

30-015-45566

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20

RECEIVED

Schlumberger

DEC 04 2019

Midland, Texas 79706

Phone : (432) 742-5400 (Main)

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DISTRICT 7 - ARTESIA O.C.D.

Well Reference:

S6, T24S, R29E Eddy, NM

N 32.25403 W -104.01872

I, Hossam Elezaby certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of May 05, 2019 through June 25, 2019, conduct or supervise the taking of the SlimPulse & 3rd Party Corrected surveys from a depth of 536.00 feet to a depth of 18750.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of OXY USA Incorporated for the Length CC 6_7 Federal Com 25H Well (Original Hole) API No. 30-015-45566 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Hossam Elezaby
FE

Hossam Elezaby

Subscribed and Sworn to before me this 13 day of August (month) 2019 (yr)

My Commission expires:

6/14/2023

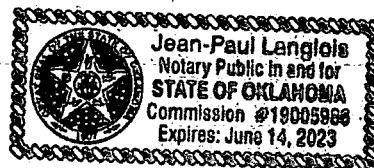
Jean-Paul Langlois

Notary Public

Comanche Oklahoma

(County State)

(signature)



Schlumberger

OXY

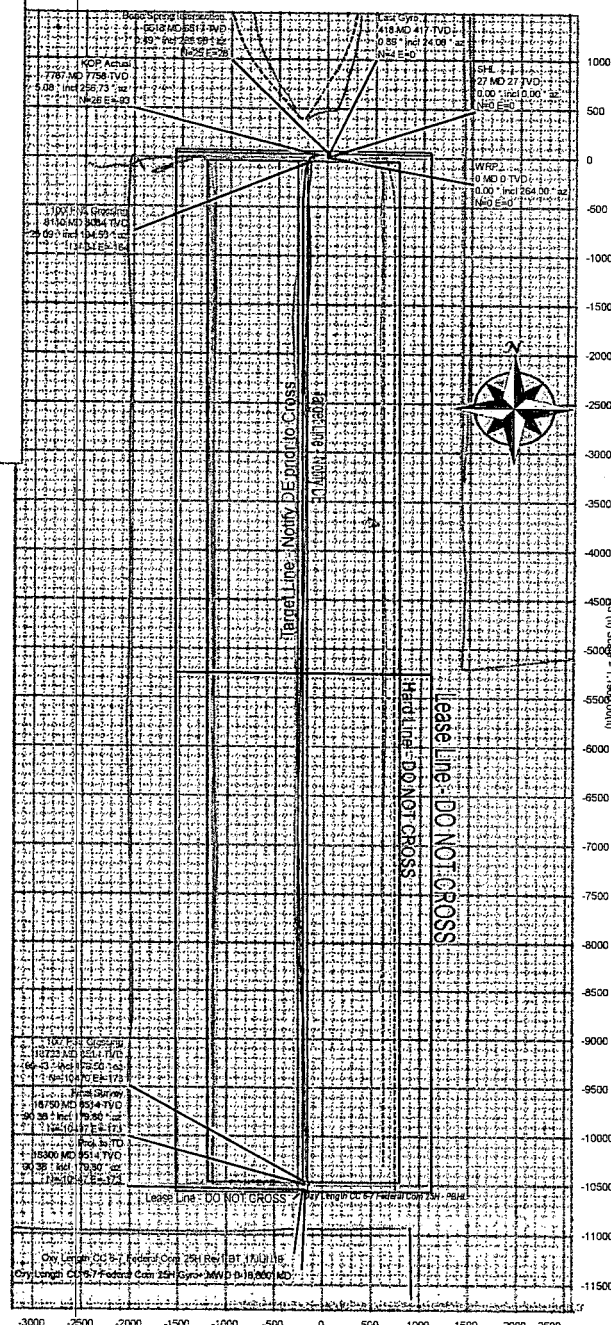
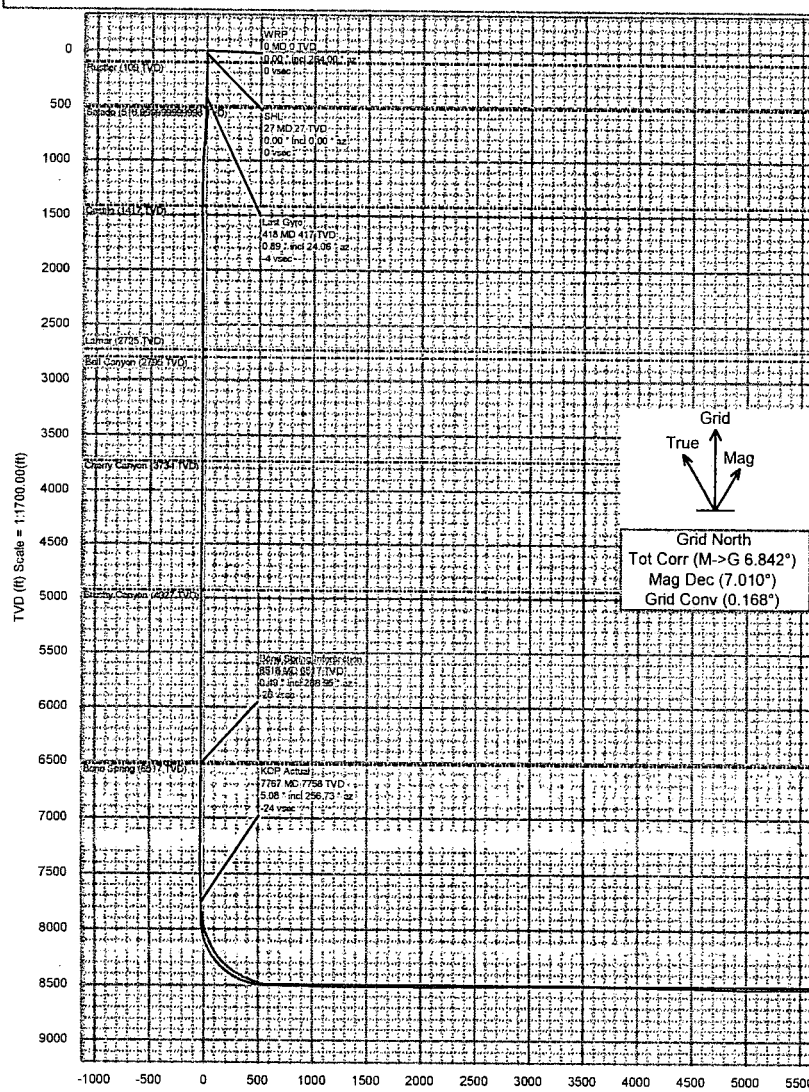


Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Length CC 6-7 Federal Com 25H	NM Eddy County (NAD 83)	Oxy Length CC 6-7 Federal Com 25H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	IFR1	Dip:	60.015°	Date:	17-Jun-2019	Lat:	N 32 15 14.50	Northing:	456291.141US	Grid Conv:	0.1879°
MagDec:	7.01°	FS:	47911.8nT	Gravity FS:	998.471mgm (9.80665 Based)	Lon:	W 104 1 7.38	Easting:	838594.331US	Scale Fact:	0.93991992
								Oxy Length CC 6-7 Federal Com 25H			
								Slot: 7 Federal Com			
								TVD Ref: RKB(2982.8ft above MSL)			
								Plan: Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD 0-18,800' MD			

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
WRP	0.00	0.00	264.00	0.00	0.00	0.00	0.00	
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00
Last Gyro	417.50	0.89	24.06	417.48	-3.64	3.64	0.30	0.58
Bone Spring Intersection	6518.43	0.49	288.95	6517.00	-25.57	25.03	28.43	0.64
KOP Actual	7767.00	5.08	256.73	7758.22	-24.47	26.25	-92.89	1.24
100' FNL Crossing	8110.00	25.09	194.53	8084.28	37.39	-34.26	-164.01	9.98
100' FSL Crossing	18722.81	90.43	179.50	8514.40	10470.95	-10469.55	-172.95	1.12
Final Survey	18750.00	90.38	179.80	8514.20	10498.13	-10496.74	-172.78	1.12
Proj. to TD	18800.00	90.38	179.80	8513.87	10548.11	-10546.74	-172.61	0.00



Vertical Section (ft) Azim = 181.10° Scale = 1:1700.00(ft) Origin = 0N+S, 0E+W

Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD 0-18,800' MD Survey

Geodetic Report

(Def Survey)



