

Schlumberger Drilling and Measurements

Drilling Group

Geo Market Area: South West Texas Basin

7220 W I-II 20

Midland, Texas 79706

Phone : (432) 742-5400 (Main)

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Schlumberger

Well Reference:

32.20888 -103.96432

I, Rasheed Atanda certify that: I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation, that I did on the day(s) of July 14, 2017 through August 06, 2017, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 26.50 feet to a depth of 17701.00 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 Cedar Canyon 23-24 Federal 31H Well (Original Hole) API No. 30-015-44179 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
Rasheed Atanda

R. Atanda

Subscribed and Sworn to before me this

28th day of *August*

(month) *2017* (yr)

My Commission expires:

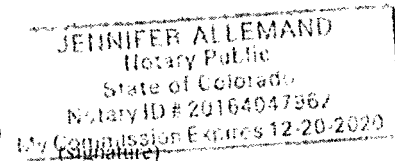
12-20-20

J. Allemand

Notary Public

El Paso County Colorado

(County State)



Schlumberger

OXY



Borehole:

Original Borehole

Well:

Oxy Cedar Canyon 23-24 Federal 31H

Field:

NM Eddy County (NAD 83)

Structure:

Oxy Cedar Canyon 23-24 Federal 31H

Company: Schlumberger
Model: HMOB 2017
Version: 7.325

Date: 08/01/17
File: 4810140017

Drawn By: 264442817
Drawn Date: 08/01/17

Location: 9884 Canyon (B. 8000000000)

Surface Location: N 32.12 31.98
East: 103.57 51.56

Northings: 43921.99815
Easting: 65566.37913

Grid Conv: 0.1867
Scale Factor: 0.9992491

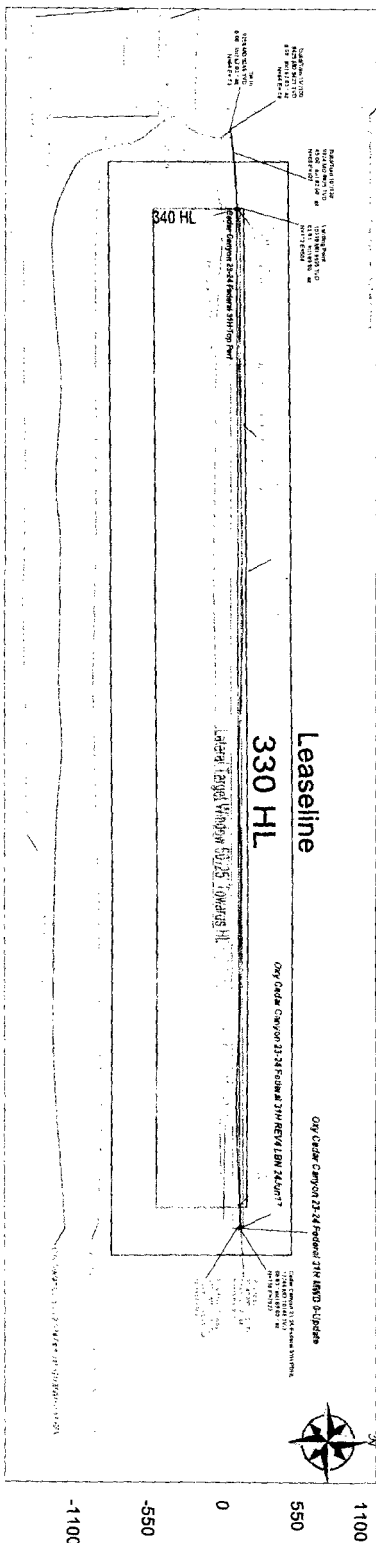
Measurements: 364
Oxy Cedar Canyon 23-24
Oxy Cedar Canyon 23-24 Federal 31H REV4 LBN 24 Unit 7

