

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

May 24, 2019

OXY USA, Inc.

Re:

CLIENT: OXY USA, Inc.
WELL: Length CC 6-7 Federal Com 22H
FIELD: Pierce Crossing Bone Spring

S6, T24S, R29E Eddy NM
N 32° 15' 10.06521" W 104° 1' 47.77745"

RIG: H&P 635
COUNTY: Eddy
API NO: 3001545565
JOB NO: 19MLH0084

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).

Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
JOSEPH AJAYI FE	Length CC 6-7 Federal Com 22H Original Hole	488.00 Ft to 18769.00 Ft	March 31, 2019 to May 24, 2019	SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

ANDREW SALOMON
Field Service Manager

Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

RECEIVED

JUL 08 2019

Schlumberger

DISTRICT 11-ARTESIA O.C.D.

Well Reference:

S6. T24S, R29E Eddy NM
N 32° 15' 10.06521" W 104° 1' 47.77745"

I, JOSEPH AJAYI certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of March 31, 2019 through May 24, 2019, conduct or supervise the taking of the SlimPulse surveys from a depth of 488.00 feet to a depth of 18769.00 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, Inc. for the Length CC 6-7 Federal Com 22H Well (Original Hole) API No. 3001545565 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
JOSEPH AJAYI
FE

JA

Subscribed and Sworn to before me this 31 day of May (month) 2019 (yr)

My Commission expires:

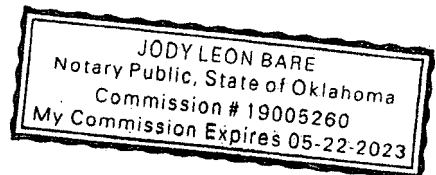
22 May 2023

Jody Leon Bare

Notary Public

(signature)

Grady County, Oklahoma
(County State)



