

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

EMNRD-OCD ARTESIA Form C-102
REC'D: 6/1/2020 Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-45972	² Pool Code 98220	³ Pool Name Purple Sage Wolfcamp (Gas)
⁴ Property Code 321482	⁵ Property Name RIVERBEND 12-13 FEDERAL COM	⁶ Well Number 31H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁹ Elevation 2937.5

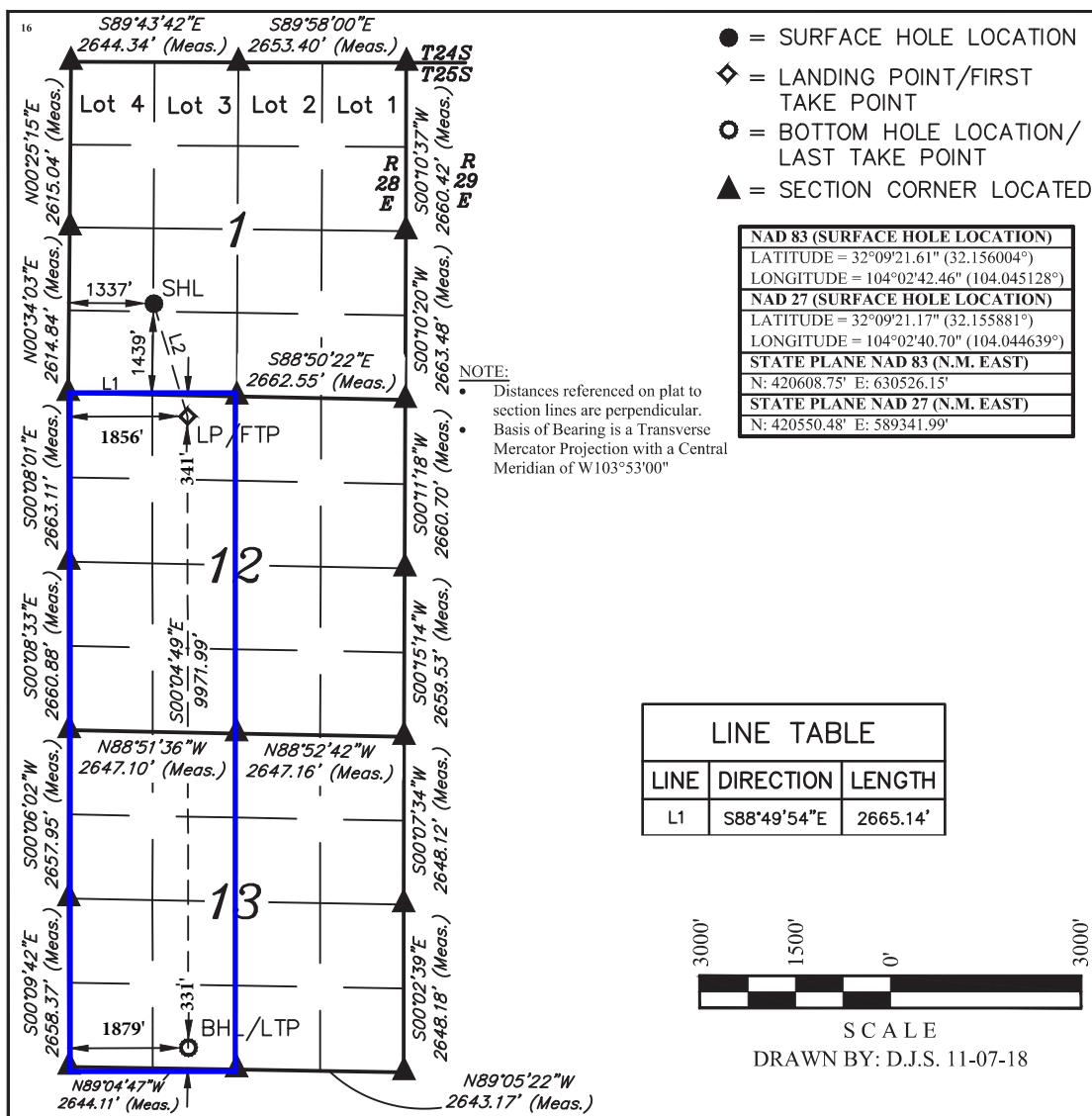
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	1	25S	28E		1439	SOUTH	1337	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
N	13	25S	28E		331	SOUTH	1879	WEST	EDDY
¹² Dedicated Acres 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



¹⁷ OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Fatima Vasquez 04/08/2020
Signature Date

Fatima Vasquez

Printed Name

fvasquez@cimarex.com

E-mail Address

¹⁸ SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

December 12, 2017

Date of Survey

Signature and Seal of Professional Surveyor:



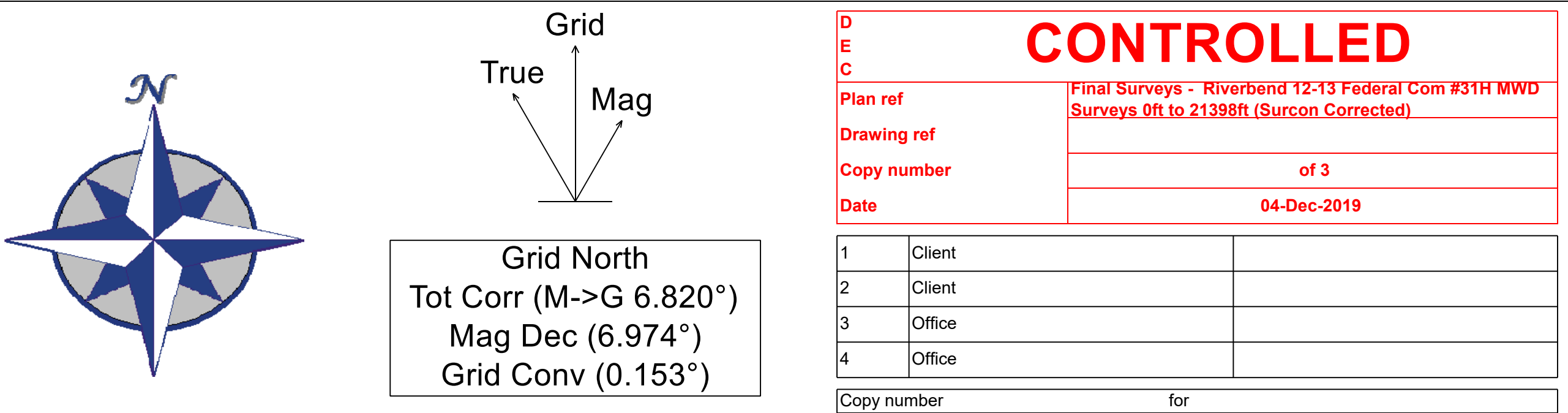
Certificate Number:



Borehole:	Well:	Field:	Structure:
Riverbend 12-13 Federal Com #31H	Riverbend 12-13 Federal Com #31H	NM Eddy County (NAD 83)	Cimarex Riverbend 12-13 Federal Com #31H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	HDGM 2019	Dip:	59.851°	Date:	11-Nov-2019	Lat:	N 32 9 21.61	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Slot:	New Slot	TVD Ref:
MagDec:	6.974°	FS:	47831.994nT	Gravity FS:	998.46mgn (9.80665 Based)	Lon:	W 104 2 42.46	Northing:	420608.75ftUS	Plan:	RKB(2960.5ft above MSL)
								Easting:	630526.15ftUS	Final Surveys - Riverbend 12-13 Federal Com #31H MWD Surveys 0ft to 21398ft (Surcon Corrected)	
								Grid Conv:	0.1534°		
								Scale Fact:	0.9999182		

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL 1439' FSL, 1337' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First SLB Survey	9367.00	2.08	220.94	9337.02	26.03	-23.13	511.86	0.36
KOP	9448.03	10.25	178.18	9417.64	33.09	-30.20	511.08	14.91
Section 1-12 Line Crossing [1880' FWL]	11096.50	89.60	179.41	9943.00	1450.44	-1447.44	535.04	1.37
First Legal Take Point [330' From Section 1-12 Line, [1872' FWL]	11426.59	89.62	181.30	9943.66	1780.40	-1777.44	528.92	1.21
Section 12-13 Line Crossing [1865' FWL]	16419.50	90.46	179.00	9961.19	6772.52	-6769.48	555.20	1.06
Final Survey	21368.00	89.34	179.75	9934.88	11720.26	-11717.10	591.87	1.55
TD, PTB [331' FSL, 1879' FWL]	21398.00	89.34	179.75	9935.23	11750.26	-11747.10	592.00	0.00



