

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 ° ' ")
	19700.00	89.94	359.63	12368.46	7489.42	7481.82	-344.67	0.00	411981.03	769096.55	N 32 7 49.72 W	103 35 51.23
	19800.00	89.94	359.63	12368.56	7589.38	7581.82	-345.31	0.00	412081.02	769095.91	N 32 7 50.71 W	103 35 51.23
	19900.00	89.94	359.63	12368.67	7689.33	7681.82	-345.96	0.00	412181.01	769095.26	N 32 7 51.69 W	103 35 51.23
	20000.00	89.94	359.63	12368.78	7789.29	7781.82	-346.60	0.00	412281.01	769094.62	N 32 7 52.68 W	103 35 51.23
	20100.00	89.94	359.63	12368.89	7889.24	7881.82	-347.25	0.00	412381.00	769093.97	N 32 7 53.67 W	103 35 51.23
	20200.00	89.94	359.63	12369.00	7989.20	7981.81	-347.89	0.00	412481.00	769093.33	N 32 7 54.66 W	103 35 51.23
	20300.00	89.94	359.63	12369.10	8089.15	8081.81	-348.54	0.00	412580.99	769092.68	N 32 7 55.65 W	103 35 51.23
	20400.00	89.94	359.63	12369.21	8189.11	8181.81	-349.18	0.00	412680.99	769092.04	N 32 7 56.64 W	103 35 51.23
	20500.00	89.94	359.63	12369.32	8289.06	8281.81	-349.83	0.00	412780.98	769091.40	N 32 7 57.63 W	103 35 51.22
	20600.00	89.94	359.63	12369.43	8389.01	8381.81	-350.47	0.00	412880.98	769090.75	N 32 7 58.62 W	103 35 51.22
	20700.00	89.94	359.63	12369.54	8488.97	8481.80	-351.12	0.00	412980.97	769090.11	N 32 7 59.61 W	103 35 51.22
	20800.00	89.94	359.63	12369.64	8588.92	8581.80	-351.76	0.00	413080.96	769089.46	N 32 8 0.60 W	103 35 51.22
	20900.00	89.94	359.63	12369.75	8688.88	8681.80	-352.41	0.00	413180.96	769088.82	N 32 8 1.59 W	103 35 51.22
	21000.00	89.94	359.63	12369.86	8788.83	8781.80	-353.05	0.00	413280.95	769088.17	N 32 8 2.58 W	103 35 51.22
	21100.00	89.94	359.63	12369.97	8888.79	8881.79	-353.70	0.00	413380.95	769087.53	N 32 8 3.57 W	103 35 51.22
	21200.00	89.94	359.63	12370.08	8988.74	8981.79	-354.34	0.00	413480.94	769086.88	N 32 8 4.56 W	103 35 51.22
	21300.00	89.94	359.63	12370.18	9088.70	9081.79	-354.99	0.00	413580.94	769086.24	N 32 8 5.55 W	103 35 51.22
	21400.00	89.94	359.63	12370.29	9188.65	9181.79	-355.63	0.00	413680.93	769085.59	N 32 8 6.54 W	103 35 51.22
	21500.00	89.94	359.63	12370.40	9288.61	9281.79	-356.28	0.00	413780.93	769084.95	N 32 8 7.53 W	103 35 51.22
	21600.00	89.94	359.63	12370.51	9388.56	9381.78	-356.92	0.00	413880.92	769084.30	N 32 8 8.52 W	103 35 51.22
	21700.00	89.94	359.63	12370.62	9488.52	9481.78	-357.56	0.00	413980.92	769083.66	N 32 8 9.51 W	103 35 51.22
	21800.00	89.94	359.63	12370.72	9588.47	9581.78	-358.21	0.00	414080.91	769083.01	N 32 8 10.50 W	103 35 51.22
	21900.00	89.94	359.63	12370.83	9688.42	9681.78	-358.85	0.00	414180.90	769082.37	N 32 8 11.49 W	103 35 51.22
	22000.00	89.94	359.63	12370.94	9788.38	9781.78	-359.50	0.00	414280.90	769081.72	N 32 8 12.47 W	103 35 51.22
Cimarex Vaca Draw 20-17 Federal #3H - PBHL [330' FSL, 1634' FWL]	22054.67	89.94	359.63	12371.00	9843.03	9836.45	-359.85	0.00	414335.57	769081.37	N 32 8 13.02 W	103 35 51.22

Survey Type: Non-Def Plan

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)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	24.000	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Vaca Draw 20-17 Federal #3H Rev0 RM 13Apr17
	1	24.000	22054.674	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Vaca Draw 20-17 Federal #3H Rev0