364
Oxy Cedar Canyon 23-24
Oxy Cedar Canyon 23-24 Federal 31H REV4 LBN 24 Unit 7

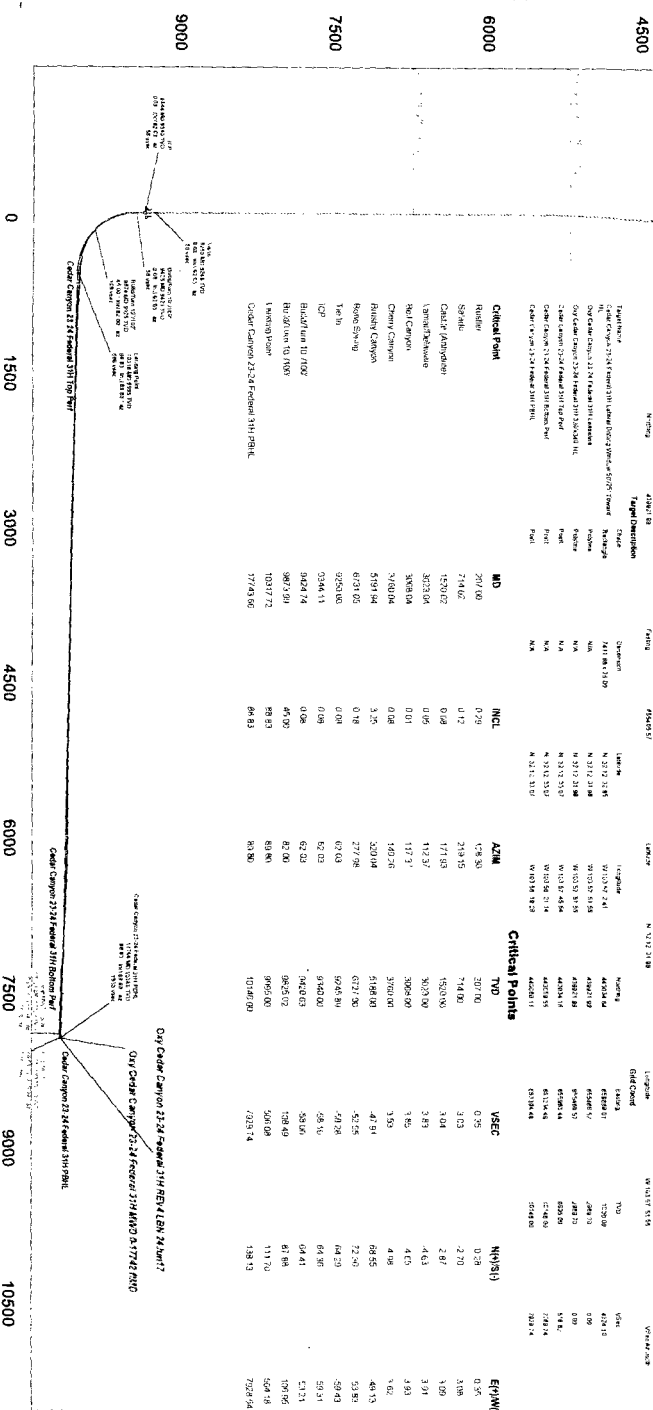
364
Oxy Cedar Canyon 23-24
Oxy Cedar Canyon 23-24 Federal 31H REV4 LBN 24 Unit 7

NS (ft) Scale = 1:300.00(ft)

EW (ft) Scale = 1:300.00(ft)



TVD (ft) Scale = 1:400.00(ft)



Grid North
Mag Dec (7.125°)
Grid Conv (0.197°)



CONTROLLED

1	Originator	2	DE Sign Off Authority
3	DATA Line Manager	4	Check

Oxy Cedar Canyon 23-24 Federal 31H MWD 0-17742 ftMD Survey Geodetic Report

(Def Survey)



