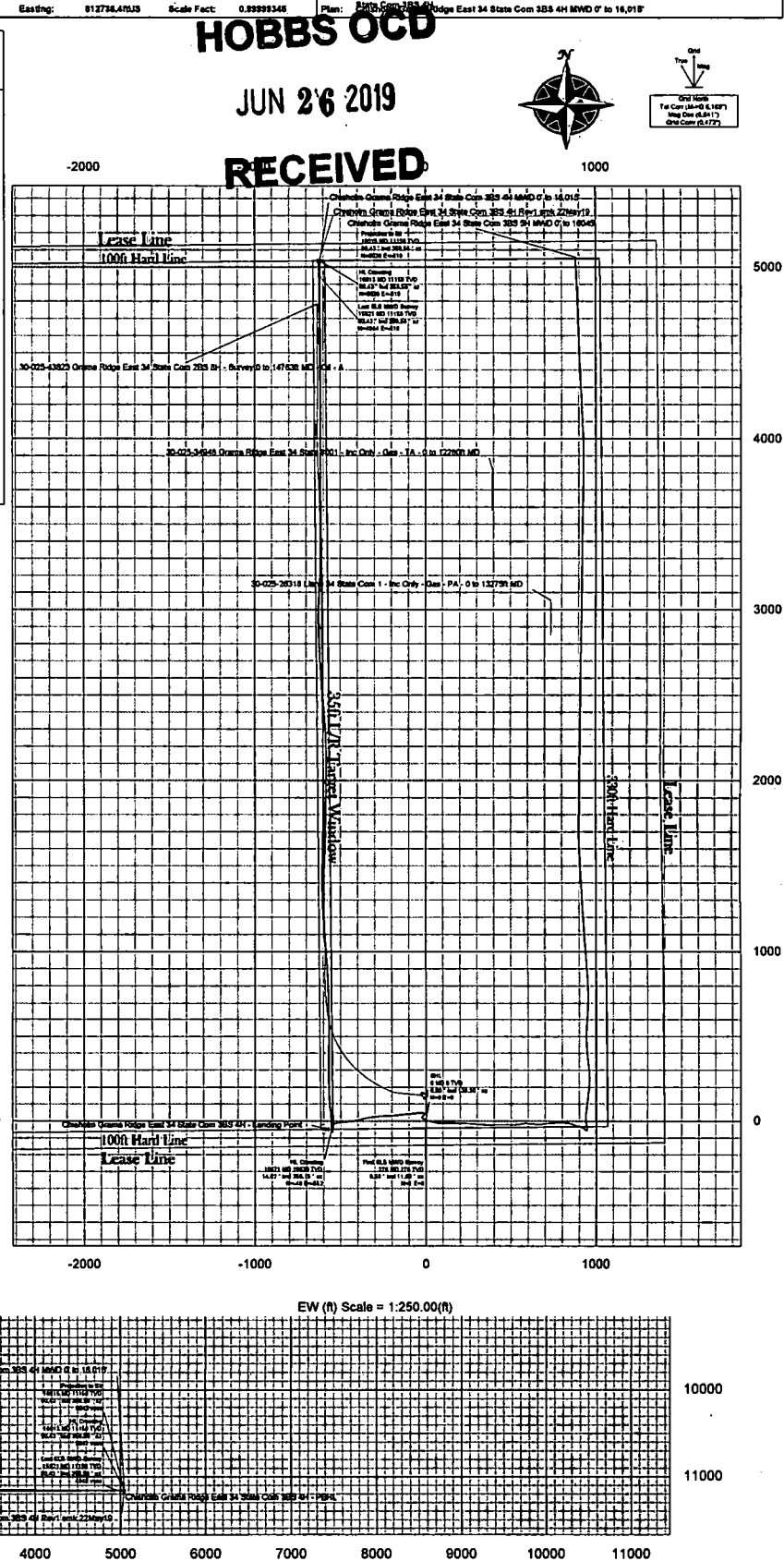
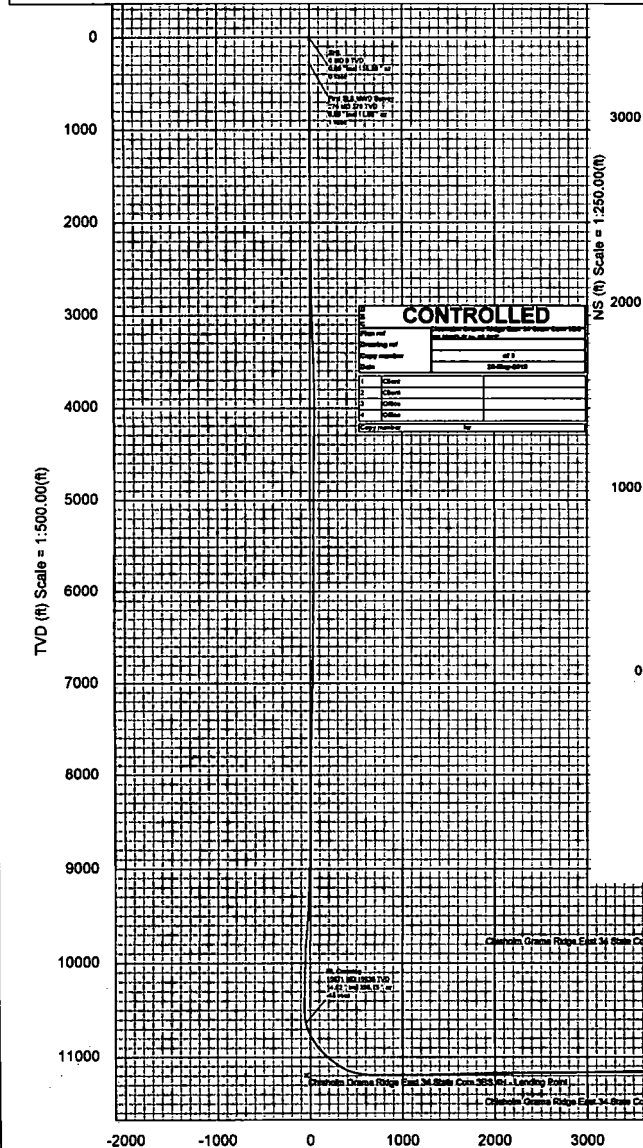


Borehole:		Well:	Field:	Structure:
Original Borehole		Chisholm Grama Ridge East 34 State Com 3BS 4H	NM Lea County (NAD 83)	Chisholm Grama Ridge East 34 State Com 3BS 4H
Gravity & Magnetic Parameters		Surface Location		Miscellaneous
Model: HDOM 2018 MagDec: 8.641° Dip: 60.257° Date: 01-May-2019 FS: 48042.8nT Gravity FS: 998.47mgn (9.80665 Based)		NAD83 New Mexico State Plane, Eastern Zone, US Foot Lat: N 32 28 43.78 Lon: W 103 27 13.29 Northing: 829764.47US Easting: 812736.47US Grid Conv: 0.47117 Scale Fact: 0.99999345		Minerals: Chisholm Grama Site: Ridge East 34 Plan: Ridge East 34 TVD Ref: RXB-31 N (JCD7) (3447ft above MSL) Chisholm Grama Ridge East 34 State Com 3BS 4H MWD 0' to 16,018'

Critical Points							
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(Y)-1	E(Y)-1
ShL	0.00	0.00	135.30	0.00	0.00	0.00	0.00
First SLB MWD Survey	278.00	0.58	11.89	278.00	1.37	1.37	0.28
HL Crossing	10870.91	14.82	355.15	10839.36	-44.78	-49.48	-551.58
Last SLB MWD Survey	15921.00	90.43	-359.56	11158.83	4948.77	4943.87	-818.40
HL Crossing	16012.87	90.43	359.56	11158.24	5040.84	5035.53	-819.11
Projection to Bit	16015.00	90.43	359.56	11158.23	5042.77	5037.86	-819.12



HOBBS OCD

JUN 26 2019

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Chisholm Grama Ridge East 34 State Com 3BS 4H MWD 0' to 16,015' **Survey Geodetic Report** (Def Survey)

Report Date:	May 28, 2019 - 08:50 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Chisholm Energy	Vertical Section Azimuth:	359.510 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Chisholm Grama Ridge East 34 State Com 3BS 4H / Chisholm Grama Ridge East 34 State Com 3BS 4H	TVD Reference Datum:	RKB=31 ft (JDC7)
Well:	Chisholm Grama Ridge East 34 State Com 3BS 4H	TVD Reference Elevation:	3647.000 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3616.000 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.641 °
Survey Name:	Chisholm Grama Ridge East 34 State Com 3BS 4H MWD 0' to 16,015'	Total Gravity Field Strength:	998.4791 mgn (9.80665 Based)
Survey Date:	May 01, 2019	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	208.106 ° / 5774.175 ft / 6.235 / 0.516	Total Magnetic Field Strength:	48042.800 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.257 °
Location Lat / Long:	N 32° 25' 42.77574", W 103° 27' 13.38539"	Declination Date:	May 01, 2019