Report Date: June 26, 2019 - 08:49 AM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Length CC 6-7 Federal Com 25H / Oxy Length CC 6-7 Federal Com 25H
 Well: Oxy Length CC 6-7 Federal Com 25H
 Borehole: Original Borehole
 UWI / API#: H&P639 / 30-015-45566
 Survey Name: Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD 0-18,800' MD
 Survey Date: March 26, 2019
 Tort / AHD / DOI / ERD Ratio: 292.210' / 10798.796 ft / 6.843' / 1.267
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 15' 14.50054", W 104° 1' 7.38402"
 Location Grid N/E/Y/X: N 456291.140 NUS, E 638594.930 NUS
 CRS Grid Convergence Angle: 0.1679°
 Grid Scale Factor: 0.99991992
 Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 181.095° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB
 TVD Reference Elevation: 2982.800 ft above MSL
 Seabed / Ground Elevation: 2956.300 ft above MSL
 Magnetic Declination: 7.010°
 Total Gravity Field Strength: 998.4714 mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47911.800 nT
 Magnetic Dip Angle: 60.015°
 Declination Date: June 17, 2019
 Magnetic Declination Model: IFR1
 North Reference: Grid North
 Grid Convergence Used: 0.1679°
 Total Corr Mag North->Grid: 6.8421°
 North: Well Head
 Local Coord Referenced To: Well Head

