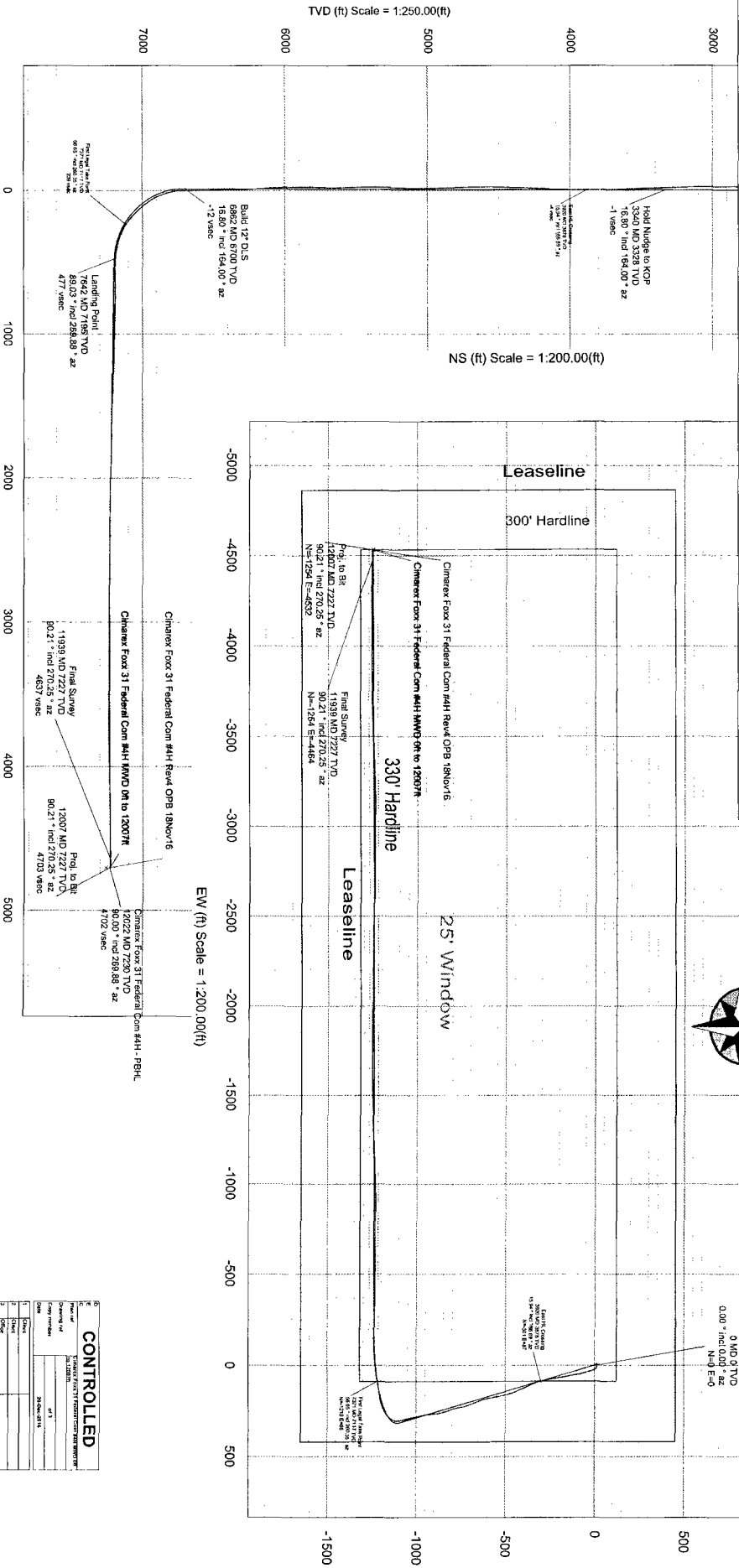


Borehole: **Original Borehole** Well: **Cimarex Foxx 31 Federal Com #4H** Field: **NM Eddy County (NAD 83)** Structure: **Cimarex Foxx 31 Federal Com #4H**

Survey & Magnetometer: **Original 2016** Date: **20-Apr-2016** Gravity: **984.27 m/s²** Location: **N 32.0 16.43 W 104.13 18.14** UTM Zone: **18QUD** Easting: **670392.21** Northing: **670392.21** Scale: **1:1000** Projection: **UTM** Datum: **NAD 83**

Critical Points					
Critical Point	MD	INCL	AZIM	TVD	VSEC
Top-In	0.00	0.00	0.00	0.00	0.00
Begin Extreme MWD	149.00	1.33	329.40	148.99	0.45
End Extreme MWD	1834.00	1.59	106.60	1833.52	-9.74
Begin SLB MWD	1968.00	1.10	110.17	1967.48	-12.36
East HL Crossing	3919.71	15.94	166.69	3878.02	-4.03
First Legal Take Point	7371.25	56.65	260.35	7116.53	-238.73
Final Survey	11938.00	90.21	270.25	7227.29	-4637.27
Proj. to Bit	12007.00	90.21	270.25	7227.04	-4702.75
					-1254.00
					-4532.48
					0.00

Critical Points					
Critical Point	MD	INCL	AZIM	TVD	VSEC
Top-In	0.00	0.00	0.00	0.00	0.00
Begin Extreme MWD	149.00	1.33	329.40	148.99	0.45
End Extreme MWD	1834.00	1.59	106.60	1833.52	-9.74
Begin SLB MWD	1968.00	1.10	110.17	1967.48	-12.36
East HL Crossing	3919.71	15.94	166.69	3878.02	-4.03
First Legal Take Point	7371.25	56.65	260.35	7116.53	-238.73
Final Survey	11938.00	90.21	270.25	7227.29	-4637.27
Proj. to Bit	12007.00	90.21	270.25	7227.04	-4702.75
					-1254.00
					-4532.48
					0.00



CONTROLLED	
Drawn by	Checked by
Scale	Date
Sheet	Page
Revision	
Comments	

Cimarex Foxx 31 Federal Com #4H MWD Off to 12007ft Survey Geodetic

Report
(Def Survey)

Report Date: December 20, 2016 - 12:47 PM
 Client: Cimarex