CONTROLLED

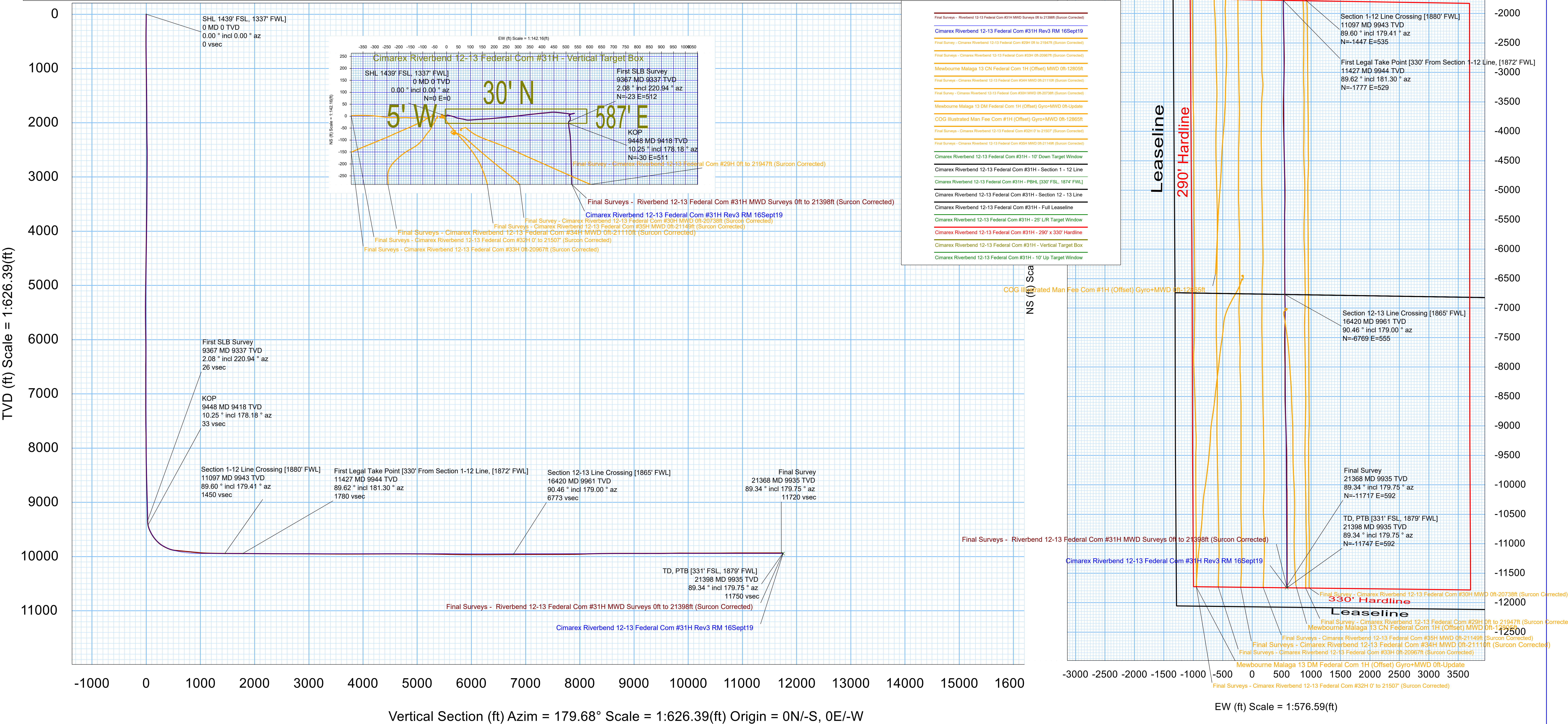
Final Surveys - Riverbend 12-13 Federal Com #31H MWD Surveys 0ft to 21398ft (Surcon Corrected)

of 3

04-Dec-2019

1	Client	
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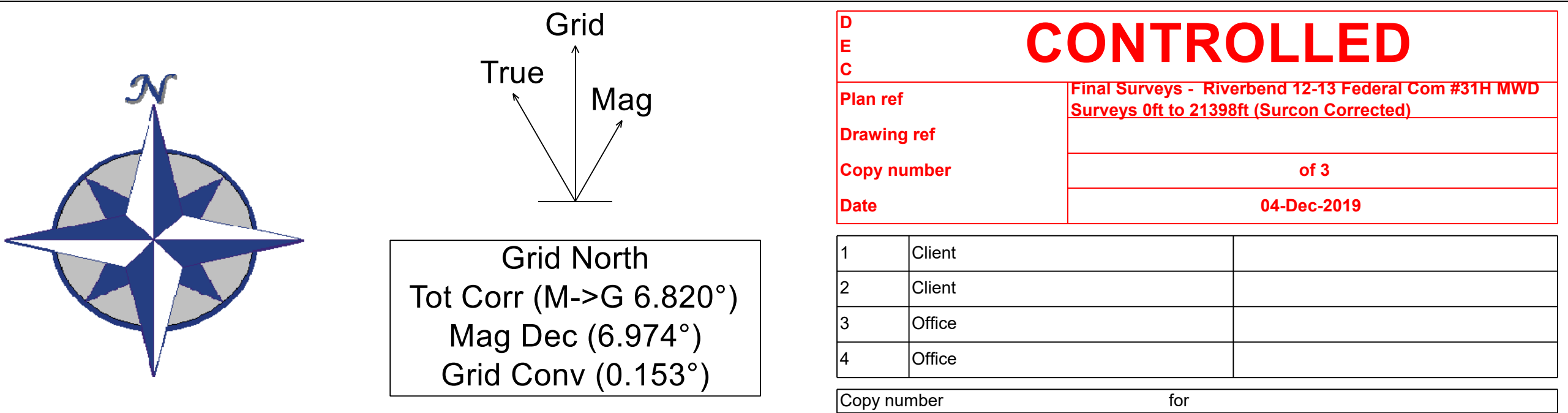




Borehole:	Well:	Field:	Structure:
Riverbend 12-13 Federal Com #31H	Riverbend 12-13 Federal Com #31H	NM Eddy County (NAD 83)	Cimarex Riverbend 12-13 Federal Com #31H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	HDGM 2019	Dip:	59.851°	Date:	11-Nov-2019	Lat:	N 32 9 21.61	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Slot:	New Slot	TVD Ref:
MagDec:	6.974°	FS:	47831.994nT	Gravity FS:	998.46mgn (9.80665 Based)	Lon:	W 104 2 42.46	Northing:	420608.75ftUS	Plan:	RKB(2960.5ft above MSL)
								Easting:	630526.15ftUS	Final Surveys - Riverbend 12-13 Federal Com #31H MWD Surveys 0ft to 21398ft (Surcon Corrected)	
								Grid Conv:	0.1534°		
								Scale Fact:	0.9999182		

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
SHL 1439' FSL, 1337' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
First SLB Survey	9367.00	2.08	220.94	9337.02	26.03	-23.13	511.86	0.36
KOP	9448.03	10.25	178.18	9417.64	33.09	-30.20	511.08	14.91
Section 1-12 Line Crossing [1880' FWL]	11096.50	89.60	179.41	9943.00	1450.44	-1447.44	535.04	1.37
First Legal Take Point [330' From Section 1-12 Line, [1872' FWL]	11426.59	89.62	181.30	9943.66	1780.40	-1777.44	528.92	1.21
Section 12-13 Line Crossing [1865' FWL]	16419.50	90.46	179.00	9961.19	6772.52	-6769.48	555.20	1.06
Final Survey	21368.00	89.34	179.75	9934.88	11720.26	-11717.10	591.87	1.55
TD, PTB [331' FSL, 1879' FWL]	21398.00	89.34	179.75	9935.23	11750.26	-11747.10	592.00	0.00



