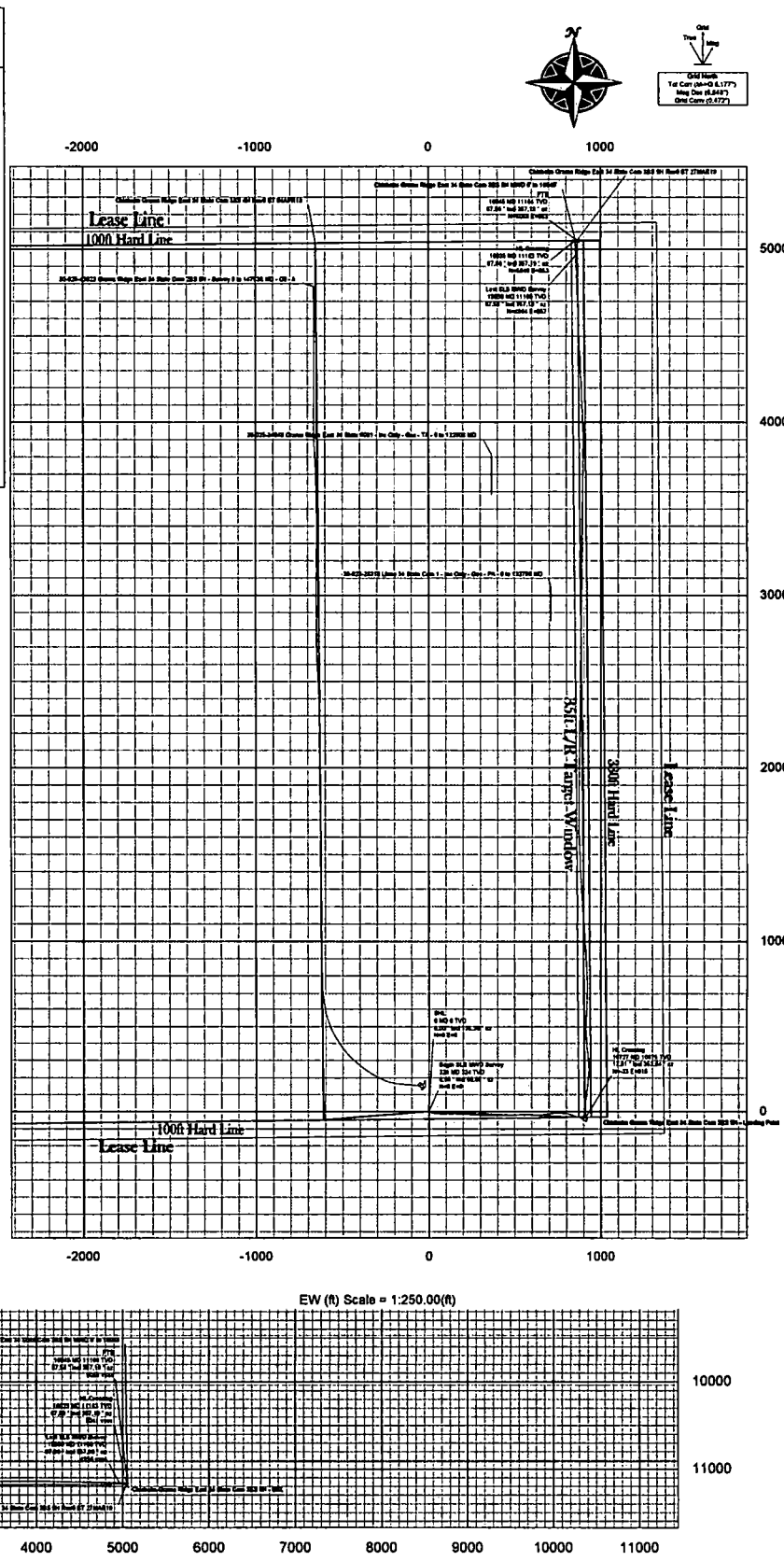
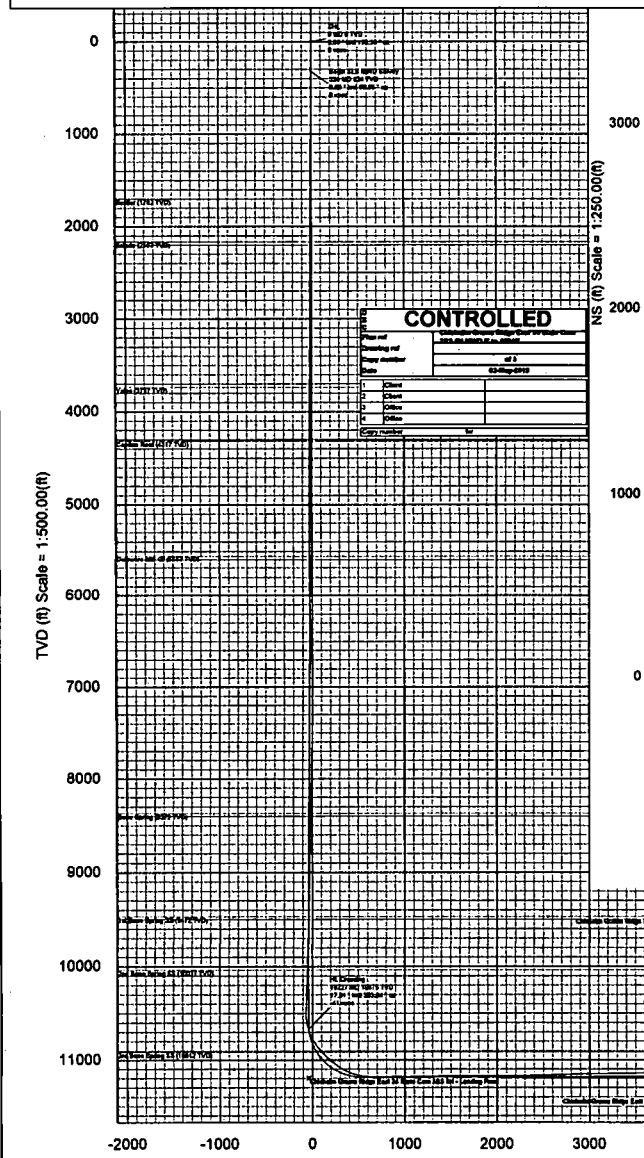


Borehole:	Well:	Field:	Structure:
Original Borehole	Chisholm Grama Ridge East 34 State Com 3BS 5H	NM Lea County (NAD 83)	Chisholm Grama Ridge East 34 State Com 3BS 5H

Geology & Magnetic Parameters	Surface Location	NADES New Mexico State Plane, Eastern Zone, US Feet	Microseismic Data
Model: HDEM 2019 Dip: 60.24° Date: 03-Apr-2019	Lat: N 32 28 43.78	Northings: 820784.6703	Slot: Ridge East 34
MagDec: 6.848° FS: 42051.224mT Gravity FS: 988.47mgm (9.80665 Based)	Lon: W 103 27 13.04	Eastings: 812784.6703	TVD Ref: RKB = 31ft (JOC 713847ft above MSL)
		Scale Fact: 0.89293347	Plan: Chisholm Grama Ridge East 34 State Com 3BS 5H MWD 0° to 16048°

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(°)Y(°)	E(°)W(°)	DLB
ShL	0.00	0.00	135.30	0.00	0.00	0.00	0.00	
Begin SLB MWD Survey	324.00	0.08	68.85	324.00	0.08	0.08	0.21	0.02
HL Crossing	10727.30	17.91	353.04	10674.85	-41.15	-33.30	815.38	9.89
Last SLB MWD Survey	15950.00	87.56	357.19	11159.82	4358.05	4983.58	857.35	2.98
HL Crossing	16035.00	87.56	357.19	11163.44	5040.80	5048.38	853.19	0.00
Projection to Bit	16045.00	87.56	357.19	11163.88	5050.88	5058.36	852.70	0.00



Vertical Section (ft) Azim = 359.51° Scale = 1:500.00(ft) Origin = 0N/S, 0E/W

Chisholm Grama Ridge East 34 State Com 3BS 5H MWD 0' to 16045'

Survey Geodetic Report

(Def Survey)

Report Date: May 02, 2019 - 09:11 AM
 Client: Chisholm Energy
 Field: NM Lea County (NAD 83)
 Structure / Slot: Chisholm Grama Ridge East 34 State Com 3BS 5H / Chisholm Grama Ridge East 34 State Com 3BS 5H
 Well: Chisholm Grama Ridge East 34 State Com 3BS 5H
 Borehole: Original Borehole
 UWI / API#: Unknown / 30-025-45625
 Survey Name: Chisholm Grama Ridge East 34 State Com 3BS 5H MWD 0' to 16045'

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 359.510 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB = 31ft (JDC 7)
 TVD Reference Elevation: 3647.000 ft above MSL
 Seabed / Ground Elevation: 3616.000 ft above MSL
 Magnetic Declination: 6.648 °
 Total Gravity Field Strength: 998.4791mg (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48051.224 nT
 Magnetic Dip Angle: 60.260 °
 Declination Date: April 03, 2019
 Magnetic Declination Model: HDGM 2019
 North Reference: Grid North
 Grid Convergence Used: 0.4718 °
 Total Cor Mag North-Grid: 6.1787 °
 North: Well Head
