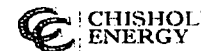


Schlumberger

Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft Definitive
Survey Report
(Def Survey)



30-015-45318

Report Date: January 17, 2019 - 12:34 PM
Client: Chisholm Energy Operating, LLC
Field: NM Eddy County (NAD 83)
Structure / Slot: Chisholm Spitfire 16 State Com WCB 1H / Spitfire 16 State Com WCB 1H
Well: Spitfire 16 State Com WCB 1H
Borehole: ST01
UWI / API#: Unknown / 30-015-45318-01
Survey Name: Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft Definitive
Survey Date: December 06, 2018
Tort / AHD / DDI / ERD Ratio: 170.613 ° / 5224.634 ft / 6.128 / 0.573
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 23' 57.51700", W 104° 17' 29.18781"
Location Grid N/E Y/X: N 509002.980 ftUS, E 554267.010 ftUS
CRS Grid Convergence Angle: 0.0224 °
Grid Scale Factor: 0.99990928
Version / Patch: 2.10.753.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 179.940 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB = 22ft (Nabors M55)
TVD Reference Elevation: 3376.200 ft above MSL
Seabed / Ground Elevation: 3354.200 ft above MSL
Magnetic Declination: 7.311 °
Total Gravity Field Strength: 998.4758mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47965.403 nT
Magnetic Dip Angle: 60.093 °
Declination Date: December 03, 2018
Magnetic Declination Model: HDGM 2018
North Reference: Grid North
Grid Convergence Used: 0.0224 °
Total Corr Mag North->Grid North: 7.2890 °
Local Coord Referenced To: Structure Reference Point