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Cimarex Foxx 31 Federal Com #4H / Cimarex Foxx 31 Federal Com #4H
 Well: Cimarex Foxx 31 Federal Com #4H
 Borehole: Original Borehole
 UWI / AP#: Unknown / Unknown
 Survey Name: Cimarex Foxx 31 Federal Com #4H MWD Off to 12007ft
 Survey Date: December 20, 2016
 Tort / AHD / DDI / ERD Ratio: 210.704' / 6090.452 ft / 6.328 / 0.842
 Location Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 0' 16.42908", W 104° 13' 18.13843"
 Location Grid N/E Y/X: N 365417.500 ftUS, E 575939.210 ftUS
 CRS Grid Convergence Angle: 0.0592°
 Grid Scale Factor: 0.99991046
 Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 254.610° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3235.900 ft above MSL
 Seabed / Ground Elevation: 3210.900 ft above MSL
 Magnetic Declination: 7.453°
 Total Gravity Field Strength: 998.4314mgN (9.80665 Based)
 Gravity Model: GARM
 Magnetic Dip Angle: 48009.884 nT
 59.699°
 Declination Date: December 20, 2016
 Magnetic Declination Model: HDGM 2016
 North Reference: Grid North
 Grid Convergence Used: 0.0592°
 Total Corr Mag North->Grid North: 7.3936°
 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 ° ' ")
Begin Extreme MWD	149.00	1.33	329.40	148.99	0.00	1.49	-0.88	0.89	365417.50	575939.21	N 32 0 16.44	W 104 13 18.15
	244.00	1.33	330.11	243.96	1.02	3.39	-1.99	0.02	365420.89	575937.22	N 32 0 16.46	W 104 13 18.16
	310.00	1.41	332.25	309.94	1.38	4.78	-2.75	0.14	365422.28	575936.46	N 32 0 16.48	W 104 13 18.17
	350.00	1.59	333.59	349.93	1.60	5.71	-3.23	0.46	365423.21	575935.98	N 32 0 16.49	W 104 13 18.18
	398.00	1.50	333.59	397.91	1.84	6.87	-3.80	0.19	365424.37	575935.41	N 32 0 16.50	W 104 13 18.18
	513.00	1.50	337.73	512.87	2.31	9.61	-5.04	0.09	365427.11	575934.17	N 32 0 16.52	W 104 13 18.20
