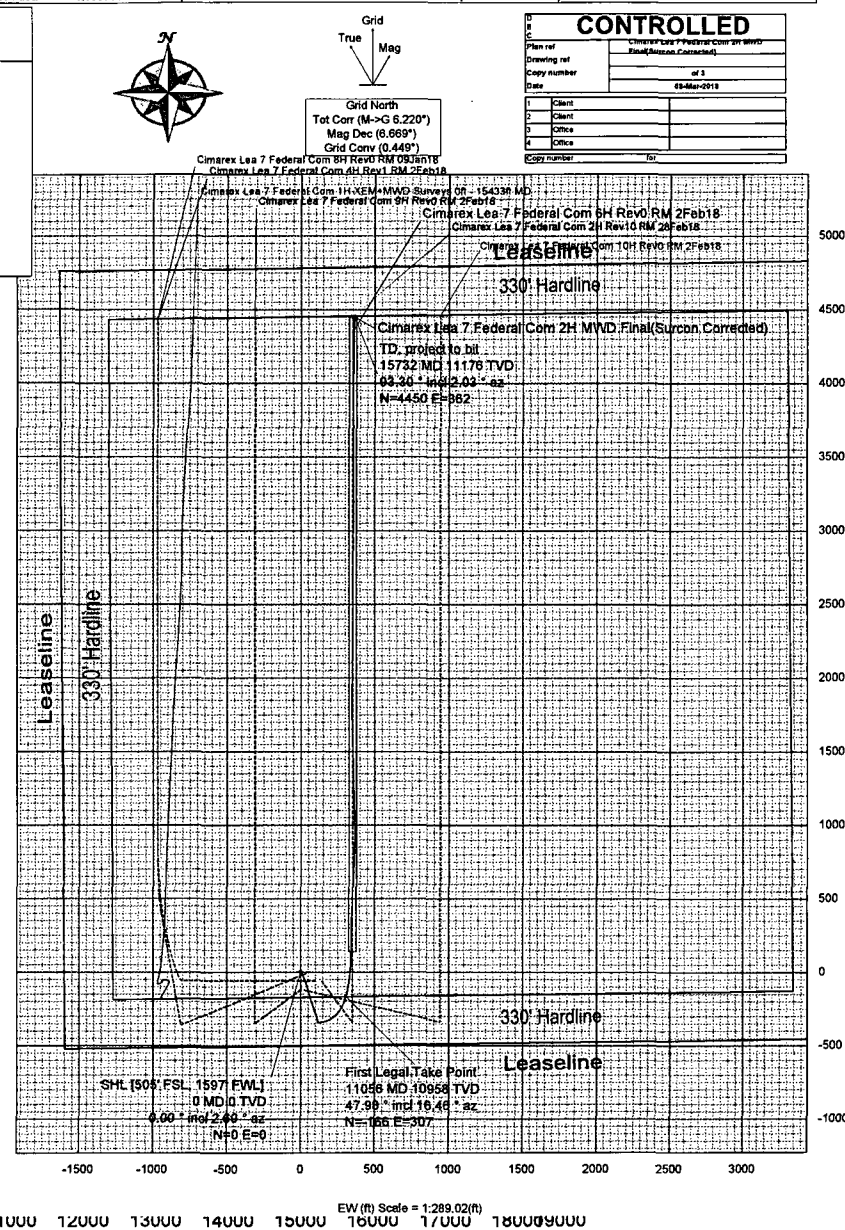
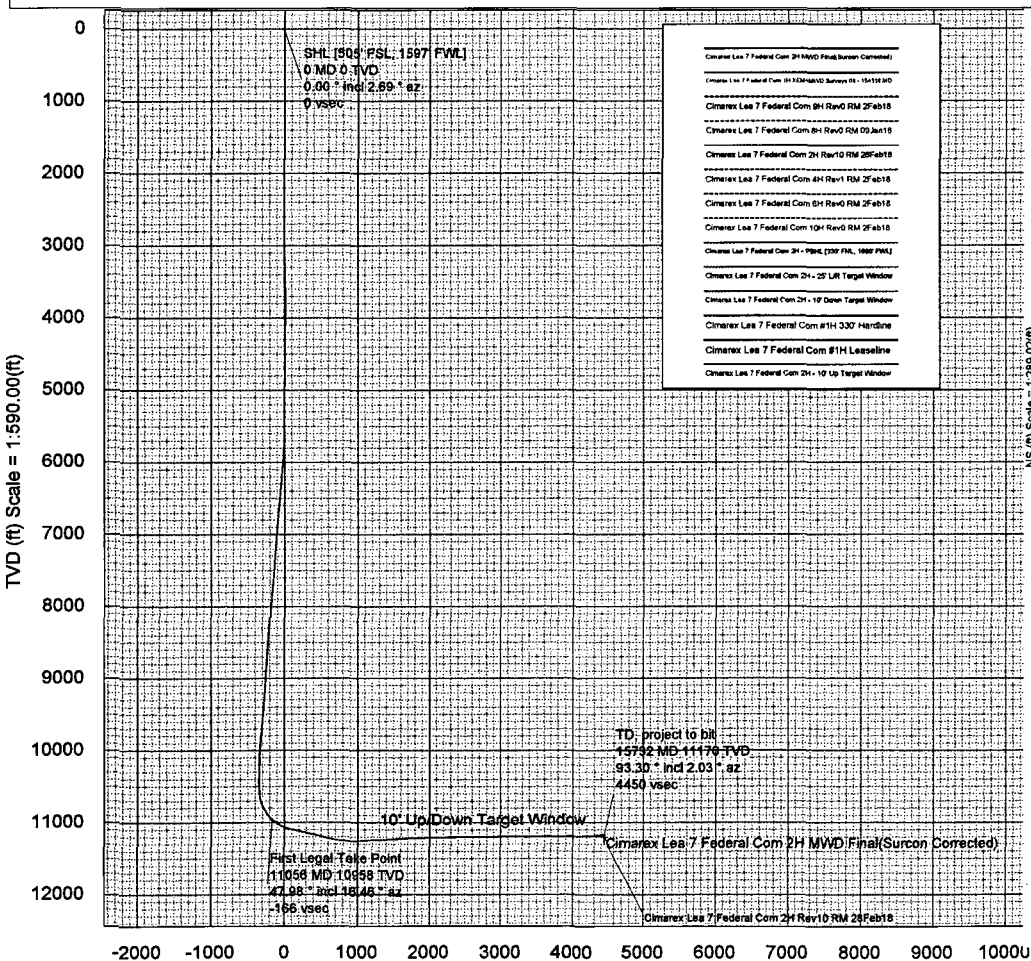


Borehole:	Well:	Field:	Structure:
Original Borehole	Cimarex Lea 7 Federal Com 2H	NM Lea County (NAD 83)	Cimarex Lea 7 Federal Com 2H

Gravity & Magnetic Parameters Model: HDGM 2017 MagDec: 8.669°	Dip: 60.539° FS: 48214.799nT	Date: 28-Feb-2018 Gravity FS: 998.806mg (8.80665 Based)	Surface Location Lat: N 32 34 54.38 Lon: W 103 29 59.93	NAD83 New Mexico State Plane, Eastern Zone, US Feet Northing: 576384.88RUS Easting: 788025.96RUS	Grid Conv: 0.4488° Scale Fact: 0.99998455	Miscellaneous Sht: Cimarex Lea 7 Plan: Cimarex Lea 7 Federal Com 2H MWD Final(Surcon Corrected)	TVD Ref: RKB(3898.9ft above MSL)
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Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL [505' FSL, 1597' FWL]	0.00	0.00	2.69	0.00	0.00	0.00	0.00	
First Legal Take Point	11058.00	47.98	16.46	10958.22	-165.62	-165.62	306.87	11.38
TD, project to bit	15732.00	93.30	2.03	11175.99	4450.15	4450.15	362.32	0.00



CONTROLLED	
Plan ref	Cimarex Lea 7 Federal Com 2H MWD
Drawing ref	Final(Surcon Corrected)
Copy number	of 3
Date	28-Mar-2018
1 Client	
2 Client	
3 Office	
4 Office	
Copy number	1st

172581-580-05

Cimarex Lea 7 Federal Com 2H MWD Final(Surcon Corrected) Survey

Geodetic Report

(Def Survey)



Report Date: March 08, 2018 - 03:18 PM
 Client: Cimarex
 Field: NM Lea County (NAD 83)
 Structure / Slot: Cimarex Lea 7 Federal Com 2H / Cimarex Lea 7 Federal Com 2H
 Well: Cimarex Lea 7 Federal Com 2H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Cimarex Lea 7 Federal Com 2H MWD Final(Surcon Corrected)
 Survey Date: February 08, 2018
 Tort / AHD / DDI / ERD Ratio: 201.244 * / 5308.244 ft / 6.174 / 0.472
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 34' 54.38158", W 103° 29' 59.93395"
 Location Grid N/E Y/X: N 576384.880 RUS, E 798025.960 RUS
 CRS Grid Convergence Angle: 0.4488 *
 Grid Scale Factor: 0.99998455
 Version / Patch: 2.10.696.0
 Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 360.000 * (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 3698.900 ft above MSL
 Seabed / Ground Elevation: 3674.900 ft above MSL
 Magnetic Declination: 6.669 *
 Total Gravity Field Strength: 998.5060mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48214.799 nT
 Magnetic Dip Angle: 60.539 *
 Declination Date: February 28, 2018
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.4488 *
 Total Corr Mag North->Grid North: 6.2204 *
 Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL [505' FSL, 1597' FWL]	0.00	0.00	2.69	0.00	0.00	0.00	0.00	N/A	576384.88	798025.96	N 32 34 54.38	W 103 29 59.93
	117.00	0.22	92.90	117.00	-0.01	-0.01	0.22	0.19	576384.87	798026.18	N 32 34 54.38	W 103 29 59.93
	208.00	0.28	47.53	208.00	0.13	0.13	0.56	0.22	576385.01	798026.52	N 32 34 54.38	W 103 29 59.93
	309.00	0.23	85.97	309.00	0.31	0.31	0.95	0.17	576385.19	798026.91	N 32 34 54.38	W 103 29 59.92
	402.00	0.16	126.59	402.00	0.25	0.25	1.24	0.16	576385.13	798027.20	N 32 34 54.38	W 103 29 59.92
	493.00	0.09	63.32	493.00	0.20	0.20	1.40	0.16	576385.08	798027.36	N 32 34 54.38	W 103 29 59.92
	585.00	0.09	175.84	585.00	0.16	0.16	1.47	0.16	576385.04	798027.43	N 32 34 54.38	W 103 29 59.92
	676.00	0.07	326.59	676.00	0.14	0.14	1.45	0.17	576385.02	798027.41	N 32 34 54.38	W 103 29 59.92
	766.00	0.06	250.42	766.00	0.17	0.17	1.37	0.09	576385.05	798027.33	N 32 34 54.38	W 103 29 59.92
	857.00	0.02	42.37	857.00	0.16	0.16	1.34	0.09	576385.04	798027.30	N 32 34 54.38	W 103 29 59.92
	952.00	0.06	240.13	952.00	0.15	0.15	1.31	0.08	576385.03	798027.27	N 32 34 54.38	W 103 29 59.92
	1046.00	0.03	203.47	1046.00	0.10	0.10	1.25	0.04	576384.98	798027.21	N 32 34 54.38	W 103 29 59.92
	1141.00	0.13	158.67	1141.00	-0.02	-0.02	1.28	0.12	576384.86	798027.24	N 32 34 54.38	W 103 29 59.92
	1232.00	0.19	231.79	1232.00	-0.21	-0.21	1.20	0.22	576384.67	798027.16	N 32 34 54.38	W 103 29 59.92
	1329.00	0.16	218.20	1329.00	-0.41	-0.41	0.99	0.05	576384.47	798026.95	N 32 34 54.38	W 103 29 59.92
	1424.00	0.14	250.24	1424.00	-0.56	-0.56	0.80	0.09	576384.32	798026.76	N 32 34 54.38	W 103 29 59.92
	1518.00	0.20	259.81	1518.00	-0.63	-0.63	0.53	0.07	576384.25	798026.49	N 32 34 54.38	W 103 29 59.93
	1613.00	0.37	252.75	1612.99	-0.75	-0.75	0.08	0.18	576384.13	798026.04	N 32 34 54.37	W 103 29 59.93
	1707.00	0.49	263.41	1706.99	-0.88	-0.88	-0.61	0.15	576384.00	798025.35	N 32 34 54.37	W 103 29 59.94
	1760.00	0.56	276.18	1759.99	-0.88	-0.88	-1.10	0.26	576384.00	798024.86	N 32 34 54.37	W 103 29 59.95
	1900.00	0.60	274.45	1899.98	-0.75	-0.75	-2.51	0.03	576384.13	798023.45	N 32 34 54.37	W 103 29 59.96
	1994.00	0.48	280.53	1993.98	-0.64	-0.64	-3.38	0.14	576384.24	798022.58	N 32 34 54.38	W 103 29 59.97
	2089.00	0.52	281.96	2088.97	-0.48	-0.48	-4.20	0.04	576384.40	798021.76	N 32 34 54.38	W 103 29 59.98
	2183.00	0.50	279.68	2182.97	-0.32	-0.32	-5.02	0.03	576384.56	798020.94	N 32 34 54.38	W 103 29 59.99
	2278.00	0.39	289.27	2277.97	-0.14	-0.14	-5.73	0.14	576384.74	798020.23	N 32 34 54.38	W 103 30 0.00