 Local Coord Referenced To: Well Head

Survey Date: April 03, 2019
 Tort / AHD / DDI / ERD Ratio: 214.495 ° / 6063.096 ft / 6.271 / 0.542
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 25' 42.77528", W 103° 27' 13.03537"
 Location Grid N/E Y/X: N 520754.600 NUS, E 812768.400 NUS
 CRS Grid Convergence Angle: 0.4718 °
 Grid Scale Factor: 0.99999347
 Version / Patch: 2.10.753.0

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	0.00	0.00	135.30	0.00	0.00	0.00	0.00	N/A	520754.60	812766.40	N 32 25 42.78	W 103 27 13.04
Begin SLB	324.00	0.08	68.85	324.00	0.08	0.08	0.21	0.02	520754.68	812766.61	N 32 25 42.78	W 103 27 13.03
MWD Survey	384.00	0.08	335.35	384.00	0.13	0.13	0.23	0.19	520754.73	812766.63	N 32 25 42.78	W 103 27 13.03
	444.00	0.28	258.00	444.00	0.14	0.14	0.07	0.48	520754.74	812766.47	N 32 25 42.78	W 103 27 13.03
	504.00	0.34	222.83	504.00	-0.02	-0.02	-0.19	0.33	520754.58	812766.21	N 32 25 42.78	W 103 27 13.04
	723.00	0.40	234.27	722.99	-0.93	-0.94	-1.26	0.04	520753.66	812765.14	N 32 25 42.77	W 103 27 13.05
	818.00	0.48	241.71	817.99	-1.31	-1.32	-1.87	0.10	520753.28	812764.53	N 32 25 42.76	W 103 27 13.06
	912.00	0.45	231.22	911.99	-1.72	-1.74	-2.51	0.10	520752.86	812763.89	N 32 25 42.76	W 103 27 13.06
	1003.00	0.63	121.61	1002.99	-2.21	-2.23	-2.36	0.98	520752.37	812764.04	N 32 25 42.75	W 103 27 13.06
	1097.00	1.65	106.39	1096.97	-2.88	-2.88	-0.62	1.12	520751.72	812765.78	N 32 25 42.75	W 103 27 13.04
	1192.00	2.10	93.94	1191.92	-3.41	-3.39	2.43	0.64	520751.21	812766.83	N 32 25 42.74	W 103 27 13.01
	1286.00	2.99	92.18	1285.82	-3.65	-3.60	6.59	0.95	520751.00	812772.99	N 32 25 42.74	W 103 27 12.96
	1381.00	2.93	96.54	1380.70	-4.07	-3.97	11.48	0.25	520750.63	812777.88	N 32 25 42.74	W 103 27 12.90
	1475.00	2.08	99.89	1474.60	-4.67	-4.54	15.55	0.92	520750.07	812781.95	N 32 25 42.73	W 103 27 12.85
	1570.00	1.80	110.50	1569.55	-5.51	-5.35	18.64	0.48	520749.25	812785.04	N 32 25 42.72	W 103 27 12.82
	1664.00	2.13	110.01	1663.50	-6.65	-6.47	21.67	0.35	520748.13	812788.07	N 32 25 42.71	W 103 27 12.78
	1734.00	2.04	107.91	1733.45	-7.50	-7.30	24.08	0.17	520747.30	812790.48	N 32 25 42.70	W 103 27 12.76
	1855.00	2.76	106.45	1854.34	-9.03	-8.78	28.92	0.60	520745.82	812795.32	N 32 25 42.69	W 103 27 12.70
	1950.00	5.96	98.02	1949.06	-10.43	-10.12	36.00	3.43	520744.48	812802.40	N 32 25 42.67	W 103 27 12.62
	2044.00	7.88	92.18	2042.37	-11.45	-11.05	47.26	2.15	520743.55	812813.66	N 32 25 42.66	W 103 27 12.49