	608.00	1.90	342.62	607.83	2.52	12.26	-5.98	0.45	365429.76	575933.23	N 32 0 16.55	W 104 13 18.21
	668.00	1.90	343.72	667.80	2.57	14.17	-6.56	0.06	365431.67	575932.65	N 32 0 16.57	W 104 13 18.21
	759.00	0.49	261.49	758.78	2.97	15.56	-7.37	2.08	365433.06	575931.84	N 32 0 16.58	W 104 13 18.22
	848.00	0.80	219.28	847.77	3.86	15.02	-8.14	0.61	365432.52	575931.07	N 32 0 16.58	W 104 13 18.23
	939.00	0.62	218.88	938.77	4.78	14.14	-8.85	0.34	365431.64	575930.36	N 32 0 16.57	W 104 13 18.24
	1029.00	0.40	194.20	1028.76	5.33	13.46	-9.23	0.20	365430.96	575929.98	N 32 0 16.56	W 104 13 18.25
	1120.00	0.22	195.30	1119.76	5.57	12.98	-9.36	0.20	365430.48	575929.86	N 32 0 16.56	W 104 13 18.25
	1210.00	0.49	94.96	1209.76	5.30	12.78	-9.02	0.34	365430.28	575930.19	N 32 0 16.56	W 104 13 18.24
	1301.00	1.33	64.78	1300.75	3.90	13.20	-7.67	1.03	365430.70	575931.54	N 32 0 16.56	W 104 13 18.23
	1393.00	2.21	66.98	1392.70	1.09	14.35	-5.08	0.96	365431.85	575932.13	N 32 0 16.57	W 104 13 18.20
	1487.00	0.40	143.08	1486.68	-0.83	14.80	-3.21	2.29	365432.29	575936.00	N 32 0 16.58	W 104 13 18.18
	1582.00	1.33	99.46	1581.67	-1.95	14.35	-1.92	1.13	365431.85	575937.29	N 32 0 16.57	W 104 13 18.16
	1677.00	2.70	94.34	1676.61	-5.06	14.00	1.40	1.45	365431.50	575940.61	N 32 0 16.57	W 104 13 18.12
	1771.00	1.50	100.34	1770.54	-8.25	13.61	4.81	1.30	365431.11	575944.02	N 32 0 16.56	W 104 13 18.08
End Extreme MWD	1834.00	1.59	106.60	1833.52	-9.74	13.21	6.46	0.30	365430.71	575945.67	N 32 0 16.56	W 104 13 18.06
Begin SLB MWD	1968.00	1.10	110.17	1967.48	-12.36	12.24	9.45	0.37	365429.74	575948.66	N 32 0 16.55	W 104 13 18.03

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...)
