Schlumberger

CIMAREX

Final Surveys - Cimarex Vaca Draw 20-17 Federal #2H MWD 0ft-22179ft (Surcon Corrected) Survey Geodetic Report

(Def Survey)

Report Date:	March 21, 2019 - 09:22 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	Cimarex	**Vertical Section Azimuth:**	359.630 ° (Grid North)
Field:	NM Lea County (NAD 83)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Vaca Draw 20-17 Federal #2H / Cimarex Vaca Draw 20-17 Federal #2H	**TVD Reference Datum:**	RKB
Well:	Cimarex Vaca Draw 20-17 Federal #2H	**TVD Reference Elevation:**	3441.200 ft above MSL
Borehole:	Original Borehole	**Seabed / Ground Elevation:**	3418.200 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	6.671 °
Survey Name:	Final Surveys - Cimarex Vaca Draw 20-17 Federal #2H MWD 0ft-22179ft (Surcon Corrected)	**Total Gravity Field Strength:**	998.4303mgn (9.80665 Based)
Survey Date:	November 29, 2018	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	313.287 ° / 10309.915 ft / 6.762 / 0.831	**Total Magnetic Field Strength:**	47802.165 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	59.731 °
Location Lat / Long:	N 32° 6' 35.65902", W 103° 35' 48.04794"	**Declination Date:**	March 07, 2019
Location Grid N/E Y/X:	N 404499.310 ftUS, E 769421.190 ftUS	**Magnetic Declination Model:**	HDGM 2019
CRS Grid Convergence Angle:	0.3916 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99996867	**Grid Convergence Used:**	0.3916 °
Version / Patch:	2.10.753.0	**Total Corr Mag North->Grid North:**	6.2797 °
		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 ° ' ")	Closure Azimuth (°)	Closure (ft)
SHL [390' FSL, 1910' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	404499.31	769421.19	N 32 6 35.66	W 103 35 48.05	0.00	0.00
	199.00	0.22	139.70	199.00	-0.29	-0.29	0.25	0.11	404499.02	769421.44	N 32 6 35.66	W 103 35 48.05	139.70	0.38
	300.00	0.22	152.20	300.00	-0.61	-0.61	0.48	0.05	404498.70	769421.65	N 32 6 35.65	W 103 35 48.04	142.84	0.77
	392.00	0.22	123.80	392.00	-0.87	-0.87	0.69	0.12	404498.44	769421.88	N 32 6 35.65	W 103 35 48.04	141.35	1.11
	484.00	0.09	153.40	484.00	-1.03	-1.03	0.87	0.16	404498.28	769422.06	N 32 6 35.65	W 103 35 48.04	139.72	1.35
	575.00	0.06	35.16	575.00	-1.06	-1.05	0.93	0.14	404498.26	769422.12	N 32 6 35.65	W 103 35 48.04	138.53	1.41
	665.00	0.07	37.47	665.00	-0.98	-0.97	0.99	0.01	404498.34	769422.18	N 32 6 35.65	W 103 35 48.04	134.41	1.39
	760.00	0.15	11.73	760.00	-0.81	-0.80	1.05	0.10	404498.51	769422.24	N 32 6 35.65	W 103 35 48.04	127.36	1.32
	850.00	0.18	332.21	850.00	-0.57	-0.56	1.01	0.13	404498.75	769422.20	N 32 6 35.65	W 103 35 48.04	119.13	1.18
	945.00	0.14	324.13	945.00	-0.34	-0.34	0.87	0.05	404498.97	769422.06	N 32 6 35.66	W 103 35 48.04	111.10	0.94
	981.00	0.13	331.75	981.00	-0.27	-0.27	0.83	0.06	404499.04	769422.02	N 32 6 35.66	W 103 35 48.04	107.77	0.87
	1134.00	0.12	245.10	1134.00	-0.18	-0.18	0.60	0.11	404499.13	769421.79	N 32 6 35.66	W 103 35 48.04	106.67	0.63
	1230.00	0.01	6.55	1230.00	-0.22	-0.21	0.51	0.13	404499.10	769421.70	N 32 6 35.66	W 103 35 48.04	112.75	0.55
	1325.00	0.06	339.54	1325.00	-0.18	-0.16	0.49	0.05	404499.15	769421.68	N 32 6 35.66	W 103 35 48.04	107.85	0.52
	1419.00	0.13	338.73	1419.00	-0.02	-0.01	0.44	0.07	404499.30	769421.63	N 32 6 35.66	W 103 35 48.04	91.74	0.44
	1608.00	0.31	350.63	1607.99	0.69	0.69	0.28	0.10	404500.00	769421.47	N 32 6 35.67	W 103 35 48.04	21.78	0.74
	1796.00	0.48	338.25	1795.99	1.92	1.92	-0.10	0.10	404501.23	769421.09	N 32 6 35.68	W 103 35 48.05	357.07	1.93
	1891.00	0.52	344.73	1890.99	2.71	2.71	-0.38	0.07	404502.02	769420.83	N 32 6 35.69	W 103 35 48.05	352.44	2.73
	1986.00	0.56	349.83	1985.98	3.59	3.58	-0.55	0.07	404502.89	769420.64	N 32 6 35.69	W 103 35 48.05	351.19	3.63
	2081.00	0.57	5.22	2080.98	4.51	4.51	-0.59	0.16	404503.82	769420.60	N 32 6 35.70	W 103 35 48.05	352.50	4.55
	2175.00	0.65	12.78	2174.97	5.50	5.50	-0.43	0.12	404504.81	769420.78	N 32 6 35.71	W 103 35 48.05	355.49	5.51
	2271.00	0.87	115.49	2270.97	5.71	5.71	0.34	1.24	404505.02	769421.53	N 32 6 35.72	W 103 35 48.04	3.45	5.72
