
	7787.00	3.66	293.23	7756.14	-61.55	56.85	-613.18	0.39	623007.44	738692.65	N 32 42 39.77	W 103 41 30.06	615.81	275.30
	7881.00	3.93	296.33	7849.94	-64.21	59.46	-618.83	0.36	623010.06	738687.00	N 32 42 39.79	W 103 41 30.13	621.68	275.49
	7976.00	3.08	271.47	7944.77	-65.76	60.97	-624.30	1.81	623011.57	738681.53	N 32 42 39.81	W 103 41 30.19	627.27	275.58
	8010.00	2.57	263.20	7978.72	-65.71	60.90	-625.97	1.92	623011.50	738679.86	N 32 42 39.81	W 103 41 30.21	628.92	275.56
	8032.00	2.02	242.87	8000.71	-65.48	60.67	-626.80	4.42	623011.27	738679.03	N 32 42 39.81	W 103 41 30.22	629.73	275.53
	8073.00	3.53	196.58	8041.66	-63.95	59.13	-627.80	6.30	623009.73	738678.03	N 32 42 39.79	W 103 41 30.23	630.58	275.38
	8127.00	9.90	219.28	8095.27	-58.78	53.94	-631.22	12.56	623004.54	738674.61	N 32 42 39.74	W 103 41 30.27	633.52	274.88
	8174.00	15.73	226.45	8141.08	-51.32	46.41	-638.40	12.84	622997.01	738667.43	N 32 42 39.67	W 103 41 30.36	640.09	274.16
	8221.00	20.04	230.77	8185.80	-41.91	36.93	-649.27	9.59	622987.52	738656.57	N 32 42 39.57	W 103 41 30.49	650.31	273.26
	8268.00	24.33	233.28	8229.31	-31.13	26.04	-663.27	9.35	622976.64	738642.56	N 32 42 39.47	W 103 41 30.65	663.78	272.25
	8316.00	27.43	232.15	8272.49	-18.56	13.34	-679.93	6.53	622963.94	738625.90	N 32 42 39.34	W 103 41 30.85	680.06	271.12
	8363.00	29.41	231.29	8313.83	-4.83	-0.52	-697.49	4.29	622950.08	738608.35	N 32 42 39.21	W 103 41 31.05	697.49	269.96
	8412.00	31.25	222.20	8356.14	11.98	-17.47	-715.42	10.08	622933.13	738590.41	N 32 42 39.04	W 103 41 31.26	715.64	268.60
	8459.00	34.64	212.65	8395.61	32.16	-37.77	-730.84	13.18	622912.83	738575.00	N 32 42 38.84	W 103 41 31.45	731.81	267.04
	8506.00	37.15	205.84	8433.69	56.09	-61.80	-744.23	10.02	622888.80	738561.60	N 32 42 38.60	W 103 41 31.60	746.80	265.25
	8554.00	39.22	200.16	8471.43	83.30	-89.10	-755.78	8.49	622861.50	738550.05	N 32 42 38.33	W 103 41 31.74	761.02	263.28
	8601.00	41.86	194.21	8507.16	112.39	-118.27	-764.76	9.96	622832.34	738541.08	N 32 42 38.05	W 103 41 31.85	773.85	261.21
	8649.00	44.06	190.39	8542.29	144.29	-150.22	-771.70	7.09	622800.39	738534.14	N 32 42 37.73	W 103 41 31.93	786.19	258.98
	8696.00	45.88	185.94	8575.56	177.12	-183.08	-776.39	7.73	622767.53	738529.44	N 32 42 37.40	W 103 41 31.99	797.69	256.73
	8743.00	48.28	183.53	8607.56	211.39	-217.38	-779.22	6.34	622733.23	738526.62	N 32 42 37.07	W 103 41 32.02	808.97	254.41
	8790.00	51.86	181.71	8637.73	247.37	-253.37	-780.85	8.17	622697.24	738524.99	N 32 42 36.71	W 103 41 32.05	820.93	252.02
	8838.00	56.72	181.12	8665.74	286.31	-292.32	-781.81	10.18	622658.29	738524.03	N 32 42 36.32	W 103 41 32.06	834.67	249.50