CONTROLLED

Final Surveys - Riverbend 12-13 Federal Com #31H MWD Surveys 0ft to 21398ft (Surcon Corrected)

Plan ref

Drawing ref

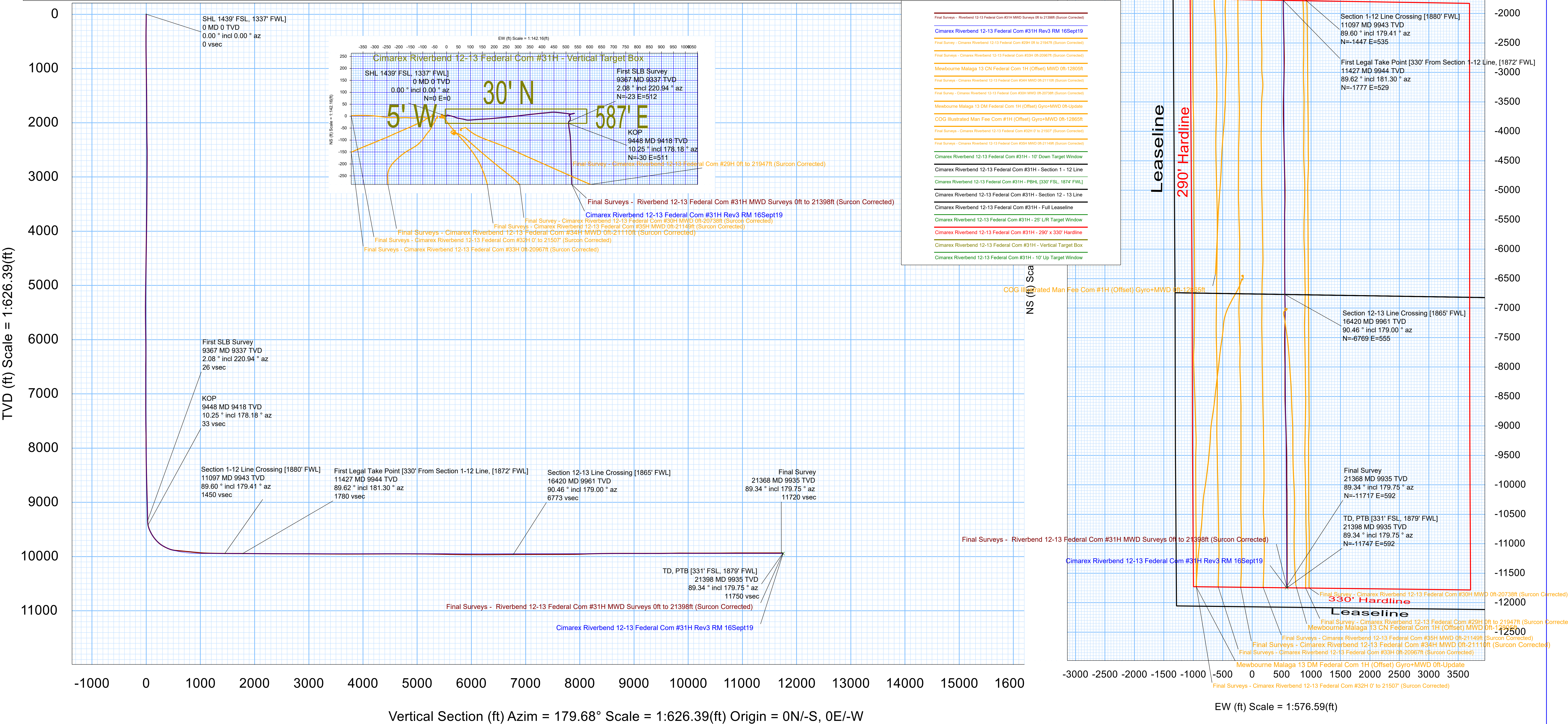
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Date

of 3

04-Dec-2019

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4	Office	
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Final Surveys - Riverbend 12-13 Federal Com #31H MWD Surveys 0ft to 21398ft (Surcon Corrected) Survey Geodetic Report (Def Survey)



Report Date:	December 04, 2019 - 11:22 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex Energy	Vertical Section Azimuth:	179.676 ° (Grid North)
Field:	NM Eddy County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex Riverbend 12-13 Federal Com #31H / New Slot	TVD Reference Datum:	RKB
Well:	Riverbend 12-13 Federal Com #31H	TVD Reference Elevation:	2960.500 ft above MSL
Borehole:	Riverbend 12-13 Federal Com #31H	Seabed / Ground Elevation:	2937.500 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.974 °
Survey Name:	Final Surveys - Riverbend 12-13 Federal Com #31H MWD Surveys 0ft to 21398ft (Surcon Corrected)	Total Gravity Field Strength:	998.4601mgn (9.80665 Based)
Survey Date:	July 20, 2019	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	211.200 ° / 12329.525 ft / 6.748 / 1.237	Total Magnetic Field Strength:	47831.994 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	59.851 °
Location Lat / Long:	N 32° 9' 21.61300", W 104° 2' 42.46230"	Declination Date:	November 11, 2019
Location Grid N/E Y/X:	N 420608.750 ftUS, E 630526.150 ftUS	Magnetic Declination Model:	HDGM 2019
CRS Grid Convergence Angle:	0.1534 °	North Reference:	Grid North
Grid Scale Factor:	0.9999182	Grid Convergence Used:	0.1534 °
Version / Patch:	2.10.787.0	Total Corr Mag North->Grid North:	6.8203 °
		Local Coord Referenced To:	Well Head