East HL Crossing	2062.00	0.92	115.15	2061.47	-13.67	11.61	10.98	0.21	365429.11	575950.19	N 32 0 16.54	W 104 13 18.01
	2157.00	0.84	115.30	2156.46	-14.78	10.98	12.30	0.08	365428.48	575951.51	N 32 0 16.54	W 104 13 18.00
	2251.00	0.68	107.83	2250.45	-15.76	10.52	13.45	0.20	365428.02	575952.66	N 32 0 16.53	W 104 13 17.98
	2246.00	0.51	99.26	2245.44	-16.62	10.28	14.41	0.20	365427.78	575953.62	N 32 0 16.53	W 104 13 17.97
	2440.00	0.45	91.11	2439.44	-17.35	10.20	15.19	0.10	365427.70	575954.40	N 32 0 16.53	W 104 13 17.96
	2635.00	2.73	130.78	2534.40	-18.97	8.72	17.28	2.53	365426.22	575956.49	N 32 0 16.52	W 104 13 17.94
	2630.00	4.80	152.22	2629.19	-21.08	3.72	20.84	2.60	365421.22	575960.05	N 32 0 16.47	W 104 13 17.90
	2724.00	7.15	158.62	2722.68	-22.54	-5.20	24.81	2.59	365412.30	575964.02	N 32 0 16.38	W 104 13 17.85
	2819.00	8.85	162.48	2816.75	-23.43	-17.68	29.17	1.88	365399.82	575968.37	N 32 0 16.25	W 104 13 17.80
	2913.00	10.90	163.62	2909.35	-23.85	-33.10	33.85	2.19	365384.40	575973.06	N 32 0 16.10	W 104 13 17.75
	3008.00	13.49	165.73	3002.20	-23.79	-52.46	39.11	2.77	365365.04	575978.32	N 32 0 15.91	W 104 13 17.68
	3102.00	15.75	168.07	3093.15	-22.80	-75.57	44.45	2.48	365341.93	575983.66	N 32 0 15.68	W 104 13 17.62
	3197.00	17.42	169.59	3184.20	-20.79	-102.18	49.69	1.82	365315.33	575988.90	N 32 0 15.42	W 104 13 17.56
	3291.00	17.47	169.83	3273.87	-18.29	-129.90	54.72	0.99	365287.61	575993.93	N 32 0 15.14	W 104 13 17.50
	3386.00	16.53	170.28	3364.72	-15.65	-157.26	59.52	1.00	365260.25	575998.73	N 32 0 14.87	W 104 13 17.45
	3480.00	15.98	170.35	3454.96	-13.04	-183.20	63.85	0.59	365234.32	576003.15	N 32 0 14.62	W 104 13 17.40
	3575.00	14.72	171.89	3546.57	-10.24	-208.03	67.89	1.38	365209.49	576007.09	N 32 0 14.37	W 104 13 17.35
	3669.00	16.09	168.59	3637.19	-7.87	-232.62	72.19	1.70	365184.90	576011.39	N 32 0 14.13	W 104 13 17.30
	3764.00	16.05	169.25	3728.48	-5.89	-258.43	77.24	0.20	365159.10	576016.45	N 32 0 13.87	W 104 13 17.24
	3858.00	16.38	165.92	3818.74	-4.54	-284.05	82.89	1.05	365133.48	576022.09	N 32 0 13.62	W 104 13 17.18
	3919.71	15.94	166.69	3878.02	-4.03	-300.73	86.96	0.80	365116.79	576026.16	N 32 0 13.45	W 104 13 17.13
	3953.00	15.70	167.13	3910.05	-3.66	-309.57	89.01	0.80	365107.95	576028.22	N 32 0 13.36	W 104 13 17.11
	4047.00	14.87	158.11	4000.73	-4.47	-333.17	96.94	2.68	365084.36	576035.55	N 32 0 13.13	W 104 13 17.02
	4142.00	13.45	156.79	4092.84	-7.35	-354.63	105.24	1.53	365062.90	576044.44	N 32 0 12.92	W 104 13 16.92
	4236.00	13.87	153.18	4184.19	-11.07	-374.74	114.64	1.01	365042.80	576053.84	N 32 0 12.72	W 104 13 16.81