	2139.00	7.87	90.22	2136.48	-11.83	-11.32	60.25	0.28	520743.28	812826.65	N 32 25 42.66	W 103 27 12.33
	2233.00	7.40	92.42	2229.64	-12.22	-11.60	72.73	0.59	520743.00	812839.13	N 32 25 42.65	W 103 27 12.19
	2328.00	7.04	90.00	2323.89	-12.58	-11.86	84.67	0.50	520742.74	812851.07	N 32 25 42.65	W 103 27 12.05
	2422.00	6.88	87.11	2417.20	-12.39	-11.57	96.05	0.41	520743.03	812862.45	N 32 25 42.65	W 103 27 11.92
	2517.00	7.88	90.24	2511.41	-12.24	-11.31	108.25	1.13	520743.29	812874.65	N 32 25 42.65	W 103 27 11.77
	2611.00	8.03	91.88	2604.50	-12.59	-11.56	121.25	0.29	520743.04	812887.65	N 32 25 42.65	W 103 27 11.62
	2706.00	8.20	91.17	2698.55	-13.08	-11.91	134.66	0.21	520742.69	812901.06	N 32 25 42.65	W 103 27 11.47
	2800.00	8.10	91.44	2791.60	-13.48	-12.21	147.98	0.11	520742.39	812914.38	N 32 25 42.64	W 103 27 11.31
	2894.00	8.01	93.15	2884.68	-14.12	-12.74	161.14	0.27	520741.86	812927.54	N 32 25 42.64	W 103 27 11.16
	2989.00	8.14	91.17	2978.74	-14.73	-13.24	174.47	0.32	520741.36	812940.87	N 32 25 42.63	W 103 27 11.00
	3083.00	8.56	91.37	3071.74	-15.15	-13.55	188.12	0.45	520741.06	812954.52	N 32 25 42.63	W 103 27 10.84
	3177.00	7.95	90.21	3164.76	-15.46	-13.74	201.62	0.67	520740.86	812968.01	N 32 25 42.62	W 103 27 10.68
	3272.00	8.24	89.80	3256.82	-15.57	-13.74	214.99	0.31	520740.86	812981.39	N 32 25 42.62	W 103 27 10.53
	3366.00	6.97	93.39	3351.99	-15.99	-14.05	227.42	1.44	520740.55	812993.82	N 32 25 42.62	W 103 27 10.38
	3461.00	6.54	94.42	3446.33	-16.85	-14.81	238.57	0.47	520739.79	813004.97	N 32 25 42.61	W 103 27 10.25
	3555.00	6.71	95.15	3539.70	-17.85	-15.71	249.38	0.20	520738.89	813015.78	N 32 25 42.60	W 103 27 10.13
	3650.00	6.83	96.43	3634.04	-19.07	-16.84	260.52	0.20	520737.76	813026.92	N 32 25 42.59	W 103 27 10.00
	3744.00	7.26	95.81	3727.33	-20.40	-18.07	271.98	0.46	520736.53	813038.38	N 32 25 42.57	W 103 27 9.86
	3839.00	7.21	94.91	3821.57	-21.62	-19.19	283.89	0.13	520735.41	813050.29	N 32 25 42.56	W 103 27 9.73
	3933.00	6.81	93.88	3914.87	-22.60	-20.07	295.33	0.45	520734.53	813061.73	N 32 25 42.55	W 103 27 9.59
	4028.00	6.69	93.14	4009.21	-23.38	-20.76	306.48	0.16	520733.84	813072.87	N 32 25 42.54	W 103 27 9.46
	4122.00	6.16	92.61	4102.62	-24.00	-21.29	316.98	0.57	520733.31	813083.38	N 32 25 42.54	W 103 27 9.34
	4216.00	5.87	88.78	4196.10	-24.21	-21.41	326.82	0.53	520733.19	813093.22	N 32 25 42.54	W 103 27 9.22