Schlumberger

OXY

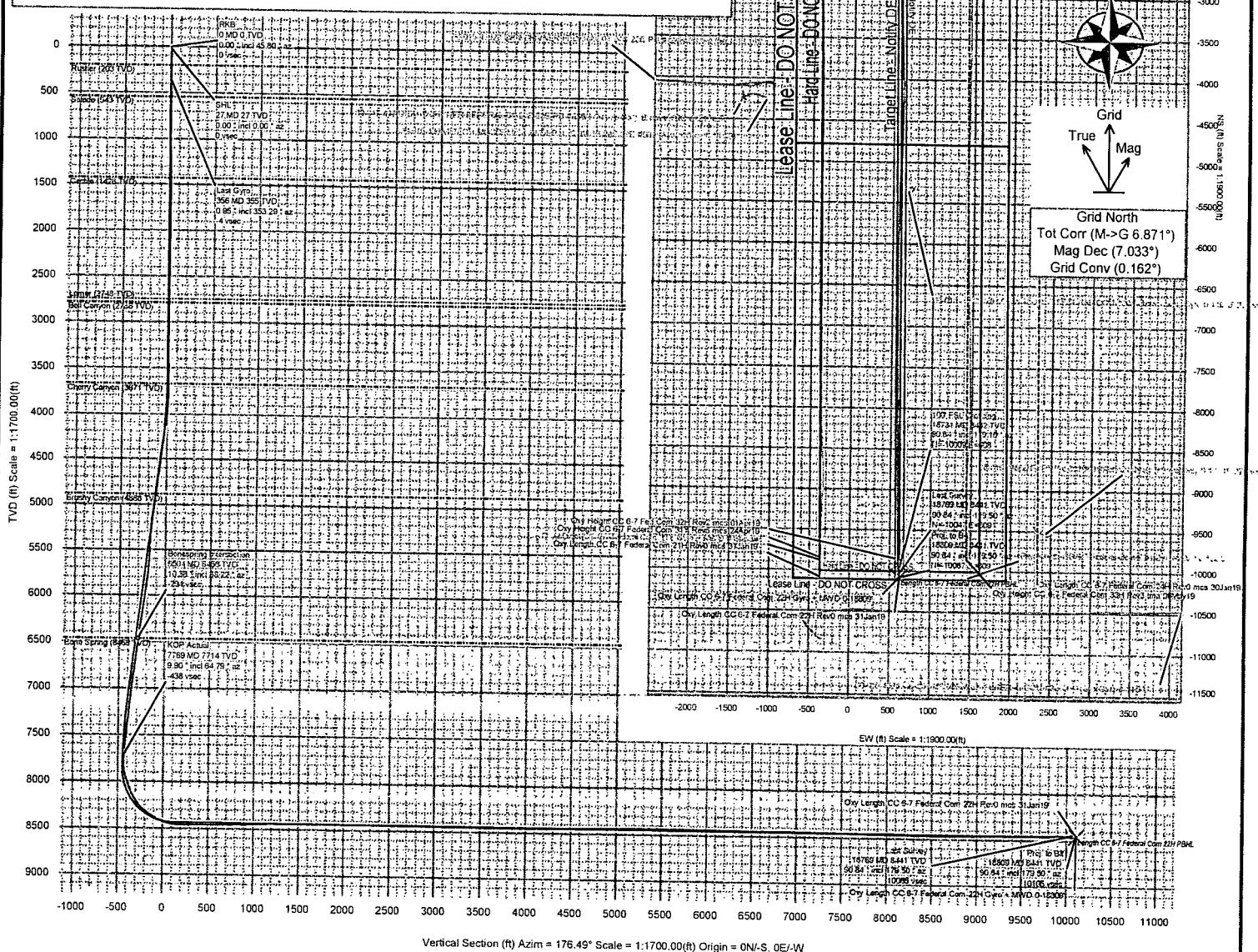


Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Length CC 6-7 Federal Com 22H	NM Eddy County (NAD 83)	Oxy Length CC 6-7 Federal Com 22H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	IFR1	Dip:	60.02°	Date:	17-May-2019	Lat:	N 32 15 10.07	Northing:	458832.99HUS	Grid Conv:	0.1619°
MagDec:	7.033°	FS:	47919.4nT	Gravity FS:	998.471mg (9.80665 Based)	Lon:	W 104 1 47.78	Easting:	635127.61HUS	Scale Fact:	0.99991917
								Plan:			
								Oxy Length CC 6-7 Federal Com 22H Gyro = MWD 0-1800°			

Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
RKB	0.00	0.00	45.80	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	355.50	0.95	353.29	355.47	-4.05	4.02	-0.52	0.67
Bonespring Intersection	6504.00	10.38	38.22	6468.00	-293.56	312.49	299.60	0.38
KOP Actual	7769.00	9.90	64.79	7713.78	-437.82	466.46	453.45	0.94
100' FNL Crossing	8042.00	22.51	144.57	7977.56	-410.16	442.11	508.34	8.39
100' FSL Crossing	18731.10	90.84	179.16	8441.90	10027.32	-10008.85	608.43	0.89
Last Survey	18769.00	90.84	179.50	8441.34	10065.17	-10046.74	608.87	0.89
Proj. to Bit	18809.00	90.84	179.50	8440.76	10105.11	-10086.73	609.22	0.00



Oxy Length CC 6-7 Federal Com 22H Gyro + MWD 0-18809' Survey

Geodetic Report

(Def Survey)



Report Date: May 30, 2019 - 11:41 AM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Length CC 6-7 Federal Com 22H / Oxy Length CC 6-7 Federal Com 22H
 Well: Oxy Length CC 6-7 Federal Com 22H
 Borehole: Original Borehole
 UWI / API#: H&P635 / 30-015-45565
 Survey Name: Oxy Length CC 6-7 Federal Com 22H Gyro + MWD 0-18809'
 Survey Date: March 25, 2019
 Tort / AHD / DDI / ERD Ratio: 245.366' / 11318.299 ft / 6.791' / 1.338
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 15' 10.06521", W 104° 1' 47.77745"
 Location Grid N/E Y/X: N 455832.960 RUS, E 635127.610 RUS
 CRS Grid Convergence Angle: 0.1619°
 Grid Scale Factor: 0.99991917
 Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 176.490 ° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 2989.500 ft above MSL
 Seabed / Ground Elevation: 2963.000 ft above MSL
 Magnetic Declination: 7.033 °
 Total Gravity Field Strength: 998.4712mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 47919.400 nT
 Magnetic Dip Angle: 60.020 °
 Declination Date: May 17, 2019
 Magnetic Declination Model: IFR1
 North Reference: Grid North
 Grid Convergence Used: 0.1619 °
 Total Corr Mag North->Grid: 6.8711 °
 North: 6.8711 °
 Local Coord Referenced To: Well Head