	4331.00	14.67	157.83	4276.26	-14.75	-396.04	124.31	1.47	365021.50	576063.51	N 32 0 12.51	W 104 13 16.70
	4425.00	15.69	157.65	4366.98	-17.70	-418.82	133.64	1.09	364998.72	576072.84	N 32 0 12.28	W 104 13 16.59
	4520.00	17.17	156.94	4458.09	-21.13	-443.60	144.02	1.57	364973.94	576083.21	N 32 0 12.04	W 104 13 16.47
	4614.00	18.43	162.49	4547.60	-23.53	-470.54	153.92	2.25	364947.00	576093.12	N 32 0 11.77	W 104 13 16.36
	4708.00	18.57	167.57	4636.75	-23.30	-489.33	161.62	1.72	364918.21	576100.81	N 32 0 11.49	W 104 13 16.27
	4803.00	17.77	169.08	4727.01	-21.39	-528.34	167.62	0.98	364889.21	576106.81	N 32 0 11.20	W 104 13 16.20
	4897.00	16.86	170.46	4816.75	-19.12	-555.83	172.83	0.98	364861.73	576112.02	N 32 0 10.93	W 104 13 16.14
	4992.00	16.29	170.38	4907.80	-16.62	-582.51	177.58	0.66	364835.05	576116.77	N 32 0 10.66	W 104 13 16.08
	5086.00	14.77	167.03	4998.37	-14.79	-607.18	182.47	1.88	364810.37	576121.66	N 32 0 10.42	W 104 13 16.03
	5181.00	15.96	161.69	5089.98	-14.94	-631.38	189.29	1.94	364786.17	576128.48	N 32 0 10.18	W 104 13 15.95
	5275.00	17.34	157.21	5180.04	-17.40	-656.57	198.78	2.00	364760.99	576137.97	N 32 0 9.93	W 104 13 15.84
	5370.00	17.96	159.84	5270.57	-20.44	-683.37	209.31	1.06	364734.19	576148.50	N 32 0 9.66	W 104 13 15.72
	5464.00	17.71	160.98	5360.05	-22.56	-710.49	218.96	0.46	364707.07	576158.15	N 32 0 9.40	W 104 13 15.60
	5559.00	17.96	169.21	5450.50	-22.30	-738.55	226.42	2.66	364679.02	576165.60	N 32 0 9.12	W 104 13 15.52
	5653.00	15.45	168.38	5540.52	-20.31	-765.05	231.65	2.68	364652.52	576170.84	N 32 0 8.86	W 104 13 15.46
	5748.00	12.68	165.93	5632.67	-19.24	-787.56	236.74	2.98	364630.01	576175.92	N 32 0 8.63	W 104 13 15.40
	5843.00	11.93	158.24	5725.49	-20.09	-806.80	242.91	1.90	364610.77	576182.10	N 32 0 8.44	W 104 13 15.33
	5938.00	12.94	160.12	5818.26	-22.01	-825.92	250.17	1.15	364591.65	576189.36	N 32 0 8.25	W 104 13 15.24
	6032.00	15.11	167.04	5909.46	-22.31	-847.76	256.50	2.91	364569.81	576195.68	N 32 0 8.04	W 104 13 15.17
	6127.00	16.00	173.41	6000.98	-20.24	-872.78	264.65	1.55	364544.80	576200.42	N 32 0 7.79	W 104 13 15.12
	6221.00	16.34	173.55	6091.27	-16.65	-898.73	269.63	0.73	364518.86	576203.84	N 32 0 7.53	W 104 13 15.08
	6316.00	17.33	176.10	6182.19	-11.75	-926.12	267.11	1.30	364491.46	576206.30	N 32 0 7.26	W 104 13 15.05
	6410.00	17.84	168.64	6271.81	-7.95	-954.21	270.90	2.46	364463.38	576210.09	N 32 0 6.98	W 104 13 15.00
	6505.00	19.15	167.92	6361.90	-6.03	-983.72	277.03	1.40	364433.87	576216.21	N 32 0 6.69	W 104 13 14.93
	6599.00	20.49	167.46	6450.33	-4.32	-1014.85	283.83	1.44	364402.74	576223.01	N 32 0 6.38	W 104 13 14.85