	2373.00	0.60	301.73	2372.96	0.22	0.22	-6.46	0.25	576385.10	798019.50	N 32 34 54.38	W 103 30 0.01
	2562.00	0.55	310.86	2561.95	1.34	1.34	-7.99	0.06	576386.22	798017.97	N 32 34 54.40	W 103 30 0.03
	2657.00	0.43	307.77	2656.95	1.86	1.86	-8.62	0.13	576386.74	798017.34	N 32 34 54.40	W 103 30 0.03
	2751.00	0.56	313.23	2750.95	2.39	2.39	-9.23	0.15	576387.27	798016.73	N 32 34 54.41	W 103 30 0.04
	2846.00	0.45	348.13	2845.94	3.07	3.07	-9.64	0.34	576387.95	798016.32	N 32 34 54.41	W 103 30 0.05
	2940.00	0.53	26.14	2939.94	3.82	3.82	-9.53	0.35	576388.70	798016.43	N 32 34 54.42	W 103 30 0.04
	3035.00	0.68	39.34	3034.94	4.65	4.65	-8.98	0.21	576389.53	798016.98	N 32 34 54.43	W 103 30 0.04
	3129.00	0.93	42.19	3128.93	5.65	5.65	-8.11	0.27	576390.53	798017.85	N 32 34 54.44	W 103 30 0.03
	3224.00	1.09	39.95	3223.91	6.91	6.91	-7.01	0.17	576391.79	798018.95	N 32 34 54.45	W 103 30 0.02
	3319.00	1.42	44.55	3318.89	8.44	8.44	-5.61	0.36	576393.32	798020.35	N 32 34 54.47	W 103 30 0.00
	3413.00	1.39	37.28	3412.86	10.18	10.18	-4.10	0.19	576395.06	798021.86	N 32 34 54.48	W 103 29 59.98
	3508.00	1.13	39.03	3507.84	11.82	11.82	-2.81	0.28	576396.70	798023.15	N 32 34 54.50	W 103 29 59.97
	3602.00	1.02	39.02	3601.82	13.19	13.19	-1.70	0.12	576398.07	798024.26	N 32 34 54.51	W 103 29 59.95
	3697.00	1.08	38.78	3696.81	14.55	14.55	-0.61	0.06	576399.43	798025.35	N 32 34 54.53	W 103 29 59.94
	3791.00	0.63	70.67	3790.79	15.41	15.41	0.43	0.68	576400.29	798026.39	N 32 34 54.53	W 103 29 59.93
	3886.00	0.84	151.06	3885.79	14.97	14.97	1.26	1.01	576399.85	798027.22	N 32 34 54.53	W 103 29 59.92
	3980.00	0.71	144.81	3979.78	13.90	13.90	1.93	0.16	576398.78	798027.89	N 32 34 54.52	W 103 29 59.91
	4075.00	0.69	143.64	4074.77	12.95	12.95	2.61	0.03	576397.83	798028.57	N 32 34 54.51	W 103 29 59.90
	4168.00	0.65	146.52	4167.77	12.06	12.06	3.23	0.06	576396.94	798029.19	N 32 34 54.50	W 103 29 59.90
	4262.00	0.76	147.94	4261.76	11.09	11.09	3.86	0.12	576395.97	798029.82	N 32 34 54.49	W 103 29 59.89
	4357.00	0.78	152.97	4356.75	9.98	9.98	4.49	0.07	576394.86	798030.45	N 32 34 54.48	W 103 29 59.88
	4452.00	0.61	142.67	4451.74	9.00	9.00	5.09	0.22	576393.88	798031.05	N 32 34 54.47	W 103 29 59.87
	4546.00	0.73	150.26	4545.74	8.08	8.08	5.69	0.16	576392.96	798031.65	N 32 34 54.46	W 103 29 59.87
	4641.00	0.75	146.37	4640.73	7.04	7.04	6.33	0.06	576391.92	798032.29	N 32 34 54.45	W 103 29 59.86
	4735.00	0.57	139.99	4734.72	6.17	6.17	6.97	0.21	576391.05	798032.93	N 32 34 54.44	W 103 29 59.85