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 ° ' ")
WRP	0.00	0.00	264.00	0.00	0.00	0.00	0.00	N/A	456291.14	638594.93	N 32 15 14.50 W 104 1	7.38
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	456291.14	638594.93	N 32 15 14.50 W 104 1	7.38
	99.50	0.69	7.78	99.50	-0.44	0.44	0.06	0.95	456291.58	638594.99	N 32 15 14.50 W 104 1	7.38
	131.50	0.63	22.58	131.50	-0.79	0.79	0.15	0.56	456291.93	638595.08	N 32 15 14.51 W 104 1	7.38
	189.50	0.56	1.55	189.49	-1.37	1.37	0.28	0.39	456292.51	638595.21	N 32 15 14.51 W 104 1	7.38
	246.50	0.39	340.89	246.49	-1.83	1.83	0.23	0.42	456292.97	638595.16	N 32 15 14.52 W 104 1	7.38
	310.50	0.56	349.66	310.49	-2.34	2.34	0.10	0.29	456293.48	638595.03	N 32 15 14.52 W 104 1	7.38
Last Gyro	373.50	0.74	9.33	373.48	-3.05	3.05	0.11	0.45	456294.19	638595.04	N 32 15 14.53 W 104 1	7.38
	417.50	0.89	24.06	417.48	-3.64	3.64	0.30	0.58	456294.78	638595.23	N 32 15 14.54 W 104 1	7.38
	536.00	0.95	19.60	535.97	-5.42	5.40	1.00	0.08	456296.54	638595.93	N 32 15 14.55 W 104 1	7.37
	625.00	1.28	26.15	624.95	-7.02	6.99	1.69	0.40	456298.13	638596.62	N 32 15 14.57 W 104 1	7.36
	650.00	2.17	34.30	649.94	-7.67	7.63	2.08	3.68	456298.77	638597.01	N 32 15 14.58 W 104 1	7.36
	675.00	2.59	36.23	674.92	-8.53	8.48	2.68	1.71	456299.62	638597.61	N 32 15 14.58 W 104 1	7.35
	700.00	3.15	36.96	699.88	-9.55	9.48	3.42	2.24	456300.62	638598.35	N 32 15 14.59 W 104 1	7.34
	710.00	3.35	37.93	709.87	-10.00	9.93	3.77	2.07	456301.07	638598.70	N 32 15 14.60 W 104 1	7.34
	720.00	3.61	38.38	719.85	-10.49	10.41	4.14	2.61	456301.55	638599.07	N 32 15 14.60 W 104 1	7.34
	730.00	3.87	38.20	729.83	-11.01	10.92	4.55	2.60	456302.06	638599.48	N 32 15 14.61 W 104 1	7.33
740.00	4.11	39.51	739.80	-11.56	11.47	4.98	2.57	456302.60	638599.91	N 32 15 14.61 W 104 1	7.33	
750.00	4.35	38.79	749.78	-12.14	12.04	5.45	2.46	456303.18	638600.38	N 32 15 14.62 W 104 1	7.32	
780.00	4.86	40.48	779.68	-14.02	13.89	6.99	1.76	456305.03	638601.92	N 32 15 14.64 W 104 1	7.30	
830.00	5.84	42.11	829.46	-17.58	17.39	10.07	1.98	456308.53	638605.00	N 32 15 14.67 W 104 1	7.27	
860.00	6.09	43.90	859.30	-19.90	19.67	12.20	1.04	456310.81	638607.12	N 32 15 14.69 W 104 1	7.24	
897.00	5.75	44.71	896.10	-22.68	22.40	14.86	0.95	456313.54	638609.79	N 32 15 14.72 W 104 1	7.21	
930.00	4.80	43.25	928.96	-24.90	24.58	16.97	2.91	456315.72	638611.90	N 32 15 14.74 W 104 1	7.19	
989.00	3.93	46.15	987.79	-28.16	27.78	20.12	1.52	456318.92	638615.05	N 32 15 14.77 W 104 1	7.15	
1081.00	0.95	17.35	1079.70	-31.12	30.69	22.62	3.40	456321.83	638617.55	N 32 15 14.80 W 104 1	7.12	
1171.00	0.61	24.23	1169.69	-32.28	31.84	23.04	0.39	456322.98	638617.97	N 32 15 14.81 W 104 1	7.11	
1264.00	0.85	27.46	1262.68	-33.35	32.90	23.56	0.26	456324.04	638618.49	N 32 15 14.83 W 104 1	7.11	
1446.00	0.41	184.71	1444.68	-33.91	33.45	24.13	0.68	456324.59	638619.06	N 32 15 14.83 W 104 1	7.10	
1537.00	1.76	144.95	1535.66	-32.45	31.98	24.91	1.61	456323.12	638619.83	N 32 15 14.82 W 104 1	7.09	
1627.00	2.24	144.54	1625.60	-29.93	29.42	26.72	0.53	456320.56	638621.65	N 32 15 14.79 W 104 1	7.07	
1719.00	0.01	50.65	1717.58	-28.49	27.96	27.77	2.44	456319.10	638622.70	N 32 15 14.78 W 104 1	7.06	
1813.00	0.05	102.40	1811.58	-28.48	27.96	27.82	0.05	456319.10	638622.74	N 32 15 14.78 W 104 1	7.06	
1908.00	0.07	55.42	1906.58	-28.51	27.98	27.90	0.05	456319.12	638622.83	N 32 15 14.78 W 104 1	7.06	