Report Date: August 07, 2017 - 10:18 AM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Cedar Canyon 23-24 Federal 31H / Oxy Cedar Canyon 23-24 Federal 31H
 Well: Oxy Cedar Canyon 23-24 Federal 31H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Cedar Canyon 23-24 Federal 31H MWD 0-17742 ftMD
 Survey Date: July 13, 2017
 Tort / AHD / DDI / ERD Ratio: 137 858' / 8118 270 ft / 6 448' / 0 799'
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 12' 31.98222" W 103° 57' 51.56258"
 Location Grid N/E Y/X: N 439921 990 ftUS, E 655466 570 ftUS
 CRS Grid Convergence Angle: 0.1967°
 Grid Scale Factor: 0.99992401
 Version / Patch: 2.10.544.0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 88.985° (Grid North)
 Vertical Section Origin: 0.000 ft, 0.000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 2965.700 ft above MSL
 Seabed / Ground Elevation: 2843.200 ft above MSL
 Magnetic Declination: 7.125°
 Total Gravity Field Strength: 998.4695mgm (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48134.403 nT
 Magnetic Dip Angle: 60.015°
 Declination Date: July 28, 2017
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.1967°
 Total Corr Mag North->Grid: 6.9282°
 North: Well Head
 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 ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	439921.99	655466.57	N 32 12 31.98	W 103 57 51.56
RKB	26.50	0.00	0.00	26.50	0.00	0.00	0.00	0.00	439921.99	655466.57	N 32 12 31.98	W 103 57 51.56
	505.00	0.76	128.36	504.98	2.46	-1.97	2.48	0.16	439920.02	655469.06	N 32 12 31.96	W 103 57 51.53
	595.00	0.18	138.27	594.98	3.01	-2.44	3.05	0.85	439919.55	655469.52	N 32 12 31.96	W 103 57 51.53
	686.00	0.13	203.65	685.98	3.06	-2.64	3.11	0.19	439919.35	655469.68	N 32 12 31.96	W 103 57 51.53
	775.00	0.13	254.70	774.98	2.92	-2.76	2.97	0.13	439919.23	655469.54	N 32 12 31.95	W 103 57 51.53
	864.00	0.11	13.69	863.98	2.84	-2.71	2.89	0.23	439919.28	655469.46	N 32 12 31.96	W 103 57 51.53
	1045.00	0.08	74.99	1045.98	3.01	-2.50	3.06	0.06	439919.43	655469.63	N 32 12 31.96	W 103 57 51.53
	1141.00	0.11	287.06	1140.98	2.99	-2.46	3.03	0.19	439919.53	655469.60	N 32 12 31.96	W 103 57 51.53
	1236.00	0.08	152.93	1235.98	2.93	-2.49	2.98	0.18	439919.50	655469.55	N 32 12 31.96	W 103 57 51.53
	1330.00	0.08	157.11	1329.98	2.98	-2.61	3.03	0.01	439919.38	655469.60	N 32 12 31.96	W 103 57 51.53
	1425.00	0.08	167.78	1424.98	3.02	-2.74	3.07	0.02	439919.25	655469.64	N 32 12 31.96	W 103 57 51.53
	1520.00	0.08	171.93	1519.98	3.04	-2.87	3.09	0.01	439919.12	655469.66	N 32 12 31.95	W 103 57 51.53
	1709.00	0.06	330.05	1708.98	3.01	-2.91	3.06	0.37	439919.08	655469.63	N 32 12 31.95	W 103 57 51.53
	1803.00	0.06	19.41	1802.98	3.00	-2.82	3.06	0.05	439919.17	655469.62	N 32 12 31.95	W 103 57 51.53
	1898.00	0.06	233.86	1897.98	2.98	-2.81	3.03	0.12	439919.18	655469.60	N 32 12 31.95	W 103 57 51.53
	1993.00	0.13	354.18	1992.98	2.93	-2.73	2.98	0.18	439919.26	655469.55	N 32 12 31.96	W 103 57 51.53
