

30-015-42172

Schlumberger

CIMAREX

Cimarex Medwick 32 Federal Com #7H MWD Final Survey Geodetic Report

(Def Survey)

Report Date: June 02, 2017 - 10:34 AM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Medwick 32 Federal Com #7H / Cimarex Medwick 32 Federal Com #7H
Well: Cimarex Medwick 32 Federal Com #7H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Medwick 32 Federal Com #7H MWD Final
Survey Date: April 25, 2017
Tort / AHD / DDI / ERD Ratio: 220.319' / 7536.380 ft / 6.499' / 1.010
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 0' 2.97450", W 104° 12' 35.70109"
Location Grid N/E Y/X: N 364061.930 nUS, E 579594.770 nUS
CRS Grid Convergence Angle: 0.0654°
Grid Scale Factor: 0.99991077
Version / Patch: 2 10 254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 354.344° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3215.000 ft above MSL
Seabed / Ground Elevation: 3192.000 ft above MSL
Magnetic Declination: 7.401°
Total Gravity Field Strength: 998.4332mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47972.270 nT
Magnetic Dip Angle: 59.692°
Declination Date: May 06, 2017
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.0654°
Total Corr Mag North->Grid North: 7.3354°
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 [290° FSL, 2050' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	364061.93	579594.77	N 32 0 2.97	W 104 12 35.70
	149.00	0.22	253.24	149.00	-0.06	-0.08	-0.27	0.15	364061.85	579594.50	N 32 0 2.97	W 104 12 35.70
	210.00	0.22	220.45	210.00	-0.16	-0.21	-0.46	0.20	364061.72	579594.31	N 32 0 2.97	W 104 12 35.71
	311.00	0.22	256.72	311.00	-0.32	-0.40	-0.78	0.14	364061.53	579593.99	N 32 0 2.97	W 104 12 35.71
	330.00	0.22	233.19	330.00	-0.34	-0.43	-0.84	0.47	364061.50	579593.93	N 32 0 2.97	W 104 12 35.71
	464.00	0.40	226.13	464.00	-0.77	-0.91	-1.38	0.14	364061.02	579593.39	N 32 0 2.97	W 104 12 35.72
	495.00	0.40	219.13	495.00	-0.91	-1.06	-1.53	0.16	364060.87	579593.24	N 32 0 2.96	W 104 12 35.72
	587.00	0.22	216.70	586.99	-1.27	-1.46	-1.84	0.20	364060.47	579592.93	N 32 0 2.96	W 104 12 35.72
	680.00	0.22	67.40	679.99	-1.35	-1.53	-1.78	0.46	364060.40	579592.99	N 32 0 2.96	W 104 12 35.72
	771.00	0.40	39.42	770.99	-1.07	-1.22	-1.42	0.25	364060.71	579593.35	N 32 0 2.96	W 104 12 35.72
	862.00	0.49	29.99	861.99	-0.53	-0.64	-1.02	0.13	364061.29	579593.75	N 32 0 2.97	W 104 12 35.71
	956.00	0.49	21.88	955.99	0.15	0.09	-0.67	0.07	364062.02	579594.10	N 32 0 2.98	W 104 12 35.71
	1051.00	0.71	301.67	1050.98	0.87	0.77	-1.02	0.83	364062.70	579593.75	N 32 0 2.98	W 104 12 35.71
	1145.00	1.02	287.21	1144.97	1.55	1.33	-2.32	0.40	364063.26	579592.45	N 32 0 2.99	W 104 12 35.73