NM OIL CONSERVATION
ARTESIA DISTRICT

FEB 19 2019

RECEIVED

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	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	0.00	0.00	N/A	509002.98	554267.01	N 32 23 57.52	W 104 17 29.19
	97.00	0.89	108.24	97.00	0.24	-0.24	0.72	0.75	108.24	0.92	509002.74	554267.73	N 32 23 57.51	W 104 17 29.18
	156.00	1.10	108.69	155.99	0.56	-0.56	1.69	1.78	108.38	0.36	509002.42	554268.70	N 32 23 57.51	W 104 17 29.17
	215.00	1.62	120.25	214.97	1.17	-1.16	2.94	3.17	111.54	0.99	509001.82	554269.95	N 32 23 57.51	W 104 17 29.15
	274.00	1.87	121.87	273.94	2.10	-2.09	4.48	4.95	115.01	0.43	509000.89	554271.49	N 32 23 57.50	W 104 17 29.14
	330.00	1.90	119.75	329.91	3.04	-3.03	6.06	6.78	116.58	0.14	508999.95	554273.07	N 32 23 57.49	W 104 17 29.12
Last Surface - SLB	396.00	2.21	117.99	395.87	4.18	-4.17	8.14	9.15	117.15	0.48	508998.81	554275.15	N 32 23 57.48	W 104 17 29.09
	506.00	2.08	112.40	505.79	5.94	-5.93	11.86	13.26	116.57	0.22	508997.05	554278.86	N 32 23 57.46	W 104 17 29.05
	599.00	2.15	112.02	598.73	7.24	-7.23	15.03	16.68	115.68	0.08	508995.75	554282.04	N 32 23 57.45	W 104 17 29.01
	662.00	2.14	108.98	661.69	8.07	-8.05	17.24	19.03	115.04	0.18	508994.93	554284.25	N 32 23 57.44	W 104 17 28.99
	725.00	2.25	106.28	724.64	8.80	-8.78	19.54	21.42	114.20	0.24	508994.20	554286.55	N 32 23 57.43	W 104 17 28.96
	819.00	2.12	102.73	818.57	9.71	-9.68	23.01	24.96	112.82	0.20	508993.30	554290.02	N 32 23 57.42	W 104 17 28.92
	1258.00	3.62	96.89	1257.01	13.18	-13.13	44.69	46.58	106.38	0.35	508989.85	554311.69	N 32 23 57.39	W 104 17 28.67
	1385.00	3.25	99.62	1383.78	14.27	-14.22	52.22	54.12	105.23	0.32	508988.76	554319.22	N 32 23 57.38	W 104 17 28.58
	1764.00	3.25	93.10	1762.17	16.67	-16.59	73.54	75.39	102.72	0.10	508986.39	554340.54	N 32 23 57.35	W 104 17 28.33
	2142.00	4.47	75.60	2139.32	13.61	-13.51	98.51	99.43	97.81	0.45	508989.47	554365.51	N 32 23 57.38	W 104 17 28.04
	2237.00	4.53	67.08	2234.03	11.24	-11.13	105.55	106.13	96.02	0.71	508991.85	554372.55	N 32 23 57.41	W 104 17 27.96
	2616.00	5.11	68.56	2611.69	-0.73	0.87	135.04	135.05	89.63	0.16	509003.85	554402.04	N 32 23 57.53	W 104 17 27.61
	2710.00	5.22	72.09	2705.31	-3.57	3.72	143.01	143.06	88.51	0.36	509006.70	554410.01	N 32 23 57.55	W 104 17 27.52
	2969.00	5.85	85.09	2963.11	-8.29	8.47	167.37	167.59	87.10	0.54	509011.45	554434.37	N 32 23 57.60	W 104 17 27.24
	3052.00	6.39	87.94	3045.63	-8.81	9.00	176.20	176.43	87.08	0.75	509011.98	554443.20	N 32 23 57.61	W 104 17 27.13
	3147.00	4.25	87.23	3140.22	-9.16	9.36	185.00	185.24	87.10	2.25	509012.34	554452.00	N 32 23 57.61	W 104 17 27.03
	3242.00	3.71	88.51	3234.99	-9.41	9.61	191.59	191.83	87.13	0.58	509012.59	554458.58	N 32 23 57.61	W 104 17 26.95
	3337.00	3.58	87.50	3329.80	-9.61	9.82	197.63	197.87	87.16	0.15	509012.80	554464.62	N 32 23 57.61	W 104 17 26.88
	3431.00	3.50	88.09	3423.62	-9.83	10.04	203.43	203.67	87.17	0.09	509013.02	554470.42	N 32 23 57.62	W 104 17 26.82
	3526.00	3.20	86.45	3518.46	-10.08	10.30	208.97	209.22	87.18	0.33	509013.28	554475.96	N 32 23 57.62	W 104 17 26.75
	3621.00	3.03	87.09	3613.32	-10.37	10.59	214.12	214.39	87.17	0.18	509013.57	554481.12	N 32 23 57.62	W 104 17 26.69
	3715.00	3.02	85.16	3707.18	-10.70	10.93	219.07	219.35	87.14	0.11	509013.91	554486.06	N 32 23 57.62	W 104 17 26.63
	3810.00	2.56	84.21	3802.07	-11.12	11.35	223.68	223.97	87.09	0.49	509014.33	554490.67	N 32 23 57.63	W 104 17 26.58
	3905.00	2.29	79.82	3896.99	-11.66	11.90	227.66	227.97	87.01	0.34	509014.88	554494.65	N 32 23 57.63	W 104 17 26.53
	4095.00	1.92	69.40	4086.86	-13.45	13.69	234.37	234.77	86.66	0.28	509016.67	554501.36	N 32 23 57.65	W 104 17 26.45
	4284.00	1.74	68.42	4275.76	-15.61	15.86	240.00	240.53	86.22	0.10	509018.84	554506.99	N 32 23 57.67	W 104 17 26.39
	4473.00	1.95	108.99	4464.67	-15.61	15.87	245.71	246.23	86.30	0.68	509018.85	554512.70	N 32 23 57.67	W 104 17 26.32
	4663.00	1.48	104.78	4654.59	-13.93	14.19	251.14	251.54	86.77	0.26	509017.17	554518.13	N 32 23 57.66	W 104 17 26.26