	6694.00	21.20	167.37	6539.12	-2.67	-1047.85	291.20	0.75	364369.75	576230.38	N 32 0 6.06	W 104 13 14.77
	6804.00	17.37	164.98	6642.93	-1.60	-1083.13	299.80	3.55	364334.47	576238.99	N 32 0 5.71	W 104 13 14.67
	6873.00	16.95	172.36	6708.86	-0.18	-1103.05	303.81	3.21	364314.56	576242.99	N 32 0 5.51	W 104 13 14.62
	6905.00	19.11	186.76	6739.30	2.43	-1112.86	303.61	15.43	364304.73	576243.00	N 32 0 5.47	W 104 13 14.62
	6952.00	17.78	202.50	6783.92	9.74	-1127.16	300.16	10.93	364290.45	576239.34	N 32 0 5.27	W 104 13 14.57
	6999.00	20.81	212.41	6828.28	20.34	-1140.84	292.93	9.47	364276.76	576232.12	N 32 0 5.14	W 104 13 14.75
	7046.00	24.97	222.08	6871.59	34.90	-1155.26	281.80	11.91	364262.34	576220.99	N 32 0 4.99	W 104 13 14.88

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 ° ' '')
First Legal Take Point	7094.00	29.31	233.16	6914.32	54.39	-1169.84	265.59	13.85	364247.76	5760204.78	N 32 0 4.85	W 104 13 15.07
	7141.00	34.62	242.76	6954.20	78.20	-1182.87	244.49	15.61	364234.74	576183.67	N 32 0 4.72	W 104 13 15.31
	7188.00	38.95	250.70	6991.86	106.04	-1193.88	218.65	13.67	364223.73	576157.84	N 32 0 4.61	W 104 13 15.61
	7235.00	43.03	258.46	7027.35	136.81	-1201.98	188.96	10.83	364215.63	576128.15	N 32 0 4.53	W 104 13 15.96
	7283.00	46.75	262.79	7061.36	170.47	-1207.45	155.55	10.07	364210.16	576094.75	N 32 0 4.48	W 104 13 16.35
	7330.00	51.13	261.22	7092.23	205.61	-1212.39	120.47	9.65	364205.22	576059.67	N 32 0 4.43	W 104 13 16.75
	7371.25	56.65	260.35	7116.53	238.73	-1217.74	87.59	13.49	364199.88	576026.79	N 32 0 4.38	W 104 13 17.14
	7377.00	57.42	260.24	7119.66	243.53	-1218.55	82.83	13.49	364199.06	576022.03	N 32 0 4.37	W 104 13 17.19
	7425.00	65.28	262.40	7142.65	285.32	-1224.87	41.22	16.84	364192.74	575980.43	N 32 0 4.31	W 104 13 17.67
	7472.00	72.14	265.04	7159.71	328.53	-1229.63	-2.28	15.50	364187.98	575936.93	N 32 0 4.26	W 104 13 18.18
	7519.00	75.90	266.42	7172.65	372.85	-1232.99	-47.33	8.48	364184.62	575891.89	N 32 0 4.23	W 104 13 18.70
	7566.00	80.02	267.46	7182.45	417.75	-1235.44	-93.22	9.03	364182.17	575846.00	N 32 0 4.20	W 104 13 19.24
	7613.00	85.53	269.14	7188.36	463.03	-1236.82	-139.80	12.25	364180.79	575799.42	N 32 0 4.19	W 104 13 19.78
	7660.00	90.41	270.17	7190.02	508.37	-1237.10	-186.76	10.61	364180.51	575752.47	N 32 0 4.19	W 104 13 20.32
	7693.00	90.89	270.79	7189.65	540.11	-1236.83	-219.76	2.38	364180.79	575719.47	N 32 0 4.19	W 104 13 20.71
	7797.00	90.38	270.99	7188.50	639.94	-1235.21	-323.74	0.53	364182.40	575615.50	N 32 0 4.21	W 104 13 21.91
	7892.00	89.24	270.82	7188.81	731.12	-1233.71	-418.72	1.21	364183.90	575520.53	N 32 0 4.23	W 104 13 23.02