Location Grid N/E Y/X:	N 520754.400 RUS, E 812736.400 RUS	Magnetic Declination Model:	HDGM 2019
CRS Grid Convergence Angle:	0.4717 °	North Reference:	Grid North
Grid Scale Factor:	0.99999345	Grid Convergence Used:	0.4717 °
Version / Patch:	2.10.760.0	Total Corr Mag North->Grid North:	6.1688 °
		Local Coord Referenced To:	Well Head

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	135.30	0.00	0.00	0.00	0.00	N/A	520754.40	812736.40	N 32 25 42.78	W 103 27 13.39
First SLB MWD Survey	276.00	0.58	11.69	276.00	1.37	1.37	0.28	0.21	520755.77	812736.68	N 32 25 42.79	W 103 27 13.38
	360.00	0.57	23.30	359.99	2.16	2.17	0.53	0.14	520756.57	812736.93	N 32 25 42.80	W 103 27 13.38
	454.00	0.56	42.55	453.99	2.93	2.94	1.03	0.20	520757.34	812737.43	N 32 25 42.80	W 103 27 13.37
	548.00	0.55	43.77	547.98	3.59	3.60	1.65	0.02	520758.00	812738.05	N 32 25 42.81	W 103 27 13.37
	642.00	0.83	46.95	641.98	4.37	4.39	2.46	0.30	520758.79	812738.86	N 32 25 42.82	W 103 27 13.38
	725.00	0.57	37.39	724.97	5.10	5.13	3.15	0.34	520759.53	812739.55	N 32 25 42.83	W 103 27 13.35
	820.00	0.56	23.10	819.96	5.90	5.93	3.62	0.15	520760.33	812740.02	N 32 25 42.83	W 103 27 13.34
	914.00	0.44	359.66	913.96	6.68	6.71	3.80	0.25	520761.11	812740.20	N 32 25 42.84	W 103 27 13.34
	1008.00	0.18	347.28	1007.96	7.19	7.22	3.76	0.28	520761.62	812740.16	N 32 25 42.85	W 103 27 13.34
	1102.00	0.08	212.17	1101.96	7.28	7.31	3.70	0.28	520761.71	812740.10	N 32 25 42.85	W 103 27 13.34
	1197.00	0.06	303.35	1196.96	7.25	7.28	3.62	0.11	520761.68	812740.02	N 32 25 42.85	W 103 27 13.34
	1292.00	0.18	226.80	1291.96	7.17	7.20	3.47	0.19	520761.60	812739.87	N 32 25 42.85	W 103 27 13.34
	1386.00	0.28	264.01	1385.96	7.05	7.08	3.13	0.19	520761.48	812739.53	N 32 25 42.85	W 103 27 13.35
	1481.00	0.41	249.77	1480.96	6.92	6.94	2.58	0.16	520761.34	812738.98	N 32 25 42.84	W 103 27 13.35
	1575.00	0.55	257.13	1574.95	6.71	6.72	1.83	0.16	520761.12	812738.23	N 32 25 42.84	W 103 27 13.36
	1669.00	0.53	259.61	1668.95	6.53	6.54	0.96	0.03	520760.94	812737.36	N 32 25 42.84	W 103 27 13.37
	1701.00	0.41	246.58	1700.95	6.46	6.47	0.71	0.50	520760.87	812737.11	N 32 25 42.84	W 103 27 13.38
	1770.00	0.22	224.84	1769.95	6.27	6.28	0.39	0.32	520760.68	812736.79	N 32 25 42.84	W 103 27 13.38
	1864.00	0.13	60.96	1863.95	6.20	6.20	0.36	0.37	520760.60	812736.76	N 32 25 42.84	W 103 27 13.38
	1959.00	0.56	36.74	1958.95	6.62	6.63	0.73	0.47	520761.03	812737.13	N 32 25 42.84	W 103 27 13.38