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 1439' FSL, 1337' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	420608.75	630526.15	N 32 9 21.61	W 104 2 42.46	0.00	0.00
	201.00	0.90	1.89	200.99	-1.58	1.58	0.05	0.45	420610.33	630526.20	N 32 9 21.63	W 104 2 42.46	1.89	1.58
	383.00	1.20	51.49	382.96	-4.18	4.19	1.59	0.51	420612.94	630527.74	N 32 9 21.65	W 104 2 42.44	20.77	4.48
	484.00	2.12	104.45	483.93	-4.36	4.39	4.23	1.68	420613.14	630530.38	N 32 9 21.66	W 104 2 42.41	43.95	6.09
	576.00	1.86	106.34	575.87	-3.50	3.54	7.31	0.29	420612.29	630533.46	N 32 9 21.65	W 104 2 42.38	64.15	8.12
	666.00	2.26	103.36	665.81	-2.66	2.72	10.44	0.46	420611.47	630536.59	N 32 9 21.64	W 104 2 42.34	75.39	10.78
	757.00	2.26	102.82	756.74	-1.83	1.91	13.93	0.02	420610.66	630540.08	N 32 9 21.63	W 104 2 42.30	82.21	14.06
	849.00	2.38	99.15	848.67	-1.10	1.20	17.59	0.21	420609.95	630543.73	N 32 9 21.62	W 104 2 42.26	86.09	17.63
	938.00	2.38	105.73	937.59	-0.29	0.41	21.19	0.31	420609.16	630547.34	N 32 9 21.62	W 104 2 42.22	88.90	21.19
	1032.00	2.63	107.49	1031.50	0.91	-0.77	25.12	0.28	420607.98	630551.27	N 32 9 21.60	W 104 2 42.17	91.76	25.14
	1223.00	2.45	108.53	1222.31	3.57	-3.39	33.17	0.10	420605.36	630559.32	N 32 9 21.58	W 104 2 42.08	95.83	33.35
	1318.00	2.05	109.46	1317.24	4.80	-4.60	36.70	0.42	420604.15	630562.85	N 32 9 21.57	W 104 2 42.04	97.14	36.99
	1506.00	1.98	110.33	1505.12	7.09	-6.85	42.92	0.04	420601.90	630569.06	N 32 9 21.54	W 104 2 41.96	99.06	43.46
	1601.00	1.81	107.60	1600.07	8.13	-7.87	45.89	0.20	420600.88	630572.03	N 32 9 21.53	W 104 2 41.93	99.73	46.56
	1695.00	1.33	102.13	1694.03	8.82	-8.55	48.37	0.53	420600.20	630574.51	N 32 9 21.53	W 104 2 41.90	100.02	49.12
	1790.00	1.09	102.30	1789.01	9.26	-8.97	50.33	0.25	420599.78	630576.48	N 32 9 21.52	W 104 2 41.88	100.11	51.12
	1885.00	1.11	87.30	1884.00	9.42	-9.12	52.13	0.30	420599.63	630578.28	N 32 9 21.52	W 104 2 41.86	99.92	52.92
	1979.00	1.75	102.58	1977.97	9.70	-9.39	54.44	0.79	420599.36	630580.59	N 32 9 21.52	W 104 2 41.83	99.79	55.25
	2073.00	2.55	102.28	2071.90	10.48	-10.15	57.89	0.85	420598.60	630584.03	N 32 9 21.51	W 104 2 41.79	99.94	58.77
	2168.00	2.51	98.37	2166.81	11.25	-10.90	62.01	0.19	420597.85	630588.15	N 32 9 21.50	W 104 2 41.74	99.97	62.96
	2262.00	3.42	101.42	2260.68	12.13	-11.76	66.79	0.98	420597.00	630592.94	N 32 9 21.49	W 104 2 41.69	99.98	67.82
	2452.00	5.46	104.56	2450.10	15.61	-15.15	81.10	1.08	420593.60	630607.24	N 32 9 21.46	W 104 2 41.52	100.58	82.50
	2547.00	6.05	89.22	2544.63	16.73	-16.22	90.48	1.73	420592.53	630616.62	N 32 9 21.45	W 104 2 41.41	100.16	91.92
	2723.00	4.92	84.92	2719.82	16.03	-15.42	107.27	0.68	420593.33	630633.41	N 32 9 21.46	W 104 2 41.21	98.18	108.38
	2818.00	5.09	85.05	2814.46	15.35	-14.70	115.53	0.18	420594.05	630641.67	N 32 9 21.46	W 104 2 41.12	97.25	116.46
	2912.00	5.09	86.32	2908.09	14.77	-14.07	123.84	0.12	420594.68	630649.98	N 32 9 21.47	W 104 2 41.02	96.48	124.64
	3006.00	5.14	87.06	3001.71	14.34	-13.59	132.21	0.09	420595.16	630658.35	N 32 9 21.48	W 104 2 40.92	95.87	132.91
	3101.00	5.26	85.80	3096.32	13.85	-13.05	140.80	0.17	420595.70	630666.94	N 32 9 21.48	W 104 2 40.82	95.30	141.41
	3196.00	5.66	86.53	3190.89	13.30	-12.45	149.82	0.43	420596.30	630675.96	N 32 9 21.49	W 104 2 40.72	94.75	150.34
	3290.00	7.36	85.82	3284.28	12.64	-11.73	160.46	1.81	420597.02	630686.59	N 32 9 21.49	W 104 2 40.60	94.18	160.88
	3385.00	7.30	86.96	3378.50	11.94	-10.97	172.55	0.17	420597.79	630698.69	N 32 9 21.50	W 104 2 40.46	93.64	172.90