	4311.00	5.87	91.03	4290.62	-24.27	-21.39	336.37	0.32	520733.21	813102.77	N 32 25 42.54	W 103 27 9.11
	4406.00	5.66	88.74	4385.16	-24.33	-21.37	345.75	0.24	520733.23	813112.15	N 32 25 42.54	W 103 27 9.00
	4500.00	5.55	88.54	4478.71	-24.19	-21.16	354.93	0.12	520733.44	813121.32	N 32 25 42.54	W 103 27 8.90
	4595.00	5.42	89.03	4573.27	-24.08	-20.96	364.01	0.15	520733.64	813130.40	N 32 25 42.54	W 103 27 8.79
	4689.00	5.33	92.45	4668.86	-24.26	-21.08	372.81	0.35	520733.52	813139.20	N 32 25 42.54	W 103 27 8.69
	4784.00	5.64	91.85	4761.43	-24.68	-21.41	381.88	0.33	520733.19	813148.28	N 32 25 42.53	W 103 27 8.58
	4878.00	5.45	91.99	4855.98	-25.07	-21.72	391.06	0.20	520732.88	813157.45	N 32 25 42.53	W 103 27 8.48
	4973.00	5.85	89.80	4949.52	-25.28	-21.86	400.31	0.48	520732.74	813166.70	N 32 25 42.53	W 103 27 8.37
	5068.00	5.66	90.78	5044.05	-25.41	-21.91	409.83	0.23	520732.69	813176.23	N 32 25 42.53	W 103 27 8.26
	5162.00	5.73	91.55	5137.58	-25.68	-22.10	419.16	0.11	520732.50	813185.56	N 32 25 42.52	W 103 27 8.15
	5257.00	5.80	90.57	5232.10	-25.94	-22.27	428.70	0.13	520732.33	813195.10	N 32 25 42.52	W 103 27 8.04
	5351.00	5.71	90.89	5325.63	-26.14	-22.39	438.12	0.10	520732.21	813204.52	N 32 25 42.52	W 103 27 7.93
	5446.00	5.80	89.64	5420.15	-26.26	-22.44	447.65	0.16	520732.16	813214.05	N 32 25 42.52	W 103 27 7.82
	5540.00	5.92	89.55	5513.66	-26.28	-22.37	457.25	0.13	520732.23	813223.64	N 32 25 42.52	W 103 27 7.70
	5635.00	6.01	89.50	5608.14	-26.28	-22.29	467.12	0.09	520732.31	813233.52	N 32 25 42.52	W 103 27 7.59
	5729.00	5.92	88.87	5704.29	-26.19	-22.06	483.43	0.07	520732.54	813249.83	N 32 25 42.52	W 103 27 7.40
	5824.00	6.08	88.63	5857.78	-26.06	-21.84	493.26	0.17	520732.76	813259.65	N 32 25 42.52	W 103 27 7.28
	5919.00	6.27	83.26	5952.23	-25.42	-21.11	503.44	0.64	520733.49	813269.83	N 32 25 42.53	W 103 27 7.16
	6014.00	6.15	80.65	6045.68	-24.08	-19.69	513.50	0.33	520734.91	813279.90	N 32 25 42.54	W 103 27 7.05
	6170.00	6.17	81.48	6140.13	-22.58	-18.11	523.57	0.10	520736.49	813289.97	N 32 25 42.55	W 103 27 6.93
	6264.00	6.56	79.20	6233.55	-20.92	-16.35	533.84	0.49	520738.25	813300.24	N 32 25 42.57	W 103 27 6.81
	6359.00	6.25	74.81	6327.96	-18.63	-13.98	544.16	0.61	520740.62	813310.56	N 32 25 42.59	W 103 27 6.69
	6453.00	6.93	89.83	6421.34	-17.37	-12.62	554.77	1.96	520741.98	813321.17	N 32 25 42.61	W 103 27 6.56