2002.00	0.26	123.54	2000.58	-28.43	27.90	28.13	0.26	456319.03	638623.06	N 32 15 14.78 W 104 1	7.06	
2097.00	0.61	162.69	2095.58	-27.83	27.29	28.46	0.46	456318.43	638623.39	N 32 15 14.77 W 104 1	7.05	
2192.00	0.54	141.56	2190.57	-27.01	26.46	28.89	0.23	456317.60	638623.82	N 32 15 14.76 W 104 1	7.05	
2286.00	0.15	160.14	2284.57	-26.55	26.00	29.20	0.43	456317.14	638624.13	N 32 15 14.76 W 104 1	7.04	
2381.00	0.06	131.71	2379.57	-26.40	25.85	29.28	0.11	456316.99	638624.21	N 32 15 14.76 W 104 1	7.04	
2475.00	0.11	126.64	2473.57	-26.32	25.76	29.39	0.05	456316.90	638624.32	N 32 15 14.75 W 104 1	7.04	
2570.00	0.12	121.72	2568.57	-26.21	25.65	29.55	0.01	456316.79	638624.38	N 32 15 14.75 W 104 1	7.04	
2759.00	0.01	64.25	2757.57	-26.12	25.56	29.73	0.06	456316.70	638624.66	N 32 15 14.75 W 104 1	7.04	
2854.00	0.02	292.21	2852.57	-26.13	25.57	29.73	0.03	456316.71	638624.65	N 32 15 14.75 W 104 1	7.04	
2948.00	0.04	171.00	2946.57	-26.10	25.54	29.72	0.06	456316.68	638624.64	N 32 15 14.75 W 104 1	7.04	
3043.00	0.06	28.68	3041.57	-26.12	25.55	29.75	0.10	456316.69	638624.67	N 32 15 14.75 W 104 1	7.04	
3137.00	0.23	269.86	3135.57	-26.16	25.60	29.58	0.28	456316.73	638624.51	N 32 15 14.75 W 104 1	7.04	
3232.00	0.09	173.95	3230.57	-26.08	25.52	29.40	0.27	456316.66	638624.33	N 32 15 14.75 W 104 1	7.04	
3326.00	0.09	249.63	3324.57	-25.98	25.42	29.34	0.12	456316.58	638624.26	N 32 15 14.75 W 104 1	7.04	
3421.00	0.09	90.24	3419.57	-25.95	25.40	29.34	0.19	456316.53	638624.27	N 32 15 14.75 W 104 1	7.04	
3516.00	0.05	124.30	3514.57	-25.93	25.37	29.45	0.06	456316.51	638624.38	N 32 15 14.75 W 104 1	7.04	
3705.00	0.01	333.31	3703.57	-25.90	25.34	29.51	0.03	456316.48	638624.44	N 32 15 14.75 W 104 1	7.04	
3799.00	0.07	353.87	3797.57	-25.96	25.40	29.50	0.06	456316.54	638624.43	N 32 15 14.75 W 104 1	7.04	
3894.00	0.09	232.76	3892.57	-25.97	25.42	29.44	0.15	456316.55	638624.36	N 32 15 14.75 W 104 1	7.04	
4083.00	0.09	293.16	4081.57	-25.94	25.39	29.18	0.05	456316.52	638624.11	N 32 15 14.75 W 104 1	7.04	
4178.00	0.05	148.86	4176.57	-25.93	25.38	29.13	0.14	456316.52	638624.06	N 32 15 14.75 W 104 1	7.04	
4272.00	0.02	273.36	4270.57	-25.90	25.34	29.14	0.07	456316.48	638624.07	N 32 15 14.75 W 104 1	7.04	
4367.00	0.01	326.39	4365.57	-25.90	25.35	29.12	0.02	456316.49	638624.04	N 32 15 14.75 W 104 1	7.04	
4461.00	0.01	294.04	4459.57	-25.91	25.36	29.10	0.01	456316.50	638624.03	N 32 15 14.75 W 104 1	7.04	
4650.00	0.01	125.42	4648.57	-25.91	25.36	29.10	0.01	456316.50	638624.03	N 32 15 14.75 W 104 1	7.04	
4745.00	0.09	269.76	4743.57	-25.91	25.36	29.04	0.10	456316.49	638623.96	N 32 15 14.75 W 104 1	7.05	
4840.00	0.11	215.42	4838.57	-25.83	25.28	28.91	0.10	456316.42	638623.84	N 32 15 14.75 W 104 1	7.05	
4934.00	0.04	351.86	4932.57	-25.79	25.24	28.85	0.15	456316.38	638623.78	N 32 15 14.75 W 104 1	7.05	
5029.00	0.01	251.45	5027.57	-25.82	25.27	28.84	0.05	456316.41	638623.77	N 32 15 14.75 W 104 1	7.05	
5123.00	0.05	190.71	5121.57	-25.77	25.23	28.82	0.05	456316.36	638623.75	N 32 15 14.75 W 104 1	7.05	
5218.00	0.05	194.87	5216.57	-25.69	25.15	28.80	0.00	456316.28	638623.73	N 32 15 14.75 W 104 1	7.05	
5312.00	0.01	309.96	5310.57	-25.66	25.11	28.79	0.06	456316.25	638623.72	N 32 15 14.75 W 104 1	7.05	
5407.00	0.04	229.07	5405.57	-25.64	25.10	28.76	0.04	456316.23	638623.68	N 32 15 14.75 W 104 1	7.05	