	2365.00	1.05	109.88	2364.95	5.10	5.11	1.80	0.22	404504.42	769422.99	N 32 6 35.71	W 103 35 48.03	19.38	5.42
	2459.00	1.15	99.67	2458.94	4.64	4.66	3.54	0.23	404503.97	769424.73	N 32 6 35.70	W 103 35 48.01	37.20	5.85
	2553.00	1.28	95.31	2552.92	4.37	4.41	5.51	0.17	404503.72	769426.70	N 32 6 35.70	W 103 35 47.98	51.37	7.06
	2648.00	1.35	91.53	2647.89	4.23	4.28	7.69	0.12	404503.59	769428.88	N 32 6 35.70	W 103 35 47.96	60.91	8.80
	2743.00	1.39	83.11	2742.86	4.32	4.39	9.95	0.22	404503.70	769431.14	N 32 6 35.70	W 103 35 47.93	66.21	10.88
	2837.00	1.45	81.35	2836.83	4.62	4.70	12.28	0.08	404504.01	769433.45	N 32 6 35.70	W 103 35 47.91	69.02	13.13
	2932.00	1.54	79.75	2931.80	5.01	5.11	14.70	0.10	404504.42	769435.89	N 32 6 35.71	W 103 35 47.88	70.84	15.57
	3026.00	2.11	110.67	3025.76	4.61	4.72	17.57	1.19	404504.03	769438.76	N 32 6 35.70	W 103 35 47.84	74.65	18.19
	3121.00	1.71	114.54	3120.70	3.39	3.52	20.49	0.44	404502.83	769441.68	N 32 6 35.69	W 103 35 47.81	80.26	20.79
	3216.00	1.52	116.08	3215.67	2.23	2.38	22.91	0.21	404501.69	769444.10	N 32 6 35.68	W 103 35 47.78	84.08	23.04
	3310.00	1.40	117.93	3309.64	1.13	1.29	25.05	0.14	404500.60	769446.24	N 32 6 35.67	W 103 35 47.76	87.05	25.08
	3404.00	1.18	90.59	3403.61	0.57	0.74	27.03	0.69	404500.05	769448.22	N 32 6 35.66	W 103 35 47.73	88.43	27.04
	3498.00	1.15	84.53	3497.59	0.63	0.82	28.94	0.13	404500.13	769450.13	N 32 6 35.67	W 103 35 47.71	88.37	28.95
	3593.00	0.95	81.24	3592.58	0.83	1.03	30.66	0.22	404500.34	769451.85	N 32 6 35.67	W 103 35 47.69	88.07	30.68
	3688.00	0.93	75.28	3687.56	1.14	1.35	32.19	0.11	404500.66	769453.38	N 32 6 35.67	W 103 35 47.67	87.60	32.22
	3783.00	1.33	68.60	3782.55	1.73	1.95	33.98	0.44	404501.26	769455.15	N 32 6 35.68	W 103 35 47.65	86.72	34.02
	3877.00	1.30	65.40	3876.52	2.56	2.79	35.95	0.08	404502.10	769457.13	N 32 6 35.68	W 103 35 47.63	85.56	36.05
	3972.00	1.59	100.77	3971.49	2.74	2.99	38.22	0.97	404502.30	769459.41	N 32 6 35.69	W 103 35 47.60	85.53	38.34
	4067.00	1.68	101.89	4066.45	2.19	2.46	40.88	0.10	404501.77	769462.07	N 32 6 35.68	W 103 35 47.57	86.56	40.95
	4162.00	1.00	121.27	4161.43	1.48	1.74	42.95	0.85	404501.05	769464.14	N 32 6 35.67	W 103 35 47.55	87.68	42.98
	4257.00	1.49	128.00	4256.40	0.26	0.55	44.63	0.54	404499.86	769465.82	N 32 6 35.66	W 103 35 47.53	89.29	44.63
	4352.00	1.60	130.14	4351.37	-1.37	-1.07	46.62	0.13	404498.24	769467.81	N 32 6 35.65	W 103 35 47.51	91.31	46.63
	4446.00	1.45	97.49	4445.34	-2.38	-2.07	48.80	0.92	404497.24	769469.99	N 32 6 35.64	W 103 35 47.48	92.43	48.84
	4542.00	1.93	98.47	4541.30	-2.80	-2.46	51.60	0.50	404496.85	769472.79	N 32 6 35.63	W 103 35 47.45	92.73	51.66
	4636.00	1.06	91.18	4635.26	-3.06	-2.71	54.04	0.95	404496.60	769475.23	N 32 6 35.63	W 103 35 47.42	92.88	54.11
	4732.00	1.16	99.89	4731.25	-3.26	-2.90	55.88	0.20	404496.41	769477.07	N 32 6 35.63	W 103 35 47.40	92.97	55.96
	4826.00	1.02	101.99	4825.23	-3.61	-3.24	57.64	0.15	404496.07	769478.83	N 32 6 35.62	W 103 35 47.38	93.21	57.73
	4921.00	0.98	100.02	4920.21	-3.94	-3.55	59.27	0.06	404495.76	769480.45	N 32 6 35.62	W 103 35 47.36	93.43	59.37
	5016.00	0.95	100.50	5015.20	-4.23	-3.84	60.84	0.03	404495.47	769482.03	N 32 6 35.62	W 103 35 47.34	93.61	60.96
	5111.00	0.96	101.75	5110.19	-4.55	-4.14	62.39	0.02	404495.17	769483.58	N 32 6 35.61	W 103 35 47.32	93.80	62.53
	5205.00	1.04	103.32	5204.17	-4.91	-4.50	64.00	0.09	404494.81	769485.18	N 32 6 35.61	W 103 35 47.30	94.02	64.15
	5299.00	0.89	96.35	5298.16	-5.20	-4.78	65.55	0.20	404494.53	769486.74	N 32 6 35.61	W 103 35 47.29	94.17	65.72
	5393.00	0.76	108.14	5392.15	-5.49	-5.05	66.87	0.23	404494.26	769488.06	N 32 6 35.60	W 103 35 47.27	94.32	67.06
	5488.00	0.62	117.77	5487.14	-5.93	-5.49	67.92	0.19	404493.82	769489.11	N 32 6 35.60	W 103 35 47.26	94.62	68.14
	5584.00	0.56	117.73	5583.14	-6.39	-5.95	68.80	0.06	404493.36	769489.99	N 32 6 35.60	W 103 35 47.25	94.94	69.05
	5678.00	0.60	114.91	5677.13	-6.82	-6.37	69.65	0.05	404492.94	769490.84	N 32 6 35.59	W 103 35 47.24	95.23	69.94
