

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

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JUL 08 2019

DISTRICT/ARTESIAO.CO.

May 16, 2019

OXY USA, Inc.

Re:

CLIENT: OXY USA, Inc.
WELL: Height CC 6-7 Federal Com 32H
FIELD: Purple Sage (Wolfcamp)

RIG: H&P 635
COUNTY: Eddy
API NO: 30-015-45554
JOB NO: 19MLH0085

S6, T24S, R29E Eddy NM
32.2534964 -104.0302788

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	Height CC 6-7 Federal Com 32H Original Hole	460.00 Ft to 19850.00 Ft	April 5, 2019 to May 16, 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

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Midland, Texas 79706

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Well Reference:

S6, T24S, R29E Eddy NM

32.2534964 -104.0302788

Schlumberger

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 April 05, 2019 through May 16, 2019, conduct or supervise the taking of the SlimPulse surveys from a depth of 460.00 feet to a depth of 19850.00 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 Height CC 6-7 Federal Com 32H Well (Original Hole) API No. 30-015-45554-00 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

J. Ajayi

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

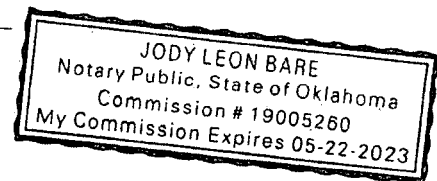
My Commission expires:

22 May 2023

Jody Bare
Notary Public

(signature)

Grady County, Oklahoma
(County State)



Oxy Height CC 6-7 Federal Com 32H Gyro + IFR 0-19894'MD Survey Geodetic Report (Def Survey)



Report Date: May 17, 2019 - 12:20 PM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Height CC 6-7 Federal Com 32H / Oxy Height CC 6-7 Federal Com 32H
Well: Height CC 6-7 Fed Com 32H
Borehole: Original Borehole
UWI / API#: H&P635 / 30-015-45554
Survey Name: Oxy Height CC 6-7 Federal Com 32H Gyro + IFR 0-19894'MD
Survey Date: March 27, 2019
Tort / AHD / DDI / ERD Ratio: 296.643' / 11000.338 ft / 6.823' / 1.127
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 15' 10.70543", W 104° 1' 48.08869"
Location Grid N/E Y/X: N 455897.580 ftUS, E 635100.700 RUS
CRS Grid Convergence Angle: 0.1619°
Grid Scale Factor: 0.99991916
Version / Patch: 2.10.760.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 176.569° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 2989.900 ft above MSL
Seabed / Ground Elevation: 2963.400 ft above MSL
Magnetic Declination: 7.038°
Total Gravity Field Strength: 998.4712mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47923.900 nT
Magnetic Dip Angle: 60.021°
Declination Date: May 02, 2019
Magnetic Declination Model: IFR1
North Reference: Grid North
Grid Convergence Used: 0.1619°
Total Corr Mag North->Grid North: 6.8761°
Local Coord Referenced To: Well Head

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DISTRICT II-ARTESIA O.C.D.