	1240.00	0.71	324.54	1239.96	2.39	2.05	-3.46	0.66	364063.98	579591.31	N 32 0 2.99	W 104 12 35.74
	1334.00	0.62	4.95	1333.96	3.39	3.04	-3.76	0.50	364064.97	579591.01	N 32 0 3.00	W 104 12 35.74
	1429.00	0.49	1.64	1428.95	4.30	3.95	-3.70	0.14	364065.88	579591.07	N 32 0 3.01	W 104 12 35.74
	1523.00	0.80	43.43	1522.95	5.13	4.83	-3.24	0.58	364066.76	579591.53	N 32 0 3.02	W 104 12 35.74
	1618.00	0.80	75.34	1617.94	5.67	5.48	-2.14	0.46	364067.41	579592.63	N 32 0 3.03	W 104 12 35.73
	1712.00	1.41	93.80	1711.92	5.58	5.57	-0.35	0.74	364067.50	579594.42	N 32 0 3.03	W 104 12 35.71
	1807.00	0.80	80.93	1806.90	5.43	5.60	1.47	0.69	364067.53	579596.24	N 32 0 3.03	W 104 12 35.68
	1839.00	0.22	354.28	1838.90	5.50	5.69	1.68	2.55	364067.62	579596.45	N 32 0 3.03	W 104 12 35.68
	1979.00	0.40	256.73	1978.90	5.71	5.85	1.18	0.34	364067.78	579595.95	N 32 0 3.03	W 104 12 35.69
	2074.00	0.49	263.46	2073.90	5.65	5.73	0.45	0.11	364067.66	579595.22	N 32 0 3.03	W 104 12 35.70
	2167.00	1.81	243.59	2166.88	5.13	5.03	-1.26	1.46	364066.96	579593.51	N 32 0 3.02	W 104 12 35.72
	2261.00	3.71	244.82	2260.76	3.59	3.07	-5.34	2.02	364065.00	579589.43	N 32 0 3.00	W 104 12 35.76
	2355.00	5.83	245.48	2354.43	1.03	-0.20	-12.44	2.26	364061.73	579582.34	N 32 0 2.97	W 104 12 35.85
	2450.00	6.32	247.29	2448.90	-2.07	-4.22	-21.65	0.55	364057.71	579573.12	N 32 0 2.93	W 104 12 35.95
	2543.00	6.45	247.02	2541.32	-5.12	-8.24	-31.18	0.14	364053.69	579563.59	N 32 0 2.89	W 104 12 36.06
	2638.00	6.54	245.23	2635.71	-8.49	-12.59	-41.01	0.23	364049.34	579553.77	N 32 0 2.85	W 104 12 36.18
	2733.00	6.63	245.92	2730.08	-11.99	-17.09	-50.92	0.13	364044.84	579543.85	N 32 0 2.81	W 104 12 36.29
	2828.00	6.63	245.61	2824.45	-15.48	-21.59	-60.93	0.04	364040.34	579533.85	N 32 0 2.76	W 104 12 36.41
	2923.00	6.63	245.30	2918.81	-19.04	-26.15	-70.90	0.04	364035.78	579523.87	N 32 0 2.72	W 104 12 36.52
	3017.00	6.72	245.22	3012.18	-22.61	-30.72	-80.83	0.10	364031.21	579513.95	N 32 0 2.67	W 104 12 36.64
	3113.00	6.85	245.48	3107.50	-26.30	-35.45	-91.14	0.14	364026.48	579503.64	N 32 0 2.62	W 104 12 36.76
	3207.00	6.90	245.23	3200.83	-29.96	-40.15	-101.36	0.06	364021.79	579493.42	N 32 0 2.58	W 104 12 36.88
	3302.00	6.32	257.55	3295.20	-32.45	-43.66	-111.65	1.61	364018.27	579483.13	N 32 0 2.54	W 104 12 37.00
	3396.00	6.14	259.32	3388.65	-33.50	-45.71	-121.84	0.28	364016.22	579473.14	N 32 0 2.52	W 104 12 37.11
	3490.00	6.23	258.83	3482.10	-34.43	-47.63	-131.59	0.11	364014.30	579463.20	N 32 0 2.50	W 104 12 37.23
	3584.00	5.13	253.24	3575.64	-35.73	-49.83	-140.61	1.31	364012.10	579454.17	N 32 0 2.48	W 104 12 37.33