	2053.00	0.45	343.36	2052.94	7.34	7.35	0.90	0.49	520761.75	812737.30	N 32 25 42.85	W 103 27 13.37
	2149.00	0.66	322.40	2148.94	8.14	8.15	0.45	0.30	520762.55	812736.85	N 32 25 42.86	W 103 27 13.38
	2242.00	1.27	303.48	2241.92	9.15	9.14	-0.73	0.73	520763.54	812735.67	N 32 25 42.87	W 103 27 13.39
	2337.00	1.89	300.26	2336.89	10.54	10.51	-2.97	0.66	520764.91	812733.43	N 32 25 42.88	W 103 27 13.42
	2431.00	2.51	288.00	2430.82	11.91	11.86	-6.28	0.88	520766.26	812730.12	N 32 25 42.89	W 103 27 13.46
	2526.00	2.48	286.63	2525.73	13.11	13.02	-10.25	0.04	520767.42	812726.15	N 32 25 42.91	W 103 27 13.50
	2620.00	2.40	289.12	2619.64	14.37	14.25	-14.06	0.14	520768.65	812722.34	N 32 25 42.92	W 103 27 13.55
	2715.00	1.99	289.69	2714.57	15.60	15.45	-17.49	0.43	520769.85	812718.91	N 32 25 42.93	W 103 27 13.59
	2810.00	1.86	296.05	2809.52	16.86	16.69	-20.43	0.26	520771.09	812715.97	N 32 25 42.94	W 103 27 13.62
	2904.00	1.62	304.11	2903.48	18.30	18.10	-22.90	0.36	520772.50	812713.50	N 32 25 42.96	W 103 27 13.65
	2998.00	1.41	345.53	2997.45	20.17	19.97	-24.29	1.16	520774.37	812712.11	N 32 25 42.98	W 103 27 13.67
	3093.00	1.50	24.15	3092.41	22.66	22.46	-23.97	1.18	520776.86	812712.43	N 32 25 43.00	W 103 27 13.66
	3188.00	2.81	37.85	3187.33	25.85	25.66	-21.93	1.20	520780.06	812714.47	N 32 25 43.03	W 103 27 13.64
	3282.00	2.77	39.08	3281.22	29.41	29.24	-18.09	0.08	520783.64	812717.31	N 32 25 43.07	W 103 27 13.61
	3376.00	2.81	37.66	3375.11	32.87	32.83	-16.25	0.08	520787.23	812720.15	N 32 25 43.10	W 103 27 13.57
	3471.00	3.07	34.85	3469.99	36.87	36.76	-13.37	0.31	520791.16	812723.03	N 32 25 43.14	W 103 27 13.54
	3566.00	2.36	22.07	3564.88	40.75	40.66	-11.17	0.88	520795.06	812725.23	N 32 25 43.18	W 103 27 13.51
	3660.00	1.79	343.34	3658.82	43.95	43.86	-10.87	1.57	520798.26	812725.53	N 32 25 43.21	W 103 27 13.51
	3754.00	2.15	306.10	3752.77	46.41	46.30	-12.71	1.39	520800.70	812723.69	N 32 25 43.23	W 103 27 13.53
	3849.00	3.08	289.63	3847.67	48.35	48.21	-16.56	1.25	520802.61	812719.84	N 32 25 43.25	W 103 27 13.57
	3943.00	4.64	272.21	3941.46	49.40	49.21	-22.74	2.08	520803.60	812713.66	N 32 25 43.26	W 103 27 13.65
	4037.00	6.19	269.12	4035.04	49.54	49.27	-31.60	1.68	520803.67	812704.80	N 32 25 43.27	W 103 27 13.75
	4132.00	7.94	264.80	4129.31	48.97	48.60	-43.26	1.92	520803.03	812693.14	N 32 25 43.26	W 103 27 13.89
	4226.00	8.56	261.40	4222.34	47.45	46.97	-56.64	0.84	520801.37	812679.76	N 32 25 43.25	W 103 27 14.04