...ST01\Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft Definitive

Schlumberger-Private

Comments	MD (m)	Incl (°)	Azim Grid (°)	TVD (m)	VSEC (m)	NS (m)	EW (m)	Closure (m)	Closure Azimuth (°)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S...)	Longitude (E/W...)
Last Pilot - SLB	4852.00	1.36	97.67	4843.53	-13.00	13.57	255.73	256.07	87.03	0.11	509016.25	554522.71	N 32.23 57.65	W 104.17 26.21
	5041.00	0.97	100.53	5032.49	-12.41	12.68	259.52	259.83	87.20	0.21	509015.66	554526.51	N 32.23 57.64	W 104.17 26.16
	5229.00	0.46	113.84	5220.47	-11.81	12.08	261.77	262.05	87.36	0.28	509015.06	554528.76	N 32.23 57.64	W 104.17 26.13
	5418.00	0.80	99.77	5409.46	-11.28	12.08	263.77	264.02	87.49	0.20	509014.53	554530.76	N 32.23 57.63	W 104.17 26.11
	5607.00	0.52	177.70	5598.45	-10.20	11.55	265.10	265.31	87.74	0.45	509013.45	554532.09	N 32.23 57.62	W 104.17 26.10
	5795.00	1.17	218.81	5786.43	-7.85	8.12	265.94	264.06	88.24	0.45	509011.10	554530.92	N 32.23 57.62	W 104.17 26.11
	5984.00	1.40	182.32	5975.39	-4.04	4.31	262.67	262.67	89.06	0.44	509007.29	554529.62	N 32.23 57.56	W 104.17 26.12
	6174.00	1.33	125.02	6165.34	-0.45	0.73	264.35	264.35	89.84	0.69	509003.71	554531.33	N 32.23 57.56	W 104.17 26.10
	6288.00	1.03	119.64	6259.32	-0.59	-0.31	265.97	265.97	90.07	0.35	509002.67	554532.95	N 32.23 57.51	W 104.17 26.09
	6363.00	2.03	66.34	6354.29	-0.39	-0.11	268.26	268.26	90.02	1.69	509004.78	554539.89	N 32.23 57.53	W 104.17 26.06
	6551.00	1.03	65.42	6542.22	-1.51	1.80	272.91	272.91	89.05	0.64	509007.52	554541.56	N 32.23 57.56	W 104.17 25.99
	6741.00	1.24	66.37	6732.19	-4.25	4.54	274.57	274.57	88.57	0.89	509009.89	554543.09	N 32.23 57.57	W 104.17 25.97
	6931.00	0.87	77.15	6922.17	-6.62	6.91	276.08	276.16	88.57	1.43	509013.87	554545.90	N 32.23 57.62	W 104.17 25.94
	7120.00	2.41	336.91	7111.11	-10.60	10.89	278.17	278.54	87.06	2.12	509013.17	554551.73	N 32.23 57.62	W 104.17 25.87
	7310.00	2.31	94.18	7301.02	-13.99	14.28	278.17	278.54	87.06	1.18	509013.17	554551.73	N 32.23 57.62	W 104.17 25.87
	7499.00	2.86	94.18	7489.00	-9.89	10.19	284.74	284.93	87.35	1.18	509013.17	554551.73	N 32.23 57.62	W 104.17 25.87
	7697.00	1.56	147.56	7677.66	-2.94	-2.25	289.51	289.53	89.36	0.32	509006.22	554536.42	N 32.23 57.55	W 104.17 25.81
	7876.00	1.03	154.50	7866.56	2.56	-2.25	292.63	292.64	90.44	0.37	509000.73	554539.62	N 32.23 57.49	W 104.17 25.76
	8065.00	1.03	175.54	8055.51	6.58	-6.27	293.94	293.98	91.22	0.10	508993.25	554560.80	N 32.23 57.42	W 104.17 25.76
	8255.00	1.07	186.08	8245.48	10.04	-9.73	293.82	293.98	92.57	0.04	508989.82	554560.32	N 32.23 57.39	W 104.17 25.77