	7986.00	88.62	270.52	7190.57	821.43	-1232.61	-512.70	0.73	364185.00	575426.56	N 32 0 4.24	W 104 13 24.11
	8081.00	88.00	270.24	7193.37	912.82	-1231.98	-607.65	0.72	364185.63	575331.61	N 32 0 4.24	W 104 13 25.21
	8175.00	88.35	270.16	7196.36	1003.31	-1231.65	-701.61	0.38	364185.96	575237.67	N 32 0 4.25	W 104 13 26.30
	8270.00	88.38	270.53	7199.07	1094.72	-1231.08	-796.57	0.39	364186.53	575142.72	N 32 0 4.25	W 104 13 27.40
	8365.00	88.35	270.29	7201.78	1186.09	-1230.40	-891.52	0.25	364187.21	575047.77	N 32 0 4.26	W 104 13 28.51
	8460.00	88.49	268.00	7204.40	1277.99	-1231.75	-986.47	2.32	364185.87	574952.83	N 32 0 4.25	W 104 13 29.61
	8554.00	88.38	268.10	7206.97	1369.36	-1234.87	-1080.39	0.12	364182.74	574858.92	N 32 0 4.22	W 104 13 30.70
	8649.00	88.28	268.08	7209.74	1461.71	-1238.03	-1175.29	0.11	364179.58	574764.02	N 32 0 4.19	W 104 13 31.80
	8743.00	88.14	268.12	7212.68	1553.07	-1241.15	-1269.20	0.15	364176.46	574670.13	N 32 0 4.16	W 104 13 32.89
	8837.00	88.42	268.20	7215.50	1644.41	-1244.17	-1363.10	0.31	364173.45	574576.23	N 32 0 4.13	W 104 13 33.98
	8932.00	88.90	268.23	7217.72	1736.72	-1247.12	-1458.03	0.51	364170.49	574481.31	N 32 0 4.10	W 104 13 35.08
	9026.00	88.73	268.40	7219.66	1828.03	-1249.89	-1551.97	0.26	364167.73	574387.38	N 32 0 4.08	W 104 13 36.18
	9121.00	88.45	270.21	7222.00	1919.89	-1251.04	-1646.93	1.93	364166.57	574292.43	N 32 0 4.07	W 104 13 37.28
	9215.00	88.90	270.47	7224.17	2010.34	-1250.48	-1740.90	0.55	364167.13	574198.46	N 32 0 4.07	W 104 13 38.37
	9310.00	89.42	270.23	7225.57	2101.77	-1249.90	-1835.89	0.60	364167.71	574103.49	N 32 0 4.08	W 104 13 39.47
	9404.00	89.35	270.64	7226.58	2192.20	-1249.19	-1929.88	0.44	364168.43	574009.50	N 32 0 4.09	W 104 13 40.56
	9499.00	89.45	270.72	7227.57	2283.48	-1248.06	-2024.87	0.13	364169.55	573914.52	N 32 0 4.10	W 104 13 41.67
	9594.00	89.31	270.41	7228.60	2374.82	-1247.12	-2119.86	0.36	364170.49	573819.54	N 32 0 4.11	W 104 13 42.77
	9688.00	89.52	270.58	7229.56	2465.22	-1246.31	-2213.85	0.29	364171.30	573725.56	N 32 0 4.12	W 104 13 43.86
	9783.00	89.86	270.61	7230.07	2556.55	-1245.33	-2308.85	0.36	364172.29	573630.57	N 32 0 4.13	W 104 13 44.96
	9878.00	89.97	270.79	7230.21	2647.83	-1244.16	-2403.84	0.22	364173.45	573535.59	N 32 0 4.14	W 104 13 46.07
	9972.00	90.03	270.77	7230.21	2738.11	-1242.89	-2497.83	0.07	364174.73	573441.61	N 32 0 4.15	W 104 13 47.16
	10067.00	89.93	270.85	7230.25	2829.34	-1241.54	-2592.82	0.13	364176.07	573346.63	N 32 0 4.17	W 104 13 48.26
	10161.00	90.03	270.67	7230.28	2919.63	-1240.30	-2686.81	0.22	364177.32	573252.64	N 32 0 4.18	W 104 13 49.35