	5773.00	0.57	104.26	5772.13	-7.15	-6.70	70.58	0.12	404492.61	769491.75	N 32 6 35.59	W 103 35 47.23	95.42	70.88
	5868.00	0.44	115.34	5867.13	-7.43	-6.97	71.35	0.17	404492.34	769492.53	N 32 6 35.59	W 103 35 47.22	95.58	71.69
	5963.00	0.58	90.49	5962.12	-7.59	-7.13	72.16	0.27	404492.18	769493.35	N 32 6 35.58	W 103 35 47.21	95.64	72.51
	6058.00	0.83	85.46	6057.11	-7.55	-7.08	73.32	0.27	404492.23	769494.51	N 32 6 35.58	W 103 35 47.20	95.51	73.67
	6153.00	0.82	84.56	6152.10	-7.44	-6.96	74.69	0.02	404492.35	769495.87	N 32 6 35.59	W 103 35 47.18	95.32	75.01
	6248.00	0.80	87.41	6247.09	-7.36	-6.87	76.03	0.05	404492.44	769497.21	N 32 6 35.59	W 103 35 47.16	95.16	76.34
	6342.00	0.85	89.70	6341.09	-7.33	-6.83	77.38	0.06	404492.48	769498.57	N 32 6 35.59	W 103 35 47.15	95.05	77.68
	6437.00	0.83	91.88	6436.07	-7.36	-6.85	78.77	0.04	404492.46	769499.96	N 32 6 35.59	W 103 35 47.13	94.97	79.07
	6532.00	0.81	90.63	6531.07	-7.40	-6.88	80.13	0.03	404492.43	769501.32	N 32 6 35.59	W 103 35 47.12	94.91	80.43
	6627.00	0.83	91.28	6626.06	-7.43	-6.90	81.49	0.02	404492.41	769502.68	N 32 6 35.59	W 103 35 47.10	94.84	81.78
	6722.00	0.77	85.47	6721.05	-7.40	-6.87	82.81	0.11	404492.44	769504.00	N 32 6 35.59	W 103 35 47.09	94.74	83.10
	6817.00	1.05	74.70	6816.03	-7.13	-6.59	84.29	0.34	404492.72	769505.48	N 32 6 35.59	W 103 35 47.07	94.47	84.55
	6912.00	1.07	72.62	6911.02	-6.65	-6.09	85.98	0.05	404493.22	769507.16	N 32 6 35.59	W 103 35 47.05	94.05	86.19
	7007.00	0.92	70.82	7006.00	-6.14	-5.58	87.54	0.16	404493.73	769508.73	N 32 6 35.60	W 103 35 47.03	93.65	87.72
	7102.00	0.83	68.93	7100.99	-5.83	-5.06	88.90	0.11	404494.25	769510.08	N 32 6 35.60	W 103 35 47.01	93.26	89.04
	7196.00	1.23	72.90	7194.98	-5.08	-4.49	90.49	0.44	404494.82	769511.67	N 32 6 35.61	W 103 35 47.00	92.84	90.60
	7290.00	1.22	69.81	7288.96	-4.45	-3.85	92.39	0.07	404495.46	769513.58	N 32 6 35.61	W 103 35 46.97	92.39	92.47
	7385.00	1.10	67.90	7383.94	-3.77	-3.18	94.18	0.13	404496.15	769515.37	N 32 6 35.62	W 103 35 46.95	91.92	94.24
	7479.00	1.02	75.47	7477.92	-3.23	-2.61	95.83	0.17	404496.70	769517.02	N 32 6 35.63	W 103 35 46.93	91.56	95.87
	7572.00	1.71	81.23	7570.89	-2.82	-2.19	98.00	0.76	404497.12	769519.19	N 32 6 35.63	W 103 35 46.91	91.28	98.03
	7666.00	1.60	87.05	7664.85	-2.56	-1.91	100.70	0.21	404497.40	769521.89	N 32 6 35.63	W 103 35 46.88	91.09	100.72
	7761.00	1.53	84.31	7759.82	-2.38	-1.72	103.29	0.11	404497.59	769524.47	N 32 6 35.64	W 103 35 46.85	90.95	103.30
	7856.00	1.40	86.77	7854.79	-2.21	-1.53	105.71	0.15	404497.79	769526.89	N 32 6 35.64	W 103 35 46.82	90.83	105.72
	7951.00	1.38	89.74	7949.76	-2.15	-1.45	107.99	0.09	404497.88	769529.18	N 32 6 35.64	W 103 35 46.79	90.77	108.00
	8046.00	1.26	89.60	8044.74	-2.15	-1.44	110.17	0.11	404497.87	769531.35	N 32 6 35.64	W 103 35 46.77	90.75	110.17

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 Azimuth (°)	Closure (ft)
	8141.00	1.11	89.75	8139.71	-2.15	-1.43	112.13	0.16	404497.88	769533.32	N 32 6 35.64	W 103 35 46.74	90.73	112.14
	8236.00	1.15	91.75	8234.70	-2.19	-1.46	114.00	0.06	404497.85	769535.19	N 32 6 35.64	W 103 35 46.72	90.73	114.01
	8331.00	0.95	92.79	8329.68	-2.27	-1.52	115.74	0.21	404497.79	769536.93	N 32 6 35.64	W 103 35 46.70	90.75	115.75
	8426.00	0.87	107.84	8424.67	-2.54	-1.78	117.22	0.26	404497.53	769538.40	N 32 6 35.63	W 103 35 46.69	90.87	117.23
	8520.00	0.75	107.93	8518.66	-2.96	-2.19	118.48	0.13	404497.12	769539.67	N 32 6 35.63	W 103 35 46.67	91.06	118.50
	8614.00	1.32	98.86	8612.64	-3.32	-2.55	120.14	0.63	404496.76	769541.32	N 32 6 35.63	W 103 35 46.65	91.21	120.16
	8709.00	1.32	104.78	8707.62	-3.78	-2.99	122.27	0.14	404496.32	769543.46	N 32 6 35.62	W 103 35 46.63	91.40	122.31
	8803.00	1.10	115.05	8801.60	-4.45	-3.65	124.14	0.33	404495.66	769545.32	N 32 6 35.61	W 103 35 46.61	91.69	124.19
	8897.00	1.02	113.80	8895.58	-5.18	-4.37	125.72	0.09	404494.94	769546.91	N 32 6 35.61	W 103 35 46.59	91.99	125.80
	8992.00	0.82	132.96	8990.57	-6.00	-5.18	126.99	0.38	404494.13	769548.18	N 32 6 35.60	W 103 35 46.57	92.33	127.10