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)
	3478.00	7.17	85.66	3470.76	11.25	-10.21	184.24	0.22	420598.54	630710.37	N 32 9 21.51	W 104 2 40.32	93.17	184.52
	3573.00	6.39	84.80	3565.10	10.39	-9.29	195.42	0.83	420599.47	630721.55	N 32 9 21.52	W 104 2 40.19	92.72	195.64
	3667.00	6.17	83.00	3658.53	9.36	-8.20	205.64	0.31	420600.56	630731.77	N 32 9 21.53	W 104 2 40.07	92.28	205.80
	3761.00	7.49	84.69	3751.87	8.24	-7.01	216.75	1.42	420601.74	630742.88	N 32 9 21.54	W 104 2 39.94	91.85	216.87
	3856.00	8.11	85.00	3845.99	7.15	-5.86	229.59	0.65	420602.89	630755.72	N 32 9 21.55	W 104 2 39.79	91.46	229.67
	4045.00	7.81	84.33	4033.16	4.87	-3.43	255.65	0.17	420605.33	630781.78	N 32 9 21.57	W 104 2 39.49	90.77	255.68
	4233.00	8.10	83.57	4219.36	2.27	-0.68	281.53	0.16	420608.07	630807.65	N 32 9 21.60	W 104 2 39.19	90.14	281.53
	4325.00	8.10	83.71	4310.44	0.91	0.76	294.41	0.02	420609.51	630820.53	N 32 9 21.61	W 104 2 39.04	89.85	294.41
	4422.00	8.06	83.36	4406.47	-0.55	2.29	307.96	0.07	420611.04	630834.08	N 32 9 21.63	W 104 2 38.88	89.57	307.96
	4516.00	8.10	83.10	4499.54	-2.03	3.85	321.08	0.06	420612.60	630847.20	N 32 9 21.64	W 104 2 38.73	89.31	321.10
	4704.00	8.32	83.10	4685.61	-5.11	7.07	347.73	0.12	420615.82	630873.85	N 32 9 21.67	W 104 2 38.42	88.83	347.80
	4893.00	8.08	84.05	4872.68	-7.98	10.09	374.51	0.15	420618.84	630900.63	N 32 9 21.70	W 104 2 38.11	88.46	374.65
	4987.00	8.13	84.49	4965.74	-9.22	11.42	387.70	0.08	420620.17	630913.82	N 32 9 21.72	W 104 2 37.95	88.31	387.87
	5081.00	7.69	84.85	5058.85	-10.35	12.62	400.58	0.47	420621.37	630926.70	N 32 9 21.73	W 104 2 37.80	88.20	400.78
	5176.00	7.40	84.65	5153.03	-11.42	13.76	413.00	0.31	420622.51	630939.12	N 32 9 21.74	W 104 2 37.66	88.09	413.23
	5271.00	6.59	84.02	5247.32	-12.50	14.90	424.52	0.86	420623.65	630950.63	N 32 9 21.75	W 104 2 37.52	87.99	424.78
	5365.00	6.57	84.12	5340.70	-13.55	16.01	435.23	0.02	420624.76	630961.34	N 32 9 21.76	W 104 2 37.40	87.89	435.52
	5552.00	6.30	93.96	5526.53	-13.82	16.40	456.11	0.61	420625.15	630982.22	N 32 9 21.76	W 104 2 37.16	87.94	456.40
	5640.00	6.52	95.78	5613.98	-12.93	15.56	465.90	0.34	420624.31	630992.01	N 32 9 21.75	W 104 2 37.04	88.09	466.16
	5741.00	6.51	96.61	5714.32	-11.63	14.33	477.29	0.09	420623.07	631003.40	N 32 9 21.74	W 104 2 36.91	88.28	477.50
	5836.00	6.50	96.36	5808.71	-10.35	13.11	487.98	0.03	420621.86	631014.09	N 32 9 21.73	W 104 2 36.79	88.46	488.16
	5930.00	6.37	96.61	5902.12	-9.10	11.92	498.45	0.14	420620.67	631024.56	N 32 9 21.72	W 104 2 36.66	88.63	498.59
	6023.00	4.83	98.25	5994.67	-7.90	10.76	507.45	1.66	420619.51	631033.56	N 32 9 21.71	W 104 2 36.56	88.78	507.56
	6117.00	4.42	96.34	6088.37	-6.88	9.80	514.97	0.47	420618.55	631041.07	N 32 9 21.70	W 104 2 36.47	88.91	515.06
	6305.00	2.81	82.90	6275.99	-6.59	9.57	526.74	0.96	420618.32	631052.85	N 32 9 21.69	W 104 2 36.33	88.96	526.83
	6399.00	2.36	69.41	6369.90	-7.53	10.53	530.84	0.80	420619.28	631056.94	N 32 9 21.70	W 104 2 36.29	88.86	530.94
	6494.00	1.58	73.90	6464.84	-8.56	11.58	533.93	0.84	420620.33	631060.03	N 32 9 21.71	W 104 2 36.25	88.76	534.05
	6588.00	0.46	93.98	6558.82	-8.89	11.92	535.55	1.23	420620.67	631061.65	N 32 9 21.72	W 104 2 36.23	88.73	535.68
	6682.00	0.36	120.62	6652.82	-8.71	11.74	536.18	0.23	420620.49	631062.28	N 32 9 21.71	W 104 2 36.23	88.75	536.31
	6776.00	0.25	142.83	6746.82	-8.39	11.43	536.56	0.17	420620.18	631062.66	N 32 9 21.71	W 104 2 36.22	88.78	536.68
	6870.00	0.10	322.98	6840.82	-8.29	11.33	536.63	0.37	420620.08	631062.74	N 32 9 21.71	W 104 2 36.22	88.79	536.75
	7059.00	0.31	299.74	7029.82	-8.68	11.71	536.09	0.12	420620.46	631062.19	N 32 9 21.71	W 104 2 36.23	88.75	536.22
	7153.00	1.00	262.39	7123.81	-8.71	11.73	535.05	0.83	420620.48	631061.16	N 32 9 21.71	W 104 2 36.24	88.74	535.18
	7247.00	1.47	266.48	7217.79	-8.53	11.55	533.04	0.51	420620.30	631059.14	N 32 9 21.71	W 104 2 36.26	88.76	533.16
	7341.00	1.62	262.49	7311.75	-8.30	11.30	530.52	0.20	420620.05	631056.62	N 32 9 21.71	W 104 2 36.29	88.78	530.64
	7428.00	1.81	260.61	7398.72	-7.93	10.92	527.94	0.23	420619.66	631054.05	N 32 9 21.71	W 104 2 36.32	88.82	528.06
	7529.00	1.93	252.91	7499.66	-7.19	10.16	524.74	0.28	420618.90	631050.85	N 32 9 21.70	W 104 2 36.36	88.89	524.84
	7624.00	2.01	245.16	7594.61	-6.04	8.99	521.70	0.29	420617.73	631047.81	N 32 9 21.69	W 104 2 36.39	89.01	521.78
	7716.00	2.65	240.81	7686.53	-4.34	7.27	518.38	0.72	420616.02	631044.49	N 32 9 21.67	W 104 2 36.43	89.20	518.43
	7812.00	1.95	248.52	7782.45	-2.68	5.59	514.92	0.80	420614.34	631041.03	N 32 9 21.65	W 104 2 36.47	89.38	514.95
	7927.00	0.73	245.81	7897.42	-1.68	4.57	512.44	1.06	420613.32	631038.54	N 32 9 21.64	W 104 2 36.50	89.49	512.46
	8001.00	0.10	300.68	7971.42	-1.52	4.41	511.95	0.92	420613.16	631038.06	N 32 9 21.64	W 104 2 36.51	89.51	511.97
	8189.00	0.98	131.65	8159.41	-0.53	3.43	513.01	0.57	420612.18	631039.12	N 32 9 21.63	W 104 2 36.49	89.62	513.02
	8378.00	1.21	153.25	8348.37	2.34	0.57	515.12	0.25	420609.32	631041.22	N 32 9 21.60	W 104 2 36.47	89.94	515.12
	8473.00	1.36	152.01	8443.35	4.24	-1.32	516.10	0.16	420607.43	631042.20	N 32 9 21.59	W 104 2 36.46	90.15	516.10
	8567.00	1.19	158.63	8537.33	6.14	-3.21	516.98	0.24	420605.54	631043.08	N 32 9 21.57	W 104 2 36.45	90.36	516.99
	8661.00	1.36	161.44	8631.30	8.11	-5.18	517.69	0.19	420603.57	631043.79	N 32 9 21.55	W 104 2 36.44	90.57	517.71
	8755.00	1.53	175.26	8725.27	10.42	-7.49	518.15	0.41	420601.26	631044.25	N 32 9 21.53	W 104 2 36.44	90.83	518.20
	8849.00	1.74	177.47	8819.24	13.09	-10.16	518.31	0.23	420598.59	631044.42	N 32 9 21.50	W 104 2 36.43	91.12	518.41
	8943.00	1.52	189.34	8913.20	15.75	-12.82	518.17	0.43	420595.93	631044.28	N 32 9 21.47	W 104 2 36.44	91.42	518.33
	9037.00	1.42	200.63	9007.17	18.07	-15.14	517.56	0.33	420593.61	631043.67	N 32 9 21.45	W 104 2 36.44	91.68	517.78
	9131.00	1.54	208.77	9101.14	20.26	-17.34	516.54	0.26	420591.41	631042.65	N 32 9 21.43	W 104 2 36.45	91.92	516.83
	9225.00	1.81	219.71	9195.10	22.50	-19.59	514.99	0.44	420589.17	631041.09	N 32 9 21.41	W 104 2 36.47	92.18	515.36
	9320.00	1.92	222.67	9290.05	24.81	-21.91	512.95	0.15	420586.84	631039.06	N 32 9 21.38	W 104 2 36.50	92.45	513.42
First SLB Survey	9367.00	2.08	220.94	9337.02	26.03	-23.13	511.86	0.36	420585.62	631037.96	N 32 9 21.37	W 104 2 36.51	92.59	512.38
	9399.00	3.35	194.02	9368.98	27.37	-24.48	511.25	5.52	420584.27	631037.36	N 32 9 21.36	W 104 2 36.52	92.74	511.83
	9430.00	7.58	179.93	9399.83	30.29	-27.40	511.03	14.21	420581.35	631037.14	N 32 9 21.33	W 104 2 36.52	93.07	511.77
KOP	9448.03	10.25	178.18	9417.64	33.09	-30.20	511.08	14.91	420578.55	631037.19	N 32 9 21.30	W 104 2 36.52	93.38	511.98
	9462.00	12.33	177.34	9431.34	35.82	-32.93	511.19	14.91	420575.82	631037.30	N 32 9 21.27	W 104 2 36.52	93.69	512.25
	9493.00	18.21	173.45	9461.24	43.95	-41.06	511.90	19.24	420567.70	631038.01	N 32 9 21.19	W 104 2 36.51	94.59	513.54
	9525.00	21.70	170.88	9491.31	54.77	-51.87	513.41	11.24	420556.89	631039.51	N 32 9 21.09	W 104 2 36.49	95.77	516.02