	10256.00	89.48	270.32	7230.69	3011.00	-1239.47	-2781.81	0.69	364178.14	573157.66	N 32 0 4.19	W 104 13 50.46
	10350.00	89.76	270.76	7231.31	3101.39	-1238.59	-2875.80	0.55	364179.02	573063.67	N 32 0 4.20	W 104 13 51.55
	10444.00	89.52	270.36	7231.90	3191.77	-1237.67	-2969.79	0.50	364179.94	572969.69	N 32 0 4.21	W 104 13 52.64
	10539.00	89.86	270.58	7232.41	3283.15	-1236.89	-3064.79	0.43	364180.72	572874.70	N 32 0 4.22	W 104 13 53.74
	10634.00	89.83	269.71	7232.67	3374.68	-1236.65	-3159.79	0.92	364180.96	572779.71	N 32 0 4.22	W 104 13 54.85
	10728.00	89.83	268.12	7232.95	3465.76	-1238.43	-3253.77	1.69	364179.18	572685.74	N 32 0 4.21	W 104 13 55.94
	10823.00	89.72	268.10	7233.32	3558.13	-1241.56	-3348.72	0.12	364176.05	572590.80	N 32 0 4.18	W 104 13 57.03
	10917.00	89.62	268.33	7233.86	3649.49	-1244.49	-3442.67	0.27	364173.12	572496.86	N 32 0 4.15	W 104 13 58.13
	11012.00	89.90	268.47	7234.26	3741.75	-1247.14	-3537.63	0.33	364170.47	572401.90	N 32 0 4.12	W 104 13 59.23
	11107.00	90.62	268.42	7233.83	3834.00	-1249.72	-3632.59	0.76	364167.89	572306.95	N 32 0 4.10	W 104 14 1.34
	11201.00	90.96	268.38	7232.53	3925.28	-1252.35	-3726.55	0.36	364165.27	572213.00	N 32 0 4.07	W 104 14 1.43
	11296.00	90.58	268.82	7231.26	4017.45	-1254.67	-3821.51	0.61	364162.95	572118.05	N 32 0 4.05	W 104 14 2.53
	11390.00	90.86	270.16	7230.08	4108.29	-1255.50	-3915.50	1.46	364162.11	572024.07	N 32 0 4.04	W 104 14 3.62
	11485.00	90.52	270.38	7228.93	4199.76	-1255.06	-4010.49	0.43	364162.56	571929.09	N 32 0 4.05	W 104 14 4.72
	11580.00	90.17	270.24	7228.36	4291.21	-1254.54	-4105.49	0.40	364163.07	571834.10	N 32 0 4.05	W 104 14 5.83
	11674.00	90.10	269.89	7228.14	4381.81	-1254.44	-4189.49	0.38	364163.18	571740.11	N 32 0 4.06	W 104 14 6.92

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 ° ° °)
	11769.00	90.10	270.11	7227.97	4473.40	-1254.44	-4294.49	0.23	364163.18	571645.12	N 32 0 4.06	W 104 14 8.02
	11863.00	90.31	269.92	7227.64	4564.03	-1254.41	-4388.48	0.30	364163.20	571551.13	N 32 0 4.06	W 104 14 9.11
Final Survey	11939.00	90.21	270.25	7227.29	4637.27	-1254.30	-4464.48	0.45	364163.32	571475.14	N 32 0 4.06	W 104 14 10.00
Proj. to Bit	12007.00	90.21	270.25	7227.04	4702.75	-1254.00	-4532.48	0.00	364163.61	571407.14	N 32 0 4.06	W 104 14 10.79

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
	1	0.000	25.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Foxx 31 Federal Com #4H MWD Off to 12007ft
	1	25.000	25.000	Act Shs	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Foxx 31 Federal Com #4H MWD Off to 12007ft
	1	25.000	12007.000	Act Shs	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Foxx 31 Federal Com #4H MWD Off to