	9086.00	0.62	135.56	9084.56	-6.62	-6.00	127.84	0.22	404493.31	769549.03	N 32 6 35.59	W 103 35 46.56	92.69	127.98
	9276.00	0.74	159.03	9274.55	-8.71	-7.88	129.00	0.16	404491.43	769550.19	N 32 6 35.57	W 103 35 46.55	93.49	129.24
	9465.00	1.02	164.46	9463.53	-11.48	-10.64	129.89	0.15	404488.67	769551.07	N 32 6 35.54	W 103 35 46.54	94.68	130.32
	9560.00	1.31	153.15	9558.51	-13.26	-12.42	130.60	0.39	404486.89	769551.79	N 32 6 35.53	W 103 35 46.53	95.43	131.19
	9654.00	1.41	145.58	9652.48	-15.18	-14.33	131.74	0.22	404484.98	769552.93	N 32 6 35.51	W 103 35 46.52	96.21	132.52
	9749.00	1.47	144.64	9747.45	-17.15	-16.29	133.11	0.07	404483.02	769554.30	N 32 6 35.49	W 103 35 46.50	96.98	134.10
	9844.00	1.29	154.90	9842.42	-19.12	-18.25	134.27	0.32	404481.06	769555.45	N 32 6 35.47	W 103 35 46.49	97.74	135.50
	9939.00	0.87	168.75	9937.41	-20.80	-19.92	134.89	0.50	404479.39	769556.07	N 32 6 35.45	W 103 35 46.48	98.40	136.35
	10033.00	0.46	329.03	10031.40	-21.17	-20.30	134.88	1.40	404479.02	769556.04	N 32 6 35.45	W 103 35 46.48	98.56	136.38
	10127.00	0.75	335.49	10125.40	-20.28	-19.41	134.41	0.32	404479.90	769555.59	N 32 6 35.46	W 103 35 46.49	98.22	135.80
	10222.00	0.89	340.15	10220.39	-19.02	-18.15	133.90	0.16	404481.16	769555.08	N 32 6 35.47	W 103 35 46.49	97.72	135.12
	10317.00	0.84	344.92	10315.38	-17.85	-16.79	133.47	0.09	404482.52	769554.65	N 32 6 35.48	W 103 35 46.50	97.17	134.52
	10411.00	0.88	348.26	10409.37	-16.27	-15.41	133.14	0.07	404483.90	769554.33	N 32 6 35.50	W 103 35 46.50	96.60	134.03
	10506.00	1.15	345.61	10504.35	-14.63	-13.76	132.76	0.29	404485.53	769553.94	N 32 6 35.51	W 103 35 46.51	95.92	133.47
	10600.00	1.14	342.63	10598.33	-12.82	-11.97	132.24	0.06	404487.34	769553.43	N 32 6 35.53	W 103 35 46.51	95.17	132.78
	10694.00	1.12	347.98	10692.31	-11.03	-10.18	131.77	0.11	404489.13	769552.98	N 32 6 35.55	W 103 35 46.52	94.42	132.18
	10788.00	1.20	348.48	10788.30	-9.17	-8.32	131.35	0.09	404490.99	769552.54	N 32 6 35.57	W 103 35 46.52	93.63	131.61
	10883.00	1.32	345.22	10881.27	-7.14	-6.30	130.84	0.13	404493.01	769552.02	N 32 6 35.59	W 103 35 46.53	92.76	130.99
	11073.00	1.74	341.68	11071.20	-2.28	-1.44	129.37	0.23	404497.87	769550.56	N 32 6 35.64	W 103 35 46.54	90.64	129.38
	11168.00	1.24	325.51	11166.17	-0.06	0.77	128.34	0.68	404500.08	769549.52	N 32 6 35.66	W 103 35 46.56	89.66	128.34
	11263.00	1.12	317.24	11261.15	1.48	2.30	127.12	0.22	404501.61	769548.31	N 32 6 35.67	W 103 35 46.57	88.96	127.15
	11358.00	1.20	313.86	11356.13	2.86	3.67	125.78	0.11	404502.98	769546.96	N 32 6 35.69	W 103 35 46.59	88.33	125.83
	11453.00	1.18	307.26	11451.11	4.15	4.95	124.28	0.15	404504.26	769545.47	N 32 6 35.70	W 103 35 46.60	87.72	124.38
	11548.00	1.32	299.58	11546.09	5.29	6.09	122.55	0.23	404505.40	769543.74	N 32 6 35.71	W 103 35 46.62	87.16	122.70
	11717.00	1.25	295.79	11715.05	7.08	7.85	119.20	0.07	404507.16	769540.38	N 32 6 35.73	W 103 35 46.66	86.23	119.46
	11760.00	1.47	293.80	11758.03	7.51	8.28	118.27	0.52	404507.59	769539.46	N 32 6 35.73	W 103 35 46.67	86.00	118.56
	11791.00	2.88	338.76	11789.01	8.39	9.15	117.60	6.88	404508.46	769538.79	N 32 6 35.74	W 103 35 46.68	85.55	117.96
	11823.00	7.79	350.92	11820.87	11.28	12.03	116.94	15.77	404511.34	769538.13	N 32 6 35.77	W 103 35 46.69	84.12	117.56
	11854.00	13.07	356.23	11851.34	16.88	17.61	116.38	17.29	404516.92	769537.56	N 32 6 35.83	W 103 35 46.69	81.40	117.70
	11886.00	18.17	357.78	11882.15	25.48	26.21	115.95	15.99	404525.52	769537.13	N 32 6 35.91	W 103 35 46.70	77.26	118.87
	11917.00	21.94	357.76	11911.27	36.09	36.83	115.53	12.16	404536.14	769536.72	N 32 6 36.02	W 103 35 46.70	72.32	121.26
	11949.00	24.81	357.02	11940.84	48.77	49.51	114.95	9.02	404548.82	769536.14	N 32 6 36.14	W 103 35 46.71	66.70	125.16
	11980.00	27.96	356.58	11968.41	62.53	63.27	114.18	10.18	404562.57	769535.38	N 32 6 36.28	W 103 35 46.72	61.01	130.53
	12011.00	31.07	357.18	11995.38	77.78	78.51	113.35	10.08	404577.82	769534.53	N 32 6 36.43	W 103 35 46.72	55.29	137.88