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)
	9556.00	24.14	171.55	9519.86	66.71	-63.80	515.25	7.92	420544.96	631041.35	N 32 9 20.97	W 104 2 36.47	97.06	519.18
	9587.00	26.74	173.62	9547.85	79.93	-77.00	516.95	8.86	420531.75	631043.06	N 32 9 20.84	W 104 2 36.45	98.47	522.66
	9619.00	29.42	175.51	9576.09	94.93	-92.00	518.37	8.82	420516.76	631044.48	N 32 9 20.69	W 104 2 36.44	100.06	526.47
	9651.00	31.94	177.09	9603.60	111.22	-108.29	519.42	8.27	420500.47	631045.52	N 32 9 20.53	W 104 2 36.42	101.78	530.58
	9698.00	35.08	179.11	9642.79	137.16	-134.22	520.26	7.09	420474.55	631046.36	N 32 9 20.27	W 104 2 36.41	104.47	537.29
	9745.00	40.21	178.58	9679.99	165.85	-162.91	520.84	10.94	420445.86	631046.95	N 32 9 19.99	W 104 2 36.41	107.37	545.72
	9792.00	43.49	177.92	9715.00	197.19	-194.24	521.81	7.04	420414.52	631047.91	N 32 9 19.68	W 104 2 36.40	110.42	556.79
	9839.00	48.27	177.99	9747.71	230.91	-227.95	523.01	10.17	420380.82	631049.12	N 32 9 19.34	W 104 2 36.39	113.55	570.53
	9886.00	54.09	178.77	9777.16	267.50	-264.54	524.03	12.45	420344.23	631050.14	N 32 9 18.98	W 104 2 36.38	116.79	587.02
	9933.00	59.31	179.23	9802.95	306.77	-303.80	524.71	11.14	420304.97	631050.82	N 32 9 18.59	W 104 2 36.37	120.07	606.32
	9980.00	62.92	179.37	9825.65	347.91	-344.95	525.22	7.69	420263.83	631051.32	N 32 9 18.19	W 104 2 36.36	123.30	628.36
	10027.00	65.53	178.99	9846.09	390.23	-387.26	525.82	5.60	420221.52	631051.93	N 32 9 17.77	W 104 2 36.36	126.37	653.04
	10076.00	70.96	180.66	9864.24	435.72	-432.75	525.95	11.52	420176.03	631052.06	N 32 9 17.32	W 104 2 36.36	129.45	681.10
	10178.00	83.06	185.53	9887.14	534.71	-531.78	520.49	12.74	420077.02	631046.60	N 32 9 16.34	W 104 2 36.42	135.61	744.11
	10210.00	85.19	185.12	9890.42	566.39	-563.47	517.54	6.78	420045.33	631043.64	N 32 9 16.02	W 104 2 36.46	137.43	765.08
	10304.00	84.75	177.20	9898.67	659.92	-657.01	515.64	8.41	419951.79	631041.75	N 32 9 15.10	W 104 2 36.48	141.87	835.20
	10398.00	84.70	176.92	9907.31	753.42	-750.49	520.44	0.30	419858.32	631046.55	N 32 9 14.17	W 104 2 36.43	145.26	913.29
	10493.00	83.82	179.05	9916.82	847.90	-844.95	523.77	2.42	419763.87	631049.87	N 32 9 13.24	W 104 2 36.40	148.21	994.12
	10586.00	84.58	178.92	9926.22	940.41	-937.46	525.41	0.83	419671.37	631051.51	N 32 9 12.32	W 104 2 36.38	150.73	1074.65
	10680.00	86.71	179.00	9933.35	1034.13	-1031.17	527.11	2.27	419577.67	631053.21	N 32 9 11.40	W 104 2 36.36	152.92	1158.08
	10774.00	88.14	178.75	9937.58	1128.02	-1125.05	528.95	1.54	419483.79	631055.06	N 32 9 10.47	W 104 2 36.34	154.82	1243.19
	10868.00	89.01	178.82	9939.91	1221.98	-1219.00	530.94	0.93	419389.85	631057.05	N 32 9 9.54	W 104 2 36.32	156.46	1329.61
	10963.00	89.19	178.98	9941.41	1316.96	-1313.97	532.77	0.25	419294.89	631058.87	N 32 9 8.60	W 104 2 36.31	157.93	1417.87
	11057.00	89.32	178.94	9942.63	1410.95	-1407.95	534.47	0.14	419200.92	631060.58	N 32 9 7.67	W 104 2 36.29	159.21	1505.98
Section 1-12 Line Crossing [1880' FWL]	11096.50	89.60	179.41	9943.00	1450.44	-1447.44	535.04	1.37	419161.43	631061.15	N 32 9 7.28	W 104 2 36.28	159.71	1543.16
	11151.00	89.98	180.05	9943.20	1504.94	-1501.94	535.30	1.37	419106.94	631061.41	N 32 9 6.74	W 104 2 36.28	160.38	1594.48
	11245.00	89.65	181.21	9943.51	1598.93	-1595.93	534.27	1.28	419012.95	631060.37	N 32 9 5.81	W 104 2 36.30	161.49	1682.98
	11340.00	90.27	182.12	9943.57	1693.87	-1690.89	531.51	1.16	418918.00	631057.61	N 32 9 4.87	W 104 2 36.33	162.55	1772.46
First Legal Take Point [330' From Section 1-12 Line, [1872' FWL]	11426.59	89.62	181.30	9943.66	1780.40	-1777.44	528.92	1.21	418831.46	631055.03	N 32 9 4.01	W 104 2 36.37	163.43	1854.47
	11434.00	89.56	181.23	9943.71	1787.81	-1784.85	528.76	1.21	418824.05	631054.87	N 32 9 3.94	W 104 2 36.37	163.50	1861.52
	11528.00	89.33	179.62	9944.62	1881.79	-1878.84	528.06	1.73	418730.07	631054.17	N 32 9 3.01	W 104 2 36.38	164.30	1951.64
	11622.00	89.23	178.84	9945.80	1975.78	-1972.82	529.33	0.84	418636.09	631055.43	N 32 9 2.08	W 104 2 36.37	164.98	2042.60
	11716.00	90.11	179.31	9946.34	2069.77	-2066.81	530.84	1.06	418542.12	631056.95	N 32 9 1.15	W 104 2 36.35	165.60	2133.89
	11810.00	89.51	178.87	9946.66	2163.77	-2160.79	532.34	0.79	418448.14	631058.44	N 32 9 0.22	W 104 2 36.34	166.16	2225.40
	11905.00	89.70	178.78	9947.31	2258.76	-2255.77	534.28	0.22	418353.17	631060.39	N 32 8 59.28	W 104 2 36.32	166.67	2318.18
	11999.00	89.79	178.57	9947.73	2352.74	-2349.74	536.46	0.24	418259.20	631062.56	N 32 8 58.35	W 104 2 36.30	167.14	2410.20
	12093.00	89.94	178.91	9947.95	2446.73	-2443.72	538.53	0.40	418165.23	631064.63	N 32 8 57.42	W 104 2 36.27	167.57	2502.36
	12187.00	89.68	178.87	9948.26	2540.72	-2537.70	540.35	0.28	418071.26	631066.45	N 32 8 56.49	W 104 2 36.26	167.98	2594.59
	12281.00	89.81	178.87	9948.68	2634.71	-2631.68	542.20	0.14	417977.29	631068.30	N 32 8 55.56	W 104 2 36.24	168.36	2686.96
	12376.00	89.64	178.54	9949.14	2729.69	-2726.66	544.35	0.39	417882.32	631070.45	N 32 8 54.62	W 104 2 36.22	168.71	2780.46
	12470.00	90.19	180.63	9949.28	2823.69	-2820.65	545.03	2.30	417788.34	631071.13	N 32 8 53.69	W 104 2 36.21	169.06	2872.82
	12563.00	90.08	181.34	9949.06	2916.66	-2913.64	543.43	0.77	417695.36	631069.53	N 32 8 52.77	W 104 2 36.23	169.44	2963.88
	12657.00	89.71	181.33	9949.23	3010.62	-3007.61	541.24	0.39	417601.39	631067.34	N 32 8 51.84	W 104 2 36.26	169.80	3055.92
	12751.00	89.73	181.12	9949.69	3104.59	-3101.59	539.23	0.22	417507.42	631065.33	N 32 8 50.91	W 104 2 36.29	170.14	3148.11
	12846.00	89.74	181.07	9950.13	3199.56	-3196.57	537.41	0.05	417412.45	631063.52	N 32 8 49.97	W 104 2 36.31	170.46	3241.43
	12940.00	89.81	181.15	9950.50	3293.53	-3290.55	535.59	0.11	417318.48	631061.70	N 32 8 49.04	W 104 2 36.34	170.76	3333.85
	13035.00	89.62	181.13	9950.97	3388.49	-3385.53	533.70	0.20	417223.50	631059.81	N 32 8 48.10	W 104 2 36.36	171.04	3427.34
	13130.00	89.59	181.00	9951.63	3483.46	-3480.51	531.94	0.14	417128.53	631058.04	N 32 8 47.16	W 104 2 36.38	171.31	3520.93
	13224.00	89.59	180.98	9952.30	3577.44	-3574.49	530.31	0.02	417034.55	631056.42	N 32 8 46.23	W 104 2 36.41	171.56	3613.62
	13413.00	90.28	178.90	9952.51	3766.42	-3763.48	530.51	1.16	416845.58	631056.62	N 32 8 44.36	W 104 2 36.41	171.98	3800.69
	13507.00	90.20	178.81	9952.12	3860.41	-3857.46	532.39	0.13	416751.61	631058.49	N 32 8 43.43	W 104 2 36.39	172.14	3894.03
	13602.00	90.17	178.52	9951.81	3955.40	-3952.44	534.60	0.31	416656.64	631060.71	N 32 8 42.49	W 104 2 36.37	172.30	3988.43
	13697.00	90.29	178.79	9951.43	4050.38	-4047.41	536.83	0.31	416561.68	631062.94	N 32 8 41.55	W 104 2 36.34	172.44	4082.86
	13791.00	90.24	178.83	9951.00	4144.37	-4141.39	538.78	0.07	416467.71	631064.89	N 32 8 40.62	W 104 2 36.32	172.59	4176.29
	13886.00	90.22	178.72	9950.61	4239.36	-4236.37	540.82	0.12	416372.74	631066.92	N 32 8 39.68	W 104 2 36.30	172.72	4270.75