	8886.00	62.97	181.51	8689.84	327.77	-333.79	-782.77	13.04	622616.82	738523.07	N 32 42 35.91	W 103 41 32.07		

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Closure (ft)	Closure Azimuth (°)
	8932.00	69.34	180.97	8708.43	369.81	-375.84	-783.67	13.89	622574.78	738522.17	N 32 42 35.50 W 103 41 32.09		869.13	244.38
	8981.00	74.06	179.18	8723.81	416.31	-422.34	-783.72	10.24	622528.28	738522.11	N 32 42 35.04 W 103 41 32.09		890.28	241.68
	9076.00	85.18	180.63	8740.90	509.60	-515.64	-783.59	11.80	622434.99	738522.25	N 32 42 34.11 W 103 41 32.10		938.03	236.65
	9108.00	87.82	181.16	8742.86	541.53	-547.57	-784.09	8.41	622403.06	738521.75	N 32 42 33.80 W 103 41 32.10		956.36	235.07
	9171.00	89.83	179.12	8744.15	604.51	-610.55	-784.24	4.55	622340.08	738521.60	N 32 42 33.18 W 103 41 32.11		993.88	232.10
	9267.00	90.84	175.88	8743.59	700.43	-706.44	-780.05	3.54	622244.19	738525.79	N 32 42 32.23 W 103 41 32.07		1052.40	227.83
	9361.00	88.94	175.39	8743.77	794.21	-800.17	-772.90	2.09	622150.47	738532.94	N 32 42 31.30 W 103 41 31.99		1112.49	224.01
	9407.00	89.33	174.41	8744.47	840.05	-845.98	-768.81	2.31	622104.66	738537.03	N 32 42 30.85 W 103 41 31.95		1143.13	222.26
	9503.00	89.22	179.02	8745.69	935.90	-941.79	-763.31	4.81	622008.86	738542.53	N 32 42 29.90 W 103 41 31.89		1212.27	219.02
	9599.00	89.22	178.38	8747.01	1031.88	-1037.75	-761.13	0.67	621912.90	738544.70	N 32 42 28.95 W 103 41 31.87		1286.96	216.26
	9693.00	89.72	178.13	8747.88	1125.85	-1131.70	-758.28	0.60	621818.95	738547.56	N 32 42 28.02 W 103 41 31.84		1362.25	213.82
	9787.00	89.66	178.19	8748.39	1219.82	-1225.65	-755.26	0.09	621725.00	738550.57	N 32 42 27.09 W 103 41 31.82		1439.67	211.64
	9882.00	89.55	178.21	8749.04	1314.79	-1320.61	-752.28	0.12	621630.06	738553.55	N 32 42 26.15 W 103 41 31.79		1519.85	209.67
	9977.00	89.33	178.13	8749.97	1409.76	-1415.55	-749.25	0.25	621535.12	738556.58	N 32 42 25.21 W 103 41 31.76		1601.62	207.89
	10073.00	89.44	177.85	8751.00	1505.72	-1511.49	-745.89	0.31	621439.18	738559.94	N 32 42 24.26 W 103 41 31.73		1685.51	206.27
	10169.00	89.55	177.85	8751.85	1601.67	-1607.42	-742.29	0.12	621343.26	738563.55	N 32 42 23.31 W 103 41 31.69		1770.53	204.79
	10265.00	89.44	177.65	8752.69	1697.62	-1703.34	-738.52	0.23	621247.34	738567.32	N 32 42 22.36 W 103 41 31.65		1856.55	203.44
	10359.00	89.55	177.96	8753.52	1791.57	-1797.27	-734.92	0.35	621153.42	738570.91	N 32 42 21.43 W 103 41 31.62		1941.72	202.24
	10454.00	89.10	178.22	8754.63	1886.53	-1892.21	-731.76	0.54	621058.48	738574.08	N 32 42 20.49 W 103 41 31.59		2028.77	201.14