	4321.00	8.04	264.26	4318.34	45.84	45.24	-70.24	0.70	520799.64	812666.16	N 32 25 43.23	W 103 27 14.20
	4415.00	7.76	263.49	4409.45	44.58	43.87	-83.09	0.32	520798.27	812653.31	N 32 25 43.22	W 103 27 14.35
	4510.00	7.03	263.70	4503.66	43.32	42.60	-95.24	0.77	520796.90	812641.16	N 32 25 43.20	W 103 27 14.49
	4604.00	7.27	264.31	4596.93	42.19	41.28	-106.88	0.27	520795.68	812629.52	N 32 25 43.19	W 103 27 14.63
	4698.00	7.15	268.59	4690.19	41.56	40.55	-116.64	0.59	520794.95	812617.76	N 32 25 43.19	W 103 27 14.77
	4793.00	7.20	265.53	4784.44	41.05	39.94	-130.49	0.41	520794.34	812605.91	N 32 25 43.18	W 103 27 14.90
	4887.00	7.06	265.41	4877.72	40.23	39.02	-142.12	0.15	520793.42	812594.28	N 32 25 43.17	W 103 27 15.04
	4982.00	6.42	262.71	4972.06	39.18	37.88	-153.21	0.75	520792.28	812583.19	N 32 25 43.16	W 103 27 15.17
	5076.00	5.83	261.93	5065.52	37.93	36.54	-163.15	0.63	520790.94	812573.25	N 32 25 43.15	W 103 27 15.29
	5171.00	6.01	264.90	5160.02	36.80	35.42	-172.88	0.37	520789.82	812563.52	N 32 25 43.14	W 103 27 15.40
	5265.00	5.60	263.00	5253.53	35.98	34.42	-182.33	0.48	520788.82	812554.07	N 32 25 43.13	W 103 27 15.51
	5359.00	5.45	266.10	5347.10	35.20	33.56	-191.34	0.36	520787.96	812545.06	N 32 25 43.12	W 103 27 15.61
	5454.00	4.80	266.70	5441.72	34.73	33.02	-199.81	0.69	520787.42	812536.59	N 32 25 43.12	W 103 27 15.71
	5548.00	5.04	269.73	5535.37	34.56	32.78	-207.86	0.38	520787.18	812528.54	N 32 25 43.12	W 103 27 15.81
	5641.00	4.70	269.97	5548.32	34.56	32.78	-208.97	2.62	520787.18	812527.44	N 32 25 43.12	W 103 27 15.82
	5691.00	4.61	266.66	5677.90	34.34	32.47	-219.51	0.22	520786.87	812516.89	N 32 25 43.11	W 103 27 15.94
	5785.00	4.86	267.90	5771.58	34.05	32.10	-227.26	0.29	520786.50	812509.14	N 32 25 43.11	W 103 27 16.03
	5880.00	4.68	265.82	5866.25	33.68	31.67	-235.14	0.26	520786.07	812501.26	N 32 25 43.11	W 103 27 16.13
	5974.00	4.87	270.49	5959.82	33.50	31.43	-242.96	0.46	520785.83	812493.44	N 32 25 43.11	W 103 27 16.22
	6069.00	4.91	269.03	6054.57	33.54	31.39	-251.06	0.14	520785.79	812485.35	N 32 25 43.11	W 103 27 16.31
	6163.00	4.60	265.54	6148.25	33.24	31.03	-258.84	0.45	520785.43	812477.57	N 32 25 43.10	W 103 27 16.40
	6258.00	4.62	264.66	6242.94	32.66	30.38	-266.44	0.08	520784.78	812469.96	N 32 25 43.10	W 103 27 16.49
	6352.00	4.51	261.34	6336.65	31.81	29.47	-273.87	0.30	520783.87	812462.54	N 32 25 43.09	W 103 27 16.58
	6447.00	4.80	262.64	6431.33	30.81	28.40	-281.50	0.32	520782.80	812454.90	N 32 25 43.08	W 103 27 16.67