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)
	13980.00	90.11	178.73	9950.34	4333.34	-4330.34	542.91	0.12	416278.77	631069.01	N 32 8 38.75	W 104 2 36.28	172.85	4364.24
	14074.00	90.14	178.75	9950.14	4427.33	-4424.32	544.97	0.04	416184.80	631071.08	N 32 8 37.82	W 104 2 36.26	172.98	4457.76
	14169.00	90.14	179.07	9949.91	4522.32	-4519.30	546.78	0.34	416089.83	631072.89	N 32 8 36.88	W 104 2 36.24	173.10	4552.26
	14264.00	90.16	178.46	9949.66	4617.31	-4614.28	548.83	0.64	415994.86	631074.93	N 32 8 35.94	W 104 2 36.22	173.22	4646.80
	14357.00	89.99	178.80	9949.54	4710.29	-4707.25	551.05	0.41	415901.89	631077.16	N 32 8 35.02	W 104 2 36.20	173.32	4739.40
	14452.00	89.80	178.73	9949.71	4805.28	-4802.23	553.10	0.21	415806.92	631079.20	N 32 8 34.08	W 104 2 36.18	173.43	4833.98
	14547.00	89.67	178.93	9950.15	4900.27	-4897.21	555.04	0.25	415711.95	631081.14	N 32 8 33.14	W 104 2 36.16	173.53	4928.56
	14641.00	89.72	178.88	9950.65	4994.26	-4991.19	556.84	0.08	415617.98	631082.94	N 32 8 32.21	W 104 2 36.14	173.63	5022.16
	14736.00	89.74	180.75	9951.10	5089.25	-5086.19	557.14	1.97	415522.99	631083.25	N 32 8 31.27	W 104 2 36.14	173.75	5116.61
	14831.00	89.34	180.53	9951.86	5184.24	-5181.18	556.08	0.48	415428.01	631082.19	N 32 8 30.33	W 104 2 36.16	173.87	5210.93
	14926.00	89.30	181.73	9952.99	5279.20	-5276.15	554.21	1.26	415333.04	631080.31	N 32 8 29.39	W 104 2 36.18	174.00	5305.18
	15020.00	88.73	181.31	9954.60	5373.14	-5370.10	551.72	0.75	415239.10	631077.82	N 32 8 28.46	W 104 2 36.21	174.13	5398.37
	15115.00	88.74	179.51	9956.70	5468.10	-5465.07	551.04	1.89	415144.14	631077.14	N 32 8 27.52	W 104 2 36.22	174.24	5492.78
	15304.00	88.79	180.29	9960.77	5657.05	-5654.03	551.37	0.41	414955.20	631077.47	N 32 8 25.65	W 104 2 36.23	174.43	5680.85
	15399.00	89.81	179.55	9961.94	5752.04	-5749.02	551.50	1.33	414860.21	631077.60	N 32 8 24.71	W 104 2 36.23	174.52	5775.41
	15493.00	89.66	179.61	9962.37	5846.04	-5843.01	552.19	0.17	414766.23	631078.29	N 32 8 23.78	W 104 2 36.22	174.60	5869.05
	15588.00	89.64	180.08	9962.95	5941.04	-5938.01	552.44	0.50	414671.24	631078.55	N 32 8 22.84	W 104 2 36.22	174.68	5963.65
	15683.00	89.63	179.91	9963.56	6036.04	-6033.01	552.45	0.18	414576.25	631078.56	N 32 8 21.90	W 104 2 36.23	174.77	6058.25
	15778.00	89.77	180.56	9964.05	6131.03	-6128.01	552.06	0.70	414481.26	631078.17	N 32 8 20.96	W 104 2 36.23	174.85	6152.82
	15872.00	90.25	179.83	9964.04	6225.03	-6222.01	551.74	0.93	414387.27	631077.85	N 32 8 20.03	W 104 2 36.24	174.93	6246.42
	15967.00	90.30	179.59	9963.58	6320.02	-6317.00	552.22	0.26	414292.28	631078.33	N 32 8 19.09	W 104 2 36.24	175.00	6341.09
	16061.00	90.32	179.47	9963.07	6414.02	-6411.00	553.00	0.13	414198.29	631079.10	N 32 8 18.16	W 104 2 36.23	175.07	6434.80
	16250.00	90.34	179.89	9961.98	6603.02	-6599.99	554.05	0.22	414009.31	631080.15	N 32 8 16.29	W 104 2 36.22	175.20	6623.21
	16344.00	90.14	179.73	9961.59	6697.02	-6693.99	554.36	0.27	413915.32	631080.47	N 32 8 15.36	W 104 2 36.22	175.27	6716.91
Section 12-13 Line Crossing [1865' FWL]	16419.50	90.46	179.00	9961.19	6772.52	-6769.48	555.20	1.06	413839.83	631081.30	N 32 8 14.61	W 104 2 36.22	175.31	6792.21
	16438.00	90.54	178.82	9961.03	6791.01	-6787.98	555.55	1.06	413821.34	631081.66	N 32 8 14.43	W 104 2 36.21	175.32	6810.68
	16532.00	90.22	178.96	9960.41	6885.00	-6881.96	557.37	0.37	413727.37	631083.48	N 32 8 13.50	W 104 2 36.19	175.37	6904.49
	16627.00	90.16	179.73	9960.09	6980.00	-6976.95	558.46	0.81	413632.38	631084.56	N 32 8 12.56	W 104 2 36.18	175.42	6999.27
	16721.00	90.16	180.12	9959.83	7074.00	-7070.95	558.58	0.41	413538.39	631084.68	N 32 8 11.63	W 104 2 36.19	175.48	7092.98
	16815.00	90.01	180.36	9959.69	7167.99	-7164.95	558.19	0.30	413444.40	631084.29	N 32 8 10.70	W 104 2 36.19	175.55	7186.66
	16910.00	89.92	181.10	9959.75	7262.98	-7259.94	556.98	0.78	413349.42	631083.08	N 32 8 9.76	W 104 2 36.21	175.61	7281.28
	17005.00	90.07	180.90	9959.76	7357.95	-7354.93	555.32	0.26	413254.44	631081.42	N 32 8 8.82	W 104 2 36.23	175.68	7375.86
	17100.00	90.10	180.97	9959.62	7452.93	-7449.92	553.77	0.08	413159.46	631079.87	N 32 8 7.88	W 104 2 36.25	175.75	7470.47
	17193.00	90.13	180.40	9959.43	7545.91	-7542.91	552.66	0.61	413066.47	631078.76	N 32 8 6.96	W 104 2 36.27	175.81	7563.13
	17287.00	89.97	179.84	9959.35	7639.91	-7636.91	552.46	0.62	412972.48	631078.56	N 32 8 6.03	W 104 2 36.28	175.86	7656.86
	17381.00	90.02	178.67	9959.36	7733.91	-7730.90	553.68	1.25	412878.50	631079.79	N 32 8 5.10	W 104 2 36.26	175.90	7750.70
	17475.00	90.64	178.81	9958.82	7827.89	-7824.87	555.75	0.68	412784.53	631081.85	N 32 8 4.17	W 104 2 36.24	175.94	7844.58
	17566.00	91.02	178.87	9957.50	7918.87	-7915.84	557.59	0.42	412693.57	631083.70	N 32 8 3.27	W 104 2 36.22	175.97	7935.46
	17662.00	92.22	179.77	9954.78	8014.83	-8011.80	558.73	1.56	412597.62	631084.83	N 32 8 2.32	W 104 2 36.21	176.01	8031.26
	17756.00	91.76	180.31	9951.52	8108.77	-8105.74	558.67	0.75	412503.69	631084.77	N 32 8 1.39	W 104 2 36.22	176.06	8124.97
	17850.00	92.01	180.07	9948.43	8202.71	-8199.69	558.35	0.37	412409.75	631084.46	N 32 8 0.46	W 104 2 36.22	176.10	8218.68
	17945.00	90.73	179.75	9946.16	8297.68	-8294.66	558.50	1.39	412314.79	631084.61	N 32 7 59.52	W 104 2 36.23	176.15	8313.44
	18039.00	90.72	180.40	9944.97	8391.67	-8388.65	558.38	0.69	412220.80	631084.48	N 32 7 58.59	W 104 2 36.23	176.19	8407.21
	18134.00	90.98	179.83	9943.56	8486.66	-8483.64	558.19	0.66	412125.82	631084.29	N 32 7 57.65	W 104 2 36.24	176.24	8501.98
	18227.00	90.53	178.25	9942.33	8579.64	-8576.62	559.75	1.77	412032.85	631085.85	N 32 7 56.73	W 104 2 36.22	176.27	8594.86
	18321.00	89.91	178.19	9941.97	8673.61	-8670.57	562.67	0.66	411938.91	631088.77	N 32 7 55.80	W 104 2 36.19	176.29	8688.81
	18415.00	89.97	178.77	9942.07	8767.59	-8764.53	565.16	0.62	411844.95	631091.26	N 32 7 54.87	W 104 2 36.16	176.31	8782.74
	18509.00	90.22	177.96	9941.91	8861.57	-8858.50	567.84	0.90	411751.00	631093.94	N 32 7 53.94	W 104 2 36.13	176.33	8876.68
	18604.00	89.75	178.32	9941.94	8956.53	-8953.45	570.93	0.62	411656.06	631097.03	N 32 7 53.00	W 104 2 36.10	176.35	8971.63
	18698.00	89.85	178.38	9942.27	9050.50	-9047.41	573.63	0.12	411562.10	631099.73	N 32 7 52.07	W 104 2 36.07	176.37	9065.57
	18792.00	89.90	178.42	9942.47	9144.48	-9141.37	576.26	0.07	411468.15	631102.36	N 32 7 51.14	W 104 2 36.05	176.39	9159.51
	18887.00	90.26	178.75	9942.34	9239.46	-9236.34	578.60	0.51	411373.18	631104.70	N 32 7 50.20	W 104 2 36.02	176.42	9254.44
	18981.00	90.27	178.32	9941.90	9333.44	-9330.31	581.01	0.46	411279.22	631107.11	N 32 7 49.27	W 104 2 36.00	176.44	9348.38
	19074.00	89.22	178.05	9942.32	9426.41	-9423.26	583.95	1.17	411186.28	631110.05	N 32 7 48.35	W 104 2 35.96	176.45	9441.33
	19168.00	91.02	179.50	9942.12	9520.39	-9517.23	585.96	2.46	411092.32	631112.06	N 32 7 47.42	W 104 2 35.94	176.48	9535.25
	19262.00	91.19	180.04	9940.31	9614.37	-9611.21	586.34	0.60	410998.34	631112.44	N 32 7 46.49	W 104 2 35.94	176.51	9629.00
	19356.00	90.69	179.83	9938.77	9708.36	-9705.20	586.45	0.58	410904.36	631112.55	N 32 7 45.56	W 104 2 35.94	176.54	9722.98
	19450.00	90.68	179.88	9937.64	9802.35	-9799.19	586.68	0.05	410810.38	631112.78	N 32 7 44.63	W 104 2 35.94	176.57	9816.74
	19544.00	89.69	179.62	9937.34	9896.35	-9893.19	587.09	1.09	410716.39	631113.19	N 32 7 43.70	W 104 2 35.94	176.60	9910.59
	19639.00	89.76	179.82	9937.79	9991.35	-9988.19	587.56	0.22	410621.40	631113.66	N 32 7 42.76	W 104 2 35.94	176.63	10005.45