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 ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	455897.58	635100.70	N 32 15 10.71 W 104	1 48.09
SHL	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	455897.58	635100.70	N 32 15 10.71 W 104	1 48.09
	70.50	0.42	184.21	70.50	0.16	-0.16	-0.01	0.95	455897.42	635100.69	N 32 15 10.70 W 104	1 48.09
	85.50	0.41	187.64	85.50	0.27	-0.27	-0.02	0.18	455897.31	635100.68	N 32 15 10.70 W 104	1 48.09
	100.50	0.30	188.98	100.50	0.36	-0.36	-0.04	0.74	455897.22	635100.66	N 32 15 10.70 W 104	1 48.09
	115.50	0.42	198.27	115.50	0.45	-0.45	-0.06	0.89	455897.13	635100.64	N 32 15 10.70 W 104	1 48.09
	130.50	0.61	198.30	130.50	0.57	-0.58	-0.10	1.27	455897.00	635100.60	N 32 15 10.70 W 104	1 48.09
	145.50	0.60	196.14	145.50	0.72	-0.73	-0.15	0.17	455896.85	635100.55	N 32 15 10.70 W 104	1 48.09
	160.50	0.59	194.16	160.50	0.87	-0.88	-0.19	0.15	455896.70	635100.51	N 32 15 10.70 W 104	1 48.09
	175.50	0.71	193.46	175.50	1.03	-1.05	-0.23	0.80	455896.53	635100.47	N 32 15 10.70 W 104	1 48.09
	190.50	0.56	190.12	190.49	1.19	-1.21	-0.26	1.03	455896.37	635100.44	N 32 15 10.69 W 104	1 48.09
	205.50	0.71	190.82	205.49	1.35	-1.37	-0.29	1.00	455896.21	635100.41	N 32 15 10.69 W 104	1 48.09
	220.50	0.72	187.41	220.49	1.54	-1.56	-0.32	0.29	455896.02	635100.38	N 32 15 10.69 W 104	1 48.09
	235.50	0.86	186.97	235.49	1.74	-1.76	-0.35	0.93	455895.82	635100.35	N 32 15 10.69 W 104	1 48.09
	250.50	0.74	181.16	250.49	1.95	-1.97	-0.37	0.96	455895.61	635100.33	N 32 15 10.69 W 104	1 48.09
	265.50	0.81	180.90	265.49	2.15	-2.17	-0.37	0.47	455895.41	635100.33	N 32 15 10.68 W 104	1 48.09
	280.50	0.67	178.28	280.49	2.34	-2.37	-0.37	0.96	455895.21	635100.33	N 32 15 10.68 W 104	1 48.09
	295.50	0.77	173.11	295.49	2.53	-2.56	-0.35	0.79	455895.02	635100.35	N 32 15 10.68 W 104	1 48.09
	310.50	0.83	163.98	310.48	2.74	-2.76	-0.31	0.94	455894.82	635100.39	N 32 15 10.68 W 104	1 48.09
	325.50	0.78	161.95	325.48	2.94	-2.96	-0.25	0.38	455894.62	635100.45	N 32 15 10.68 W 104	1 48.09
	340.50	0.80	165.64	340.48	3.14	-3.16	-0.19	0.36	455894.42	635100.51	N 32 15 10.67 W 104	1 48.09
	355.50	0.91	165.04	355.48	3.36	-3.38	-0.14	0.74	455894.20	635100.56	N 32 15 10.67 W 104	1 48.09
Last Gyro	363.50	0.93	165.31	363.48	3.49	-3.50	-0.10	0.26	455894.08	635100.60	N 32 15 10.67 W 104	1 48.09
	460.00	0.29	130.60	459.97	4.43	-4.42	0.28	0.74	455893.16	635100.98	N 32 15 10.66 W 104	1 48.09
	557.00	0.06	37.94	556.97	4.56	-4.54	0.50	0.31	455893.04	635101.20	N 32 15 10.66 W 104	1 48.08