Cimarex Vaca Draw 20-17 Federal #3H Rev0 RM 13Apr17 Proposal

Geodetic Report

(Non-Def Plan)



Report Date: April 13, 2017 - 04:08 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Vaca Draw 20-17 Federal #3H / Cimarex Vaca Draw 20-17 Federal #3H
Well: Cimarex Vaca Draw 20-17 Federal #3H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Vaca Draw 20-17 Federal #3H Rev0 RM 13Apr17
Survey Date: April 13, 2017
Tort / AHD / DDI / ERD Ratio: 112.972 ° / 9922.636 ft / 6.301 / 0.802
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 6' 35.65906", W 103° 35' 47.81518"
Location Grid N/E Y/X: N 404499.450 ftUS, E 769441.210 ftUS
CRS Grid Convergence Angle: 0.3916 °
Grid Scale Factor: 0.99996868
Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 357.905 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3442.000 ft above MSL
Seabed / Ground Elevation: 3418.000 ft above MSL
Magnetic Declination: 6.854 °
Total Gravity Field Strength: 998.4303mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48017.097 nT
Magnetic Dip Angle: 59.838 °
Declination Date: April 13, 2017
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.3916 °
Total Corr Mag North->Grid North: 6.4622 °
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 [390' FSL, 1930' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	100.00	0.00	324.30	100.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	200.00	0.00	324.30	200.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	300.00	0.00	324.30	300.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	400.00	0.00	324.30	400.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	500.00	0.00	324.30	500.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	600.00	0.00	324.30	600.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	700.00	0.00	324.30	700.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	800.00	0.00	324.30	800.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	900.00	0.00	324.30	900.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1000.00	0.00	324.30	1000.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1100.00	0.00	324.30	1100.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1200.00	0.00	324.30	1200.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1300.00	0.00	324.30	1300.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1400.00	0.00	324.30	1400.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1500.00	0.00	324.30	1500.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1600.00	0.00	324.30	1600.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1700.00	0.00	324.30	1700.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1800.00	0.00	324.30	1800.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	1900.00	0.00	324.30	1900.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	2000.00	0.00	324.30	2000.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	2100.00	0.00	324.30	2100.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	2200.00	0.00	324.30	2200.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	2300.00	0.00	324.30	2300.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	2400.00	0.00	324.30	2400.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	2500.00	0.00	324.30	2500.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	