	4830.00	0.68	159.06	4829.72	5.28	5.28	7.48	0.25	576390.16	798033.44	N 32 34 54.43	W 103 29 59.85
	4925.00	0.79	177.12	4924.71	4.10	4.10	7.71	0.27	576388.98	798033.67	N 32 34 54.42	W 103 29 59.84
	5019.00	0.77	176.43	5018.70	2.82	2.82	7.79	0.02	576387.70	798033.75	N 32 34 54.41	W 103 29 59.84
	5114.00	0.64	184.35	5113.69	1.66	1.66	7.79	0.17	576386.54	798033.74	N 32 34 54.40	W 103 29 59.84
	5208.00	0.37	183.68	5207.69	0.83	0.83	7.73	0.29	576385.71	798033.69	N 32 34 54.39	W 103 29 59.84
	5303.00	0.51	188.88	5302.69	0.11	0.11	7.64	0.15	576384.99	798033.60	N 32 34 54.38	W 103 29 59.84
	5398.00	0.57	187.32	5397.68	-0.78	-0.78	7.51	0.07	576384.10	798033.47	N 32 34 54.37	W 103 29 59.85
	5492.00	0.45	171.76	5491.68	-1.61	-1.61	7.51	0.19	576383.27	798033.47	N 32 34 54.37	W 103 29 59.85
	5584.00	0.38	178.86	5583.68	-2.13	-2.13	7.55	0.12	576382.75	798033.51	N 32 34 54.36	W 103 29 59.85
	5657.00	0.57	161.15	5656.68	-2.87	-2.87	7.71	0.26	576382.01	798033.67	N 32 34 54.35	W 103 29 59.84
	5752.00	1.40	158.11	5751.66	-4.40	-4.40	8.29	0.88	576380.48	798034.25	N 32 34 54.34	W 103 29 59.84
	5846.00	2.82	159.17	5845.59	-7.62	-7.62	9.51	1.51	576377.26	798035.50	N 32 34 54.31	W 103 29 59.82
	5941.00	3.89	158.64	5940.43	-12.81	-12.81	11.55	1.13	576372.07	798037.51	N 32 34 54.25	W 103 29 59.80
	6036.00	5.49	157.58	6035.11	-20.01	-20.01	14.46	1.69	576364.87	798040.42	N 32 34 54.18	W 103 29 59.77

Comments	MD	Incl	Azin Grd	TVD	VSEC	NS	EW	DLS	Northng	Eastng	Latitude	Longitude
	6130.00	5.73	156.71	6128.66	-28.48	-28.48	18.03	0.27	576556.40	798043.99	N 32 34 54.10 W	101 29 59.73
	6225.00	5.56	157.55	6223.20	-37.09	-37.09	21.66	0.20	576047.79	798047.99	N 32 34 54.01 W	101 29 59.68
	6319.00	5.15	155.45	6316.79	-45.13	-45.13	25.15	0.48	576333.75	798051.11	N 32 34 53.93 W	101 29 59.64
	6414.00	5.49	161.57	6411.95	-53.15	-53.15	28.80	0.36	576333.75	798051.11	N 32 34 53.85 W	101 29 59.60
	6509.00	5.45	161.57	6505.95	-61.57	-61.57	31.57	0.60	576333.75	798051.11	N 32 34 53.77 W	101 29 59.56
	6604.00	5.86	163.09	6600.48	-70.49	-70.49	34.55	0.45	576333.75	798051.11	N 32 34 53.68 W	101 29 59.53
	6694.00	5.25	161.42	6690.06	-78.78	-78.78	37.59	0.70	576333.75	798051.11	N 32 34 53.60 W	101 29 59.50
	6783.00	4.80	163.03	6788.68	-87.04	-87.04	40.48	0.48	576333.75	798051.11	N 32 34 53.54 W	101 29 59.47
	6888.00	4.93	164.23	6883.34	-94.77	-94.77	42.52	0.17	576290.11	798068.47	N 32 34 53.44 W	101 29 59.45
	6992.00	4.89	162.02	6987.01	-102.27	-102.27	44.76	0.34	576282.62	798070.74	N 32 34 53.29 W	101 29 59.42