	728.00	0.09	110.17	727.97	4.55	-4.51	0.68	0.05	455893.07	635101.38	N 32 15 10.66 W 104	1 48.08
	821.00	0.09	353.58	820.97	4.50	-4.47	0.74	0.16	455893.12	635101.44	N 32 15 10.66 W 104	1 48.08
	913.00	0.16	92.28	912.97	4.44	-4.40	0.86	0.21	455893.18	635101.56	N 32 15 10.66 W 104	1 48.08
	1005.00	0.09	88.73	1004.97	4.46	-4.40	1.06	0.08	455893.18	635101.76	N 32 15 10.66 W 104	1 48.08
	1097.00	0.12	302.05	1096.97	4.40	-4.35	1.05	0.22	455893.23	635101.75	N 32 15 10.66 W 104	1 48.08
	1189.00	0.13	116.23	1188.97	4.40	-4.34	1.06	0.27	455893.24	635101.76	N 32 15 10.66 W 104	1 48.08
	1282.00	0.11	19.52	1281.97	4.37	-4.31	1.19	0.19	455893.27	635101.89	N 32 15 10.66 W 104	1 48.08
	1376.00	0.16	38.93	1375.97	4.19	-4.12	1.30	0.07	455893.46	635102.00	N 32 15 10.66 W 104	1 48.07
	1469.00	0.10	53.54	1468.97	4.05	-3.97	1.45	0.07	455893.61	635102.15	N 32 15 10.67 W 104	1 48.07
	1656.00	0.58	72.50	1655.97	3.73	-3.59	2.48	0.26	455893.99	635103.18	N 32 15 10.67 W 104	1 48.06
	1750.00	0.13	38.19	1749.97	3.54	-3.36	3.00	0.51	455894.22	635103.70	N 32 15 10.67 W 104	1 48.05
	1845.00	0.64	37.54	1844.96	3.05	-2.86	3.39	0.54	455894.72	635103.70	N 32 15 10.67 W 104	1 48.05
	1940.00	0.95	36.98	1939.95	2.05	-1.81	4.19	0.33	455895.77	635104.09	N 32 15 10.68 W 104	1 48.05
	2034.00	1.09	16.32	2033.94	0.62	-0.33	4.91	0.42	455897.25	635104.89	N 32 15 10.69 W 104	1 48.04
	2129.00	0.99	13.31	2128.92	-1.02	1.34	5.35	0.12	455898.92	635105.61	N 32 15 10.70 W 104	1 48.03
	2223.00	0.16	196.45	2222.92	-1.67	2.00	5.50	1.22	455899.58	635106.05	N 32 15 10.72 W 104	1 48.03
	2318.00	0.28	252.61	2317.92	-1.49	1.81	5.24	0.24	455899.39	635106.20	N 32 15 10.73 W 104	1 48.02
	2412.00	0.14	203.41	2411.92	-1.33	1.63	4.98	0.23	455899.39	635105.94	N 32 15 10.72 W 104	1 48.03
	2507.00	0.15	185.87	2506.92	-1.11	1.40	4.92	0.05	455899.21	635105.68	N 32 15 10.72 W 104	1 48.03
	2601.00	0.23	131.55	2600.92	-0.85	1.16	5.05	0.20	455898.74	635105.75	N 32 15 10.72 W 104	1 48.03
	2695.00	0.22	308.53	2694.92	-0.83	1.14	5.04	0.48	455898.72	635105.74	N 32 15 10.72 W 104	1 48.03
	2790.00	0.12	286.62	2789.92	-0.99	1.28	4.80	0.12	455898.86	635105.50	N 32 15 10.72 W 104	1 48.03
	2884.00	0.12	44.05	2883.92	-1.09	1.37	4.77	0.22	455898.95	635105.47	N 32 15 10.72 W 104	1 48.03
	2978.00	0.09	59.25	2977.92	-1.19	1.48	4.91	0.04	455899.06	635105.61	N 32 15 10.72 W 104	1 48.03
	3073.00	0.09	314.21	3072.92	-1.28	1.57	4.92	0.15	455899.15	635105.62	N 32 15 10.72 W 104	1 48.03
	3167.00	0.15	21.13	3166.92	-1.44	1.74	4.91	0.15	455899.32	635105.61	N 32 15 10.72 W 104	1 48.03
	3262.00	0.21	225.01	3261.92	-1.44	1.73	4.83	0.37	455899.31	635105.53	N 32 15 10.72 W 104	1 48.03