5501.00	0.01	126.66	5499.57	-25.61	25.07	28.74	0.05	456316.21	638623.67	N 32 15 14.75 W 104 1	7.05	
5596.00	0.07	311.71	5594.57	-25.65	25.10	28.70	0.08	456316.24	638623.63	N 32 15 14.75 W 104 1	7.05	
5691.00	0.07	4.12	5689.57	-25.74	25.20	28.66	0.07	456316.34	638623.59	N 32 15 14.75 W 104 1	7.05	
5880.00	0.07	182.54	5878.57	-25.74	25.20	28.67	0.07	456316.34	638623.59	N 32 15 14.75 W 104 1	7.05	
5974.00	0.03	81.46	5972.57	-25.69	25.14	28.69	0.09	456316.28	638623.62	N 32 15 14.75 W 104 1	7.05	
6069.00	0.06	182.16	6067.57	-25.64	25.10	28.71	0.08	456316.24	638623.64	N 32 15 14.75 W 104 1	7.05	
6164.00	0.04	113.78	6162.57	-25.58	25.04	28.74	0.06	456316.17	638623.67	N 32 15 14.75 W 104 1	7.05	
6353.00	0.03	198.50	6351.57	-25.51	24.96	28.78	0.03	456316.10	638623.71	N 32 15 14.75 W 104 1	7.05	
6447.00	0.04	260.58	6445.57	-25.48	24.93	28.74	0.04	456316.07	638623.67	N 32 15 14.75 W 104 1	7.05	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (NUS)	Easting (ftUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
Bone Spring Intersection	6518.43	0.49	288.95	6517.00	-25.57	25.03	28.43	0.64	456316.17	638623.36	N 32 15 14.75 W 104 1	7.05
	6542.00	0.64	289.51	6540.57	-25.64	25.11	28.21	0.64	456316.24	638623.14	N 32 15 14.75 W 104 1	7.05
	6637.00	2.06	294.38	6635.54	-26.48	25.99	26.15	1.50	456317.13	638621.08	N 32 15 14.76 W 104 1	7.08
	6731.00	3.49	297.20	6729.42	-28.41	27.99	22.07	1.53	456319.13	638617.00	N 32 15 14.78 W 104 1	7.13
	6920.00	4.13	270.19	6918.02	-30.83	30.65	10.15	1.00	456321.78	638605.08	N 32 15 14.80 W 104 1	7.26
	7110.00	5.84	276.08	7107.30	-31.57	31.69	-6.31	0.94	456322.83	638588.62	N 32 15 14.81 W 104 1	7.46
	7204.00	5.96	275.48	7200.80	-32.35	32.66	-15.92	0.14	456323.80	638579.01	N 32 15 14.82 W 104 1	7.57
	7298.00	7.84	272.23	7294.11	-32.85	33.38	-27.19	2.04	456324.52	638567.75	N 32 15 14.83 W 104 1	7.70
	7393.00	10.57	267.43	7387.88	-32.43	33.24	-42.37	2.98	456324.38	638552.57	N 32 15 14.83 W 104 1	7.88
	7582.00	8.03	260.72	7574.39	-28.94	30.33	-72.72	1.46	456321.47	638522.22	N 32 15 14.80 W 104 1	8.23
	7676.00	6.20	257.85	7667.66	-26.59	28.21	-84.16	1.98	456319.34	638510.77	N 32 15 14.78 W 104 1	8.36
KOP Actual	7767.00	5.08	253.05	7758.22	-24.47	26.25	-92.89	1.24	456317.39	638502.05	N 32 15 14.76 W 104 1	8.46
	7861.00	12.00	245.51	7851.12	-20.40	22.44	-106.30	7.38	456313.58	638488.64	N 32 15 14.73 W 104 1	8.62
	7956.00	20.13	208.77	7942.34	-10.27	12.77	-130.67	8.82	456303.91	638464.27	N 32 15 14.63 W 104 1	8.91
	8050.00	24.38		8029.74	14.03	-11.07	-154.85	15.21	456280.07	638440.09	N 32 15 14.40 W 104 1	9.19
100' FNL Crossing	8110.00	25.09	194.53	8084.28	37.39	-34.26	-164.01	9.98	456256.89	638430.93	N 32 15 14.17 W 104 1	9.30
	8145.00	26.09	186.78	8115.86	52.27	-49.09	-166.78	9.98	456242.06	638428.16	N 32 15 14.02 W 104 1	9.33
	8240.00	31.35	182.42	8199.15	97.79	-94.56	-170.29	5.96	456196.59	638424.65	N 32 15 13.57 W 104 1	9.37
	8335.00	42.38	183.30	8275.04	154.67	-151.39	-173.19	11.62	456139.76	638421.75	N 32 15 13.01 W 104 1	9.41
	8429.00	51.56	187.34	8339.13	223.08	-219.69	-179.73	10.26	456071.47	638415.21	N 32 15 12.33 W 104 1	9.48
	8524.00	58.94	188.20	8393.24	300.55	-296.97	-190.30	7.80	455994.19	638404.64	N 32 15 11.57 W 104 1	9.61
	8618.00	67.10	180.81	8435.90	384.03	-380.34	-196.68	11.15	455910.83	638398.27	N 32 15 10.74 W 104 1	9.69
	8711.00	72.24	176.19	8468.21	471.09	-467.46	-194.34	7.23	455823.72	638400.61	N 32 15 9.88 W 104 1	9.66