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 ° ' ")
RKB	0.00	0.00	45.80	0.00	0.00	0.00	0.00	N/A	455832.96	635127.61	N 32 15 10.07 W 104	1 47 78
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	455832.96	635127.61	N 32 15 10.07 W 104	1 47 78
	70.50	0.54	341.58	70.50	-0.24	0.23	-0.08	1.45	455833.19	635127.53	N 32 15 10.07 W 104	1 47 78
	85.50	0.65	342.88	85.50	-0.40	0.39	-0.13	0.12	455833.35	635127.48	N 32 15 10.07 W 104	1 47 78
	100.50	0.60	340.25	100.50	-0.56	0.55	-0.18	0.38	455833.51	635127.43	N 32 15 10.07 W 104	1 47 78
	115.50	0.65	347.47	115.50	-0.72	0.71	-0.23	0.62	455833.67	635127.38	N 32 15 10.07 W 104	1 47 78
	130.50	0.76	1.33	130.50	-0.90	0.89	-0.24	1.35	455833.85	635127.37	N 32 15 10.07 W 104	1 47 78
	145.50	0.78	353.23	145.49	-1.10	1.09	-0.25	0.74	455834.05	635127.36	N 32 15 10.08 W 104	1 47 78
	160.50	0.80	357.12	160.49	-1.31	1.30	-0.27	0.38	455834.26	635127.34	N 32 15 10.08 W 104	1 47 78
	175.50	0.90	357.00	175.49	-1.53	1.52	-0.28	0.67	455834.48	635127.33	N 32 15 10.08 W 104	1 47 78
	190.50	0.77	356.47	190.49	-1.74	1.73	-0.29	1.27	455834.69	635127.32	N 32 15 10.08 W 104	1 47 78
	205.50	0.71	355.68	205.49	-1.94	1.92	-0.31	0.41	455834.88	635127.30	N 32 15 10.08 W 104	1 47 78
	220.50	0.74	358.07	220.49	-2.13	2.12	-0.32	0.29	455835.08	635127.29	N 32 15 10.09 W 104	1 47 78
	235.50	0.85	356.10	235.49	-2.34	2.33	-0.33	0.76	455835.29	635127.28	N 32 15 10.09 W 104	1 47 78
	250.50	0.76	354.37	250.48	-2.55	2.54	-0.34	0.62	455835.50	635127.27	N 32 15 10.09 W 104	1 47 78
	265.50	0.80	353.98	265.48	-2.76	2.74	-0.37	0.27	455835.70	635127.24	N 32 15 10.09 W 104	1 47 78
	280.50	0.68	357.86	280.48	-2.95	2.93	-0.38	0.87	455835.89	635127.23	N 32 15 10.09 W 104	1 47 78
	295.50	0.83	355.52	295.48	-3.15	3.13	-0.39	1.02	455836.09	635127.22	N 32 15 10.10 W 104	1 47 78
	310.50	0.89	349.03	310.48	-3.37	3.35	-0.42	0.76	455836.31	635127.19	N 32 15 10.10 W 104	1 47 78
	325.50	0.82	350.90	325.48	-3.59	3.57	-0.46	0.50	455836.53	635127.15	N 32 15 10.10 W 104	1 47 78
	340.50	0.85	353.46	340.47	-3.81	3.79	-0.49	0.32	455836.75	635127.12	N 32 15 10.10 W 104	1 47 78
	355.50	0.95	353.29	355.47	-4.05	4.02	-0.52	0.67	455836.98	635127.09	N 32 15 10.11 W 104	1 47 78
	488.00	0.80	348.91	487.96	-6.06	6.02	-0.82	0.12	455838.98	635126.79	N 32 15 10.12 W 104	1 47 79
	547.00	0.02	192.34	546.96	-6.46	6.42	-0.91	1.39	455839.38	635126.70	N 32 15 10.13 W 104	1 47 79
	668.00	0.04	160.08	667.96	-6.40	6.36	-0.90	0.02	455839.32	635126.71	N 32 15 10.13 W 104	1 47 79