	2087.00	0.13	214.89	2086.98	2.86	-2.71	2.91	0.26	439919.28	655469.48	N 32 12 31.96	W 103 57 51.53
	2182.00	0.06	77.74	2181.98	2.95	-2.79	2.90	0.19	439919.20	655469.47	N 32 12 31.95	W 103 57 51.53
	2276.00	0.11	249.10	2275.98	2.91	-2.81	2.86	0.18	439919.18	655469.43	N 32 12 31.95	W 103 57 51.53
	2371.00	0.13	244.66	2370.98	2.93	-2.89	2.88	0.02	439919.10	655469.25	N 32 12 31.95	W 103 57 51.53
	2456.00	0.06	254.80	2455.98	2.48	-2.95	2.53	0.08	439919.04	655469.10	N 32 12 31.95	W 103 57 51.53
	2560.00	1.49	150.63	2559.97	3.01	-4.02	3.08	1.60	439917.97	655469.65	N 32 12 31.94	W 103 57 51.53
	2655.00	0.00	158.86	2654.96	3.60	-5.10	3.69	1.57	439916.89	655470.26	N 32 12 31.93	W 103 57 51.52
	2750.00	0.38	335.51	2749.96	3.57	-5.04	3.66	0.08	439916.95	655470.23	N 32 12 31.93	W 103 57 51.52
	2844.00	0.11	48.21	2843.96	3.61	-4.92	3.70	0.12	439917.07	655470.27	N 32 12 31.93	W 103 57 51.52
	2939.00	0.17	23.33	2938.96	3.74	-4.73	3.83	0.09	439917.26	655470.40	N 32 12 31.94	W 103 57 51.52
	3033.00	0.06	131.99	3032.96	3.83	-4.64	3.92	0.21	439917.35	655470.49	N 32 12 31.94	W 103 57 51.52
	3128.00	0.08	316.27	3127.96	3.83	-4.62	3.91	0.15	439917.37	655470.48	N 32 12 31.94	W 103 57 51.52
	3233.00	0.13	293.45	3232.96	3.97	-4.52	3.75	0.06	439917.47	655470.32	N 32 12 31.94	W 103 57 51.52
	3412.00	0.13	174.39	3411.96	3.50	-4.64	3.58	0.13	439917.35	655470.15	N 32 12 31.94	W 103 57 51.52
	3507.00	0.13	231.82	3506.96	3.42	-4.32	3.51	0.13	439917.17	655470.08	N 32 12 31.93	W 103 57 51.52
	3602.00	0.06	141.78	3601.96	3.37	-4.92	3.45	0.15	439917.07	655470.02	N 32 12 31.93	W 103 57 51.52
	3696.00	0.38	81.59	3695.96	3.46	-4.95	3.55	0.08	439917.04	655470.12	N 32 12 31.93	W 103 57 51.52
	3791.00	0.11	168.24	3790.96	3.54	-5.03	3.63	0.14	439916.96	655470.20	N 32 12 31.93	W 103 57 51.52
	3886.00	0.08	205.25	3885.96	3.53	-5.18	3.62	0.07	439916.81	655470.19	N 32 12 31.93	W 103 57 51.52
	3981.00	0.83	311.47	3980.95	2.99	-4.78	3.08	0.30	439917.21	655469.65	N 32 12 31.93	W 103 57 51.53
	4075.00	1.53	312.82	4074.93	1.59	-3.48	1.65	0.75	439918.51	655468.22	N 32 12 31.95	W 103 57 51.54
	4265.00	2.79	316.30	4264.80	3.38	1.59	-3.41	0.67	439923.58	655463.16	N 32 12 32.00	W 103 57 51.60
	4359.00	3.43	323.87	4358.86	-6.55	5.51	-6.64	0.81	439927.50	655459.93	N 32 12 32.04	W 103 57 51.64
	4454.00	4.25	324.62	4453.44	-10.17	10.68	-10.36	0.86	439932.67	655456.21	N 32 12 32.09	W 103 57 51.68
	4548.00	5.00	323.06	4547.14	-14.54	16.79	-14.84	0.81	439938.78	655451.73	N 32 12 32.15	W 103 57 51.73
	4643.00	5.88	325.01	4641.72	-19.59	23.95	-20.02	0.74	439945.94	655446.55	N 32 12 32.22	W 103 57 51.79
	4738.00	6.14	326.74	4736.22	-24.93	32.05	-25.50	0.52	439954.04	655441.07	N 32 12 32.30	W 103 57 51.86
	4927.00	6.45	331.40	4924.08	-35.25	49.84	-36.14	0.32	439971.83	655430.44	N 32 12 32.48	W 103 57 51.98
	5022.00	5.52	325.29	5018.56	-40.26	58.29	-41.30	1.19	439980.27	655425.28	N 32 12 32.56	W 103 57 52.04