	8444.00	1.03	190.14	8434.45	13.47	-13.16	293.33	293.63	92.57	5.97	508981.54	554561.67	N 32.23 57.26	W 104.17 25.75
	8556.00	7.63	188.10	8546.07	21.75	-21.44	294.69	295.47	94.16	7.91	508976.74	554562.28	N 32.23 57.26	W 104.17 25.74
	8658.00	9.83	176.44	8647.07	26.55	-26.24	295.30	296.46	95.08	3.76	508971.24	554562.38	N 32.23 57.20	W 104.17 25.74
	8714.00	23.70	185.02	8729.76	80.84	-80.54	292.75	297.10	96.13	5.50	508964.88	554562.12	N 32.23 57.14	W 104.17 25.75
	8746.00	20.38	183.07	8757.77	85.77	-85.47	293.29	297.10	97.36	9.89	508957.20	554561.65	N 32.23 57.06	W 104.17 25.76
	8777.00	26.98	179.67	8786.07	95.77	-95.47	293.29	297.10	98.83	15.77	508947.68	554560.85	N 32.23 56.97	W 104.17 25.75
	8809.00	28.71	176.24	8813.88	111.56	-111.25	294.54	314.85	113.25	2.55	508891.74	554562.99	N 32.23 56.82	W 104.17 25.75
	8841.00	30.60	174.75	8840.45	127.45	-127.14	296.01	322.16	115.86	7.04	508858.74	554564.35	N 32.23 56.09	W 104.17 25.72
	8872.00	31.39	174.71	8867.46	144.57	-144.26	297.36	330.51	118.59	9.34	508840.48	554565.18	N 32.23 55.72	W 104.17 25.71
	8904.00	33.50	176.18	8883.72	162.83	-162.51	298.20	339.61	121.30	10.37	508821.52	554565.41	N 32.23 55.72	W 104.17 25.71
	8936.00	36.18	178.50	8918.24	181.79	-181.47	298.43	349.27	124.18	11.80	508800.49	554565.20	N 32.23 55.51	W 104.17 25.72
	8967.00	39.25	180.06	8942.34	202.82	-202.51	298.22	360.48	127.00	12.59	508778.61	554564.77	N 32.23 55.30	W 104.17 25.71
	8999.00	42.97	181.05	8964.29	224.70	-224.39	297.59	372.86	129.86	12.09	508754.57	554564.54	N 32.23 55.06	W 104.17 25.72
	9030.00	46.87	181.20	8985.40	248.75	-248.43	297.96	387.66	132.50	13.34	508729.95	554564.94	N 32.23 54.81	W 104.17 25.71
	9062.00	50.59	179.79	8995.40	273.36	-273.05	297.96	404.15	135.07	9.99	508703.40	554565.83	N 32.23 54.55	W 104.17 25.70
	9093.00	54.60	178.51	9004.22	299.92	-299.61	298.85	423.18	137.39	12.48	508676.66	554567.16	N 32.23 54.29	W 104.17 25.69
	9125.00	57.72	177.67	9022.04	326.67	-326.36	300.18	443.41	139.55	9.73	508648.93	554568.90	N 32.23 54.01	W 104.17 25.67
	9156.00	61.81	176.67	9037.65	354.40	-354.09	301.91	465.33	142.83	12.25	508619.51	554570.82	N 32.23 53.72	W 104.17 25.65
	9187.00	65.58	176.17	9051.38	383.82	-383.50	303.84	488.28	147.61	9.73	508589.51	554572.95	N 32.23 53.42	W 104.17 25.62
	9219.00	68.69	176.34	9063.62	413.83	-413.51	305.97	514.40	149.50	8.95	508559.94	554574.78	N 32.23 53.13	W 104.17 25.60
	9251.00	71.46	175.56	9074.72	443.40	-443.08	307.80	539.50	149.21	10.76	508539.94	554576.26	N 32.23 52.83	W 104.17 25.58
	9282.00	74.33	177.34	9083.84	474.36	-474.03	309.28	566.00	146.88	7.79	508528.99	554577.78	N 32.23 52.53	W 104.17 25.57