	820.00	0.04	295.41	819.96	-6.37	6.33	-0.93	0.05	455839.29	635126.68	N 32 15 10.13 W 104	1 47 79
	1007.00	1.39	151.95	1006.94	-4.34	4.36	0.08	0.76	455837.31	635127.69	N 32 15 10.11 W 104	1 47 78
	1191.00	2.66	180.30	1190.82	1.95	-1.88	1.11	0.86	455831.08	635128.72	N 32 15 10.05 W 104	1 47 76
	1283.00	1.18	146.12	1282.77	4.90	-4.81	1.63	1.97	455828.15	635129.24	N 32 15 10.02 W 104	1 47 76
	1468.00	0.02	203.80	1467.76	6.57	-6.42	2.67	0.63	455826.54	635130.28	N 32 15 10.00 W 104	1 47 75
	1655.00	0.02	191.99	1654.76	6.63	-6.48	2.65	0.00	455826.48	635130.26	N 32 15 10.00 W 104	1 47 75
	1749.00	0.07	91.38	1748.76	6.65	-6.50	2.71	0.08	455826.46	635130.32	N 32 15 10.00 W 104	1 47 75
	1844.00	0.06	41.05	1843.76	6.62	-6.46	2.80	0.06	455826.50	635130.41	N 32 15 10.00 W 104	1 47 75
	1939.00	0.02	8.27	1938.76	6.57	-6.41	2.83	0.05	455826.55	635130.44	N 32 15 10.00 W 104	1 47 74
	2033.00	0.06	121.04	2032.76	6.58	-6.42	2.88	0.07	455826.55	635130.49	N 32 15 10.00 W 104	1 47 74
	2129.00	0.09	214.84	2128.76	6.67	-6.50	2.88	0.12	455826.46	635130.49	N 32 15 10.00 W 104	1 47 74
	2222.00	0.53	45.43	2221.76	6.44	-6.26	3.14	0.67	455826.70	635130.75	N 32 15 10.00 W 104	1 47 74
	2317.00	0.43	83.14	2316.75	6.13	-5.91	3.81	0.34	455827.05	635131.42	N 32 15 10.01 W 104	1 47 73
	2411.00	0.31	262.68	2410.75	6.13	-5.90	3.91	0.79	455827.06	635131.52	N 32 15 10.01 W 104	1 47 73
	2506.00	0.52	338.05	2505.75	5.74	-5.53	3.49	0.56	455827.43	635131.10	N 32 15 10.01 W 104	1 47 74
	2600.00	0.07	315.05	2599.75	5.29	-5.10	3.29	0.49	455827.86	635130.90	N 32 15 10.01 W 104	1 47 74
	2694.00	0.07	264.55	2693.75	5.25	-5.06	3.20	0.06	455827.90	635130.80	N 32 15 10.02 W 104	1 47 74
	2789.00	0.09	348.58	2788.75	5.18	-4.99	3.12	0.11	455827.97	635130.73	N 32 15 10.02 W 104	1 47 74
	2883.00	0.04	119.69	2882.75	5.12	-4.94	3.14	0.13	455828.02	635130.75	N 32 15 10.02 W 104	1 47 74
	2977.00	0.04	313.65	2976.75	5.11	-4.93	3.14	0.08	455828.03	635130.75	N 32 15 10.02 W 104	1 47 74
	3166.00	0.02	345.32	3165.75	5.03	-4.85	3.09	0.01	455828.11	635130.69	N 32 15 10.02 W 104	1 47 74
	3260.00	0.02	339.59	3259.75	5.00	-4.82	3.08	0.00	455828.14	635130.68	N 32 15 10.02 W 104	1 47 74
	3355.00	0.98	99.53	3354.74	5.17	-4.94	3.87	1.04	455828.02	635131.48	N 32 15 10.02 W 104	1 47 73
	3449.00	3.08	94.00	3448.68	5.68	-5.25	7.18	2.24	455827.71	635134.79	N 32 15 10.01 W 104	1 47 69
	3543.00	5.22	92.70	3542.43	6.47	-5.63	13.97	2.28	455827.33	635141.58	N 32 15 10.01 W 104	1 47 61
	3638.00	6.14	85.93	3636.96	6.89	-5.47	23.36	1.20	455827.49	635150.97	N 32 15 10.01 W 104	1 47 51