	5117.00	4.20	321.60	5113.22	-44.91	64.77	-46.06	1.43	439986.76	655420.51	N 32 12 32.62	W 103 57 52.10
	5211.00	3.01	319.49	5207.03	-48.57	69.34	-49.80	1.27	439991.33	655416.77	N 32 12 32.67	W 103 57 52.14
	5306.00	1.24	302.26	5301.96	-51.01	71.79	-52.29	1.96	439993.77	655414.28	N 32 12 32.69	W 103 57 52.17
	5421.00	0.13	321.60	5396.95	-51.94	72.42	-53.23	1.18	439994.41	655413.35	N 32 12 32.70	W 103 57 52.18
	5496.00	0.18	267.21	5491.95	-52.15	72.50	-53.44	0.16	439994.48	655413.13	N 32 12 32.70	W 103 57 52.18
	5590.00	0.06	3.95	5585.95	-52.29	72.54	-53.59	0.21	439994.53	655412.99	N 32 12 32.70	W 103 57 52.18
	5685.00	0.08	219.32	5680.95	-52.33	72.54	-53.63	0.14	439994.53	655412.95	N 32 12 32.70	W 103 57 52.18
	5780.00	0.11	101.52	5775.95	-52.29	72.47	-53.56	0.17	439994.46	655413.00	N 32 12 32.70	W 103 57 52.18
	5969.00	0.06	129.99	5964.95	-52.04	72.37	-53.33	0.03	439994.36	655413.25	N 32 12 32.70	W 103 57 52.18
	6064.00	0.08	316.20	6059.95	-52.04	72.39	-53.33	0.15	439994.37	655413.24	N 32 12 32.70	W 103 57 52.18
	6158.00	0.06	47.82	6153.95	-52.05	72.47	-53.34	0.11	439994.45	655413.23	N 32 12 32.70	W 103 57 52.18
	6348.00	0.11	325.51	6343.95	-52.08	72.69	-53.37	0.06	439994.67	655413.20	N 32 12 32.70	W 103 57 52.18
	6443.00	0.08	182.23	6438.95	-52.13	72.69	-53.43	0.19	439994.68	655413.15	N 32 12 32.70	W 103 57 52.18
	6537.00	0.06	221.24	6532.95	-52.18	72.58	-53.47	0.06	439994.56	655413.10	N 32 12 32.70	W 103 57 52.18
	6632.00	0.18	214.13	6627.95	-52.31	72.41	-53.80	0.11	439994.39	655412.98	N 32 12 32.70	W 103 57 52.18
	6727.00	0.17	277.57	6722.95	-52.53	72.30	-53.82	0.19	439994.29	655412.75	N 32 12 32.70	W 103 57 52.19
	6821.00	0.29	283.36	6816.95	-52.90	72.37	-54.19	0.13	439994.36	655412.38	N 32 12 32.70	W 103 57 52.19
	6916.00	0.33	303.13	6911.95	-53.36	72.58	-54.65	0.12	439994.56	655411.92	N 32 12 32.70	W 103 57 52.20
	7011.00	0.08	291.48	7006.95	-53.65	72.75	-54.95	0.27	439994.74	655411.63	N 32 12 32.70	W 103 57 52.20
	7196.00	0.11	303.09	7191.95	-53.78	72.83	-55.08	0.04	439994.81	655411.49	N 32 12 32.70	W 103 57 52.20
	7291.00	0.18	220.49	7196.95	-53.96	72.76	-55.26	0.21	439994.75	655411.32	N 32 12 32.70	W 103 57 52.20
	7295.00	1.47	222.78	7290.93	-54.89	71.77	-56.17	1.37	439993.75	655410.40	N 32 12 32.69	W 103 57 52.21
	7390.00	0.06	94.85	7385.92	-55.69	70.87	-56.95	1.59	439992.85	655409.62	N 32 12 32.69	W 103 57 52.22
	7485.00	0.13	301.01	7480.92	-55.73	70.92	-56.99	0.20	439992.90	655409.58	N 32 12 32.69	W 103 57 52.22
	7580.00	0.06	322.74	7575.92	-55.85	71.01	-57.12	0.08	439993.00	655409.46	N 32 12 32.69	W 103 57 52.22
	7675.00	0.30	135.15	7670.92	-55.71	70.88	-56.97	0.38	439992.86	655409.60	N 32 12 32.69	W 103 57 52.22
	7769.00	0.08	310.19	7764.92	-55.58	70.74	-56.85	0.40	439992.73	655409.73	N 32 12 32.68	W 103 57 52.22
	7864.00	0.08	16.37	7859.92	-55.62	70.85	-56.88	0.09	439992.84	655409.70	N 32 12 32	