	6542.00	5.15	265.41	6525.97	30.03	27.55	-289.69	0.45	520781.95	812446.71	N 32 25 43.07	W 103 27 16.76
	6636.00	4.98	262.29	6618.91	29.21	26.66	-297.94	0.34	520781.06	812438.46	N 32 25 43.06	W 103 27 16.86
	6731.00	4.88	284.67	6714.27	28.37	25.75	-305.89	0.38	520780.15	812430.52	N 32 25 43.06	W 103 27 16.95
	6825.00	4.43	263.60	6807.97	27.67	24.99	-313.31	0.28	520779.39	812423.09	N 32 25 43.05	W 103 27 17.04
	6920.00	4.39	264.53	6902.69	26.97	24.23	-320.58	0.09	520778.63	812415.82	N 32 25 43.04	W 103 27 17.12
	7014.00	4.21	257.87	6996.43	25.97	23.17	-327.53	0.56	520777.57	812408.87	N 32 25 43.03	W 103 27 17.20
	7109.00	5.96	257.68	7091.05	24.25	21.38	-335.76	1.84	520775.44	812400.64	N 32 25 43.5	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° ' '')	Longitude (E/W ° ° ' '')
	7203.00	6.84	256.00	7184.46	21.94	18.99	-345.96	0.86	520773.39	812390.44	N 32 25 42.99 W 103 27 17.42	
	7298.00	6.87	255.29	7278.80	19.27	16.22	-356.79	0.20	520770.62	812378.62	N 32 25 42.97 W 103 27 17.55	
	7393.00	7.02	256.55	7373.13	16.61	13.46	-367.77	0.40	520767.86	812368.64	N 32 25 42.94 W 103 27 17.67	
	7487.00	6.37	257.30	7466.49	14.22	10.88	-378.44	0.33	520765.38	812357.96	N 32 25 42.92 W 103 27 17.80	
	7582.00	6.27	254.58	7560.91	11.77	8.44	-388.58	0.53	520762.84	812347.82	N 32 25 42.89 W 103 27 17.92	
	7676.00	6.03	258.93	7654.37	9.54	6.13	-398.38	0.56	520760.53	812338.03	N 32 25 42.87 W 103 27 18.03	
	7771.00	5.79	259.81	7748.86	7.81	4.33	-407.99	0.27	520758.73	812328.41	N 32 25 42.85 W 103 27 18.14	
	7865.00	5.23	259.90	7842.43	6.30	2.74	-416.88	0.60	520757.14	812319.53	N 32 25 42.84 W 103 27 18.25	
	7960.00	4.84	260.01	7937.06	4.92	1.28	-425.09	0.41	520755.68	812311.32	N 32 25 42.82 W 103 27 18.34	
	8054.00	6.28	263.05	8030.82	3.68	-0.03	-434.09	1.56	520754.37	812302.31	N 32 25 42.81 W 103 27 18.45	
	8149.00	7.16	261.72	8124.96	2.30	-1.51	-445.11	0.94	520752.89	812291.29	N 32 25 42.80 W 103 27 18.58	
	8243.00	6.13	261.88	8218.33	0.84	-3.06	-455.88	1.10	520751.34	812280.53	N 32 25 42.78 W 103 27 18.70	
	8338.00	5.09	261.33	8312.87	-0.44	-4.42	-465.06	1.10	520749.98	812271.34	N 32 25 42.77 W 103 27 18.81	
	8432.00	4.62	261.94	8406.54	-1.53	-5.57	-472.94	0.50	520748.83	812263.47	N 32 25 42.76 W 103 27 18.90	
	8526.00	4.24	267.04	8500.26	-2.18	-6.28	-480.15	0.58	520748.12	812256.25	N 32 25 42.75 W 103 27 18.99	