	9314.00	76.82	177.19	9091.81	504.60	-504.28	312.62	592.36	149.73	5.47	508498.75	554579.60	N 32.23 52.22	W 104.17 25.54
	9345.00	78.51	177.06	9098.43	535.97	-535.65	314.61	617.77	150.94	4.37	508467.38	554581.59	N 32.23 51.91	W 104.17 25.52
	9377.00	79.68	176.28	9104.48	566.36	-566.03	316.71	647.77	152.09	7.19	508436.80	554583.69	N 32.23 51.60	W 104.17 25.50
	9408.00	83.32	176.27	9109.07	598.35	-598.01	318.43	676.70	153.15	10.63	508374.11	554585.41	N 32.23 51.29	W 104.17 25.48
	9440.00	85.62	177.45	9113.70	629.26	-628.92	318.43	704.94	154.20	9.95	508342.14	554586.46	N 32.23 50.98	W 104.17 25.46
	9471.00	91.55	177.79	9113.64	661.24	-660.90	319.48	734.07	155.14	6.47	508312.18	554587.02	N 32.23 50.36	W 104.17 25.45
	9503.00	91.55	179.08	9112.32	693.20	-692.87	320.04	761.39	156.08	2.60	508280.26	554587.62	N 32.23 50.36	W 104.17 25.45
	9533.00	93.47	178.74	9110.18	723.12	-722.79	320.97	790.72	156.96	4.26	508248.35	554587.95	N 32.23 50.36	W 104.17 25.45
	9565.00	94.09	180.10	9107.85	755.04	-754.70	320.97	820.12	157.80	6.73	508217.40	554587.60	N 32.23 49.74	W 104.17 25.45
	9595.00	94.09	180.10	9105.54	785.99	-785.65	320.62	848.55	158.64	7.78	508185.43	554586.73	N 32.23 49.43	W 104.17 25.46
	9628.00	92.31	181.92	9105.50	817.96	-817.63	318.67	877.93	159.42	1.83	508154.45	554585.65	N 32.23 49.12	W 104.17 25.48
	9660.00	89.93	181.92	9105.50	848.94	-848.61	317.59	906.47	160.17	1.13	508122.47	554584.57	N 32.23 48.80	W 104.17 25.49
	9691.00	89.93	181.92	9105.50	880.92	-880.59	317.59	936.11	160.17	3.62	508091.49	554583.15	N 32.23 48.50	W 104.17 25.50
	9723.00	89.66	181.83	9105.67	911.91	-911.58	316.74	965.04	161.46	2.40	508060.50	554583.15	N 32.23 48.19	W 104.17 25.50
	9754.00	90.65	181.30	9105.87	942.90	-942.57	316.17	994.18	162.04	2.76	508028.51	554582.90	N 32.23 47.87	W 104.17 25.51
	9785.00	91.20	180.80	9105.87	974.89	-974.56	315.92	1024.48	162.04	1.32	507997.57	554583.10	N 32.23 47.17	W 104.17 25.51
	9817.00	91.75	180.11	9104.54	1005.51	-1005.18	316.12	1052.25	163.18	3.41	507862.60	554582.78	N 32.23 46.37	W 104.17 25.51
	9848.00	92.52	179.57	9101.90	1045.84	-1045.51	316.44	1083.57	164.49	0.73	507674.65	554582.78	N 32.23 45.29	W 104.17 25.53
	9888.00	89.31	180.73	9101.57	1235.80	-1235.46	315.80	1365.18	166.68	0.13	507579.67	554580.26	N 32.23 43.43	W 104.17 25.54
	10078.00	89.26	180.73	9101.57	1423.78	-1423.44	314.53	1457.51	167.59	0.18	507485.70	554579.01	N 32.23 42.50	W 104.17 25.56
	10171.00	89.31	180.84	9102.73	1517.75	-1517.42	312.03	1549.17	168.38	0.21				
	10266.00	89.23	180.85	9105.07										
	10360.00													