	7071.00	4.03	164.28	7071.58	-109.81	-109.81	47.06	0.47	576282.62	798070.74	N 32 34 53.22 W	101 29 59.39
	7111.00	4.89	165.87	7115.37	-117.19	-117.19	49.04	0.51	576282.62	798070.74	N 32 34 53.15 W	101 29 59.35
	7266.00	4.43	166.60	7266.80	-123.98	-123.98	50.74	0.25	576282.62	798070.74	N 32 34 53.08 W	101 29 59.32
	7381.00	3.77	167.60	7384.80	-130.26	-130.26	52.14	0.45	576282.62	798070.74	N 32 34 53.00 W	101 29 59.29
	7456.00	5.20	168.08	7448.61	-137.39	-137.39	53.89	1.41	576282.62	798070.74	N 32 34 52.92 W	101 29 59.26
	7550.00	5.13	169.71	7543.23	-145.54	-145.54	56.17	0.19	576233.24	798086.13	N 32 34 52.84 W	101 29 59.23
	7645.00	5.04	169.71	7637.85	-153.71	-153.71	58.54	0.20	576233.24	798086.13	N 32 34 52.76 W	101 29 59.20
	7739.00	5.10	169.71	7731.48	-161.69	-161.69	60.85	0.07	576233.24	798086.13	N 32 34 52.68 W	101 29 59.17
	7834.00	4.78	169.71	7826.13	-169.58	-169.58	62.99	0.39	576215.30	798098.55	N 32 34 52.60 W	101 29 59.14
	7924.00	4.85	169.71	7919.81	-176.90	-176.90	64.84	0.08	576207.98	798100.80	N 32 34 52.52 W	101 29 59.11
	8023.00	5.08	169.71	8014.44	-183.16	-183.16	67.07	0.32	576184.15	798103.06	N 32 34 52.44 W	101 29 59.08
	8118.00	5.24	169.71	8109.05	-193.17	-193.17	70.07	0.64	576184.15	798103.06	N 32 34 52.36 W	101 29 59.05
	8212.00	4.78	169.71	8202.69	-200.73	-200.73	73.26	0.50	576184.15	798103.06	N 32 34 52.28 W	101 29 59.02
	8307.00	4.25	169.71	8297.40	-207.72	-207.72	75.90	0.63	576171.06	798103.06	N 32 34 52.20 W	101 29 59.00
	8401.00	3.53	169.71	8391.18	-213.83	-213.83	77.73	0.84	576171.06	798103.06	N 32 34 52.12 W	101 29 58.97
	8496.00	3.48	169.71	8486.00	-219.47	-219.47	79.11	0.08	576165.41	798106.05	N 32 34 52.04 W	101 29 58.94
	8591.00	3.94	169.71	8580.80	-225.35	-225.35	80.69	0.68	576165.41	798106.05	N 32 34 51.96 W	101 29 58.91
	8685.00	4.35	169.71	8674.56	-231.74	-231.74	83.19	0.42	576153.14	798106.05	N 32 34 51.88 W	101 29 58.88
	8780.00	4.53	169.71	8769.33	-237.92	-237.92	85.78	1.07	576146.97	798111.23	N 32 34 51.80 W	101 29 58.85
	8874.00	4.53	169.71	8863.10	-244.25	-244.25	87.14	0.49	576146.97	798111.23	N 32 34 51.72 W	101 29 58.82
	8969.00	4.26	169.71	8957.82	-251.34	-251.34	89.79	0.64	576146.97	798111.23	N 32 34 51.64 W	101 29 58.79
	9063.00	3.72	169.71	9051.59	-257.72	-257.72	90.20	0.64	576146.97	798111.23	N 32 34 51.56 W	101 29 58.76
	9158.00	3.22	169.71	9146.39	-263.64	-263.64	91.91	0.23	576146.97	798111.23	N 32 34 51.48 W	101 29 58.73
	9253.00	4.20	169.71	9241.17	-269.61	-269.61	94.54	0.96	576146.97	798111.23	N 32 34 51.40 W	101 29 58.70