	6547.00	7.38	96.11	6514.61	-18.09	-13.25	566.45	0.96	520741.35	813332.64	N 32 25 42.60	W 103 27 6.43
	6642.00	7.15	96.07	6608.85	-19.47	-14.52	578.39	0.24	520740.08	813344.79	N 32 25 42.58	W 103 27 6.29
	6737.00	6.85	95.67	6703.14	-20.75	-15.71	589.91	0.32	520738.89	813356.31	N 32 25 42.57	W 103 27 6.15
	6831.00	6.34	94.90	6796.52	-21.84	-16.71	600.66	0.55	520737.89	813367.06	N 32 25 42.56	W 103 27 6.03
	6925.00	5.56	94.82	6890.01	-22.75	-17.53	610.37	0.83	520737.07	813376.76	N 32 25 42.55	W 103 27 5.92
	7020.00	4.87	95.21	6984.62	-23.58	-18.29	618.97	0.73	520736.31	813385.37	N 32 25 42.54	W 103 27 5.82
	7114.00	4.12	95.28	7078.33	-24.31	-18.96	626.31	0.80	520735.64	813392.70	N 32 25 42.54	W 103 27 5.73
	7209.00	3.69	95.97	7173.11	-25.00	-19.59	632.75	0.46				

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ° ' '')	Longitude (E/W ° ° ' '')
	7492.00	5.46	84.29	7455.00	-23.13	-17.51	657.49	0.47	520737.09	813423.89	N 32 25 42.55 W 103 27	5.37
	7587.00	4.99	82.37	7549.60	-22.20	-16.51	666.08	0.53	520738.09	813432.48	N 32 25 42.56 W 103 27	5.27
	7681.00	4.48	77.44	7643.28	-20.93	-15.17	673.72	0.69	520739.43	813440.11	N 32 25 42.57 W 103 27	5.18
	7776.00	4.84	84.31	7737.97	-19.79	-13.96	681.33	0.70	520740.64	813447.72	N 32 25 42.58 W 103 27	5.09
	7870.00	6.02	87.71	7831.55	-19.27	-13.37	690.20	1.30	520741.23	813456.59	N 32 25 42.59 W 103 27	4.98
	7965.00	5.71	84.80	7926.05	-18.73	-12.75	699.88	0.45	520741.85	813466.28	N 32 25 42.59 W 103 27	4.87
	8059.00	5.41	82.34	8019.61	-17.79	-11.73	708.93	0.41	520742.87	813475.33	N 32 25 42.60 W 103 27	4.77
	8154.00	4.86	80.41	8114.23	-16.60	-10.46	717.34	0.61	520744.14	813483.73	N 32 25 42.61 W 103 27	4.67
	8247.00	6.73	86.42	8206.75	-15.68	-9.47	726.66	2.11	520745.13	813493.06	N 32 25 42.62 W 103 27	4.56
	8342.00	5.74	84.59	8301.18	-14.97	-8.67	736.95	1.06	520745.93	813503.34	N 32 25 42.63 W 103 27	4.44
	8436.00	5.89	84.15	8394.70	-14.12	-7.74	746.43	0.17	520746.86	813512.82	N 32 25 42.64 W 103 27	4.33
	8531.00	8.16	89.66	8488.98	-13.72	-7.23	756.02	2.50	520747.37	813524.41	N 32 25 42.64 W 103 27	4.19
	8625.00	8.03	96.79	8582.05	-14.60	-8.01	771.21	1.03	520746.59	813537.60	N 32 25 42.63 W 103 27	4.04
	8720.00	8.24	97.76	8676.31	-16.18	-9.49	782.92	1.89	520745.11	813549.31	N 32 25 42.62 W 103 27	3.90
	8815.00	5.14	93.66	8770.84	-17.23	-10.46	792.28	1.23	520744.14	813558.67	N 32 25 42.61 W 103 27	3.79