	8805.00	81.57	177.15	8489.49	562.27	-558.76	-189.04	9.98	455732.43	638405.91	N 32 15 8.98 W 104 1	9.60
	8898.00	90.18	178.99	8496.17	654.81	-651.38	-185.93	9.47	455639.82	638409.02	N 32 15 8.06 W 104 1	9.57
	8965.00	89.41	176.23	8496.41	721.68	-718.31	-183.13	4.28	455572.89	638411.81	N 32 15 7.40 W 104 1	9.54
	9058.00	89.26	179.40	8497.49	814.51	-811.22	-179.59	3.41	455479.98	638415.36	N 32 15 6.48 W 104 1	9.50
	9151.00	89.30	178.20	8498.66	907.42	-904.19	-177.64	1.29	455387.02	638417.31	N 32 15 5.56 W 104 1	9.48
	9244.00	88.03	178.53	8500.83	1000.29	-997.13	-174.99	1.41	455294.09	638419.96	N 32 15 4.64 W 104 1	9.46
	9337.00	89.29	181.14	8503.00	1093.23	-1090.09	-174.72	3.12	455201.14	638420.22	N 32 15 3.70 W 104 1	9.46
	9430.00	89.34	182.11	8504.11	1186.22	-1183.05	-177.36	1.04	455108.19	638417.59	N 32 15 2.82 W 104 1	9.49
	9524.00	89.52	182.61	8505.05	1280.19	-1276.96	-181.23	0.57	455014.28	638413.72	N 32 15 1.87 W 104 1	9.54
	9710.00	89.55	183.94	8506.56	1466.05	-1462.65	-191.85	0.72	454828.61	638403.09	N 32 15 0.83 W 104 1	9.67
	9804.00	90.54	185.05	8506.48	1559.88	-1556.36	-198.22	1.58	454734.91	638395.73	N 32 14 59.11 W 104 1	9.76
	9990.00	89.62	183.70	8506.22	1745.57	-1741.81	-213.41	0.88	454549.47	638381.54	N 32 14 57.27 W 104 1	9.93
	10177.00	89.55	181.36	8507.58	1932.49	-1928.61	-222.12	1.25	454362.69	638373.29	N 32 14 55.42 W 104 1	10.03
	10270.00	90.01	179.21	8507.94	2025.48	-2021.60	-222.12	2.36	454269.70	638372.82	N 32 14 54.50 W 104 1	10.04
	10364.00	90.07	178.83	8507.87	2119.42	-2115.59	-220.52	0.41	454175.73	638374.43	N 32 14 53.57 W 104 1	10.02
	10551.00	89.42	179.08	8507.07	2306.28	-2302.55	-217.11	0.23	453998.77	638377.84	N 32 14 51.72 W 104 1	9.99
	10737.00	90.58	178.88	8507.07	2492.16	-2488.52	-213.79	0.46	453802.82	638381.15	N 32 14 49.88 W 104 1	9.96
	10924.00	91.33	178.99	8505.59	2679.01	-2675.48	-210.32	0.94	453615.88	638384.63	N 32 14 48.03 W 104 1	9.92
	11111.00	91.18	178.96	8501.49	2865.84	-2862.40	-206.97	0.88	453428.97	638387.97	N 32 14 46.18 W 104 1	9.89
	11204.00	89.71	178.88	8500.77	2958.76	-2955.38	-205.22	1.58	453336.00	638389.72	N 32 14 45.26 W 104 1	9.87
	11297.00	90.03	178.64	8500.98	3051.69	-3048.36	-203.21	0.43	453243.03	638391.74	N 32 14 44.34 W 104 1	9.85
	11391.00	90.51	178.55	8500.54	3145.60	-3142.33	-200.90	0.52	453149.07	638394.04	N 32 14 43.41 W 104 1	9.83
	11580.00	90.55	180.47	8498.79	3334.51	-3331.31	-199.29	1.02	452960.11	638395.66	N 32 14 41.54 W 104 1	9.82
	11769.00	89.63	179.75	8498.49	3523.47	-3520.30	-199.65	0.62	452771.13	638395.30	N 32 14 39.67 W 104 1	9.83
	11958.00	89.57	180.97	8499.81	3712.45	-3709.29	-200.84	0.65	452582.15	638394.11	N 32 14 37.80 W 104 1	9.85
	12147.00	88.95	182.73	8502.25	3901.41	-3898.17	-206.94	0.99	452393.29	638388.01	N 32 14 35.93 W 104 1	9.93
	12241.00	88.21	182.03	8504.58	3995.36	-3992.06	-210.84	1.08	452298.41	638384.11	N 32 14 35.00 W 104 1	9.98
	12430.00	88.64	181.65	8509.77	4184.27	-4180.89	-216.91	0.30	452110.60	638378.04	N 32 14 33.14 W 104 1	10.05
	12619.00	89.75	180.59	8512.43	4373.24	-4368.83	-220.60	0.81	451921.67	638374.35	N 32 14 31.27 W 104 1	10.10
	12808.00	89.56	182.51	8513.57	4562.23	-4558.74	-225.71	1.02	451732.77	638369.24	N 32 14 29.40 W 104 1	10.17
	12997.00	88.02	182.63	8517.56	4751.12	-4747.51	-234.19	0.82	451544.02	638360.76	N 32 14 27.53 W 104 1	10.27