	12043.00	33.82	359.38	12022.38	94.94	95.67	112.84	9.34	404594.98	769534.03	N 32 6 36.60	W 103 35 46.73	49.71	147.94
	12074.00	35.02	359.90	12047.95	112.46	113.19	112.73	3.99	404612.50	769533.91	N 32 6 36.77	W 103 35 46.73	44.88	159.75
	12105.00	36.38	359.84	12073.13	130.55	131.28	112.69	4.39	404630.59	769533.87	N 32 6 36.95	W 103 35 46.73	40.64	173.01
	12137.00	38.66	359.62	12098.51	150.04	150.77	112.59	7.14	404650.07	769533.78	N 32 6 37.14	W 103 35 46.73	36.75	188.17
	12169.00	40.70	359.35	12123.13	170.47	171.20	112.41	6.40	404670.50	769533.60	N 32 6 37.35	W 103 35 46.73	33.29	204.80
	12200.00	44.31	358.84	12145.98	191.41	192.14	112.08	11.70	404691.44	769533.26	N 32 6 37.55	W 103 35 46.73	30.26	222.44
	12231.00	48.74	358.75	12167.31	213.90	214.62	111.60	14.29	404713.93	769532.79	N 32 6 37.78	W 103 35 46.73	27.47	241.91
	12263.00	53.75	358.95	12187.33	238.84	239.56	111.10	15.66	404738.87	769532.29	N 32 6 38.02	W 103 35 46.74	24.88	264.07
	12294.00	58.22	358.94	12204.67	264.53	265.25	110.63	14.42	404764.55	769531.82	N 32 6 38.28	W 103 35 46.74	22.64	287.40
	12326.00	61.99	359.03	12220.62	292.26	292.98	110.14	11.78	404792.28	769531.33	N 32 6 38.55	W 103 35 46.74	20.60	313.00
	12358.00	64.23	359.64	12235.09	320.80	321.52	109.81	7.20	404820.82	769531.00	N 32 6 38.83	W 103 35 46.75	18.88	339.75
	12390.00	67.04	0.20	12248.29	349.95	350.67	109.77	8.92	404849.96	769530.96	N 32 6 39.12	W 103 35 46.74	17.38	367.44
	12402.00	68.20	0.49	12252.86	361.04	361.76	109.84	9.92	404861.06	769531.02	N 32 6 39.23	W 103 35 46.74	16.89	378.07
	12483.00	73.00	2.24	12279.76	437.38	438.11	111.67	6.27	404937.41	769532.86	N 32 6 39.99	W 103 35 46.71	14.30	452.12
	12514.00	74.01	2.16	12288.56	467.08	467.82	112.61	3.27	404967.11	769534.00	N 32 6 40.28	W 103 35 46.70	13.56	481.23
	12546.00	74.97	2.09	12297.12	497.68	498.63	113.66	3.01	404997.92	769535.14	N 32 6 40.59	W 103 35 46.68	12.87	511.49
	12578.00	75.83	2.12	12305.18	528.82	529.57	115.10	2.69	405028.87	769536.28	N 32 6 40.89	W 103 35 46.67	12.26	541.94
	12609.00	76.64	2.15	12312.56	558.90	559.66	116.22	2.61	405058.95	769537.40	N 32 6 41.19	W 103 35 46.65	11.73	571.60
	12641.00	77.20	1.88	12319.80	590.04	590.81	117.31	1.93	405090.10	769538.50	N 32 6 41.50	W 103 35 46.64	11.23	602.35
	12684.00	77.17	2.17	12329.34	631.84	632.72	118.79	0.68	405132.00	769539.98	N 32 6 41.91	W 103 35 46.62	10.63	643.77
	12716.00	79.77	1.51	12335.73	663.26	664.05	119.80	8.37	405163.34	769540.99	N 32 6 42.22	W 103 35 46.60	10.23	674.77
	12748.00	82.31	0.95	12340.72	694.88	695.85	120.48	8.12	405194.94	769541.66	N 32 6 42.53	W 103 35 46.59	9.83	706.01
	12779.00	85.32	1.10	12344.06	725.67	726.46	121.03	9.72	405225.75	769542.22	N 32 6 42.84	W 103 35 46.58	9.46	736.47
	12811.00	88.76	1.24	12345.71	757.61	758.41	121.68	10.76	405257.69	769542.87	N 32 6 43.16	W 103 35 46.57	9.12	768.11
	12906.00	92.58	1.45	12344.60	852.54	853.36	123.91	4.03	405352.64	769545.10	N 32 6 44.09	W 103 35 46.54	8.26	862.31
	13001.00	90.34	1.43	12342.18	947.48	948.29	126.30	2.36	405447.57	769547.48	N 32 6 45.03	W 103 35 46.50	7.59	956.68
	13096.00	89.07	2.00	12342.67	1042.39	1043.24	129.14	1.47	405542.52	769550.33	N 32 6 45.97	W 103 35 46.46	7.06	1051.21
	13191.00	89.76	1.39	12343.64	1137.32	1138.20	131.95	0.97	405637.47	769553.14	N 32 6 46.91	W 103 35 46.42	6.61	1145.82
	13286.00	88.73	1.02	12344.69	1232.28	1233.17	133.95	1.15	405732.43	769555.13	N 32 6 47.85	W 103 35 46.39	6.20	1240.42
	13380.00	89.31	359.97	12348.50	1326.25	1327.15	134.76	1.28	405826.41	769555.95	N 32 6 48.78	W 103 35 46.38	5.80	1333.97
	13475.00	89.07	0.25	12347.84	1421.24	1422.14	134.94	0.39	405921.40	769556.13	N 32 6 49.72	W 103 35 46.37	5.42	1428.53
	13570.00	88.21	358.85	12350.09	1516.21	1517.10	134.20	1.73	406016.36	769555.38	N 32 6 50.66	W 103 35 46.37	5.05	1523.03
	13665.00	89.14	359.11	12352.29	1611.17	1612.06	132.51	1.02	406111.32	769553.69	N 32 6 51.60	W 103 35 46.38	4.70	1617.50