	3732.00	6.80	78.74	3730.36	6.09	-4.03	33.83	1.11	455828.93	635161.44	N 32 15 10.02 W 104	1 47 38
	3827.00	7.24	68.43	3824.66	3.48	-0.73	44.91	1.40	455832.23	635172.52	N 32 15 10.06 W 104	1 47 25
	3921.00	7.97	59.39	3917.83	-1.33	4.77	56.03	1.49	455837.73	635183.64	N 32 15 10.11 W 104	1 47 12
	4015.00	8.67	43.00	4010.86	-9.17	13.27	66.47	2.62	455846.23	635194.08	N 32 15 10.19 W 104	1 47 00
	4110.00	9.52	32.81	4104.67	-20.43	25.11	75.62	1.91	455858.07	635203.22	N 32 15 10.31 W 104	1 46 50
	4204.00	9.01	25.01	4197.44	-33.16	38.31	82.94	1.44	455871.27	635210.54	N 32 15 10.44 W 104	1 46 41
	4298.00	7.85	18.24	4290.43	-45.59	51.08	88.06	1.62	455884.04	635215.66	N 32 15 10.57 W 104	1 46 35
	4392.00	7.99	19.53	4383.53	-57.57	63.33	92.25	0.24	455896.29	635219.86	N 32 15 10.69 W 104	1 46 30
	4481.00	8.18	20.95	4470.65	-81.89	88.27	101.45	0.15	455921.22	635229.05	N 32 15 10.94 W 104	1 46 29
	4576.00	7.94	21.69	4464.72	-93.98	100.68	106.29	0.28	455933.63	635233.90	N 32 15 11.06 W 104	1 46 24
	4670.00	8.00	21.96	4457.81	-105.76	112.78	111.14	0.08	455945.73	635238.74	N 32 15 11.18 W 104	1 46 18
	4770.00	7.65	20.66	4850.93	-117.38	124.70	115.79	0.42	455957.65	635243.39	N 32 15 11.30 W 104	1 46 12
	4864.00	7.76	24.09	4945.07	-128.83	136.47	120.64	0.50	455969.42	635248.24	N 32 15 11.41 W 104	1 46 07
	4959.00	7.86	25.38	5038.20	-140.08	148.07	125.99	0.21	455981.02	635253.59	N 32 15 11.53 W 104	1 46 03
	5147.00	8.32	33.57	5131.27	-151.13	159.55	132.50	1.32	455992.49	635260.10	N 32 15 11.64 W 104	1 46 03
	5241.00	8.71	44.45	5224.24	-161.33	170.29	141.25	1.76	456003.24	635268.85	N 32 15 11.75 W 104	1 46 03
	5430.00	9.66	71.55	5410.90	-175.00	185.54	166.33	2.32	456018.48	635273.92	N 32 15 11.90 W 104	1 45 53
	5524.00	9.77	78.92	5503.56	-178.09	189.56	181.63	1.33	456022.51	635309.23	N 32 15 11.94 W 104	1 45 56
	5619.00	10.46	67.96	5597.09	-181.89	194.35	197.54	2.15	456027.29	635325.13	N 32 15 11.98 W 104	1 45 47
	5713.00	9.97	46.03	5689.63	-189.89	203.21	211.31	4.14	456036.15	635338.90	N 32 15 12.07 W 104	1 45 31
	5807.00	9.95	48.25	5782.22	-200.19	214.26	223.23	0.41	456047.20	635350.82	N 32 15 12.18 W 104	1 45 17
	5902.00	10.35	36.31	5875.74	-211.83	226.61	234.40	2.25	456059.55	635361.99	N 32 15 12.30 W 104	1 45 04
	5996.00	10.02	35.83	5968.26	-224.64	240.04	244.19	0.36	456072.98	635371.78	N 32 15 12.43 W 104	1 44 93
	6185.00	10.38	37.99	6154.27	-250.11	266.79	264.30	0.28	456099.73	635391.88	N 32 15 12.70 W 104	1 44 69