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (*/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	10454.00	89.28	181.10	9106.29	1611.73	-1611.40	310.43	1641.03	169.10	0.27	507391.73	554577.41	N 32 23 41.57	W 104 17 25.57
	10549.00	89.40	181.71	9107.39	1706.69	-1706.37	308.10	1733.96	169.77	0.65	507296.77	554575.08	N 32 23 40.63	W 104 17 25.60
	10644.00	89.28	181.01	9108.48	1801.65	-1801.33	305.84	1827.11	170.36	0.75	507201.81	554572.83	N 32 23 39.69	W 104 17 25.63
	10738.00	89.83	180.83	9109.21	1895.64	-1895.32	304.34	1919.60	170.88	0.62	507107.84	554571.32	N 32 23 38.76	W 104 17 25.65
	10833.00	89.77	180.70	9109.54	1990.63	-1990.31	303.07	2013.25	171.34	0.15	507012.86	554570.05	N 32 23 37.82	W 104 17 25.66
	10927.00	89.74	181.55	9109.95	2084.60	-2084.29	301.22	2105.94	171.78	0.90	506918.88	554568.20	N 32 23 36.89	W 104 17 25.68
	11022.00	89.83	182.17	9110.30	2179.55	-2179.24	298.14	2199.54	172.21	0.66	506823.94	554565.12	N 32 23 35.95	W 104 17 25.72
	11117.00	89.66	181.28	9110.72	2274.50	-2274.19	295.28	2293.28	172.60	0.95	506729.00	554562.26	N 32 23 35.01	W 104 17 25.75
	11211.00	89.48	179.79	9111.43	2368.49	-2368.18	294.40	2386.41	172.91	1.60	506635.02	554561.38	N 32 23 34.08	W 104 17 25.77
	11306.00	89.74	178.82	9112.08	2463.48	-2463.17	295.55	2480.84	173.16	1.06	506540.04	554562.54	N 32 23 33.14	W 104 17 25.75
	11401.00	90.14	178.92	9112.18	2558.46	-2558.15	297.43	2575.39	173.37	0.43	506445.06	554564.41	N 32 23 32.20	W 104 17 25.73
	11494.00	90.20	179.22	9111.90	2651.45	-2651.14	298.94	2667.94	173.57	0.33	506352.08	554565.92	N 32 23 31.28	W 104 17 25.71
	11588.00	90.57	179.01	9111.27	2745.44	-2745.13	300.39	2761.51	173.76	0.45	506258.11	554567.37	N 32 23 30.35	W 104 17 25.70
	11683.00	90.14	178.80	9110.68	2840.42	-2840.11	302.20	2856.14	173.93	0.50	506163.13	554569.19	N 32 23 29.41	W 104 17 25.68
	11777.00	90.03	178.32	9110.54	2934.40	-2934.08	304.57	2949.84	174.07	0.52	506069.17	554571.55	N 32 23 28.48	W 104 17 25.65
	11872.00	90.40	177.66	9110.18	3029.34	-3029.02	307.90	3044.63	174.20	0.80	505974.24	554574.88	N 32 23 27.54	W 104 17 25.61
	11966.00	90.17	178.30	9109.72	3123.28	-3122.96	311.21	3138.43	174.31	0.72	505880.31	554578.19	N 32 23 26.61	W 104 17 25.57
	12061.00	90.23	178.70	9109.38	3218.25	-3217.93	313.70	3233.18	174.43	0.43	505785.35	554580.68	N 32 23 25.67	W 104 17 25.54
	12155.00	90.29	178.76	9108.96	3312.23	-3311.90	315.78	3326.92	174.55	0.09	505691.39	554582.76	N 32 23 24.74	W 104 17 25.52
	12250.00	90.17	178.81	9108.58	3407.21	-3406.88	317.80	3421.67	174.67	0.14	505596.42	554584.78	N 32 23 23.81	W 104 17 25.50
	12344.00	90.11	178.68	9108.35	3501.19	-3500.86	319.85	3515.44	174.78	0.15	505502.45	554586.83	N 32 23 22.88	W 104 17 25.47
	12439.00	90.20	178.66	9108.09	3596.17	-3595.83	322.06	3610.22	174.88	0.10	505407.48	554589.04	N 32 23 21.94	W 104 17 25.45
	12533.00	90.17	179.07	9107.79	3690.15	-3689.81	323.92	3704.00	174.98	0.44	505313.51	554590.90	N 32 23 21.01	W 104 17 25.43
	12628.00	90.23	179.54	9107.45	3785.14	-3784.80	325.07	3798.74	175.09	0.50	505218.53	554592.05	N 32 23 20.07	W 104 17 25.41
	12722.00	90.17	180.28	9107.13	3879.14	-3878.80	325.22	3892.41	175.21	0.79	505124.54	554592.20	N 32 23 19.14	W 104 17 25.41
	12817.00	90.29	180.84	9106.75	3974.13	-3973.80	324.29	3987.01	175.33	0.60	505029.55	554591.27	N 32 23 18.20	W 104 17 25.42
	12911.00	90.20	181.03	9106.34	4068.12	-4067.78	322.76	4080.57	175.46	0.22	504935.57	554589.74	N 32 23 17.27	W 104 17 25.44
	13005.00	90.20	181.64	9106.02	4162.09	-4161.76	320.57	4174.08	175.60	0.65	504841.61	554587.55	N 32 23 16.34	W 104 17 25.47
	13100.00	89.40	180.75	9106.35	4257.06	-4256.73	318.59	4268.64	175.72	1.26	504746.64	554585.57	N 32 23 15.40	W 104 17 25.49
	13194.00	89.68	181.32	9107.10	4351.04	-4350.71	316.89	4362.24	175.83	0.68	504652.67	554583.87	N 32 23 14.47	W 104 17 25.51
	13288.00	89.66	181.17	9107.64	4445.02	-4444.69	314.85	4455.83	175.95	0.16	504558.70	554581.83	N 32 23 13.54	W 104 17 25.54
	13383.00	89.83	181.06	9108.07	4540.00	-4539.67	313.00	4550.45	176.06	0.21	504463.73	554579.98	N 32 23 12.60	W 104 17 25.56
	13477.00	89.71	180.84	9108.44	4633.98	-4633.66	311.44	4644.11	176.15	0.27	504369.75	554578.42	N 32 23 11.67	W 104 17 25.58
	13572.00	89.71	181.48	9108.92	4728.96	-4728.64	309.52	4738.76	176.25	0.67	504274.78	554576.50	N 32 23 10.73	W 104 17 25.60
	13631.00	89.31	181.12	9109.43	4787.94	-4787.62	308.18	4797.53	176.32	0.91	504215.80	554575.16	N 32 23 10.14	W 104 17 25.62
Proj. to TD	13735.00	89.31	181.12	9110.68	4891.91	-4891.59	306.15	4901.16	176.42	0.00	504111.84	554573.13	N 32 23 9.11	W 104 17 25.64