	10549.00	88.99	177.96	8756.21	1981.49	-1987.14	-728.59	0.29	620963.55	738577.24	N 32 42 19.55 W 103 41 31.56		2116.50	200.14
	10644.00	88.99	177.83	8757.89	2076.43	-2082.06	-725.11	0.14	620868.64	738580.73	N 32 42 18.61 W 103 41 31.52		2204.71	199.20
	10738.00	88.94	180.29	8759.58	2170.41	-2176.03	-723.57	2.62	620774.68	738582.27	N 32 42 17.68 W 103 41 31.51		2293.17	198.39
	10833.00	88.93	179.91	8761.35	2265.39	-2271.01	-723.73	0.40	620679.70	738582.10	N 32 42 16.74 W 103 41 31.52		2383.54	197.68
	10928.00	88.15	180.32	8763.77	2360.35	-2365.98	-723.92	0.93	620584.74	738581.91	N 32 42 15.80 W 103 41 31.53		2474.25	197.01
	11022.00	88.49	180.76	8766.53	2454.29	-2459.93	-724.81	0.59	620490.79	738581.03	N 32 42 14.87 W 103 41 31.55		2564.49	196.42
	11117.00	87.98	180.79	8769.45	2549.23	-2554.88	-726.09	0.54	620395.84	738579.74	N 32 42 13.93 W 103 41 31.57		2656.05	195.87
	11211.00	87.98	181.00	8772.77	2643.14	-2648.81	-727.56	0.22	620301.92	738578.27	N 32 42 13.01 W 103 41 31.59		2746.91	195.36
	11306.00	87.92	180.37	8776.16	2738.06	-2743.74	-728.70	0.67	620206.99	738577.14	N 32 42 12.07 W 103 41 31.61		2838.86	194.87
	11400.00	87.87	180.81	8779.62	2831.99	-2837.67	-729.66	0.47	620113.06	738576.17	N 32 42 11.14 W 103 41 31.63		2929.98	194.42
	11496.00	86.64	180.55	8784.21	2927.85	-2933.55	-730.80	1.31	620017.19	738575.03	N 32 42 10.19 W 103 41 31.65		3023.21	193.99
	11590.00	86.86	180.32	8789.54	3021.69	-3027.40	-731.51	0.34	619923.35	738574.32	N 32 42 9.26 W 103 41 31.66		3114.52	193.58
	11686.00	86.81	180.73	8794.84	3117.53	-3123.25	-732.39	0.43	619827.50	738573.44	N 32 42 8.31 W 103 41 31.68		3207.97	193.20
	11780.00	87.14	180.80	8799.80	3211.38	-3217.11	-733.65	0.36	619733.65	738572.19	N 32 42 7.38 W 103 41 31.70		3299.70	192.85
	11875.00	87.20	180.71	8804.49	3306.24	-3311.99	-734.90	0.11	619638.77	738570.94	N 32 42 6.44 W 103 41 31.72		3392.54	192.51
	11970.00	87.87	181.08	8808.58	3401.13	-3406.88	-736.38	0.81	619543.88	738569.46	N 32 42 5.51 W 103 41 31.75		3485.56	192.20
	12065.00	87.93	180.71	8812.06	3496.04	-3501.81	-737.86	0.39	619448.96	738567.97	N 32 42 4.57 W 103 41 31.77		3578.70	191.90
	12159.00	88.37	180.08	8815.10	3589.98	-3595.76	-738.51	0.82	619355.02	738567.33	N 32 42 3.64 W 103 41 31.79		3670.81	191.61
	12253.00	88.49	182.42	8817.67	3683.90	-3689.69	-740.56	2.49	619261.08	738565.28	N 32 42 2.71 W 103 41 31.82		3763.28	191.35
	12348.00	89.83	183.17	8819.07	3778.73	-3784.57	-745.19	1.62	619166.21	738560.65	N 32 42 1.77 W 103 41 31.88		3857.23	191.14
	12443.00	89.38	181.12	8819.72	3873.63	-3879.49	-748.75	2.21	619071.29	738557.09	N 32 42 0.83 W 103 41 31.93		3951.09	190.92