	8621.00	4.77	267.35	8594.96	-2.48	-6.65	-487.61	0.56	520747.75	812248.80	N 32 25 42.75 W 103 27 19.07	
	8715.00	5.23	265.60	8688.60	-2.92	-7.16	-495.78	0.52	520747.24	812240.62	N 32 25 42.75 W 103 27 19.17	
	8810.00	4.04	265.06	8783.29	-3.47	-7.78	-503.43	1.25	520746.62	812232.97	N 32 25 42.74 W 103 27 19.26	
	8904.00	5.07	263.91	8876.99	-4.14	-8.50	-510.86	1.10	520745.90	812225.54	N 32 25 42.73 W 103 27 19.35	
	8999.00	5.77	256.81	8971.57	-5.59	-10.04	-518.69	1.02	520744.36	812216.72	N 32 25 42.72 W 103 27 19.45	
	9093.00	4.54	252.04	9065.19	-7.75	-12.26	-527.83	1.38	520742.14	812208.58	N 32 25 42.70 W 103 27 19.54	
	9188.00	4.40	243.58	9159.90	-10.47	-15.05	-534.67	0.71	520739.35	812201.74	N 32 25 42.67 W 103 27 19.62	
	9282.00	3.93	243.68	9253.65	-13.45	-18.08	-540.78	0.50	520736.32	812195.62	N 32 25 42.64 W 103 27 19.70	
	9377.00	2.77	243.87	9348.49	-15.86	-20.53	-545.76	1.22	520733.87	812190.64	N 32 25 42.62 W 103 27 19.75	
	9471.00	3.64	204.33	9442.35	-19.56	-24.25	-549.03	2.46	520730.15	812187.37	N 32 25 42.58 W 103 27 19.79	
	9565.00	4.49	188.91	9536.12	-25.89	-30.61	-550.83	1.47	520723.79	812185.57	N 32 25 42.52 W 103 27 19.81	
	9660.00	4.51	183.37	9630.82	-33.29	-38.01	-551.63	0.46	520716.39	812184.78	N 32 25 42.44 W 103 27 19.82	
	9755.00	3.99	176.44	9725.56	-40.32	-45.04	-551.64	0.77	520709.36	812184.76	N 32 25 42.38 W 103 27 19.83	
	9849.00	3.38	176.91	9810.37	-46.35	-51.07	-551.29	0.65	520703.33	812185.12	N 32 25 42.32 W 103 27 19.82	
	9944.00	2.07	162.55	9914.28	-50.79	-55.50	-550.62	1.54	520698.90	812185.78	N 32 25 42.27 W 103 27 19.81	
	10038.00	2.00	153.04	10008.20	-53.88	-58.58	-549.37	0.37	520695.82	812187.03	N 32 25 42.24 W 103 27 19.80	
	10132.00	1.59	169.32	10102.16	-56.63	-61.33	-548.39	0.69	520693.07	812188.02	N 32 25 42.21 W 103 27 19.79	
	10226.00	1.77	162.88	10196.11	-59.31	-64.00	-547.72	0.28	520690.41	812188.69	N 32 25 42.19 W 103 27 19.78	
	10321.00	0.83	197.07	10291.09	-61.37	-66.06	-547.49	1.24	520688.35	812188.92	N 32 25 42.17 W 103 27 19.78	
	10415.00	0.79	213.67	10385.08	-62.56	-67.25	-548.05	0.25	520687.16	812188.36	N 32 25 42.15 W 103 27 19.79	
	10490.00	0.61	227.63	10460.08	-63.25	-67.94	-548.63	0.33	520686.46	812187.78	N 32 25 42.15 W 103 27 19.79	
	10530.00	0.74	324.10	10500.07	-63.18	-67.88	-548.94	2.53	520686.52	812187.47	N 32 25 42.15 W 103 27 19.80	
	10577.00	4.79	348.71	10547.01	-61.01	-65.71	-549.50	8.78	520686.69	812186.91	N 32 25 42.17 W 103 27 19.80	