	3356.00	0.06	52.82	3355.92	-1.35	1.64	4.75	0.29	455899.22	635105.45	N 32 15 10.72 W 104	1 48.03
	3450.00	0.08	171.82	3449.92	-1.31	1.60	4.80	0.13	455899.18	635105.50	N 32 15 10.72 W 104	1 48.03
	3544.00	0.08	113.41	3543.92	-1.22	1.51	4.87	0.08	455899.09	635105.57	N 32 15 10.72 W 104	1 48.03
	3639.00	0.11	120.40	3638.92	-1.14	1.44	5.01	0.03	455899.02	635105.71	N 32 15 10.72 W 104	1 48.03
	3733.00	0.10	162.48	3732.92	-1.01	1.32	5.11	0.08	455898.90	635105.81	N 32 15 10.72 W 104	1 48.03
	3829.00	0.22	160.45	3828.92	-0.75	1.06	5.20	0.13	455898.64	635105.89	N 32 15 10.72 W 104	1 48.03
	3922.00	0.08	51.20	3921.91	-0.62	0.94	5.31	0.28	455898.52	635106.00	N 32 15 10.71 W 104	1 48.03
	4016.00	0.12	22.21	4015.91	-0.74	1.07	5.39	0.07	455898.65	635106.09	N 32 15 10.72 W 104	1 48.03
	4110.00	0.05	350.93	4109.91	-0.87	1.20	5.42	0.09	455898.78	635106.12	N 32 15 10.72 W 104	1 48.03
	4300.00	0.10	163.50	4299.91	-0.79	1.12	5.46	0.08	455898.70	635106.16	N 32 15 10.72 W 104	1 48.03
	4394.00	0.08	18.37	4393.91	-0.78	1.11	5.50	0.18	455898.69	635106.20	N 32 15 10.72 W 104	1 48.02
	4583.00	0.07	253.59	4582.91	-0.87	1.20	5.43	0.07	455898.78	635106.13	N 32 15 10.72 W 104	1 48.03
	4677.00	0.06	126.11	4676.91	-0.83	1.15	5.42	0.12	455898.73	635106.12	N 32 15 10.72 W 104	1 48.03
	4771.00	0.13	261.43	4770.91	-0.79	1.11	5.35	0.19	455898.69	635106.05	N 32 15 10.72 W 104	1 48.03
	4960.00	0.09	42.66	4959.91	-0.87	1.19	5.24	0.11	455898.77	635105.94	N 32 15 10.72 W 104	1 48.03
	5054.00	1.43	46.82	5053.90	-1.67	2.04	6.15	1.43	455899.62	635106.85	N 32 15 10.73 W 104	1 48.02
	5148.00	3.75	52.63	5147.80	-4.14	4.71	9.45	2.48	455902.29	635110.14	N 32 15 10.75 W 104	1 47.98
	5242.00	5.64	48.56	5241.48	-8.70	9.64	15.35	2.04	455907.21	635116.05	N 32 15 10.80 W 104	1 47.91
	5337.00	7.65	47.05	5335.84	-15.60	17.03	23.48	2.12	455914.61	635124.18	N 32 15 10.87 W 104	1 47.81
	5431.00	9.33	47.43	5428.81	-24.39	26.45	33.67	1.79	455924.03	635134.37	N 32 15 10.97 W 104	1 47.70
5525.00	8.87	45.33	5521.62	-33.98	36.70	44.44	0.60	455934.28	635145.13	N 32 15 11.07 W 104	1 47.57	
5620.00	8.13	44.39	5615.58	-43.32	46.65	54.35	0.79	455944.23	635155.04	N 32 15 11.17 W 104	1 47.45	
5714.00	7.58	44.33	5708.70	-51.95	55.84	63.33	0.59	455953.41	635164.02	N 32 15 11.26 W 104	1 47.35	
5808.00	7.53	47.22	5801.88	-60.02	64.85	72.18	0.41	455962.03	635172.87	N 32 15 11.34 W 104	1 47.25	
5903.00	7.41	49.30	5896.07	-67.68	72.68	81.39	0.31	455970.25	635182.09	N 32 15 11.42 W 104	1 47.14	
5997.00	7.45	51.48</										