	13760.00	88.52	357.06	12354.23	1706.11	1706.98	129.33	2.25	406206.24	769550.52	N 32 6 52.54	W 103 35 46.41	4.33	1711.88
	13855.00	89.55	358.97	12355.83	1801.06	1801.91	126.04	2.26	406301.16	769547.23	N 32 6 53.48	W 103 35 46.44	4.00	1806.31
	13950.00	90.55	359.08	12355.75	1896.05	1896.89	124.43	1.06	406396.14	769545.61	N 32 6 54.42	W 103 35 46.45	3.75	1900.97
	14045.00	89.97	359.88	12355.32	1991.05	1991.89	123.55	1.02	406491.13	769544.73	N 32 6 55.36	W 103 35 46.45	3.55	1995.71
	14140.00	90.72	359.57	12354.74	2086.05	2086.88	123.08	0.85	406586.12	769544.26	N 32 6 56.30	W 103 35 46.45	3.38	2090.51
	14235.00	90.83	359.87	12353.48	2181.04	2181.87	122.61	0.34	406681.11	769543.80	N 32 6 57.24	W 103 35 46.45	3.22	2185.32
	14330.00	88.59	358.80	12353.94	2276.03	2276.86	121.51	2.61	406776.09	769542.69	N 32 6 58.18	W 103 35 46.45	3.05	2280.10
	14424.00	86.97	357.90	12357.58	2369.93	2370.74	118.80	1.97	406869.98	769539.99	N 32 6 59.11	W 103 35 46.48	2.87	2373.72
	14520.00	89.07	357.32	12360.80	2465.81	2466.60	114.80	2.27	406965.83	769535.99	N 32 7 0.06	W 103 35 46.52	2.68	2469.27
	14614.00	89.45	357.90	12362.11	2559.74	2560.51	110.88	0.74	407059.73	769532.07	N 32 7 0.99	W 103 35 46.56	2.48	2562.91
	14709.00	89.35	1.01	12363.11	2654.72	2655.49	109.98	3.28	407154.71	769531.17	N 32 7 1.93	W 103 35 46.56	2.37	2657.76
	14804.00	89.83	1.03	12363.79	2749.69	2750.47	111.67	0.51	407249.69	769532.86	N 32 7 2.87	W 103 35 46.53	2.32	2752.74
	14899.00	91.48	2.90	12362.70	2844.60	2845.40	114.93	2.62	407344.61	769536.11	N 32 7 3.81	W 103 35 46.49	2.31	2847.72
	14994.00	89.42	2.30	12361.96	2939.46	2940.29	119.24	2.26	407439.51	769540.42	N 32 7 4.75	W 103 35 46.43	2.32	2942.71
	15076.00	85.53	359.83	12365.66	3023.33	3024.17	120.80	5.48	407523.38	769541.99	N 32 7 5.58	W 103 35 46.40	2.29	3026.59
	15172.00	88.45	1.38	12370.59	3117.18	3118.03	121.79	3.52	407617.23	769542.98	N 32 7 6.50	W 103 35 46.38	2.24	3120.40
	15267.00	89.83	359.48	12372.02	3212.15	3213.01	122.50	2.47	407712.21	769543.69	N 32 7 7.44	W 103 35 46.37	2.18	3215.34
	15362.00	89.79	0.27	12372.33	3307.15	3308.01	122.30	0.83	407807.20	769543.48	N 32 7 8.38	W 103 35 46.36	2.12	3310.26
	15458.00	89.72	358.10	12372.74	3403.14	3403.99	120.93	2.26	407903.19	769542.12	N 32 7 9.33	W 103 35 46.37	2.03	3406.14
	15553.00	89.48	357.56	12373.41	3498.09	3498.92	117.33	0.62	407998.11	769538.52	N 32 7 10.27	W 103 35 46.41	1.92	3500.88
	15648.00	89.90	358.28	12373.92	3593.04	3593.85	113.89	0.88	408093.04	769535.07	N 32 7 11.21	W 103 35 46.44	1.82	3595.66
	15743.00	89.66	357.84	12374.28	3688.01	3688.80	110.67	0.53	408187.98	769531.86	N 32 7 12.15	W 103 35 46.47	1.72	3690.48
	15838.00	89.90	357.76	12374.65	3782.98	3783.73	107.02	0.27	408282.91	769528.21	N 32 7 13.09	W 103 35 46.50	1.62	3785.24
	15932.00	89.62	0.30	12375.04	3876.94	3877.70	105.43	2.72	408376.89	769526.62	N 32 7 14.02	W 103 35 46.51	1.56	3879.14
	16027.00	89.45	0.05	12375.81	3971.94	3972.70	105.72	0.32	408471.88	769526.91	N 32 7 14.96	W 103 35 46.50	1.52	3974.11
	16122.00	89.48	0.10	12376.70	4066.93	4067.70	105.85	0.06	408566.87	769527.03	N 32 7 15.90	W 103 35 46.49	1.49	4069.07
	16217.00	89.00	358.87	12377.98	4161.92	4162.68	104.99	1.39	408661.85	769526.18	N 32 7 16.84	W 103 35 46.50	1.44	4164.01
	16312.00	89.78	0.41	12378.99	4256.91	4257.67	104.40	1.81	408756.84	769525.58	N 32 7 17.78	W 103 35 46.50	1.40	4258.95
	16407.00	89.69	1.09	12379.45	4351.89	4352.66	105.64	0.72	408851.83	769526.83	N 32 7 18.72	W 103 35 46.47	1.39	4353.94
	16502.00	90.03	0.59	12379.68	4446.87	4447.65	107.03	0.64	408946.81	769528.22	N 32 7 19.66	W 103 35 46.45	1.38	4448.94
	16597.00	90.07	0.37	12379.59	4541.86	4542.65	107.83	0.24	409041.81	769529.02	N 32 7 20.60	W 103 35 46.43	1.36	4543.93
	16692.00	89.35	0.37	12380.08	4636.85	4637.64	108.44	0.76	409136.80	769529.63	N 32 7 21.54	W 103 35 46.42	1.34	4638.91
	16787.00	89.66	1.03	12380.90	4731.83	4732.63	109.60	0.77	409231.78	769530.79	N 32 7 22.48	W 103 35 46.40	1.33	4733.90
	16882.00	90.14	359.80	12381.06	4826.81	4827.63	110.29	1.39	409326.78	769531.48	N 32 7 23.42	W 103 35 46.38	1.31	4828.89