	10625.00	10.41	351.92	10594.57	-54.73	-59.44	-550.50	11.74	520694.96	812185.90	N 32 25 42.23 W 103 27 19.81	
HL Crossing	10670.91	14.82	355.15	10639.38	-44.78	-49.48	-551.58	9.73	520704.92	812184.82	N 32 25 42.33 W 103 27 19.83	
	10672.00	14.93	355.20	10640.41	-44.48	-49.20	-551.60	9.73	520705.20	812184.80	N 32 25 42.33 W 103 27 19.83	
	10719.00	18.75	357.89	10685.39	-30.89	-35.61	-552.39	8.29	520718.79	812184.01	N 32 25 42.47 W 103 27 19.83	
	10766.00	22.60	357.73	10729.36	-14.30	-19.03	-553.03	8.19	520735.37	812183.38	N 32 25 42.63 W 103 27 19.84	
	10814.00	27.22	356.64	10772.88	5.89	1.15	-554.04	9.67	520755.55	812182.37	N 32 25 42.83 W 103 27 19.85	
	10861.00	32.81	355.25	10813.56	29.34	24.59	-555.72	11.98	520778.99	812180.68	N 32 25 43.06 W 103 27 19.87	
	10908.00	37.03	354.23	10852.09	56.15	51.37	-558.20	9.06	520805.77	812178.21	N 32 25 43.33 W 103 27 19.89	
	10955.00	38.44	353.81	10889.26	84.78	79.98	-561.20	3.05	520834.38	812175.21	N 32 25 43.61 W 103 27 19.92	
	11003.00	42.01	355.84	10925.90	115.66	110.85	-563.97	7.92	520865.24	812172.43	N 32 25 43.92 W 103 27 19.95	
	11050.00	45.94	357.70	10959.72	148.25	143.42	-565.79	8.80	520897.82	812170.81	N 32 25 44.24 W 103 27 19.97	
	11097.00	47.62	358.31	10991.91	182.49	177.65	-568.98	3.70	520932.05	812169.42	N 32 25 44.58 W 103 27 19.98	
	11144.00	49.53	358.35	11023.00	217.72	212.87	-568.01	4.06	520967.27	812168.40	N 32 25 44.93 W 103 27 19.99	
	11192.00	52.13	359.35	11053.32	254.93	250.07	-568.75	5.65	521004.47	812167.66	N 32 25 45.30 W 103 27 20.00	
	11239.00	54.91	359.33	11081.26	292.72	287.86	-569.19	5.81	521042.26	812167.22	N 32 25 45.67 W 103 27 20.00	
	11286.00	58.91	0.25	11106.61	332.08	327.23	-569.32	8.67	521081.62	812167.08	N 32 25 46.06 W 103 27 20.00	
	11333.00	63.96	0.57	11129.38	373.34	368.49	-569.02	10.76	521166.77	812167.38	N 32 25 46.47 W 103 27 20.00	
	11381.00	68.31	0.69	11148.79	417.22	412.37	-568.54	8.07	521166.77	812167.86	N 32 25 46.90 W 103 27 20.00	
	11428.00	73.74	0.83	11164.07	461.64	456.80	-567.95	11.56	521211.20	812166.45	N 32 25 47.34 W 103 27 20.07	
	11475.00	79.31	0.93	11175.02	507.32	502.48	-567.25	11.85	521256.88	812169.16	N 32 25 47.79 W 103 27 20.06	
	11522.00	81.62	359.77	11182.80	553.66	548.83	-566.97	5.48	521303.22	812169.44	N 32 25 48.25 W 103 27 20.05	
	11570.00	85.35	358.96	11188.25	601.34	596.51	-567.50	7.95	521350.90	812168.91	N 32 25 48.72 W 103 27 20.05	
	11618.00	89.97	358.45	11192.09	695.22	690.38	-568.62	4.94	521444.77	812168.79	N 32 25 49.65 W 103 27 20.06	