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 ° ' ")
Bonespring Intersection	6504.00	10.38	38.22	6468.00	-293.56	312.49	299.60	0.38	456145.42	635427.19	N 32 15 13.15 W 104	1 44.28
	6562.00	10.16	38.39	6525.07	-301.26	320.60	306.01	0.38	456153.53	635433.60	N 32 15 13.23 W 104	1 44.20
	6656.00	10.09	39.39	6617.61	-313.46	333.46	316.39	0.20	456166.39	635443.97	N 32 15 13.36 W 104	1 44.08
	6751.00	9.71	37.88	6711.19	-323.57	346.22	326.59	0.48	456179.15	635454.17	N 32 15 13.48 W 104	1 43.96
	6845.00	9.95	39.38	6803.81	-337.47	358.75	336.61	0.37	456191.68	635464.19	N 32 15 13.61 W 104	1 43.85
	6940.00	10.00	40.31	6897.38	-349.43	371.38	347.15	0.18	456204.31	635474.73	N 32 15 13.73 W 104	1 43.72
	7034.00	10.01	38.19	6989.95	-361.42	384.03	357.48	0.39	456216.96	635485.06	N 32 15 13.86 W 104	1 43.60
	7129.00	9.95	40.03	7083.51	-373.53	396.80	367.86	0.34	456229.73	635495.44	N 32 15 13.98 W 104	1 43.48
	7223.00	9.98	41.27	7176.09	-385.20	409.14	378.46	0.23	456242.07	635506.04	N 32 15 14.10 W 104	1 43.36
	7317.00	9.78	51.40	7268.71	-395.57	420.25	390.07	1.86	456253.17	635517.65	N 32 15 14.21 W 104	1 43.22
	7412.00	9.89	49.56	7362.31	-405.11	430.57	402.59	0.35	456263.50	635530.16	N 32 15 14.31 W 104	1 43.08
	7506.00	10.09	47.54	7454.89	-415.14	441.37	414.81	0.43	456274.29	635542.38	N 32 15 14.42 W 104	1 42.93
	7695.00	10.30	61.54	7640.93	-432.68	460.80	441.88	1.31	456293.52	635569.45	N 32 15 14.61 W 104	1 42.62
	7769.00	9.90	64.79	7713.78	-437.82	466.46	453.45	0.94	456299.38	635581.02	N 32 15 14.67 W 104	1 42.48
	7875.00	9.92	87.00	7818.24	-441.11	470.82	470.82	3.58	456303.74	635598.39	N 32 15 14.71 W 104	1 42.28
	7970.00	19.40	130.03	7910.28	-430.12	461.05	491.17	14.57	456293.98	635618.74	N 32 15 14.61 W 104	1 42.04
100' FNL Crossing	8042.00	22.51	144.57	7977.56	-410.16	442.11	508.34	8.39	456275.04	635635.90	N 32 15 14.43 W 104	1 41.84
	8064.00	23.68	148.21	7997.79	-402.69	434.93	513.10	8.39	456267.85	635640.67	N 32 15 14.35 W 104	1 41.79
	8158.00	23.93	156.47	8083.82	-368.15	401.39	530.66	3.55	456234.32	635658.23	N 32 15 14.02 W 104	1 41.58
	8253.00	30.30	168.10	8168.40	-326.27	360.21	543.32	8.70	456193.14	635670.89	N 32 15 13.61 W 104	1 41.44
	8347.00	40.74	176.41	8244.84	-271.95	306.21	550.15	12.21	456139.15	635677.72	N 32 15 13.08 W 104	1 41.36
	8442.00	52.76	179.64	8309.82	-202.93	237.19	552.34	12.89	456070.13	635679.90	N 32 15 12.40 W 104	1 41.34
	8537.00	59.47	177.56	8362.76	-124.17	158.41	554.32	7.29	455991.35	635681.89	N 32 15 11.62 W 104	1 41.32
	8631.00	64.46	180.73	8406.94	-41.33	75.49	555.51	6.09	455908.44	635683.07	N 32 15 10.80 W 104	1 41.31
	8726.00	76.38	178.87	8438.72	47.86	-13.85	555.87	12.68	455819.11	635683.44	N 32 15 9.91 W 104	1 41.31
	8820.00	86.76	176.07	8452.49	140.70	-106.61	560.00	11.43	455726.36	635687.57	N 32 15 8.99 W 104	1 41.26
	8906.00	90.75	176.03	8454.35	226.66	-192.37	565.92	4.64	455640.61	635693.49	N 32 15 8.15 W 104	1 41.19
	8992.00	90.84	173.15	8453.16	312.59	-277.97	574.03	3.35	455555.02	635701.59	N 32 15 7.30 W 104	1 41.10