Section Line Crossing [2050' FWL]	*16943.30*	*90.19*	*358.23*	*12380.89*	*4888.11*	*4888.92*	*109.24*	*2.57*	*409388.06*	*769530.42*	*N 32 7 24.03*	*W 103 35 46.39*	*1.28*	*4890.14*
	16977.00	90.21	357.36	12380.77	4921.79	4922.59	107.94	2.57	409421.74	769529.12	N 32 7 24.36	W 103 35 46.40	1.26	4923.77

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 Azimuth (°)	Closure (ft)
	17072.00	89.90	355.61	12380.68	5016.64	5017.41	102.11	1.87	409516.55	769523.30	N 32 7 25.30	W 103 35 48.46	1.17	5018.45
	17167.00	89.24	356.66	12381.39	5111.46	5112.19	95.71	1.31	409611.33	769518.90	N 32 7 26.24	W 103 35 48.53	1.07	5113.08
	17262.00	88.04	0.81	12383.65	5206.40	5207.12	93.61	4.55	409706.25	769514.80	N 32 7 27.18	W 103 35 48.55	1.03	5207.96
	17357.00	89.24	3.32	12385.90	5301.28	5302.02	97.03	2.93	409801.15	769518.22	N 32 7 28.12	W 103 35 48.50	1.05	5302.91
	17452.00	91.62	2.44	12385.19	5396.12	5396.89	101.81	2.67	409896.02	769522.99	N 32 7 29.05	W 103 35 48.44	1.08	5397.85
	17548.00	89.55	0.48	12384.23	5490.05	5490.84	104.20	3.03	409989.97	769525.39	N 32 7 29.98	W 103 35 48.40	1.09	5491.83
	17641.00	89.97	0.37	12384.63	5585.04	5585.84	104.91	0.46	410084.96	769526.09	N 32 7 30.92	W 103 35 48.38	1.08	5586.82
	17736.00	89.17	357.70	12385.34	5680.03	5680.81	103.31	2.93	410179.93	769524.49	N 32 7 31.86	W 103 35 48.40	1.04	5681.75
	17831.00	91.27	357.21	12384.98	5774.95	5775.71	99.09	2.27	410274.83	769520.28	N 32 7 32.80	W 103 35 48.44	0.98	5776.56
	17927.00	90.31	355.99	12383.65	5870.81	5871.53	93.40	1.62	410370.65	769514.58	N 32 7 33.75	W 103 35 48.50	0.91	5872.27
	18021.00	90.76	358.11	12382.78	5964.70	5965.40	88.56	2.31	410464.51	769509.75	N 32 7 34.68	W 103 35 48.54	0.85	5966.05
	18116.00	88.80	357.84	12383.14	6059.66	6060.33	85.20	2.08	410559.44	769506.39	N 32 7 35.62	W 103 35 48.58	0.81	6060.93
	18211.00	89.11	357.41	12384.87	6154.58	6155.23	81.27	0.56	410654.34	769502.45	N 32 7 36.56	W 103 35 48.61	0.76	6155.77
	18306.00	89.59	0.13	12385.95	6249.56	6250.20	79.23	2.91	410749.30	769500.41	N 32 7 37.50	W 103 35 48.63	0.73	6250.70
	18401.00	88.42	2.85	12387.60	6344.48	6345.14	81.70	3.12	410844.24	769502.88	N 32 7 38.44	W 103 35 48.59	0.74	6345.67
	18495.00	90.86	5.25	12388.19	6438.19	6438.89	88.33	3.64	410937.99	769509.52	N 32 7 39.37	W 103 35 48.51	0.79	6439.50
	18591.00	87.97	359.57	12389.17	6534.02	6534.75	92.37	6.64	411033.84	769513.56	N 32 7 40.31	W 103 35 48.45	0.81	6535.40
	18686.00	89.17	358.36	12391.54	6628.98	6629.70	90.65	1.79	411128.79	769511.84	N 32 7 41.25	W 103 35 48.47	0.78	6630.32
	18781.00	89.14	357.92	12392.95	6723.94	6724.64	87.57	0.46	411223.73	769508.76	N 32 7 42.19	W 103 35 48.50	0.75	6725.21
	18876.00	88.87	358.91	12394.59	6818.90	6819.59	84.94	1.08	411318.67	769506.13	N 32 7 43.13	W 103 35 48.52	0.71	6820.12
	18971.00	88.62	359.09	12396.68	6913.87	6914.55	83.29	0.32	411413.63	769504.47	N 32 7 44.07	W 103 35 48.53	0.69	6915.05
	19066.00	89.00	0.49	12398.65	7008.85	7009.53	82.94	1.53	411508.60	769504.13	N 32 7 45.01	W 103 35 48.53	0.68	7010.02
	19162.00	91.34	2.55	12398.36	7104.78	7105.48	85.48	3.25	411604.56	769506.67	N 32 7 45.96	W 103 35 48.49	0.69	7106.00
	19257.00	90.76	359.05	12396.62	7199.73	7200.44	86.81	3.73	411699.51	769508.00	N 32 7 46.90	W 103 35 48.47	0.69	7200.97
	19352.00	92.06	358.95	12394.28	7294.69	7295.40	85.15	1.37	411794.48	769506.34	N 32 7 47.84	W 103 35 48.48	0.67	7295.89
	19447.00	90.48	358.00	12392.18	7389.65	7390.34	82.63	1.94	411889.40	769503.81	N 32 7 48.78	W 103 35 48.50	0.64	7390.80
	19542.00	89.04	358.09	12392.58	7484.61	7485.28	79.38	1.52	411984.34	769500.57	N 32 7 49.72	W 103 35 48.53	0.61	7485.70
	19635.00	88.42	358.56	12398.28	7577.50	7578.18	76.87	2.86	412077.21	769497.86	N 32 7 50.64	W 103 35 48.55	0.58	7578.54
	19730.00	89.93	358.81	12399.29	7672.42	7673.06	74.32	3.70	412172.12	769495.51	N 32 7 51.58	W 103 35 48.57	0.55	7673.42
	19825.00	91.20	359.78	12398.35	7767.41	7768.05	72.99	1.62	412267.10	769494.18	N 32 7 52.52	W 103 35 48.58	0.54	7768.39