4/14/2017 8:03 AM Page 2 of 5

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 ° ' ")
	8500.00	0.00	324.30	8500.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	8600.00	0.00	324.30	8600.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	8700.00	0.00	324.30	8700.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	8800.00	0.00	324.30	8800.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	8900.00	0.00	324.30	8900.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9000.00	0.00	324.30	9000.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9100.00	0.00	324.30	9100.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9200.00	0.00	324.30	9200.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9300.00	0.00	324.30	9300.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9400.00	0.00	324.30	9400.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9500.00	0.00	324.30	9500.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9600.00	0.00	324.30	9600.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9700.00	0.00	324.30	9700.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9800.00	0.00	324.30	9800.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	9900.00	0.00	324.30	9900.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10000.00	0.00	324.30	10000.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10100.00	0.00	324.30	10100.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10200.00	0.00	324.30	10200.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10300.00	0.00	324.30	10300.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10400.00	0.00	324.30	10400.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10500.00	0.00	324.30	10500.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10600.00	0.00	324.30	10600.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10700.00	0.00	324.30	10700.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10800.00	0.00	324.30	10800.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	10900.00	0.00	324.30	10900.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11000.00	0.00	324.30	11000.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11100.00	0.00	324.30	11100.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11200.00	0.00	324.30	11200.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11300.00	0.00	324.30	11300.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11400.00	0.00	324.30	11400.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11500.00	0.00	324.30	11500.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11600.00	0.00	324.30	11600.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11700.00	0.00	324.30	11700.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11800.00	0.00	324.30	11800.00	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
KOP - Build 12°/100' DLS	11857.11	0.00	324.30	11857.11	0.00	0.00	0.00	0.00	404499.45	769441.21	N 32 6 35.66 W 103 35 47.82	
	11900.00	5.15	324.30	11899.94	1.60	1.56	-1.12	12.00	404501.01	769440.09	N 32 6 35.67 W 103 35 47.83	
	12000.00	17.15	324.30	11997.88	17.68	17.23	-12.38	12.00	404516.68	769428.83	N 32 6 35.83 W 103 35 47.96	
	12100.00	29.15	324.30	12089.66	50.35	49.10	-35.28	12.00	404548.55	769405.93	N 32 6 36.15 W 103 35 48.22	
	12200.00	41.15	324.30	12171.28	98.21	95.76	-68.81	12.00	404595.21	769372.40	N 32 6 36.61 W 103 35 48.61	
Wolfcamp	12233.91	45.22	324.30	12196.00	117.54	114.60	-82.35	12.00	404614.05	769358.86	N 32 6 36.80 W 103 35 48.76	
	12300.00	53.15	324.30	12239.17	159.16	155.19	-111.51	12.00	404654.63	769329.70	N 32 6 37.20 W 103 35 49.10	
	12400.00	65.15	324.30	12290.36	230.53	224.78	-161.52	12.00	404724.22	769279.70	N 32 6 37.89 W 103 35 49.68	
Build & Turn 12°/100' DLS	12482.11	75.00	324.30	12318.31	294.74	287.39	-206.51	12.00	404786.83	769234.71	N 32 6 38.52 W 103 35 50.19	
	12500.00	75.74	326.38	12322.82	309.33	301.62	-216.35	12.00	404801.06	769224.87	N 32 6 38.66 W 103 35 50.31	
	12600.00	80.19	337.78	12343.73	397.22	387.91	-261.98	12.00	404887.34	769179.24	N 32 6 39.52 W 103 35 50.83	
	12700.00	85.01	348.87	12356.65	493.03	482.74	-290.33	12.00	404982.17	769150.89	N 32 6 40.46 W 103 35 51.15	
Landing Point	12798.54	89.94	359.63	12361.00	591.10	580.52	-300.16	12.00	405079.95	769141.06	N 32 6 41.42 W 103 35 51.26	
	12800.00	89.94	359.63	12361.00	592.56	581.97	-300.17	0.00	405081.40	769141.05	N 32 6 41.44 W 103 35 51.26	
	12900.00	89.94	359.63	12361.11	692.51	681.97	-300.82	0.00	405181.40	769140.40	N 32 6 42.43 W 103 35 51.26	
	13000.00	89.94	359.63	12361.22	792.47	781.97	-301.46	0.00	405281.39	769139.76	N 32 6 43.42 W 103 35 51.26	
	13100.00	89.94	359.63	12361.33	892.42	881.97	-302.11	0.00	405381.39	769139.11	N 32 6 44.41 W 103 35 51.26	
	13200.00	89.94	359.63	12361.43	992.38	981.96	-302.75	0.00	405481.38	769138.47	N 32 6 45.40 W 103 35 51.26	
	13300.00	89.94	359.63	12361.54	1092.33	1081.96	-303.40	0.00	405581.38	769137.82	N 32 6 46.39 W 103 35 51.26	
	13400.00	89.94	359.63	12361.65	1192.28	1181.96	-304.04	0.00	405681.37	769137.18	N 32 6 47.38 W 103 35 51.26	
	13500.00	89.94	359.63	12361.76	1292.24	1281.96	-304.69	0.00	405781.36	769136.53	N 32 6 48.36 W 103 35 51.26	
	13600.00	89.94	359.63	12361.87	1392.19	1381.95	-305.33	0.00	405881.36	769135.89	N 32 6 49.35 W 103 35 51.26	
	13700.00	89.94	359.63	12361.97	1492.15	1481.95	-305.98	0.00	405981.35	769135.24	N 32 6 50.34 W 103 35 51.25	