	9347.00	5.48	169.71	9334.83	-276.68	-276.68	97.14	1.40	576146.97	798111.23	N 32 34 51.32 W	101 29 58.67
	9442.00	4.26	169.71	9429.49	-284.02	-284.02	101.47	1.30	576146.97	798111.23	N 32 34 51.24 W	101 29 58.64
	9537.00	5.80	169.71	9524.12	-291.69	-291.69	104.71	1.62	576146.97	798111.23	N 32 34 51.16 W	101 29 58.61
	9631.00	4.72	169.71	9617.72	-299.79	-299.79	107.62	1.31	576146.97	798111.23	N 32 34 51.08 W	101 29 58.58
	9726.00	4.58	169.71	9712.39	-307.55	-307.55	109.27	0.75	576146.97	798111.23	N 32 34 51.00 W	101 29 58.55
	9821.00	5.89	169.71	9806.99	-316.10	-316.10	110.68	0.77	576146.97	798111.23	N 32 34 50.92 W	101 29 58.52
	9915.00	5.16	169.71	9900.88	-324.69	-324.69	112.58	0.59	576146.97	798111.23	N 32 34 50.84 W	101 29 58.49
	10010.00	3.26	169.71	9995.32	-331.34	-331.34	114.63	2.07	576146.97	798111.23	N 32 34 50.76 W	101 29 58.46
	10104.00	1.55	169.71	10089.23	-335.10	-335.10	115.43	1.95	576146.97	798111.23	N 32 34 50.68 W	101 29 58.43
	10199.00	1.29	169.71	10184.20	-337.37	-337.37	115.43	0.73	576146.97	798111.23	N 32 34 50.60 W	101 29 58.40
	10293.00	1.09	169.71	10278.18	-339.46	-339.46	115.71	0.59	576146.97	798111.23	N 32 34 50.52 W	101 29 58.37
	10385.00	1.35	169.71	10370.16	-341.20	-341.20	115.71	0.92	576146.97	798111.23	N 32 34 50.44 W	101 29 58.34
	10480.00	3.64	169.71	10465.08	-341.85	-341.85	115.71	3.21	576146.97	798111.23	N 32 34 50.36 W	101 29 58.31
	10574.00	8.06	169.71	10496.90	-341.64	-341.64	115.71	13.88	576146.97	798111.23	N 32 34 50.28 W	101 29 58.28
	10670.00	28.43	169.71	10466.77	-342.60	-342.60	115.71	3.21	576146.97	798111.23	N 32 34 50.20 W	101 29 58.25
	10764.00	33.15	169.71	10470.51	-342.34	-342.34	115.71	10.31	576146.97	798111.23	N 32 34 50.12 W	101 29 58.22
	10859.00	34.29	169.71	10480.93	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	10954.00	34.41	169.71	10480.93	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11049.00	50.15	169.71	10973.29	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11144.00	55.84	169.71	11071.54	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11239.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11334.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11429.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11524.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11619.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11714.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11809.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	11904.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12000.