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)
	19733.00	90.09	178.23	9937.92	10085.34	-10082.17	589.16	1.73	410527.42	631115.26	N 32 7 41.83	W 104 2 35.93	176.66	10099.37
	19827.00	89.56	179.88	9938.20	10179.33	-10176.15	590.71	1.84	410433.45	631116.81	N 32 7 40.90	W 104 2 35.91	176.68	10193.28
	19921.00	89.95	180.02	9938.61	10273.33	-10270.15	590.79	0.44	410339.46	631116.89	N 32 7 39.97	W 104 2 35.91	176.71	10287.13
	20016.00	89.98	180.10	9938.66	10368.33	-10365.15	590.69	0.09	410244.47	631116.79	N 32 7 39.03	W 104 2 35.92	176.74	10381.97
	20110.00	90.61	179.97	9938.18	10462.32	-10459.15	590.63	0.68	410150.48	631116.73	N 32 7 38.10	W 104 2 35.92	176.77	10475.81
	20205.00	90.61	179.75	9937.17	10557.32	-10554.14	590.86	0.23	410055.49	631116.96	N 32 7 37.16	W 104 2 35.92	176.80	10570.67
	20299.00	90.18	179.72	9936.52	10651.31	-10648.14	591.30	0.46	409961.50	631117.40	N 32 7 36.23	W 104 2 35.92	176.82	10664.55
	20487.00	90.64	179.72	9935.18	10839.31	-10836.13	592.22	0.24	409773.52	631118.32	N 32 7 34.37	W 104 2 35.91	176.87	10852.30
	20581.00	90.33	179.87	9934.38	10933.31	-10930.13	592.55	0.37	409679.54	631118.65	N 32 7 33.44	W 104 2 35.91	176.90	10946.18
	20676.00	89.97	179.86	9934.13	11028.30	-11025.13	592.78	0.38	409584.55	631118.88	N 32 7 32.50	W 104 2 35.91	176.92	11041.05
	20770.00	89.75	180.30	9934.36	11122.30	-11119.13	592.65	0.52	409490.55	631118.75	N 32 7 31.57	W 104 2 35.92	176.95	11134.91
	20865.00	89.90	179.76	9934.65	11217.30	-11214.13	592.60	0.59	409395.56	631118.70	N 32 7 30.63	W 104 2 35.92	176.98	11229.77
	20959.00	89.77	180.54	9934.92	11311.29	-11308.13	592.35	0.84	409301.57	631118.45	N 32 7 29.70	W 104 2 35.93	177.00	11323.63
	21054.00	89.94	180.05	9935.16	11406.29	-11403.12	591.86	0.55	409206.58	631117.96	N 32 7 28.76	W 104 2 35.93	177.03	11418.47
	21149.00	90.95	180.27	9934.42	11501.28	-11498.12	591.60	1.09	409111.59	631117.70	N 32 7 27.82	W 104 2 35.94	177.05	11513.33
	21242.00	90.08	180.10	9933.59	11594.27	-11591.11	591.30	0.95	409018.61	631117.40	N 32 7 26.90	W 104 2 35.95	177.08	11606.19
	21336.00	88.93	179.47	9934.40	11688.27	-11685.11	591.65	1.39	408924.62	631117.75	N 32 7 25.97	W 104 2 35.95	177.10	11700.08
Final Survey	21368.00	89.34	179.75	9934.88	11720.26	-11717.10	591.87	1.55	408892.63	631117.97	N 32 7 25.65	W 104 2 35.94	177.11	11732.04
TD, PTB [331' FSL, 1879' FWL]	21398.00	89.34	179.75	9935.23	11750.26	-11747.10	592.00	0.00	408862.63	631118.10	N 32 7 25.36	W 104 2 35.94	177.12	11762.01

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	17.500	13.375	NAL_MWD_IFR1+MS-Depth Only	Riverbend 12-13 Federal Com #31H / Final Surveys - Riverbend 12-13 Federal Com #31H MWD
	1	23.000	23.000	Act Stns	17.500	13.375	NAL_MWD_IFR1+MS-Depth Only	Riverbend 12-13 Federal Com #31H / Final Surveys - Riverbend 12-13 Federal Com #31H MWD
	1	23.000	455.000	Act Stns	17.500	13.375	NAL_MWD_IFR1+MS	Riverbend 12-13 Federal Com #31H / Final Surveys - Riverbend
	1	455.000	2652.000	Act Stns	12.250	9.625	NAL_MWD_IFR1+MS	Riverbend 12-13 Federal Com #31H / Final Surveys - Riverbend
	1	2652.000	10135.000	Act Stns	8.750	7.000	NAL_MWD_IFR1+MS	Riverbend 12-13 Federal Com #31H / Final Surveys - Riverbend
	1	10135.000	21398.000	Act Stns	6.000	4.500	NAL_MWD_IFR1+MS	Riverbend 12-13 Federal Com #31H / Final Surveys - Riverbend