	13092.00	88.64	183.54	8520.33	4846.02	-4842.33	-239.30	1.16	451449.21	638355.65	N 32 14 26.59 W 104 1	10.34
	13186.00	89.44	182.28	8521.90	4939.95	-4936.19	-244.07	1.59	451355.36	638350.88	N 32 14 25.66 W 104 1	10.39
	13281.00	90.08	179.70	8522.03	5034.94	-5031.17	-245.71	2.80	451260.39	638349.24	N 32 14 24.72 W 104 1	10.42
	13375.00	90.25	179.69	8522.03	5128.92	-5125.16	-245.21	0.18	451166.40	638349.74	N 32 14 23.79 W 104 1	10.41
	13470.00	90.10	179.50	8521.74	5223.88	-5220.16	-244.54	0.25	451071.41	638350.41	N 32 14 22.85 W 104 1	10.41
	13659.00	90.01	181.55	8521.56	5412.86	-5409.14	-246.27	1.09	450882.44	638348.68	N 32 14 20.98 W 104 1	10.44
	13753.00	90.75	183.57	8520.94	5506.82	-5503.04	-250.47	2.29	450788.55	638344.48	N 32 14 20.05 W 104 1	10.49
	13848.00	90.53	181.49	8519.87	5601.78	-5597.94	-254.66	2.20	450693.66	638340.29	N 32 14 19.12 W 104 1	10.54
	13943.00	90.56	178.64	8518.97	5696.75	-5692.92	-254.77	3.00	450598.68	638340.18	N 32 14 18.18 W 104 1	10.54
	14037.00	90.05	180.75	8518.47	5790.72	-5786.92	-254.27	2.31	450504.70	638340.68	N 32 14 17.25 W 104 1	10.54
	14226.00	90.78	181.15	8517.10	5979.71	-5975.88	-257.40	0.44	450315.75	638337.55	N 32 14 15.38 W 104 1	10.58
	14416.00	88.40	181.62	8518.46	6169.69	-6165.81	-261.99	1.28	450125.84	638332.96	N 32 14 13.50 W 104 1	10.64
	14510.00	87.30	181.56	8521.99	6263.62	-6259.71	-264.60	1.17	450031.95	638330.35	N 32 14 12.57 W 104 1	10.68
	14604.00	89.50	180.96	8524.61	6357.58	-6353.64	-266.66	2.43	449938.02	638328.29	N 32 14 11.64 W 104 1	10.71
	14699.00	91.59	180.46	8523.71	6452.56	-6448.62	-267.84	2.26	449843.05	638327.11	N 32 14 10.70 W 104 1	10.72
	14793.00	90.45	180.33	8522.03	6546.54	-6542.60	-268.49	1.22	449749.07	638326.46	N 32 14 9.77 W 104 1	10.73
	14888.00	92.03	179.49	8519.98	6641.49	-6637.58	-268.34	1.88	449654.11	638326.61	N 32 14 8.83 W 104 1	10.73
	15077.00	90.06	181.20	8516.53	6830.43	-6826.53	-269.48	1.38	449465.17	638325.47	N 32 14 6.96 W 104 1	10.75
	15171.00	91.27	178.77	8515.44	6924.40	-6920.51	-269.45	2.89	449371.20	638325.50	N 32 14 6.03 W 104 1	10.76
	15266.00	90.39	176.53	8514.06	7019.21	-7015.41	-265.56	2.53	449276.30	638329.39	N 32 14 5.09 W 104 1	10.71
	15361.00	89.91	177.72	8513.82	7113.98	-7110.29	-260.80	1.35	449181.43	638334.16	N 32 14 4.15 W 104 1	10.66
	15455.00	89.28	180.12	8514.48	7207.90	-7204.27	-259.02	2.64	449087.47	638335.93	N 32 14 3.22 W 104 1	10.65
	15550.00	90.58	180.90	8514.60	7302.89	-7299.26	-259.87	1.60</				

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 ° ' ")
100' FSL	18722.81	90.43	179.50	8514.40	10470.95	-10459.55	-172.95	1.12	445822.45	638422.00	N 32 13 30.91	W 104 1 9.75
Crossing												
Final Survey	18750.00	90.38	179.80	8514.20	10498.13	-10496.74	-172.78	1.12	445795.26	638422.16	N 32 13 30.64	W 104 1 9.75
Proj. to TD	18800.00	90.38	179.80	8513.87	10548.11	-10546.74	-172.61	0.00	445745.27	638422.34	N 32 13 30.14	W 104 1 9.75

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	26.500	1/98.425	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD 0-18,800' MD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD 0-18,800' MD
	1	26.500	417.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD
	1	417.500	18800.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD

...Original Borehole/Oxy Length CC 6-7 Federal Com 25H Gyro+ MWD 0-18,800' MD