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12095.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12190.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12285.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12380.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12475.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12570.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12665.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12760.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12855.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	12950.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	13045.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	13140.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23	N 32 34 50.04 W	101 29 58.19
	13235.00	68.15	169.71	11059.26	-342.08	-342.08	115.71	10.31	576146.97	798111.23		

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 ° ' '')
	12745.00	91.72	358.55	11233.38	1464.83	1464.83	353.08	0.80	577849.69	798379.04	N 32 35 8.85	W 103 29 55.67
	12839.00	94.75	358.32	11228.08	1558.64	1558.64	350.52	3.23	577943.49	798376.47	N 32 35 9.78	W 103 29 55.69
	12934.00	94.16	358.76	11220.70	1653.32	1653.32	348.12	0.79	578038.17	798374.08	N 32 35 10.71	W 103 29 55.71
	13028.00	92.06	359.77	11215.60	1747.17	1747.17	346.94	2.47	578132.02	798372.89	N 32 35 11.64	W 103 29 55.72
	13123.00	92.41	359.79	11211.90	1842.09	1842.09	346.57	0.37	578226.94	798372.53	N 32 35 12.58	W 103 29 55.71
	13218.00	91.00	0.75	11209.07	1937.05	1937.05	347.02	1.80	578321.89	798372.97	N 32 35 13.52	W 103 29 55.70
	13312.00	91.17	0.57	11207.29	2031.02	2031.02	348.10	0.26	578415.87	798374.06	N 32 35 14.45	W 103 29 55.68
	13407.00	91.10	0.50	11205.41	2126.00	2126.00	348.89	0.10	578510.84	798374.94	N 32 35 15.39	W 103 29 55.66
	13501.00	91.44	0.28	11203.32	2219.98	2219.98	349.63	0.43	578604.82	798375.58	N 32 35 16.32	W 103 29 55.64
	13595.00	91.41	0.82	11200.99	2313.94	2313.94	350.53	0.58	578698.78	798376.48	N 32 35 17.25	W 103 29 55.63
	13690.00	91.34	0.61	11198.71	2408.91	2408.91	351.72	0.23	578793.75	798377.67	N 32 35 18.19	W 103 29 55.60
	13784.00	89.86	359.61	11197.72	2502.90	2502.90	351.90	1.90	578887.73	798377.85	N 32 35 19.12	W 103 29 55.59
	13879.00	90.10	358.83	11197.76	2597.89	2597.89	350.60	0.86	578982.72	798376.56	N 32 35 20.06	W 103 29 55.60
	13973.00	90.48	0.90	11197.28	2691.88	2691.88	350.38	2.24	579076.72	798376.34	N 32 35 20.99	W 103 29 55.59