	11721.00	90.69	358.19	11191.76	752.21	747.35	-571.29	1.34	521501.75	812165.11	N 32 25 50.22 W 103 27 20.08	
	11763.00	91.00	357.95	11191.14	794.19	789.32	-572.70	0.93	521543.72	812163.70	N 32 25 50.63 W 103 27 20.09	
	11858.00	89.80	357.09	11190.47	889.13	884.23	-576.82	1.55	521638.62	812159.59	N 32 25 51.57 W 103 27 20.03	
	11952.00	89.80	356.09	11190.80	983.01	978.06	-582.41	1.06	521732.45	812154.00	N 32 25 52.50 W 103 27 20.09	
	12046.00	89.86	355.31	11191.08	1076.80	1071.81	-588.45	0.83	521826.19	812146.95	N 32 25 53.43 W 103 27 20.16	
	12141.00	89.71	355.85	11191.44	1171.57	1166.51	-596.78	0.59	521920.90	812139.63	N 32 25 54.37 W 103 27 20.24	
	12235.00	89.60	358.32	11192.00	1265.48	1260.38	-601.56	2.63	522014.77	812134.85	N 32 25 55.30 W 103 27 20.28	
	12330.00	90.11	1.41	11192.25	1360.47	1355.37	-601.78	3.30	522109.76	812134.83	N 32 25 56.24 W 103 27 20.28	
	12424.00	90.00	3.79	11192.15	1454.32	1449.27	-597.52	2.53	522203.65	812138.89	N 32 25 57.16 W 103 27 20.22	
	12518.00	90.83	1.94	11191.47	1548.15	1543.14	-592.82	2.16	522297.53	812143.59	N 32 25 58.09 W 103 27 20.15	
	12612.00	90.89	1.92	11190.06	1642.06	1637.08	-589.65	0.07	522391.46	812146.75	N 32 25 59.02 W 103 27 20.11	
	12707.00	90.83	1.22	11188.64	1736.99	1732.03	-587.05	0.74	522486.42	812149.36	N 32 25 59.96 W 103 27 20.07	
	12801.00	91.52	0.17	11186.71	1830.95	1826.00	-585.91	1.34	522580.39	812150.50	N 32 26 0.89 W 103 27 20.05	
	12896.00	91.23	0.98	11184.43	1925.90	1920.97	-584.96	0.81	522675.35	812151.45	N 32 26 1.83 W 103 27 20.03	
	12990.00	91.72	1.25	11182.01	2019.83	2014.92	-583.13	0.60	522769.30	812153.28	N 32 26 2.76 W 103 27 20.00	
	13085.00	91.88	0.33	11178.84	2114.76	2109.86	-581.82	1.01	522864.24	812154.59	N 32 26 3.70 W 103 27 19.97	
	13179.00	91.98	35									

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 ° ' ")
Projection to Bit	16015.00	90.43	359.56	11158.23	5042.77	5037.66	-619.12	0.00	525702.02	812117.28	N 32 26 32.67	W 103 27 20.13

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	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 4H MWD 0' to 18,015'
	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 4H MWD 0' to 18,015'
	1	31.000	16015.000	Act Stns	30.000	30.000	NAL_MWD_1.0_DEG	Original Borehole / Chisholm Grama Ridge East 34 State Com

...Original Borehole\Chisholm Grama Ridge East 34 State Com 3BS 4H MWD 0' to 18,015'