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 (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	22.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft Definitive
	1	22.000	819.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft
	1	819.000	1258.000	1/98.425	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft
	1	1258.000	1385.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft
	1	1385.000	1764.000	1/98.425	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft
	1	1764.000	1764.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft
	1	1764.000	2142.000	1/98.425	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft
	1	2142.000	2237.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft
	1	2237.000	2616.000	1/98.425	30.000	30.000	NAL_MWD_1.0_DEG	ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft

...ST01\Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft Definitive

Schlumberger-Private

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
		1	2616.000	13735.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG						
ST01 / Chisholm Spitfire 16 State Com WCB 1H ST01 0ft to 13735ft														

Borehole:	ST01	Well:	Splifire 16 State Com WCB 1H	Field:	NM Eddy County (NAD 83)	Structure:	Chisholm Splifire 16 State Com WCB 1H
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Gravity & Magnetic Parameters							Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous											
Model:	MDGM 2018		Dip:	60.083°		Date:	03-Dec-2018		Lat:	N 32 25 57.52		Northings:	609002.891NLS		Grid Conv:	0.0224°		Block:	Splifire 16		State Com WCB 1H		VTD Ref:		RWB = 221 (Hobbs M85) 1376.28 above MSL)	
MagDec:	7.311°		FI:	47965.403nT		Gravity FI:	998.471mgal (9.80665 Based)		Long:	W 104 17 25.16		Eastings:	654267.011NLS		Scale Fact:	0.99990223		Plan:	Chisholm Splifire 16 State Com WCB 1H ST01 OR to 13752N Ordinate							

Critical Points								
Critical Point	MD	EWCL	AZIM	TVD	VSEC	W(+)/E(-)	N(+)/S(-)	DLS
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Last Surface - GLB	308.00	2.21	117.90	395.87	4.18	-4.17	6.14	0.48
Last Plot - GLB	8444.00	1.03	190.14	6434.45	13.47	-13.16	293.33	0.04
HL Crossing	8007.00	43.98	181.09	6948.15	208.32	-208.01	296.12	12.59
HL Crossing	13504.00	89.31	181.12	9110.19	4850.92	-4850.90	306.95	0.00
Proj. to TD	13735.00	89.31	181.12	9110.88	4891.91	-4891.59	306.15	0.00