	3678.00	4.82	252.40	3669.28	-37.36	-52.24	-148.40	0.34	364009.70	579446.38	N 32 0 2.46	W 104 12 37.43
	3772.00	4.82	251.91	3762.95	-39.03	-54.66	-155.92	0.04	364007.28	579438.86	N 32 0 2.44	W 104 12 37.51
	3867.00	4.82	250.72	3857.61	-40.82	-57.21	-163.48	0.11	364004.72	579431.30	N 32 0 2.41	W 104 12 37.60
	3961.00	4.73	251.03	3951.29	-42.65	-59.78	-170.88	0.10	364002.16	579423.91	N 32 0 2.38	W 104 12 37.69
	4056.00	4.73	251.03	4045.96	-44.45	-62.32	-178.28	0.00	363999.61	579416.50	N 32 0 2.36	W 104 12 37.77
	4150.00	4.42	247.73	4139.66	-46.38	-64.96	-185.30	0.43	363996.98	579409.49	N 32 0 2.33	W 104 12 37.85
	4245.00	5.61	248.39	4234.30	-48.70	-68.05	-193.01	1.25	363993.88	579401.78	N 32 0 2.30	W 104 12 37.94
	4339.00	5.61	249.01	4327.85	-51.18	-71.39	-201.57	0.06	363990.54	579393.22	N 32 0 2.27	W 104 12 38.04
	4434.00	5.52	248.12	4422.40	-53.69	-74.76	-210.14	0.13	363987.18	579384.65	N 32 0 2.24	W 104 12 38.14
	4528.00	5.35	247.73	4515.98	-56.20	-78.10	-218.39	0.19	363983.83	579376.40	N 32 0 2.20	W 104 12 38.24
	4622.00	5.21	248.21	4609.58	-58.64	-81.35	-226.41	0.16	363980.59	579368.38	N 32 0 2.17	W 104 12 38.33
	4716.00	5.35	248.39	4703.18	-61.03	-84.55	-234.45	0.15	363977.39	579360.34	N 32 0 2.14	W 104 12 38.42
	4810.00	5.21	248.70	4796.78	-63.39	-87.71	-242.50	0.15	363974.23	579352.29	N 32 0 2.11	W 104 12 38.52
	4904.00	4.90	247.63	4890.42	-65.69	-90.79	-250.19	0.34	363971.15	579344.60	N 32 0 2.08	W 104 12 38.61
	4998.00	5.13	248.12	4884.06	-68.02	-93.88	-257.80	0.25	363968.05	579336.99	N 32 0 2.05	W 104 12 38.70
	5092.00	5.04	247.82	5077.69	-70.37	-97.01	-265.52	0.10	363964.93	579329.27	N 32 0 2.02	W 104 12 38.79
	5187.00	5.04	246.32	5172.32	-72.85	-100.26	-273.21	0.14	363961.68	579321.59	N 32 0 1.99	W 104 12 38.88
	5282.00	5.92	247.60	5266.88	-75.55	-103.80	-281.56	0.94	363958.14	579313.23	N 32 0 1.95	W 104 12 38.97
	5375.00	5.61	246.49	5359.41	-78.33	-107.44	-290.16	0.35	363954.50	579304.63	N 32 0 1.91	W 104 12 39.07
	5469.00	6.85	246.58	5452.86	-81.44	-111.51	-299.52	1.32	363950.43	579295.28	N 32 0 1.87	W 104 12 39.18
	5564.00	6.72	246.80	5547.19	-84.85	-115.95	-309.83	0.14	363945.99	579284.97	N 32 0 1.83	W 104 12 39.30
	5658.00	5.13	239.18	5640.69	-88.29	-120.27	-318.49	1.88	363941.67	579276.31	N 32 0 1.79	W 104 12 39.40
	5753.00	5.83	240.90	5735.25	-92.02	-124.79	-326.36	0.76	363937.15	579268.44	N 32 0 1.74	W 104 12 39.49
	5848.00	6.54	250.72	5829.70	-95.21	-128.92	-335.68	1.34	363933.02	579259.12	N 32 0 1.70	W 104 12 39.60
	5942.00	5.44	252.62	5923.19	-97.38	-132.02	-344.98	1.19	363929.92	579249.82	N 32 0 1.67	W 104 12 39.71
	6037.00	4.73	254.12	6017.81	-98.99	-134.44	-353.05	0.76	363927.50	579241.75	N 32 0 1.65	W 104 12 39.80