	9179.00	90.29	171.28	8451.32	499.05	-463.23	599.36	1.04	455369.77	635726.92	N 32 15 5.46 W 104	1 40.81
	9273.00	90.46	174.52	8450.70	592.86	-556.49	610.97	3.45	455276.52	635738.53	N 32 15 4.54 W 104	1 40.68
	9366.00	90.84	178.79	8449.65	685.83	-649.30	616.40	4.61	455183.71	635743.96	N 32 15 3.62 W 104	1 40.62
	9459.00	91.25	182.85	8447.95	778.53	-742.26	615.07	4.39	455090.76	635742.63	N 32 15 2.70 W 104	1 40.64
	9553.00	91.25	184.70	8445.90	871.74	-836.03	608.88	1.97	454997.00	635736.44	N 32 15 1.78 W 104	1 40.72
	9646.00	91.35	184.62	8443.79	963.77	-928.70	601.33	0.64	454904.34	635728.89	N 32 15 0.86 W 104	1 40.81
	9833.00	91.21	185.85	8439.61	1148.55	-1114.87	584.27	1.16	454718.18	635711.83	N 32 14 59.02 W 104	1 41.01
	9926.00	90.15	185.30	8438.51	1240.38	-1207.42	575.24	1.28	454625.64	635702.80	N 32 14 58.10 W 104	1 41.12
	10020.00	90.18	184.49	8438.24	1333.36	-1301.08	567.22	0.86	454531.99	635694.78	N 32 14 57.18 W 104	1 41.22
	10113.00	90.25	182.25	8437.89	1425.69	-1393.91	561.75	2.41	454439.17	635689.31	N 32 14 56.26 W 104	1 41.28
	10206.00	90.46	181.88	8437.31	1518.25	-1486.85	558.40	0.46	454346.24	635685.96	N 32 14 55.34 W 104	1 41.32
	10299.00	90.29	181.86	8436.70	1610.83	-1579.79	555.36	0.18	454253.30	635682.93	N 32 14 54.42 W 104	1 41.36
	10392.00	89.87	180.87	8436.57	1703.50	-1672.77	553.15	1.16	454160.33	635680.71	N 32 14 53.50 W 104	1 41.39
	10486.00	89.91	180.97	8436.75	1797.22	-1766.75	551.64	0.11	454066.35	635679.20	N 32 14 52.57 W 104	1 41.41
	10579.00	89.53	180.93	8437.21	1889.93	-1859.74	550.10	0.41	453973.37	635677.66	N 32 14 51.65 W 104	1 41.43
	10672.00	89.91	180.68	8437.66	1982.67	-1952.73	548.79	0.49	453880.39	635676.36	N 32 14 50.73 W 104	1 41.45
	10766.00	89.67	177.73	8438.01	2076.55	-2046.71	550.09	3.15	453786.42	635677.66	N 32 14 49.80 W 104	1 41.44
	10859.00	89.77	179.04	8438.46	2169.50	-2139.67	552.72	1.41	453693.47	635680.28	N 32 14 48.88 W 104	1 41.41
	10952.00	90.18	178.89	8438.50	2262.41	-2232.65	554.40	0.47	453600.49	635681.96	N 32 14 47.96 W 104	1 41.40
	11047.00	90.35	179.17	8438.06	2357.32	-2327.64	556.00	0.34	453505.51	635683.67	N 32 14 47.02 W 104	1 41.38
	11142.00	89.87	178.86	8437.88	2452.22	-2422.62	557.64	0.60	453410.54	635685.20	N 32 14 46.08 W 104	1 41.36
	11237.00	89.98	177.39	8438.00	2547.18	-2517.57	560.75	1.55	453315.60	635688.31	N 32 14 45.14 W 104	1 41.33
	11331.00	89.87	178.36	8438.13	2641.15	-2611.51	564.23	1.04	453221.67	635691.79	N 32 14 44.21 W 104	1 41.29
	11426.00	90.18	178.94	8438.09	2736.08	-2706.48	566.47	0.69	453126.71	635694.03	N 32 14 43.27 W 104	1 41.27
	11521.00	89.53	179.37	8438.33	2830.98	-2801.47	567.87	0.82	453031.72	635695.43	N 32 14 42.33 W 104	1 41.26
	11616.00	88.94	178.31	8439.59	2925.89	-2896.44	569.79	1.28	452936.76	635697.36	N 32 14 41.39 W 104	1 41.24
	11710.00	89.01	177.35	8441.28	3019.85	-2909.35	573.35	1.02	452842.85	635700.91	N 32 14 40.46 W 104	1 41.20
	11805.00	89.77	176.36	8442.29	3114.84	-3085.20	578.56	1.31	452748.01	635706.13	N 32 14 39.52 W 104	1 41.14