Comments	MD (ft)	Incl (°)	Azim (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS ("/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ° ')	Longitude (E/W ° ° ')
	6092.00	7.31	52.39	6083.50	-81.78	87.95	100.36	0.19	455985.52	635201.05	N 32 15 11.57 W 104	1 46 92
	6186.00	7.30	50.39	6176.74	-88.67	95.41	109.70	0.27	455992.98	635210.39	N 32 15 11.65 W 104	1 46 81
	6280.00	7.83	48.79	6269.92	-96.12	103.43	119.12	0.61	456001.00	635219.81	N 32 15 11.73 W 104	1 46 70
	6375.00	7.46	43.27	6364.07	-104.31	112.19	128.21	0.87	456009.76	635228.90	N 32 15 11.81 W 104	1 46 59
	6469.00	7.83	36.23	6457.26	-113.30	121.66	136.09	1.00	456019.23	635236.77	N 32 15 11.91 W 104	1 46 50
	6563.00	7.73	33.87	6550.42	-123.13	131.95	143.30	0.35	456029.51	635243.99	N 32 15 12.01 W 104	1 46 42
	6657.00	7.95	42.56	6643.54	-132.68	141.98	151.22	1.28	456039.55	635251.91	N 32 15 12.11 W 104	1 46 32
	6752.00	8.54	46.80	6737.56	-141.76	151.65	160.80	0.89	456049.22	635261.49	N 32 15 12.20 W 104	1 46 21
	6846.00	8.65	47.99	6830.51	-150.63	161.16	171.14	0.22	456058.73	635271.83	N 32 15 12.30 W 104	1 46 09
	6941.00	8.86	48.54	6924.40	-159.59	170.78	181.93	0.24	456068.35	635282.62	N 32 15 12.39 W 104	1 45 96
	7035.00	8.79	54.32	7017.29	-167.88	179.77	193.19	0.95	456077.33	635293.88	N 32 15 12.48 W 104	1 45 83
	7130.00	10.08	65.97	7111.01	-174.68	187.39	206.68	2.42	456084.95	635307.37	N 32 15 12.55 W 104	1 45 68
	7318.00	8.19	66.86	7296.62	-184.99	199.35	234.03	1.01	456096.91	635334.71	N 32 15 12.67 W 104	1 45 36
	7507.00	9.89	64.48	7483.26	-195.63	211.63	261.06	0.92	456109.20	635361.73	N 32 15 12.79 W 104	1 45 04
	7601.00	10.89	58.12	7575.72	-202.90	219.80	275.88	1.62	456117.36	635376.56	N 32 15 12.87 W 104	1 44 87
	7694.00	8.59	40.23	7667.40	-212.11	229.75	287.83	4.06	456127.31	635388.51	N 32 15 12.97 W 104	1 44 73
	7790.00	9.41	41.35	7762.22	-222.87	241.11	297.65	0.87	456138.67	635398.32	N 32 15 13.08 W 104	1 44 61
	7884.00	8.63	40.84	7855.05	-233.37	252.22	307.34	0.83	456149.78	635408.01	N 32 15 13.19 W 104	1 44 50
	7980.00	8.69	44.65	7949.96	-243.38	262.83	317.14	0.60	456160.38	635417.82	N 32 15 13.30 W 104	1 44 39
	8167.00	9.18	49.44	8134.69	-261.82	282.58	338.40	0.48	456180.13	635439.08	N 32 15 13.49 W 104	1 44 14
	8263.00	8.39	36.39	8229.57	-271.82	293.19	348.38	2.23	456190.75	635449.05	N 32 15 13.60 W 104	1 44 02
	8357.00	8.88	44.03	8322.51	-281.99	303.83	357.49	1.33	456201.49	635458.16	N 32 15 13.70 W 104	1 43 92
	8452.00	8.93	42.08	8416.37	-292.12	314.68	367.53	0.32	456212.23	635468.20	N 32 15 13.81 W 104	1 43 80
	8546.00	8.80	43.28	8509.24	-302.16	325.33	377.35	0.24	456222.88	635478.01	N 32 15 13.91 W 104	1 43 68
	8735.00	7.59	40.20	8696.31	-321.11	345.38	395.31	0.68	456242.94	635495.98	N 32 15 14.11 W 104	1 43 47