	8909.00	4.99	91.42	8864.47	-17.67	-10.83	800.57	0.26	520743.77	813566.96	N 32 25 42.60 W 103 27	3.70
	9004.00	6.00	104.73	8959.04	-18.11	-12.19	809.50	1.71	520742.41	813575.89	N 32 25 42.59 W 103 27	3.59
	9098.00	4.54	107.31	9052.64	-21.54	-14.55	817.80	1.57	520740.05	813584.20	N 32 25 42.56 W 103 27	3.50
	9193.00	5.99	106.36	9147.24	-24.13	-17.06	826.15	1.53	520737.54	813592.54	N 32 25 42.54 W 103 27	3.40
	9287.00	5.55	109.06	9240.76	-27.07	-19.93	835.15	0.55	520734.67	813601.55	N 32 25 42.51 W 103 27	3.29
	9381.00	4.85	115.35	9334.37	-30.32	-23.11	843.04	0.96	520731.49	813609.43	N 32 25 42.48 W 103 27	3.20
	9476.00	4.46	113.46	9429.06	-33.57	-26.30	850.06	0.44	520728.30	813616.45	N 32 25 42.45 W 103 27	3.12
	9571.00	5.39	103.45	9523.71	-36.15	-28.81	857.79	1.33	520725.79	813624.18	N 32 25 42.42 W 103 27	3.03
	9665.00	6.01	100.31	9617.24	-38.13	-30.72	866.92	0.74	520723.88	813633.31	N 32 25 42.40 W 103 27	2.92
	9759.00	5.28	109.23	9710.79	-40.52	-33.03	875.85	1.21	520721.57	813642.24	N 32 25 42.38 W 103 27	2.82
	9854.00	4.20	117.73	9805.46	-43.84	-36.08	883.05	1.35	520718.52	813649.45	N 32 25 42.35 W 103 27	2.74
	9945.00	3.57	117.97	9896.25	-46.58	-38.96	888.51	0.69	520715.64	813654.90	N 32 25 42.32 W 103 27	2.67
	10042.00	3.41	119.46	9993.07	-49.44	-41.80	893.68	0.19	520712.80	813660.08	N 32 25 42.29 W 103 27	2.61
	10134.00	3.82	126.17	10084.89	-52.64	-44.95	898.54	0.64	520709.65	813664.93	N 32 25 42.26 W 103 27	2.56
	10228.00	3.97	131.58	10178.67	-56.69	-48.96	903.50	0.42	520705.64	813669.90	N 32 25 42.22 W 103 27	2.50
	10323.00	3.61	130.26	10273.47	-60.84	-53.08	908.25	0.39	520701.52	813674.64	N 32 25 42.18 W 103 27	2.44
	10417.00	2.75	107.53	10367.33	-63.47	-55.67	912.65	1.61	520698.93	813679.05	N 32 25 42.15 W 103 27	2.39
	10495.00	3.06	120.29	10445.23	-65.12	-57.28	916.24	0.82	520697.32	813682.63	N 32 25 42.13 W 103 27	2.35
	10529.00	2.75	128.64	10479.18	-68.09	-58.25	917.66	1.54	520696.35	813684.05	N 32 25 42.12 W 103 27	2.34
	10576.00	0.74	75.57	10526.16	-68.73	-58.88	918.83	5.06	520695.72	813685.22	N 32 25 42.12 W 103 27	2.32
	10623.00	7.09	349.78	10573.04	-63.80	-55.94	918.61	15.05	520698.66	813685.00	N 32 25 42.15 W 103 27	2.32
	10670.00	12.33	350.76	10619.35	-55.97	-48.13	917.29	11.15	520706.47	813683.68	N 32 25 42.22 W 103 27	2.34
	10717.00	16.89	353.59	10664.82	-44.22	-36.39	915.72	9.82	520718.21	813682.11	N 32 25 42.34 W 103 27	2.36