	6131.00	5.61	250.42	6111.43	-100.78	-137.04	-361.11	1.00	363924.90	579233.70	N 32 0 1.62	W 104 12 39.90
	6225.00	5.35	256.23	6205.00	-102.51	-139.62	-369.69	0.65	363922.32	579225.11	N 32 0 1.60	W 104 12 40.00
	6319.00	4.95	262.45	6298.62	-103.26	-141.20	-377.97	0.73	363920.75	579216.84	N 32 0 1.58	W 104 12 40.09
	6412.00	3.80	256.23	6391.35	-103.83	-142.46	-384.94	1.34	363919.49	579209.87	N 32 0 1.57	W 104 12 40.17
	6507.00	3.62	253.10	6486.15	-104.86	-144.08	-390.87	0.29	363917.86	579203.94	N 32 0 1.55	W 104 12 40.24
	6601.00	3.23	252.93	6579.98	-105.96	-145.72	-396.24	0.42	363916.22	579198.57	N 32 0 1.54	W 104 12 40.30
	6650.28	2.93	248.54	6629.19	-106.58	-146.59	-398.74	0.78	363915.36	579196.07	N 32 0 1.53	W 104 12 40.33
	6720.00	3.04	257.06	6698.82	-107.30	-147.65	-402.20	0.66	363914.29	579192.61	N 32 0 1.52	W 104 12 40.37
	6751.00	6.22	264.50	6729.71								

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 ° ' '')
	6814.00	14.95	265.69	6791.57	-107.05	-148.80	-416.26	13.49	363913.15	579178.54	N 32 0 1.51	W 104 12 40.54
	6845.00	19.27	266.83	6821.19	-106.73	-149.38	-425.36	13.98	363912.56	579169.45	N 32 0 1.50	W 104 12 40.84
	6877.00	22.43	267.41	6851.09	-106.18	-149.95	-436.74	9.92	363912.00	579158.07	N 32 0 1.50	W 104 12 40.77
	6908.00	23.59	272.04	6879.63	-105.03	-149.99	-448.85	6.92	363911.95	579145.97	N 32 0 1.50	W 104 12 40.92
	6939.00	23.19	280.53	6908.09	-102.50	-148.66	-461.05	10.94	363913.29	579133.76	N 32 0 1.51	W 104 12 41.06
	6971.00	23.73	287.87	6937.45	-98.17	-145.53	-473.37	9.28	363916.41	579121.44	N 32 0 1.54	W 104 12 41.20
	7003.00	25.12	294.33	6966.59	-92.20	-140.75	-485.69	9.40	363921.19	579109.12	N 32 0 1.59	W 104 12 41.34
	7034.00	27.08	302.89	6994.44	-84.52	-134.21	-497.62	13.68	363927.73	579097.19	N 32 0 1.65	W 104 12 41.48
	7066.00	30.14	309.47	7022.53	-74.28	-125.14	-509.94	13.71	363936.80	579084.87	N 32 0 1.74	W 104 12 41.62
	7097.00	31.49	313.35	7049.16	-62.65	-114.64	-521.84	7.75	363947.31	579072.98	N 32 0 1.85	W 104 12 41.76
	7129.00	32.58	317.97	7076.29	-49.40	-102.50	-533.69	8.38	363959.44	579061.13	N 32 0 1.97	W 104 12 41.90
	7161.00	34.21	322.97	7103.01	-34.78	-88.91	-544.88	9.99	363973.03	579049.94	N 32 0 2.10	W 104 12 42.03
	7192.00	37.62	327.82	7128.12	-18.87	-73.84	-555.17	14.32	363988.00	579038.80	N 32 0 2.25	W 104 12 42.16
	7223.00	41.70	332.19	7151.98	-0.84	-56.80	-565.03	15.94	364005.13	579029.80	N 32 0 2.42	W 104 12 42.28
	7255.00	45.95	334.35	7175.07	19.83	-37.01	-574.98	14.08	364024.92	579019.85	N 32 0 2.61	W 104 12 42.38
	7287.00	49.22	336.53	7196.65	42.18	-15.52	-584.78	11.39	364046.41	579010.04	N 32 0 2.83	W 104 12 42.49