	8830.00	8.40	46.28	8790.39	-330.14	354.97	404.38	1.23	456252.52	635505.05	N 32 15 14.21 W 104	1 43 37
	8924.00	9.03	45.97	8883.30	-339.38	364.85	414.64	0.67	456262.39	635515.31	N 32 15 14.30 W 104	1 43 25
	9018.00	8.58	40.12	8976.20	-349.26	375.33	424.47	1.07	456272.88	635525.13	N 32 15 14.41 W 104	1 43 13
	9094.00	8.76	41.13	9051.33	-357.49	384.03	431.93	0.31	456281.58	635532.59	N 32 15 14.49 W 104	1 43 05
	9200.00	11.74	76.35	9155.72	-365.17	392.66	447.73	6.41	456290.21	635548.40	N 32 15 14.58 W 104	1 42 86
	9294.00	17.83	118.37	9246.81	-359.26	388.07	469.77	12.71	456285.61	635570.43	N 32 15 14.53 W 104	1 42 61
100' FNL Crossed	9337.00	18.62	136.18	9287.89	-350.55	379.98	480.32	13.03	456277.53	635580.98	N 32 15 14.45 W 104	1 42 48
	9389.00	21.51	154.15	9336.57	-335.40	365.39	490.24	13.03	456262.94	635590.90	N 32 15 14.31 W 104	1 42 37
	9484.00	27.22	171.01	9423.18	-297.60	328.18	501.25	9.42	456225.74	635601.91	N 32 15 13.94 W 104	1 42 24
	9579.00	37.65	174.72	9503.26	-246.83	277.69	507.33	11.17	456175.24	635607.99	N 32 15 13.44 W 104	1 42 17
	9673.00	44.51	176.26	9574.07	-185.11	216.15	512.13	7.38	456113.71	635612.79	N 32 15 12.83 W 104	1 42 12
	9768.00	56.89	172.85	9634.14	-111.81	143.14	519.28	13.32	456040.71	635619.94	N 32 15 12.11 W 104	1 42 04
	9863.00	65.98	169.09	9679.53	-28.89	60.87	532.48	10.18	455958.44	635633.14	N 32 15 11.29 W 104	1 41 89
Wolfcamp Intersection	9879.35	67.38	169.86	9686.00	-14.00	46.11	535.22	9.58	455943.69	635635.88	N 32 15 11.15 W 104	1 41 85
	9958.00	74.15	173.35	9711.91	59.93	-27.31	546.01	9.58	455870.28	635646.67	N 32 15 10.42 W 104	1 41 73
	10052.00	86.31	180.18	9727.84	152.34	-119.57	551.13	14.78	455778.02	635651.78	N 32 15 9.51 W 104	1 41 68
	10121.00	87.00	180.85	9731.87	221.06	-188.45	550.51	1.39	455709.15	635651.16	N 32 15 8.83 W 104	1 41 68
	10258.00	87.59	180.40	9738.34	357.56	-325.29	549.01	0.54	455572.32	635649.67	N 32 15 7.47 W 104	1 41 71
	10351.00	89.04	181.48	9741.07	450.25	-418.23	547.49	1.94	455479.38	635648.14	N 32 15 6.55 W 104	1 41 73
	10445.00	89.38	181.62	9742.37	543.88	-512.19	544.95	0.39	455385.44	635645.60	N 32 15 5.62 W 104	1 41 76
	10538.00	89.93	181.72	9742.93	636.51	-605.15	542.24	0.60	455292.48	635642.89	N 32 15 4.70 W 104	1 41 79
	10632.00	89.86	181.31	9743.10	730.16	-699.11	539.75	0.44	455198.53	635640.41	N 32 15 3.77 W 104	1 41 83
	10725.00	89.69	180.94	9743.46	822.87	-792.09	537.92	0.44	455105.55	635638.58	N 32 15 2.85 W 104	1 41 85
	10814.00	89.62	182.81	9744.60	1011.04	-980.98	531.74	0.98	454916.68	635632.40	N 32 15 0.98 W 104	1 41 93
	11009.00	89.48	182.27	9745.35	1105.53	-1075.88	527.53	0.59	454821.78	635628.19	N 32 15 0.04 W 104	1 41 98
	11103.00	90.10	181.85	9745.69	1199.09	-1169.82	524.15	0.80	454727.85	635621.84	N 32 14 59.12 W 104	1 42 02