	10772.30	17.91	353.64	10674.65	-41.15	-33.33	915.38	9.89	520721.27	813681.77	N 32 25 42.37 W 103 27	2.36
	10764.00	21.54	353.78	10709.19	-28.83	-21.02	914.02	9.89	520733.58	813680.41	N 32 25 42.49 W 103 27	2.37
	10812.00	25.90	355.15	10753.12	-9.60	-1.80	912.18	9.16	520752.80	813678.57	N 32 25 42.68 W 103 27	2.39
	10859.00	30.68	0.71	10794.50	12.64	20.43	911.46	11.60	520775.03	813677.85	N 32 25 42.90 W 103 27	2.40
	10906.00	35.07	6.03	10833.97	38.06	45.87	913.03	11.17	520800.47	813679.42	N 32 25 43.15 W 103 27	2.38
	10953.00	37.91	6.77	10871.78	65.80	73.64	916.15	6.11	520828.24	813682.54	N 32 25 43.43 W 103 27	2.34
	11001.00	42.32	6.72	10908.46	96.48	104.35	919.78	9.19	520858.95	813686.17	N 32 25 43.73 W 103 27	2.29
	11048.00	46.26	7.36	10942.09	129.01	136.91	923.81	8.44	520891.51	813690.20	N 32 25 44.05 W 103 27	2.24
	11095.00	48.28	6.29	10973.98	163.25	171.19	927.91	4.81	520925.79	813694.30	N 32 25 44.39 W 103 27	2.19
	11142.00	50.46	5.92	11004.59	198.68	206.65	931.70	4.68	520961.25	813698.09	N 32 25 44.74 W 103 27	2.15
	11190.00	51.78	1.02	11034.73	235.94	243.93	933.94	8.41	520998.53	813700.34	N 32 25 45.11 W 103 27	2.12
	11237.00	53.45	355.62	11083.28	273.25	281.24	932.83	9.79	521035.83	813699.22	N 32 25 45.48 W 103 27	2.13
	11285.00	57.72	353.68	11090.40	312.69	320.65	929.12	9.50	521075.24	813695.51	N 32 25 45.87 W 103 27	2.16
	11332.00	62.72	353.84	11113.74	353.26	361.18	924.62	10.84	521115.76	813691.01	N 32 25 46.27 W 103 27	2.21
	11379.00	67.44	354.65	11133.53	395.68	403.57	920.28	10.23	521158.16	813686.67	N 32 25 46.69 W 103 27	2.26
	11426.00	71.66	357.10	11149.95	439.62	447.48	917.12	10.22	521202.07	813683.52	N 32 25 47.13 W 103 27	2.29
	11474.00	74.79	359.83	11163.81	485.56	493.41	915.90	8.49	521248.00	813682.29	N 32 25 47.58 W 103 27	2.30
	11521.00	78.85	2.46	11174.52	531.29	539.15	916.83	10.21	521293.74	813683.22	N 32 25 48.04 W 103 27	2.29
	11568.00	84.21	3.89	11181.45	577.66	585.54	918.40	11.79	521340.14	813685.80	N 32 25 48.49 W 103 27	2.25
	11663.00	89.35	2.44	11186.78	672.28	680.22	924.64	5.62	521434.81	813691.03	N 32 25 48.94 W 103 27	2.18
	11708.00	90.93	359.95	11186.67	717.26	725.20	925.57	6.55	521479.80	813691.97	N 32 25 49.88 W 103 27	2.17
	11766.00	91.64	358.45	11185.37	775.24	783.18	924.76	2.86	521537.77	813691.16	N 32 25 50.45 W 103 27	2.17
	11860.00	90.74	355.36	11183.42	869.11	877.01	918.69	3.42	521631.60	813686.08	N 32 25 51.38 W 103 27	2.22