	7318.00	52.02	338.56	7216.32	65.12	6.62	-593.92	10.35	364068.55	579000.90	N 32 0 3.05	W 104 12 42.60
First Taken Point	7332.00	53.39	339.85	7224.80	75.87	17.03	-597.88	12.21	364078.96	578996.95	N 32 0 3.15	W 104 12 42.64
	7350.00	55.16	341.45	7235.31	90.07	30.82	-602.72	12.21	364092.75	578992.11	N 32 0 3.29	W 104 12 42.70
	7381.00	59.36	344.05	7252.07	115.60	55.72	-610.43	15.27	364117.64	578984.39	N 32 0 3.53	W 104 12 42.79
	7413.00	63.20	345.85	7267.45	143.28	82.81	-617.71	12.97	364144.74	578977.12	N 32 0 3.80	W 104 12 42.87
	7444.00	66.16	347.47	7280.71	171.05	110.08	-624.17	10.65	364172.00	578970.66	N 32 0 4.07	W 104 12 42.95
	7476.00	68.84	348.71	7292.95	200.44	139.00	-630.27	9.11	364200.92	578964.56	N 32 0 4.36	W 104 12 43.02
	7507.00	72.07	349.99	7303.32	229.53	167.71	-635.86	11.12	364229.62	578959.17	N 32 0 4.64	W 104 12 43.08
	7539.00	76.91	351.80	7311.88	260.30	198.14	-640.53	16.08	364260.06	578954.30	N 32 0 4.94	W 104 12 43.14
	7570.00	81.49	353.05	7317.68	290.73	228.32	-644.54	15.30	364290.23	578950.29	N 32 0 5.24	W 104 12 43.18
	7601.00	83.68	354.92	7321.68	321.47	258.89	-647.76	9.26	364320.80	578947.07	N 32 0 5.54	W 104 12 43.22
	7633.00	83.82	357.82	7325.17	353.25	290.63	-649.78	9.02	364352.53	578945.05	N 32 0 5.86	W 104 12 43.24
	7665.00	83.83	358.83	7328.61	384.99	322.43	-650.71	3.14	364384.33	578944.12	N 32 0 6.17	W 104 12 43.25
	7692.00	83.90	359.05	7331.50	411.75	349.27	-651.20	0.85	364411.17	578943.63	N 32 0 6.44	W 104 12 43.26
	7788.00	84.42	358.95	7341.26	506.93	444.76	-652.87	0.55	364506.65	578941.96	N 32 0 7.38	W 104 12 43.28
	7882.00	84.98	358.88	7349.95	600.23	538.34	-654.64	0.60	364600.22	578940.19	N 32 0 8.31	W 104 12 43.30
	7976.00	85.77	359.42	7357.53	693.60	632.02	-656.03	1.02	364693.90	578938.80	N 32 0 9.24	W 104 12 43.31
	8070.00	86.49	359.92	7363.87	786.98	725.81	-656.57	0.93	364767.67	578938.26	N 32 0 10.16	W 104 12 43.32
	8164.00	87.35	359.73	7368.92	880.41	819.67	-656.86	0.94	364881.52	578937.97	N 32 0 11.09	W 104 12 43.32
	8259.00	87.32	357.94	7373.34	975.01	914.54	-658.79	1.88	364976.39	578936.04	N 32 0 12.03	W 104 12 43.34
	8353.00	87.42	357.12	7377.65	1068.77	1008.36	-662.84	0.88	365070.19	578932.00	N 32 0 12.96	W 104 12 43.39
	8447.00	89.01	359.18	7380.58	1162.51	1102.25	-665.87	2.77	365164.08	578928.96	N 32 0 13.89	W 104 12 43.42
	8542.00	87.84	0.43	7383.19	1257.04	1197.21	-666.19	1.80	365259.03	578928.64	N 32 0 14.83	W 104 12 43.42
	8637.00	87.31	0.10	7387.21	1351.45	1292.13	-665.75	0.66	365353.94	578929.08	N 32 0 15.77	W 104 12 43.42
	8732.00	87.11	359.81	7391.84	1445.88	1387.01	-665.83	0.37	365448.82	578929.00	N 32 0 16.71	W 104 12 43.41