	14068.00	90.58	0.88	11196.40	2786.87	2786.87	351.86	0.11	579171.70	798377.81	N 32 35 21.93	W 103 29 55.57
	14162.00	90.65	1.28	11195.39	2880.84	2880.84	353.63	0.43	579265.67	798379.58	N 32 35 22.86	W 103 29 55.54
	14256.00	90.72	1.34	11194.27	2974.81	2974.81	355.78	0.10	579359.64	798381.73	N 32 35 23.79	W 103 29 55.50
	14351.00	89.86	1.25	11193.79	3069.79	3069.79	357.92	0.91	579454.61	798383.88	N 32 35 24.73	W 103 29 55.47
	14445.00	90.21	0.21	11193.73	3163.78	3163.78	359.12	1.17	579548.60	798385.08	N 32 35 25.66	W 103 29 55.45
	14540.00	89.52	359.14	11193.95	3258.77	3258.77	358.58	1.34	579643.60	798384.54	N 32 35 26.60	W 103 29 55.44
	14634.00	89.42	359.15	11194.82	3352.76	3352.76	357.18	0.11	579737.58	798383.13	N 32 35 27.53	W 103 29 55.45
	14729.00	90.28	359.35	11195.07	3447.75	3447.75	355.94	0.93	579832.57	798381.89	N 32 35 28.47	W 103 29 55.46
	14823.00	90.58	0.50	11194.37	3541.75	3541.75	355.81	1.26	579926.56	798381.77	N 32 35 29.40	W 103 29 55.45
	14918.00	89.62	358.77	11194.20	3636.74	3636.74	355.21	2.08	580021.56	798381.16	N 32 35 30.34	W 103 29 55.45
	15012.00	89.83	358.51	11194.65	3730.71	3730.71	352.98	0.36	580115.53	798378.93	N 32 35 31.27	W 103 29 55.47
	15107.00	90.03	359.35	11194.77	3825.69	3825.69	351.20	0.91	580210.51	798377.16	N 32 35 32.21	W 103 29 55.48
	15201.00	90.38	0.50	11194.43	3919.69	3919.69	351.08	1.28	580304.50	798377.03	N 32 35 33.14	W 103 29 55.47
	15296.00	90.96	1.06	11193.32	4014.67	4014.67	352.37	0.85	580399.48	798378.33	N 32 35 34.08	W 103 29 55.45
	15391.00	91.03	1.52	11191.67	4109.64	4109.64	354.51	0.49	580494.44	798380.47	N 32 35 35.02	W 103 29 55.41
	15485.00	92.44	0.71	11188.82	4203.57	4203.57	356.34	1.73	580588.38	798382.29	N 32 35 35.95	W 103 29 55.38
	15580.00	92.89	1.02	11184.41	4298.46	4298.46	357.77	0.58	580683.26	798383.73	N 32 35 36.88	W 103 29 55.36
	15674.00	93.30	2.03	11179.33	4392.29	4392.29	360.27	1.16	580777.09	798386.22	N 32 35 37.81	W 103 29 55.32
TD, project to bit	15732.00	93.30	2.03	11175.99	4450.15	4450.15	362.32	0.00	580834.96	798388.28	N 32 35 38.38	W 103 29 55.29

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	24.000	1/98.425	17.500	13.375	NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Cimarex Lea 7 Federal Com 2H MWD Final(Surcon Corrected)
	1	24.000	24.000	Act Stns	17.500	13.375	NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Cimarex Lea 7 Federal Com 2H MWD Final(Surcon Corrected)
	1	24.000	15732.000	Act Stns	17.500	13.375	NAL_MWD_IFR1+MS	Original Borehole / Cimarex Lea 7 Federal Com 2H MWD