	12538.00	89.66	182.07	8820.52	3968.56	-3974.45	-751.39	1.04	618976.34	738554.45	N 32 41 59.89 W 103 41 31.96		4044.86	190.71
	12630.00	89.61	182.02	8821.10	4060.48	-4066.39	-754.67	0.08	618884.40	738551.16	N 32 41 58.98 W 103 41 32.01		4135.83	190.51
	12725.00	88.77	178.41	8822.45	4155.44	-4161.36	-755.03	3.90	618789.44	738550.81	N 32 41 58.04 W 103 41 32.02		4229.31	190.28
	12821.00	88.26	179.17	8824.93	4251.40	-4257.31	-753.00	0.95	618693.49	738552.83	N 32 41 57.09 W 103 41 32.00		4323.39	190.03
	12916.00	88.15	179.86	8827.91	4346.35	-4352.26	-752.20	0.74	618598.55	738553.64	N 32 41 56.15 W 103 41 32.00		4416.78	189.81
	13011.00	87.98	179.91	8831.12	4441.30	-4447.20	-752.01	0.19	618503.61	738553.83	N 32 41 55.21 W 103 41 32.01		4510.34	189.60
	13106.00	88.04	179.66	8834.42	4536.24	-4542.15	-751.65	0.27	618408.67	738554.18	N 32 41 54.27 W 103 41 32.01		4603.92	189.40
	13199.00	88.09	179.33	8837.56	4629.19	-4635.09	-750.83	0.36	618315.73	738555.00	N 32 41 53.35 W 103 41 32.00		4695.51	189.20
	13294.00	88.09	178.91	8840.72	4724.13	-4730.03	-749.37	0.44	618220.80	738556.46	N 32 41 52.41 W 103 41 31.99		4789.02	189.00
	13388.00	87.36	178.79	8844.45	4818.05	-4823.93	-747.49	0.79	618126.90	738558.35	N 32 41 51.49 W 103 41 31.98		4881.50	188.81
	13484.00	87.42	179.10	8848.83	4913.94	-4919.82	-745.72	0.33	618031.02	738560.11	N 32 41 50.54 W 103 41 31.96		4976.01	188.62
Last SLB MWD Survey	13555.00	87.48	179.36	8851.98	4984.87	-4990.74	-744.77	0.38	617960.10	738561.06	N 32 41 49.83 W 103 41 31.96		5046.00	188.49
Projection to Bit	13646.00	87.48	179.36	8855.99	5075.78	-5081.65	-743.76	0.00	617869.20	738562.08	N 32 41 48.94 W 103 41 31.95		5135.79	188.33

Survey Type: 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	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
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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 ° ' ")	Closure (ft)	Closure Azimuth (°)
		1	0.000	32.000	1/98.425	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only			Chisholm Gazelle 32 State Com			
		1	32.000	32.000	Act Sins	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only			1BS 3H / Chisholm Gazelle 32			
		1	32.000	13646.000	Act Sins	30.000	30.000	NAL_MWD_1.0_DEG			State Com 1BS 3H MWD 0' to			
											Chisholm Gazelle 32 State Com			
											1BS 3H / Chisholm Gazelle 32			
											State Com 1BS 3H MWD 0' to			
											Chisholm Gazelle 32 State Com			
											1BS 3H / Chisholm Gazelle 32			
											State Com 1BS 3H MWD 0' to			
											Chisholm Gazelle 32 State Com			
											1BS 3H / Chisholm Gazelle 32			