	8827.00	86.77	359.64	7396.91	1540.32	1481.88	-666.28	0.40	365543.67	578928.55	N 32 0 17.65	W 104 12 43.42
	8922.00	87.45	0.01	7401.70	1634.77	1576.75	-666.57	0.81	365638.54	578928.26	N 32 0 18.58	W 104 12 43.42
	9016.00	86.73	0.05	7406.47	1728.19	1670.63	-666.52	0.77	365732.41	578928.31	N 32 0 19.51	W 104 12 43.42
	9111.00	86.04	0.08	7412.46	1822.52	1765.44	-666.41	0.73	365827.21	578928.42	N 32 0 20.45	W 104 12 43.42
	9205.00	88.08	0.49	7417.28	1915.89	1859.31	-665.95	2.21	365921.07	578928.88	N 32 0 21.38	W 104 12 43.41
	9300.00	88.29	359.25	7420.29	2010.40	1954.26	-666.16	1.32	366016.02	578928.67	N 32 0 22.32	W 104 12 43.41
	9394.00	87.60	359.53	7423.66	2103.98	2048.20	-667.16	0.79	366109.94	578927.67	N 32 0 23.25	W 104 12 43.42
	9489.00	87.08	359.27	7428.07	2198.50	2143.09	-668.16	0.61	366204.82	578926.67	N 32 0 24.19	W 104 12 43.43
	9579.00	85.81	0.47	7439.85	2387.25	2332.72	-668.59	0.92	366394.43	578926.24	N 32 0 26.07	W 104 12 43.43
	9673.00	84.63	0.42	7447.68	2480.39	2426.38	-667.86	1.26	366488.09	578926.97	N 32 0 26.99	W 104 12 43.42
	9856.00	85.11	359.79	7455.10	2562.64	2509.05	-667.71	0.95	366570.75	578927.12	N 32 0 27.81	W 104 12 43.42
	9888.00	85.97	0.23	7457.59	2594.39	2540.95	-667.70	3.02	366602.65	578927.13	N 32 0 28.13	W 104 12 43.42
	9919.00	87.25	0.15	7459.43	2625.17	2571.90	-667.60	4.14	366633.59	578927.23	N 32 0 28.43	W 104 12 43.42
	9950.00	88.54	0.14	7460.56	2655.99	2602.88	-667.52	4.16	366664.57	578927.31	N 32 0 28.74	W 104 12 43.42
	9982.00	90.45	359.72	7460.85	2687.84	2634.87	-667.56	6.11	366696.56	578927.27	N 32 0 29.06	W 104 12 43.42
	10014.00	92.13	358.95	7460.13	2719.70	2666.86	-667.93	5.77	366728.55	578926.90	N 32 0 29.37	W 104 12 43.42
	10045.00	92.58	358.72	7458.85	2750.58	2697.83	-668.56	1.63	366759.51	578926.27	N 32 0 29.68	W 104 12 43.43
	10139.00	92.07	357.08	7455.04	2844.32	2791.69	-672.00	1.83	366853.36	578922.83	N 32 0 30.61	W 104 12 43.47
	10234.00	92.41	356.59	7451.33	2939.16	2886.47	-677.25	0.63	366948.13	578917.59	N 32 0 31.55	W 104 12 43.53
	10328.00	91.40	357.57	7448.20	3033.00	2980.29	-682.03	1.50	367041.95	578912.80	N 32 0 32.47	W 104 12 43.58
	10423.00	92.19	357.23	7445.23	3127.82	3075.15	-686.34	0.91	367136.80	578908.49	N 32 0 33.41	W 104 12 43.63
	10518.00	90.90	357.59	7442.66	3222.64	3170.01	-690.63	1.41	367231.65	578904.20	N 32 0 34.35	W 104 12 43.68
	10613.00	90.56	358.07	7441.45	3317.46	3264.94	-694.23	0.62	367326.57	578900.61	N 32 0 35.29	W 104 12 43.72
	10707.00	90.17	0.14	7440.85	3411.13	3358.92	-695.69	2.24	367420.54	578899.14	N 32 0 36.22	W 104 12 43.74