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 ° ' ")
	13800.00	89.94	359.63	12362.08	1592.10	1581.95	-306.62	0.00	406081.35	769134.60	N 32 6 51.33 W	103 35 51.25
	13900.00	89.94	359.63	12362.19	1692.06	1681.95	-307.26	0.00	406181.34	769133.96	N 32 6 52.32 W	103 35 51.25
	14000.00	89.94	359.63	12362.30	1792.01	1781.95	-307.91	0.00	406281.34	769133.31	N 32 6 53.31 W	103 35 51.25
	14100.00	89.94	359.63	12362.41	1891.97	1881.94	-308.55	0.00	406381.33	769132.67	N 32 6 54.30 W	103 35 51.25
	14200.00	89.94	359.63	12362.51	1991.92	1981.94	-309.20	0.00	406481.33	769132.02	N 32 6 55.29 W	103 35 51.25
	14300.00	89.94	359.63	12362.62	2091.88	2081.94	-309.84	0.00	406581.32	769131.38	N 32 6 56.28 W	103 35 51.25
	14400.00	89.94	359.63	12362.73	2191.83	2181.94	-310.49	0.00	406681.31	769130.73	N 32 6 57.27 W	103 35 51.25
	14500.00	89.94	359.63	12362.84	2291.78	2281.94	-311.13	0.00	406781.31	769130.09	N 32 6 58.26 W	103 35 51.25
	14600.00	89.94	359.63	12362.95	2391.74	2381.93	-311.78	0.00	406881.30	769129.44	N 32 6 59.25 W	103 35 51.25
	14700.00	89.94	359.63	12363.05	2491.69	2481.93	-312.42	0.00	406981.30	769128.80	N 32 7 0.24 W	103 35 51.25
	14800.00	89.94	359.63	12363.16	2591.65	2581.93	-313.07	0.00	407081.29	769128.15	N 32 7 1.23 W	103 35 51.25
	14900.00	89.94	359.63	12363.27	2691.60	2681.93	-313.71	0.00	407181.29	769127.51	N 32 7 2.22 W	103 35 51.25
	15000.00	89.94	359.63	12363.38	2791.56	2781.92	-314.36	0.00	407281.28	769126.86	N 32 7 3.21 W	103 35 51.25
	15100.00	89.94	359.63	12363.49	2891.51	2881.92	-315.00	0.00	407381.28	769126.22	N 32 7 4.20 W	103 35 51.25
	15200.00	89.94	359.63	12363.59	2991.47	2981.92	-315.65	0.00	407481.27	769125.57	N 32 7 5.19 W	103 35 51.25
	15300.00	89.94	359.63	12363.70	3091.42	3081.92	-316.29	0.00	407581.27	769124.93	N 32 7 6.18 W	103 35 51.25
	15400.00	89.94	359.63	12363.81	3191.38	3181.92	-316.94	0.00	407681.26	769124.28	N 32 7 7.17 W	103 35 51.25
	15500.00	89.94	359.63	12363.92	3291.33	3281.91	-317.58	0.00	407781.25	769123.64	N 32 7 8.16 W	103 35 51.25
	15600.00	89.94	359.63	12364.03	3391.29	3381.91	-318.23	0.00	407881.25	769122.99	N 32 7 9.14 W	103 35 51.25
	15700.00	89.94	359.63	12364.13	3491.24	3481.91	-318.87	0.00	407981.24	769122.35	N 32 7 10.13 W	103 35 51.25
	15800.00	89.94	359.63	12364.24	3591.19	3581.91	-319.52	0.00	408081.24	769121.70	N 32 7 11.12 W	103 35 51.25
	15900.00	89.94	359.63	12364.35	3691.15	3681.91	-320.16	0.00	408181.23	769121.06	N 32 7 12.11 W	103 35 51.25
	16000.00	89.94	359.63	12364.46	3791.10	3781.90	-320.81	0.00	408281.23	769120.41	N 32 7 13.10 W	103 35 51.24
	16100.00	89.94	359.63	12364.57	3891.06	3881.90	-321.45	0.00	408381.22	769119.77	N 32 7 14.09 W	103 35 51.24
	16200.00	89.94	359.63	12364.68	3991.01	3981.90	-322.10	0.00	408481.22	769119.12	N 32 7 15.08 W	103 35 51.24
	16300.00	89.94	359.63	12364.78	4090.97	4081.90	-322.74	0.00	408581.21	769118.48	N 32 7 16.07 W	103 35 51.24
	16400.00	89.94	359.63	12364.89	4190.92	4181.89	-323.39	0.00	408681.21	769117.83	N 32 7 17.06 W	103 35 51.24
	16500.00	89.94	359.63	12365.00	4290.88	4281.89	-324.03	0.00	408781.20	769117.19	N 32 7 18.05 W	103 35 51.24
	16600.00	89.94	359.63	12365.11	4390.83	4381.89	-324.68	0.00	408881.19	769116.54	N 32 7 19.04 W	103 35 51.24