	11905.00	89.49	179.16	8443.51	3204.77	-3275.04	585.99	1.48	452658.20	635713.55	N 32 14 37.64 W 104	1 41.08
	12184.00	89.70	177.81	8444.85	3493.65	-3463.96	590.99	0.72	452369.29	635718.55	N 32 14 35.77 W 104	1 41.01
	12373.00	89.80	177.67	8445.68	3682.60	-3642.56	598.44	0.09	452180.45	635726.00	N 32 14 33.90 W 104	1 40.93
	12563.00	89.77	177.72	8446.39	3872.56	-3842.66	606.08	0.03	451990.62	635733.64	N 32 14 32.02 W 104	1 40.85
	12753.00	89.98	177.80	8446.80	4062.51	-4032.51	613.51	0.12	451800.78	635741.07	N 32 14 30.15 W 104	1 40.77
	12943.00	90.90	181.59	8445.34	4252.17	-4222.47	614.52	2.05	451610.84	635742.08	N 32 14 28.27 W 104	1 40.76
	13133.00	90.94	181.35	8442.29	4441.43	-4412.38	609.64	0.13	451420.95	635737.20	N 32 14 26.39 W 104	1 40.82
	13323.00	90.90	180.89	8439.24	4630.78	-4602.32	605.93	0.24	451231.02	635733.49	N 32 14 24.51 W 104	1 40.87
	13513.00	90.97	182.17	8436.14	4820.02	-4792.22	600.86	0.67	451041.14	635728.42	N 32 14 22.63 W 104	1 40.94
	13702.00	90.39	181.48	8433.90	5008.18	-4981.11	594.84	0.48	450852.26	635722.40	N 32 14 20.76 W 104	1 41.02
	13797.00	90.32	180.87	8433.31	5102.86	-5076.09	592.89	0.65	450757.29	635720.45	N 32 14 19.82 W 104	1 41.04
	13892.00	90.32	181.51	8432.78	5197.54	-5171.06	590.92	0.67	450662.32	635718.48	N 32 14 18.88 W 104	1 41.07
	13987.00	89.80	181.83	8432.68	5292.15	-5266.02	588.15	0.64	450567.37	635715.71	N 32 14 17.94 W 104	1 41.10
	14177.00	90.25	180.52	8433.01	5386.72	-5360.97	584.93	0.23	450472.44	635712.50	N 32 14 17.00 W 104	1 41.14
	14366.00	89.74	181.70	8432.97	5481.39	-5455.94	582.80	1.68	450377.47	635710.37	N 32 14 16.06 W 104	1 41.17
	14461.00	89.77	181.33	8432.99	5669.77	-5644.90	579.14	0.68	450188.53	635706.70	N 32 14 14.19 W 104	1 41.22
	14556.00	89.98	181.70	8433.39	5764.40	-5739.87	576.63	0.39	450093.57	635704.19	N 32 14 13.25 W 104	1 41.25
	14651.00	89.05	183.24	8433.60	5858.94	-5834.80	573.06	1.75	449998.65	635700.62	N 32 14 12.31 W 104	1 41.30
	14745.00	89.39	182.10	8434.40	5953.30	-5929.65	567.91	1.02	449903.80	635695.47	N 32 14 11.37 W 104	1 41.36
	14839.00	89.46	180.55	8435.68	6046.74	-6023.54	563.53	1.27	449809.92	635691.09	N 32 14 10.45 W 104	1 41.41
	14934.											

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 ° ' ")
Last Survey	18769.00	90.84	179.50	8441.34	10065.17	-10046.74	608.87	0.89	445787.05	635736.43	N 32 13 30.63	W 104 1 41.02
Proj. to Bit	18809.00	90.84	179.50	8440.76	10105.11	-10086.73	609.22	0.00	445747.06	635736.78	N 32 13 30.24	W 104 1 41.02

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 22H Gyro + MWD 0-18809'
	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 22H Gyro + MWD 0-18809'
	1	26.500	355.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Length CC 6-7 Federal Com 22H Gyro +
	1	355.500	18809.000	Act Stns	30.000	30.000	NAL_MWD_JFR1+MS	Original Borehole / Oxy Length CC 6-7 Federal Com 22H Gyro +

...Original Borehole/Oxy Length CC 6-7 Federal Com 22H Gyro + MWD 0-18809'