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 ° ' '')
	8338.00	0.65	157.26	8333.91	-56.51	68.61	-57.73	0.60	439990.60	655408.84	N 32 12 32.66 W	103 57 52.23
	8432.00	0.68	225.51	8427.90	-56.72	67.73	-57.93	0.79	439989.71	655408.65	N 32 12 32.65 W	103 57 52.23
	8527.00	0.56	210.14	8522.90	-57.37	66.93	-58.56	0.21	439988.92	655408.01	N 32 12 32.65 W	103 57 52.24
	8717.00	0.34	220.80	8712.89	-58.22	65.70	-59.40	0.12	439987.69	655407.18	N 32 12 32.63 W	103 57 52.25
	8811.00	0.11	199.51	8806.89	-58.44	65.41	-59.61	0.26	439987.39	655406.97	N 32 12 32.63 W	103 57 52.25
	8906.00	0.45	132.90	8901.89	-58.20	65.07	-59.37	0.44	439987.05	655407.21	N 32 12 32.63 W	103 57 52.25
	9001.00	0.13	336.58	8996.89	-57.98	64.91	-59.14	0.60	439986.90	655407.44	N 32 12 32.63 W	103 57 52.25
	9190.00	0.40	196.32	9185.89	-58.26	64.48	-59.41	0.27	439986.46	655407.17	N 32 12 32.62 W	103 57 52.25
	9250.00	0.08	62.03	9245.89	-58.28	64.29	-59.43	0.77	439986.28	655407.15	N 32 12 32.62 W	103 57 52.25
	9399.00	0.96	220.51	9394.88	-59.02	63.39	-60.15	0.69	439985.38	655406.43	N 32 12 32.61 W	103 57 52.26
	9494.00	3.83	73.77	9489.82	-56.48	63.68	-57.62	4.91	439985.66	655408.96	N 32 12 32.61 W	103 57 52.23
	9588.00	17.92	81.35	9581.90	-39.03	66.74	-40.22	15.03	439988.73	655426.36	N 32 12 32.64 W	103 57 52.03
	9683.00	25.79	78.49	9670.01	-4.17	73.08	-5.46	8.36	439995.06	655461.11	N 32 12 32.71 W	103 57 51.62
	9778.00	35.76	85.20	9751.55	43.99	79.54	42.59	11.08	440001.52	655509.15	N 32 12 32.77 W	103 57 51.06
	9872.00	46.24	83.83	9822.40	105.37	85.50	103.88	11.19	440007.49	655570.44	N 32 12 32.82 W	103 57 50.35
	9967.00	55.90	85.11	9882.02	178.96	92.56	177.35	10.22	440014.54	655643.91	N 32 12 32.89 W	103 57 49.49
	10061.00	66.81	86.73	9927.02	261.21	98.36	259.51	11.70	440020.34	655726.06	N 32 12 32.95 W	103 57 48.54
	10156.00	79.18	86.59	9954.75	351.81	103.65	350.03	13.02	440025.63	655816.57	N 32 12 33.00 W	103 57 47.48
	10251.00	86.18	85.11	9966.85	445.83	110.47	443.94	7.53	440032.45	655910.48	N 32 12 33.06 W	103 57 46.39
	10345.00	86.35	84.53	9972.97	539.38	118.94	537.36	0.64	440040.92	656003.89	N 32 12 33.14 W	103 57 45.30
	10459.00	87.01	85.01	9979.57	652.88	129.31	650.70	0.72	440051.29	656117.21	N 32 12 33.24 W	103 57 43.98
	10553.00	86.49	86.78	9984.90	746.59	136.03	744.30	1.96	440058.01	656210.81	N 32 12 33.29 W	103 57 42.89
	10647.00	86.70	88.53	9990.48	840.40	139.87	838.05	1.87	440061.85	656304.56	N 32 12 33.34 W	103 57 41.80
	10742.00	87.52	90.21	9995.27	935.27	140.91	932.92	1.97	440062.89	656399.42	N 32 12 33.34 W	103 57 40.70
	10837.00	88.49	92.10	9998.58	1030.14	139.00	1027.84	2.24	440060.98	656494.33	N 32 12 33.32 W	103 57 39.59
	10931.00	88.31	91.25	10001.21	1124.00	136.25	1121.76	0.92	440058.23	656588.24	N 32 12 33.29 W	103 57 38.50
	11026.00	88.76	90.81	10003.64	1218.90	134.55	1216.71	0.66	440056.52	656683.19	N 32 12 33.27 W	103 57 37.40
	11121.00	88.56	90.95	10005.86	1313.83	133.09	1311.68	0.26	440055.07	656778.14	N 32 12 33.25 W	103 57 36.29