	19920.00	91.07	358.07	12396.47	7862.38	7863.01	71.21	1.80	412362.06	769492.39	N 32 7 53.46	W 103 35 48.59	0.52	7863.33
	20015.00	91.44	359.89	12394.39	7957.35	7957.97	69.52	1.95	412457.01	769490.70	N 32 7 54.40	W 103 35 48.61	0.50	7958.27
	20110.00	90.10	1.44	12393.11	8052.32	8052.95	70.62	2.16	412551.99	769491.81	N 32 7 55.34	W 103 35 48.59	0.50	8053.26
	20205.00	88.52	0.30	12394.25	8147.29	8147.92	72.06	2.05	412646.96	769493.25	N 32 7 56.28	W 103 35 48.56	0.51	8148.24
	20300.00	91.03	2.67	12394.63	8242.22	8242.88	74.52	3.63	412741.91	769495.71	N 32 7 57.22	W 103 35 48.53	0.52	8243.21
	20395.00	89.42	2.10	12394.25	8337.11	8337.79	78.48	1.80	412836.82	769499.68	N 32 7 58.16	W 103 35 48.47	0.54	8338.16
	20490.00	91.24	358.93	12393.71	8432.08	8432.77	79.33	3.85	412931.80	769500.52	N 32 7 59.10	W 103 35 48.45	0.54	8433.14
	20585.00	93.03	0.38	12390.17	8527.01	8527.69	78.76	2.42	413026.72	769499.95	N 32 8 0.04	W 103 35 48.45	0.53	8528.06
	20680.00	91.07	358.41	12386.77	8621.94	8622.62	77.75	2.92	413121.64	769498.94	N 32 8 0.98	W 103 35 48.46	0.52	8622.97
	20774.00	92.58	0.72	12383.77	8715.88	8716.56	77.04	2.93	413215.58	769498.23	N 32 8 1.90	W 103 35 48.46	0.51	8716.90
	20870.00	92.27	359.98	12379.71	8811.79	8812.47	77.63	0.84	413311.49	769498.81	N 32 8 2.85	W 103 35 48.44	0.50	8812.81
	20965.00	90.10	356.73	12377.75	8906.72	8907.39	74.90	4.11	413406.41	769496.09	N 32 8 3.79	W 103 35 48.47	0.48	8907.71
	21060.00	89.38	356.66	12378.18	9001.60	9002.23	69.42	0.76	413501.24	769490.61	N 32 8 4.73	W 103 35 48.52	0.44	9002.50
	21155.00	89.48	356.66	12379.12	9096.47	9097.08	64.05	0.24	413596.08	769485.24	N 32 8 5.67	W 103 35 48.58	0.40	9097.30
	21250.00	91.41	357.17	12378.39	9191.37	9191.94	59.11	2.06	413690.94	769480.30	N 32 8 6.61	W 103 35 48.63	0.37	9192.13
	21344.00	90.07	1.35	12377.17	9285.33	9285.90	57.89	4.67	413784.90	769479.08	N 32 8 7.54	W 103 35 48.64	0.36	9286.08
	21439.00	92.23	5.68	12375.26	9380.07	9380.68	63.71	5.09	413879.67	769484.90	N 32 8 8.48	W 103 35 48.58	0.39	9380.89
	21534.00	95.44	5.51	12368.91	9474.33	9475.00	72.95	3.38	413973.99	769494.14	N 32 8 9.41	W 103 35 48.45	0.44	9475.28
	21629.00	93.92	1.29	12361.16	9568.78	9569.49	78.56	4.71	414068.48	769499.75	N 32 8 10.34	W 103 35 48.37	0.47	9569.81
	21724.00	91.65	357.40	12358.54	9663.65	9664.35	77.48	4.74	414163.34	769498.68	N 32 8 11.28	W 103 35 48.38	0.46	9664.68
	21819.00	90.31	357.86	12354.91	9758.57	9759.25	73.55	1.49	414258.24	769494.74	N 32 8 12.22	W 103 35 48.42	0.43	9759.53
	21914.00	88.11	359.42	12356.22	9853.54	9854.21	71.29	2.84	414353.19	769492.48	N 32 8 13.16	W 103 35 48.44	0.41	9854.46
	22010.00	87.94	1.55	12359.53	9949.47	9950.14	72.11	2.22	414449.12	769493.29	N 32 8 14.11	W 103 35 48.42	0.42	9950.40
	22105.00	93.72	3.81	12358.16	10044.28	10044.98	76.54	6.53	414543.96	769497.73	N 32 8 15.05	W 103 35 48.38	0.44	10045.27
Last Legal Take Point [100' FNL, 2053' FWL]	*22129.00*	*93.81*	*3.86*	*12356.58*	*10068.16*	*10068.87*	*78.15*	*0.42*	*414567.85*	*769499.33*	*N 32 8 15.29*	*W 103 35 48.34*	*0.44*	*10069.18*
Last Survey	22133.00	93.82	3.87	12356.32	10072.14	10072.86	78.42	0.42	414571.83	769499.60	N 32 8 15.33	W 103 35 48.34	0.45	10073.16
TD, PTB [51' FNL, 2057' FWL]	22179.00	93.82	3.87	12353.25	10117.91	10118.65	81.51	0.00	414617.62	769502.70	N 32 8 15.78	W 103 35 48.30	0.46	10118.98

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	23.000	1/98.425	8.750	7.000	NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Final Surveys - Cimarex Vaca Draw 20-17 Federal #2H MWD 0ft-22179ft (Surcon
	1	23.000	23.000	Act Stns	8.750	7.000	NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Final Surveys - Cimarex Vaca Draw 20-17 Federal #2H MWD 0ft-22179ft (Surcon
	1	23.000	12456.000	Act Stns	8.750	7.000	NAL_MWD_IFR1+MS	Original Borehole / Final Surveys - Cimarex Vaca Draw 20-17 Federal
	1	12456.000	22179.000	Act Stns	6.750	4.500	NAL_MWD_IFR1+MS	Original Borehole / Final Surveys - Cimarex Vaca Draw 20-17 Federal