	10802.00	87.76	0.41	7442.57	3505.60	3453.89	-695.24	2.55	367515.51	578899.59	N 32 0 37.16	W 104 12 43.73
	10897.00	88.26	359.25	7445.87	3600.10	3548.83	-695.52	1.33	367610.44	578899.31	N 32 0 38.10	W 104 12 43.73
	10991.00	89.55	358.59	7447.67	3693.78	3642.80	-697.29	1.54	367704.40	578897.54	N 32 0 39.03	W 104 12 43.75
	11086.00	90.78	358.18	7447.39	3788.54	3737.76	-699.97	1.36	367799.35	578894.86	N 32 0 39.97	W 104 12 43.78
	11180.00	90.73	358.87	7446.15	3882.29	3831.72	-702.39	0.74	367893.30	578892.45	N 32 0 40.90	W 104 12 43.81
	11274.00	90.73	359.88	7444.96	3975.91	3925.70	-703.41	1.07	367987.28	578891.42	N 32 0 41.83	W 104 12 43.82
	11369.00	92.13	359.27	7442.59	4070.49	4020.67	-704.12	1.61	368082.23	578890.72	N 32 0 42.77	W 104 12 43.83
	11464.00	91.63	0.32	7439.47	4165.00	4115.62	-704.46	1.22	368177.17	578890.38	N 32 0 43.71	W 104 12 43.83
	11559.00	91.12	0.78	7437.19	4259.42	4210.58	-703.55	0.72	368272.13	578891.29	N 32 0 44.65	W 104 12 43.82
	11653.00	92.02	0.46	7434.61	4352.82	4304.54	-702.53	1.02	368366.08	578892.30	N 32 0 45.58	W 104 12 43.80
	11747.00	90.79	359.38	7432.31	4446.35	4398.51	-702.66	1.74	368460.04	578892.17	N 32 0 46.51	W 104 12 43.80
	11842.00	91.46	359.27	7430.44	4540.97	4493.48	-703.78	0.7				

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 ° ' ")
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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	23.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Medwick 32 Federal Com #7H MWD Final
	1	23.000	23.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Medwick 32 Federal Com #7H MWD Final
	1	23.000	14163.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Medwick 32 Federal Com #7H

Borehole:		Well:		Field:		Structure:	
Original Borehole		Cimarex Medwick 32 Federal Com #7H		NM Eddy County (NAD 83)		Cimarex Medwick 32 Federal Com #7H	
Survey & Logbook Parameters Date: 04-July-2017 Dr: 66-887" PE: 47922-774-T Model: HGS2018 MagDec: 7.461° Incl: 25mag (8.0000 Grad)		Target Location Lat: N 22 0 2.87 Lon: W 104 17 36.70 Easting: 67864.776US Northing: 344061.320US UTM Zone: 18 S		Miscellaneous Plan: 0.0001077 Scale Fact: 1.00047 Grid Coord: 0.00047 BAC: Cimarex Medwick 32 Federal Com #7H Plan: Cimarex Medwick 32 Federal Com #7H		TYD Ref: RM(2746 above BML) Cimarex Medwick 32 Federal Com #7H	

Critical Point	Critical Points							
	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SR4L (230' FSU, 2065' FEL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First Taken Point	7332.00	53.36	339.65	7224.80	75.67	17.03	-597.68	12.21
Project to bit	14163.00	92.08	368.27	7373.29	6462.66	6813.31	-736.76	0.00