	11215.00	88.35	91.65	10008.39	1407.72	130.95	1405.62	0.78	440052.83	656872.08	N 32 12 33.23 W	103 57 35.20
	11310.00	88.35	90.95	10011.13	1502.60	128.80	1500.55	0.74	440050.78	656967.01	N 32 12 33.21 W	103 57 34.09
	11405.00	88.45	88.80	10013.78	1597.54	129.01	1595.51	2.26	440050.99	657061.96	N 32 12 33.20 W	103 57 32.99
	11499.00	88.28	88.52	10016.46	1691.50	131.20	1689.45	0.35	440053.18	657155.88	N 32 12 33.22 W	103 57 31.89
	11594.00	88.14	89.13	10019.43	1786.46	133.15	1784.38	0.66	440055.13	657250.81	N 32 12 33.24 W	103 57 30.79
	11688.00	87.97	88.37	10022.62	1880.40	135.20	1878.30	0.83	440057.18	657344.73	N 32 12 33.26 W	103 57 29.70
	11783.00	88.18	87.89	10025.81	1975.34	138.30	1973.20	0.55	440060.28	657439.61	N 32 12 33.28 W	103 57 28.59
	11878.00	88.35	90.05	10028.69	2070.29	140.01	2068.13	2.28	440061.99	657534.54	N 32 12 33.30 W	103 57 27.49
	11972.00	88.45	89.74	10031.31	2164.24	140.18	2162.10	0.75	440062.16	657628.50	N 32 12 33.30 W	103 57 26.39
	12067.00	89.11	89.98	10033.34	2259.21	140.41	2257.07	0.34	440062.39	657723.47	N 32 12 33.29 W	103 57 25.29
	12161.00	88.93	90.40	10034.94	2353.17	140.10	2351.06	0.49	440062.08	657817.45	N 32 12 33.29 W	103 57 24.19
	12256.00	88.04	89.51	10037.45	2448.12	140.17	2446.02	1.32	440062.15	657912.40	N 32 12 33.29 W	103 57 23.09
	12350.00	88.18	88.69	10040.56	2542.07	141.65	2539.96	0.88	440063.63	658006.33	N 32 12 33.30 W	103 57 22.00
	12445.00	88.21	88.05	10043.55	2637.02	144.35	2634.87	0.67	440066.33	658101.24	N 32 12 33.32 W	103 57 20.89
	12540.00	88.28	87.61	10046.46	2731.95	147.95	2729.76	0.47	440069.92	658196.12	N 32 12 33.35 W	103 57 19.79
	12634.00	88.97	90.10	10048.71	2825.92	149.82	2823.71	2.75	440071.80	658290.06	N 32 12 33.37 W	103 57 18.69
	12729.00	89.35	91.05	10050.11	2920.87	148.87	2918.69	1.08	440070.85	658385.03	N 32 12 33.35 W	103 57 17.59
	12823.00	88.66	89.71	10051.74	3014.82	148.25	3012.67	1.60	440070.22	658479.01	N 32 12 33.35 W	103 57 16.49
	12918.00	88.76	89.06	10053.88	3109.80	149.27	3107.64	0.69	440071.24	658573.97	N 32 12 33.35 W	103 57 15.39
	13012.00	89.28	87.95	10055.48	3203.78	151.72	3201.59	1.30	440073.70	658667.91	N 32 12 33.42 W	103 57 14.29
	13107.00	89.24	88.13	10056.71	3298.76	154.97	3296.53	0.19	440076.94	658762.84	N 32 12 33.40 W	103 57 13.19
	13201.00	89.79	89.23	10057.51	3382.75	157.13	3380.50	1.31	440079.11	658856.81	N 32 12 33.42 W	103 57 12.10
	13296.00	89.45	89.38	10058.14	3487.75	158.28	3485.49	0.39	440080.26	658951.79	N 32 12 33.43 W	103 57 10.99
	13391.00	89.48	90.92	10059.02	3582.72	158.04	3580.48	1.62	440080.01	659046.78	N 32 12 33.42 W	103 57 9.88
	13485.00	89.79	91.78	10059.82	3676.64	155.82	3674.46	0.97	440077.80	659140.74	N 32 12 33.40 W	103 57 8.79
	13580.00	89.73	92.36	10060.02	3771.50	152.39	3769.39	0.61	440074.37	659235.67	N 32 12 33.38 W	103 57 7.69
	13675.00	89.38	92.04	10060.76	3866.35	148.74	3864.32	0.50	440070.72	659330.59	N 32 12 33.32 W	103 57 6.58
	13769.00	89.31	92.16	10061.83	3960.20	145.30	3958.25	0.15	440067.28	659424.51	N 32 12 33.28 W	103 57 5.48