	16700.00	89.94	359.63	12365.22	4490.79	4481.89	-325.32	0.00	408981.19	769115.90	N 32 7 20.03 W	103 35 51.24
	16800.00	89.94	359.63	12365.32	4590.74	4581.89	-325.97	0.00	409081.18	769115.25	N 32 7 21.02 W	103 35 51.24
	16900.00	89.94	359.63	12365.43	4690.69	4681.88	-326.61	0.00	409181.18	769114.61	N 32 7 22.01 W	103 35 51.24
	17000.00	89.94	359.63	12365.54	4790.65	4781.88	-327.26	0.00	409281.17	769113.96	N 32 7 23.00 W	103 35 51.24
	17100.00	89.94	359.63	12365.65	4890.60	4881.88	-327.90	0.00	409381.17	769113.32	N 32 7 23.99 W	103 35 51.24
	17200.00	89.94	359.63	12365.76	4990.56	4981.88	-328.55	0.00	409481.16	769112.68	N 32 7 24.98 W	103 35 51.24
	17300.00	89.94	359.63	12365.86	5090.51	5081.88	-329.19	0.00	409581.16	769112.03	N 32 7 25.97 W	103 35 51.24
	17400.00	89.94	359.63	12365.97	5190.47	5181.87	-329.84	0.00	409681.15	769111.39	N 32 7 26.96 W	103 35 51.24
	17500.00	89.94	359.63	12366.08	5290.42	5281.87	-330.48	0.00	409781.15	769110.74	N 32 7 27.95 W	103 35 51.24
	17600.00	89.94	359.63	12366.19	5390.38	5381.87	-331.13	0.00	409881.14	769110.10	N 32 7 28.94 W	103 35 51.24
	17700.00	89.94	359.63	12366.30	5490.33	5481.87	-331.77	0.00	409981.13	769109.45	N 32 7 29.93 W	103 35 51.24
	17800.00	89.94	359.63	12366.40	5590.29	5581.87	-332.41	0.00	410081.13	769108.81	N 32 7 30.91 W	103 35 51.24
	17900.00	89.94	359.63	12366.51	5690.24	5681.86	-333.06	0.00	410181.12	769108.16	N 32 7 31.90 W	103 35 51.24
	18000.00	89.94	359.63	12366.62	5790.20	5781.86	-333.70	0.00	410281.12	769107.52	N 32 7 32.89 W	103 35 51.24
	18100.00	89.94	359.63	12366.73	5890.15	5881.86	-334.35	0.00	410381.11	769106.87	N 32 7 33.88 W	103 35 51.24
	18200.00	89.94	359.63	12366.84	5990.10	5981.86	-334.99	0.00	410481.11	769106.23	N 32 7 34.87 W	103 35 51.23
	18300.00	89.94	359.63	12366.94	6090.06	6081.85	-335.64	0.00	410581.10	769105.58	N 32 7 35.86 W	103 35 51.23
	18400.00	89.94	359.63	12367.05	6190.01	6181.85	-336.28	0.00	410681.10	769104.94	N 32 7 36.85 W	103 35 51.23
	18500.00	89.94	359.63	12367.16	6289.97	6281.85	-336.93	0.00	410781.09	769104.29	N 32 7 37.84 W	103 35 51.23
	18600.00	89.94	359.63	12367.27	6389.92	6381.85	-337.57	0.00	410881.09	769103.65	N 32 7 38.83 W	103 35 51.23
	18700.00	89.94	359.63	12367.38	6489.88	6481.85	-338.22	0.00	410981.08	769103.00	N 32 7 39.82 W	103 35 51.23
	18800.00	89.94	359.63	12367.48	6589.83	6581.84	-338.86	0.00	411081.07	769102.36	N 32 7 40.81 W	103 35 51.23
	18900.00	89.94	359.63	12367.59	6689.79	6681.84	-339.51	0.00	411181.07	769101.71	N 32 7 41.80 W	103 35 51.23
	19000.00	89.94	359.63	12367.70	6789.74	6781.84	-340.15	0.00	411281.06	769101.07	N 32 7 42.79 W	103 35 51.23
	19100.00	89.94	359.63	12367.81	6889.70	6881.84	-340.80	0.00	411381.06	769100.42	N 32 7 43.78 W	103 35 51.23
	19200.00	89.94	359.63	12367.92	6989.65	6981.84	-341.44	0.00	411481.05	769099.78	N 32 7 44.77 W	103 35 51.23
	19300.00	89.94	359.63	12368.02	7089.61	7081.83	-342.09	0.00	411581.05	769099.13	N 32 7 45.76 W	103 35 51.23
	19400.00	89.94	359.63	12368.13	7189.56	7181.83	-342.73	0.00	411681.04	769098.49	N 32 7 46.75 W	103 35 51.23
	19500.00	89.94	359.63	12368.24	7289.51	7281.83	-343.38	0.00	411781.04	769097.84	N 32 7 47.74 W	103 35 51.23
	19600.00	89.94	359.63	12368.35	7389.47	7381.83	-344.02	0.00	411881.03	769097.20	N 32 7 48.73 W	103 35 51.23