	11955.00	90.60	355.89	11182.31	963.89	971.73	912.44	0.58	521726.32	813678.84	N 32 25 52.32 W 103 27	2.30
	12049.00	90.97	356.12	11181.02	1057.70	1065.49	905.90	0.46	521820.08	813672.29	N 32 25 53.24 W 103 27	2.36
	12144.00	90.77	355.57	11179.58	1152.50	1160.23	899.01	0.62	521914.82	813665.41	N 32 25 54.18 W 103 27	2.44
	12238.00	90.74	355.54	11178.34	1246.26	1253.94	891.73	0.05	522008.53	813658.12	N 32 25 55.11 W 103 27	2.51
	12332.00	90.57	356.71	11177.26	1340.09	1347.71	885.38	1.26	522102.30	813651.77	N 32 25 56.04 W 103 27	2.58
	12427.00	90.49	357.67	11176.38	1435.01	1442.59	880.72	1.01	522197.18	813647.11	N 32 25 56.98 W 103 27	2.62
	12521.00	90.26	357.51	11175.77	1528.95	1536.51	876.77	0.30	522291.10	813643.16	N 32 25 57.91 W 103 27	2.66
	12615.00	90.40	357.72	11175.23	1622.90	1630.43	872.86	0.27	522385.01	813639.25	N 32 25 58.84 W 103 27	2.70
	12709.00	89.89	0.84	11174.99	1716.89	1724.41	871.67	3.38	522478.99	813638.07	N 32 25 59.77 W 103 27	2.70
	12804.00	89.83	1.04	11175.22	1811.86	1819.39	873.23	0.22	522573.98	813639.63	N 32 26 0.71 W 103 27	2.67
	12898.00	89.57	0.80	11175.71	1905.83	1913.38	874.74	0.38	522667.96	813641.13	N 32 26 1.64 W 103 27	2.65
	12993.00	90.80	1.02	11175.41	2000.80	2008.37	876.25	1.32	522762.95	813642.64	N 32 26 2.58 W 103 27	2.62
	13087.00	90.72	0.61	11174.16	2094.77	2102.35	877.59	0.44	522856.93	813643.98	N 32 26 3.51 W 103 27	2.59
	13182.00	91.12	1.20	11172.63	2186.72	2197.32	879.09	0.75	522951.90	813645.48	N 32 26 4.44 W 103 27	2.57
	13276.00	91.06	0.81	11170.85	2283.68	2291.29	880.57	0.63	523045.87	813646.96	N 32 26 5.37 W 103 27	2.54
	13370.00	91.00	0.57	11169.16	2377.65	2385.27	881.54	0.08	523139.85	813647.93	N 32 26 6.30 W 103 27	2.52
	13465.00	91.83	0.44	11166.81	2472.60	2480.24	882.38	0.88				

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 ° ' ")
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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	31.000	1/98.425	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	Original Borehole / Chisholm Grama Ridge East 34 State Com 3BS 5H MWD 0' to 16045'
	1	31.000	31.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG-Depth Only	Original Borehole / Chisholm Grama Ridge East 34 State Com 3BS 5H MWD 0' to 16045'
	1	31.000	16045.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	Original Borehole / Chisholm Grama Ridge East 34 State Com