	11198.00	90.27	181.73	9745.39	1293.70	-1264.78	521.18	0.22	454632.91	635618.19	N 32 14 57.24 W 104	1 42 11
	11293.00	91.51	182.68	9743.91	1388.23	-1359.69	517.53	1.64	454538.00	635614.19	N 32 14 56.30 W 104	1 42 16
	11388.00	89.24	182.14	9743.29	1482.72	-1454.60	513.54	2.46	454443.10	635612.19	N 32 14 55.37 W 104	1 42 19
	11482.00	92.13	180.47	9742.17	1576.38	-1548.55	511.40	3.55	454349.15	635614.18	N 32 14 54.43 W 104	1 42 19
	11577.00	89.86	179.36	9740.52	1671.20	-1643.53	511.54	2.66	454254.18	635612.19	N 32 14 53.49 W 104	1 42 17
	11672.00	91.37	178.24	9739.50	1766.12	-1738.50	513.53	1.98	454159.22	635614.18	N 32 14 52.51 W 104	1 42 11
	11862.00	89.96	178.55	9737.29	1956.00	-1928.41	518.85	0.76	453969.33	635619.50	N 32 14 51.61 W 104	1 42 11
	12051.00	91.96	177.54	9734.12	2144.90	-2117.26	525.29	1.19	453780.50	635625.95	N 32 14 49.74 W 104	1 42 04
	12240.00	89.86	178.46	9731.12	2333.81	-2306.11	531.89	1.21	453591.66	635632.54	N 32 14 47.87 W 104	1 41 97
	12335.00	90.07	177.85	9731.18	2428.77	-2401.06	534.95	0.68	453496.72	635633.60	N 32 14 46.93 W 104	1 41 94
	12524.00	89.59	176.66	9731.74	2617.75	-2589.84	544.00	0.68	453307.96	635644.65	N 32 14 45.06 W 104	1 41 84
	12619.00	88.86	175.01	9733.03	2712.73	-2684.57	550.90	1.90	453213.23	635651.55	N 32 14 44.13 W 104	1 41 76
	12714.00	87.52	175.50	9736.03	2807.66	-2779.20	558.75	1.50	453118.61	635659.40	N 32 14 43.19 W 104	1 41 67
	12809.00	89.04	175.05	9738.88	2902.59	-2873.83	566.57	1.67	453023.99	635667.22	N 32 14 42.25 W 104	1 41 59
	12999.00	90.34	175.84	9739.91	3092.53	-3063.20	581.99	0.75	452834.64	635682.64	N 32 14 40.38 W 104	1 41 41
	13094.00	91.65	175.83	9738.26	3187.51	-3157.92	589.05	1.39	452739.93	635689.71	N 32 14 39.44 W 104	1 41 33
	13189.00	89.38	176.20	9737.40	3282.49	-3252.68	595.66	2.42	452645.17	635696.31	N 32 14 38.50 W 104	1 41 26
	13284.00	89.52	176.27	9738.32	3377.49	-3347.47	601.89	0.16	452550.39	635702.54	N 32 14 37.57 W 104	1 41 19
	13474.00	89.65	180.12	9739.69	3567.37	-3537.33	607.88	2.03	452360.54	635708.53	N 32 14 35.69 W 104	1 41 13
	13569.00	89.41	180.18	9740.47	3662.18	-3632.33	607.63	0.26	452265.55	635708.28	N 32 14 34.75 W 104	1 41 13
	13664.00	89.76	181.48	9741.16	3756.91	-3727.31	606.25	1.42	452170.58	635706.90	N 32 14 33.81 W 104	1 41 15
	13759.00	90.21	181.28	9741.18	3851.58	-3822.29	603.96	0.52	452075.61	635704.61	N 32 14 32.87 W 104	1 41 18
	13854.00	89.79	181.73	9741.18	3946.23	-3917.25	601.47	0.65	451980.65	635702.12	N 32 14 31.93 W 104	1 41 21
	13948.00	88.83	182.50	9741.50	4039.78	-4011.19	599.00	0.82	451886.73	635698.65	N 32 14 31.00 W 104	1 41 26
	14138.00	90.48	185.85	9740.98	4228.08	-4200.65	584.17	1.80	451697.27	635684.82	N 32 14 29.12 W 104	1 41 43
	14328.00	89.62	183.75	9740.82	4416.12	-4389.98	568.27	1.19	451507.97	635668.92	N 32 14 27.25 W 104	1 41 62