	13864.00	88.07	91.33	10064.01	4055.06	142.41	4053.18	1.57	440064.39	659519.47	N 32 12 33.25 W	103 57 4.38
	13958.00	88.97	90.93	10066.43	4148.97	140.55	4147.13	1.05	440062.53	659613.37	N 32 12 33.23 W	103 57 3.29
	14053.00	89.66	91.90	10067.57	4243.87	138.21	4242.09	1.25	440060.19	659708.33	N 32 12 33.20 W	103 57 2.18
	14147.00	90.14	92.91	10067.73	4337.70	134.26	4336.01	1.19	440056.24	659802.24	N 32 12 33.16 W	103 57 1.09
	14242.00	88.45	91.93	10070.07	4527.34	126.74	4525.81	1.03	440048.22	659992.03	N 32 12 33.07 W	103 56 58.88
	14337.00	88.45	88.69	10072.61	4621.27	125.73	4619.76	3.45	440047.71	660085.97	N 32 12 33.07 W	103 56 57.79
	14431.00	88.07	87.05	10075.50	4716.20	129.26	4714.85	1.77	440051.24	660180.85	N 32 12 33.10 W	103 56 56.69
	14526.00	89.31	88.25	10077.67	4811.15	133.16	4809.54	1.82	440055.14	660275.74	N 32 12 33.13 W	103 56 55.58
	14621.00	86.69	88.39	10079.31	4905.13	135.91	4903.49	0.68	440057.89	660369.68	N 32 12 33.16 W	103 56 54.49
	14715.00	87.70	87.82	10082.30	5000.07	139.05	4998.39	1.20	440061.03	660464.57	N 32 12 33.18 W	103 56 53.38
	14810.00	89.31	88.35	10084.78	5095.02	142.22	5093.30	1.78	440064.20	660559.47	N 32 12 33.21 W	103 56 52.28
	14905.00	89.31	89.15	10085.91	5189.01	144.27	5187.27	0.85	440066.25	660653.43	N 32 12 33.23 W	103 56 51.18
	15000.00	89.35	89.80	10087.02	5284.00	145.14	5282.26	0.69	440067.12	660748.42	N 32 12 33.23 W	103 56 50.08
	15188.00	89.38	90.31	10088.07	5377.98	145.05	5376.25	0.54	440067.03	660842.40	N 32 12 33.23 W	103 56 48.98
	15283.00	89.79	90.50	10088.75	5472.94	144.38	5471.25	0.48	440066.36	660937.39	N 32 12 33.22 W	103 56 47.88
	15378.00	89.87	89.52	10088.95	5567.93	144.37	5566.24	1.05	440066.35	661032.38	N 32 12 33.22 W	103 56 46.77
	15472.00	89.89	89.89	10089.23	5661.92	144.85	5660.24	0.49	440066.83	661126.37	N 32 12 33.22 W	103 56 45.68
	15567.00	89.66	89.83	10089.77	5756.91	145.08	5755.24	0.07	440067.06	661221.36	N 32 12 33.22 W	103 56 44.57
	15662.00	89.82	90.12	10090.36	5850.89	145.12	5849.24	0.31	440067.10	661315.35	N 32 12 33.21 W	103 56 43.48
	15756.00	89.62	90.57	10090.99	5945.86	144.55	5944.23	0.47	440066.53	661410.34	N 32 12 33.21 W	103 56 42.37
	15851.00	89.35	90.60									

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 ° ' ")
		1	0.000	26.500	Act Stns	30.000	30.000	NAL_MWVD_PLUS_0.5_DEG- Depth Only		Original Borehole / Oxy Cedar Canyon 23-24 Federal 31H MWVD 0-17742 ftMD		
		1	26.500	505.000	1/98.425	30.000	30.000	NAL_MWVD_PLUS_0.5_DEG		Original Borehole / Oxy Cedar Canyon 23-24 Federal 31H MWVD		
		1	505.000	17742.000	Act Stns	30.000	30.000	NAL_MWVD_PLUS_0.5_DEG		Original Borehole / Oxy Cedar Canyon 23-24 Federal 31H MWVD		

OXY USA Inc.
Cedar Canyon 23-24 Federal 31H
API No. 30-015-44179

14-3/4" hole @ 422'
10-3/4" csg @ 422'
w/ 385sx-TOC-Surf Circ.

9-7/8" hole @ 9358'
7-5/8" csg @ 9346'
w/ 1365sx-TOC-Surf Circ.

6-3/4" hole @ 17742'
4-1/2" liner @ 9181-17727'
w/ 815sx-TOC- 9181' Circ.

Perfs @ 10330-17558'

TD- 17742'M 10160'V