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

Well Reference:
22, 24S, 29E, EDDY NM
N 32.19863 W -103.97972

I, Kalu Chibueze Uga certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of September 05, 2016 through October 20, 2016, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 453.00 feet to a depth of 13482.00 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 22 FEDERAL COM 5H Well (Original Hole) API No. 30-015-43758 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
Kalu Chibueze Uga
FS

Subscribed and Sworn to before me this 31 day of Oct (month) 2016 (yr)

My Commission expires:
7-9-20

Mary E. Mack (signature)
Notary Public

Eddy New Mexico
(County State)

OFFICIAL SEAL
Mary E. Mack
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 7-9-20

Schlumberger

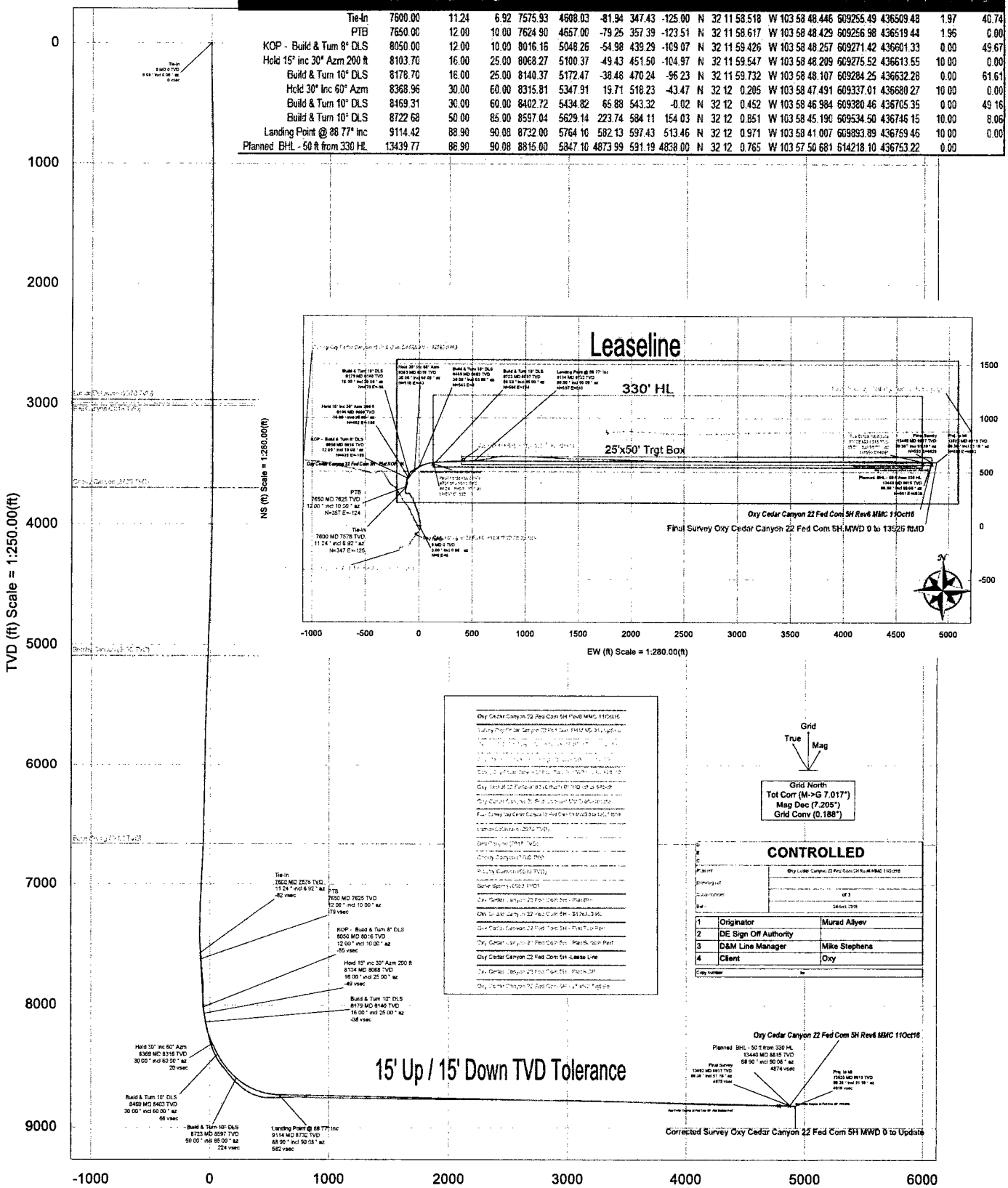
Final PvA- Rev6 **OXY** RKB = 28.2 ft

Borehole:	Well:	Field:	Structure:
Oxy CC 22 Fed Com 5H -Original Borehole	Oxy Cedar Canyon 22 Fed Com 5H	NM Eddy County (NAD 27)	Oxy Cedar Canyon 22 Fed Com 5H