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 ° ' '')
	17170.00	91.21	178.98	9736.80	7249.57	-7227.41	588.38	0.73	448670.77	635689.03	N 32 13 59.17 W 104	1 41.48
	17265.00	91.55	180.61	9734.52	7344.49	-7322.38	588.72	1.75	448575.80	635689.37	N 32 13 58.23 W 104	1 41.48
	17359.00	91.14	179.11	9732.31	7438.31	-7416.35	588.95	1.65	448481.84	635689.60	N 32 13 57.30 W 104	1 41.48
	17454.00	90.38	179.06	9731.05	7533.21	-7511.33	590.47	0.80	448386.87	635691.12	N 32 13 56.36 W 104	1 41.46
	17549.00	90.76	181.20	9730.10	7628.01	-7606.32	590.25	2.29	448291.89	635690.90	N 32 13 55.42 W 104	1 41.47
	17644.00	90.38	180.00	9729.16	7722.77	-7701.31	589.25	1.32	448196.91	635689.91	N 32 13 54.48 W 104	1 41.48
	17738.00	87.42	179.15	9730.96	7816.61	-7795.28	589.95	3.28	448102.95	635690.60	N 32 13 53.55 W 104	1 41.48
	17834.00	88.81	179.61	9734.12	7912.44	-7891.22	590.99	1.53	448007.02	635691.64	N 32 13 52.60 W 104	1 41.47
	17929.00	86.99	178.85	9737.60	8007.27	-7986.14	592.26	2.08	447912.10	635692.92	N 32 13 51.67 W 104	1 41.46
	18023.00	87.43	178.16	9742.18	8101.11	-8080.00	594.71	0.87	447818.25	635695.37	N 32 13 50.74 W 104	1 41.43
	18118.00	88.02	178.27	9745.95	8195.99	-8174.88	597.67	0.63	447723.38	635698.32	N 32 13 49.80 W 104	1 41.40
	18213.00	89.46	178.60	9748.04	8290.92	-8269.81	600.27	1.56	447628.45	635700.92	N 32 13 48.86 W 104	1 41.37
	18307.00	90.15	178.61	9748.36	8384.85	-8363.79	602.55	0.73	447534.49	635703.20	N 32 13 47.93 W 104	1 41.35
	18497.00	90.25	177.26	9747.69	8474.80	-8453.66	609.40	0.71	447440.63	635710.05	N 32 13 46.05 W 104	1 41.28
	18592.00	89.15	175.77	9748.19	8569.79	-8548.48	615.17	1.95	447346.82	635715.82	N 32 13 45.11 W 104	1 41.21
	18686.00	89.53	177.50	9749.27	8663.78	-8642.30	620.69	1.88	447252.34	635721.34	N 32 13 44.18 W 104	1 41.15
	18781.00	89.36	177.45	9750.19	8758.76	-8737.21	624.88	0.19	447158.00	635725.52	N 32 13 43.24 W 104	1 41.10
	18970.00	90.91	182.73	9749.75	8853.73	-8837.21	624.58	2.91	447061.11	635725.23	N 32 13 41.37 W 104	1 41.11
	19065.00	90.60	182.55	9748.50	8947.79	-8921.02	620.20	0.38	446977.31	635720.85	N 32 13 40.43 W 104	1 41.17
	19254.00	88.19	180.99	9750.49	9041.79	-9009.90	614.37	1.52	446882.19	635715.02	N 32 13 38.57 W 104	1 41.24
	19348.00	88.54	181.75	9753.17	9135.62	-9103.84	612.12	0.89	446787.31	635712.77	N 32 13 37.64 W 104	1 41.27
	19443.00	89.29	181.85	9754.97	9229.88	-9209.90	609.14	0.80	446692.52	635709.79	N 32 13 36.70 W 104	1 41.31
	19538.00	87.92	181.30	9757.29	9323.62	-9309.90	606.53	1.55	446597.59	635707.18	N 32 13 35.76 W 104	1 41.34
	19632.00	88.88	181.56	9759.91	9417.51	-9403.84	604.18	1.06	446502.74	635704.83	N 32 13 34.83 W 104	1 41.37
	19727.00	90.39	179.96	9760.52	9511.41	-9503.84	602.92	2.32	446407.92	635703.57	N 32 13 33.89 W 104	1 41.39
100' FSL Crossed	19779.00	90.17	179.18	9760.26	9605.30	-9605.30	603.31	1.57	446313.11	635703.96	N 32 13 33.37 W 104	1 41.39
	19822.00	89.98	178.53	9760.21	9699.19	-9699.19	604.17	1.57	446218.30	635704.82	N 32 13 32.95 W 104	1 41.38
Final MWD	19850.00	90.87	178.26	9760.00	9793.08	-9793.08	604.96	3.32	446123.49	635705.61	N 32 13 32.67 W 104	1 41.37
Proj to TD	19894.00	90.87	178.26	9759.33	9886.97	-9886.97	606.29	0.00	446028.68	635706.94	N 32 13 32.24 W 104	1 41.36

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 Height CC 6-7 Federal Com 32H Gyro + IFR 0-19894'MD
	1	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Height CC 6-7 Federal Com 32H Gyro + IFR 0-19894'MD
	1	26.500	363.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Height CC 6-7 Federal Com 32H Gyro + IFR
	1	363.500	19894.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Height CC 6-7 Federal Com 32H Gyro + IFR

...Height CC 6-7 Fed Com 32H\Original Borehole\Oxy Height CC 6-7 Federal Com 32H Gyro + IFR 0-19894'MD