Gravity & Magnetic Parameters					Surface Location	NAD27 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous		
Model:	HDGM 2016	Dip:	60.047°	Date:	10-Oct-2016	Lat: N 32 11 55.08	Northing:	436162.08ftUS	Grid Conv:	0.1884°	Slot: Oxy Cedar Canyon 22 Fed Com 5H	TVD Ref: RKB(2967.9ft above MSL)
MagDec:	7.205°	FS:	48193.955nT	Gravity FS:	998.467mgn (9.80665 Based)	Lon: W 103 58 47.06	Easting:	609380.48ftUS	Scale Fact:	0.99992279	Plan: Oxy Cedar Canyon 22 Fed Com 5H Rev6 MMC 11Oct16	

Critical Points

Comments	Survey MD (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Sub-Sea TVD	VS (ft)	NS (ft)	EW (ft)	Latitude (deg)	Longitude (deg)	Easting (ftUS)	Northing (ftUS)	DLS (°/100ft)	Tool Face (deg)
Tie-In	7600.00	11.24	6.92	7575.93	4608.03	-81.94	347.43	-125.00	N 32 11 58.518	W 103 58 48.446	609255.49	436509.48	1.97	40.74
PTB	7650.00	12.00	10.00	7624.90	4657.00	-79.25	357.39	-123.51	N 32 11 58.617	W 103 58 48.429	609256.98	436519.44	1.96	0.00
KOP - Build & Turn 8° DLS	8050.00	12.00	10.00	8016.16	5048.26	-54.98	439.29	-109.07	N 32 11 59.426	W 103 58 48.257	609271.42	436601.33	0.00	49.67
Hold 15° inc 30° Azm 200 ft	8103.70	16.00	25.00	8068.27	5100.37	-49.43	451.50	-104.97	N 32 11 59.547	W 103 58 48.209	609275.52	436613.55	10.00	0.00
Build & Turn 10° DLS	8178.70	16.00	25.00	8140.37	5172.47	-38.48	470.24	-96.23	N 32 11 59.732	W 103 58 48.107	609284.25	436632.28	0.00	61.61
Hold 30° Inc 60° Azm	8368.96	30.00	60.00	8315.81	5347.91	19.71	518.23	-43.47	N 32 12 0.205	W 103 58 47.491	609337.01	436680.27	10.00	0.00
Build & Turn 10° DLS	8469.31	30.00	60.00	8402.72	5434.82	65.88	543.32	-0.02	N 32 12 0.452	W 103 58 46.984	609380.46	436705.35	0.00	49.16
Build & Turn 10° DLS	8722.68	50.00	85.00	8597.04	5629.14	223.74	584.11	154.03	N 32 12 0.851	W 103 58 45.190	609534.50	436746.15	10.00	8.06
Landing Point @ 88.77° inc	9114.42	88.90	90.08	8732.00	5764.10	582.13	597.43	513.46	N 32 12 0.971	W 103 58 41.007	609893.89	436759.46	10.00	0.00
Planned BHL - 50 ft from 330 HL	13439.77	86.90	90.08	8815.00	5847.10	4873.99	591.19	4838.00	N 32 12 0.765	W 103 57 50.681	614218.10	436753.22	0.00	



Schlumberger

Final Survey Oxy Cedar Canyon 22 Fed Com 5H MWD 0 to 13525 ftMD
Survey Geodetic Report
(Def Survey)

Report Date:	October 24, 2016 - 07:31 AM	**Survey / DLS Computation:**	Minimum Curvature / Lubinski
Client:	OXY	**Vertical Section Azimuth:**	83.033 ° (Grid North)
Field:	NM Eddy County (NAD 27)	**Vertical Section Origin:**	0.000 ft, 0.000 ft
Structure / Slot:	Oxy Cedar Canyon 22 Fed Com 5H / Oxy Cedar Canyon 22 Fed Com 5H	**TVD Reference Datum:**	RKB
Well:	Oxy Cedar Canyon 22 Fed Com 5H	**TVD Reference Elevation:**	2967.900 ft above MSL
Borehole:	Oxy CC 22 Fed Com 5H -Original Borehole	**Seabed / Ground Elevation:**	2939.700 ft above MSL
UWI / API#:	Unknown / Unknown	**Magnetic Declination:**	7.215 °
Survey Name:	Final Survey Oxy Cedar Canyon 22 Fed Com 5H MWD 0 to 13525 ftMD	**Total Gravity Field Strength:**	998.4669mgn (9.80665 Based)
Survey Date:	September 02, 2016	**Gravity Model:**	GARM
Tort / AHD / DDI / ERD Ratio:	235.127 ° / 5591.729 ft / 6.305 / 0.634	**Total Magnetic Field Strength:**	48205.250 nT
Coordinate Reference System:	NAD27 New Mexico State Plane, Eastern Zone, US Feet	**Magnetic Dip Angle:**	60.049 °
Location Lat / Long:	N 32° 11' 55.07597", W 103° 58' 47.00490"	**Declination Date:**	September 02, 2016
Location Grid N/E Y/X:	N 436162.080 ftUS, E 609380.480 ftUS	**Magnetic Declination Model:**	HDGM 2016
CRS Grid Convergence Angle:	0.1884 °	**North Reference:**	Grid North
Grid Scale Factor:	0.99992279	**Grid Convergence Used:**	0.1884 °
Version / Patch:	2.10.254.0	**Total Corr Mag North->Grid North:**	7.0269 °
		Local Coord Referenced To:	Structure Reference Point

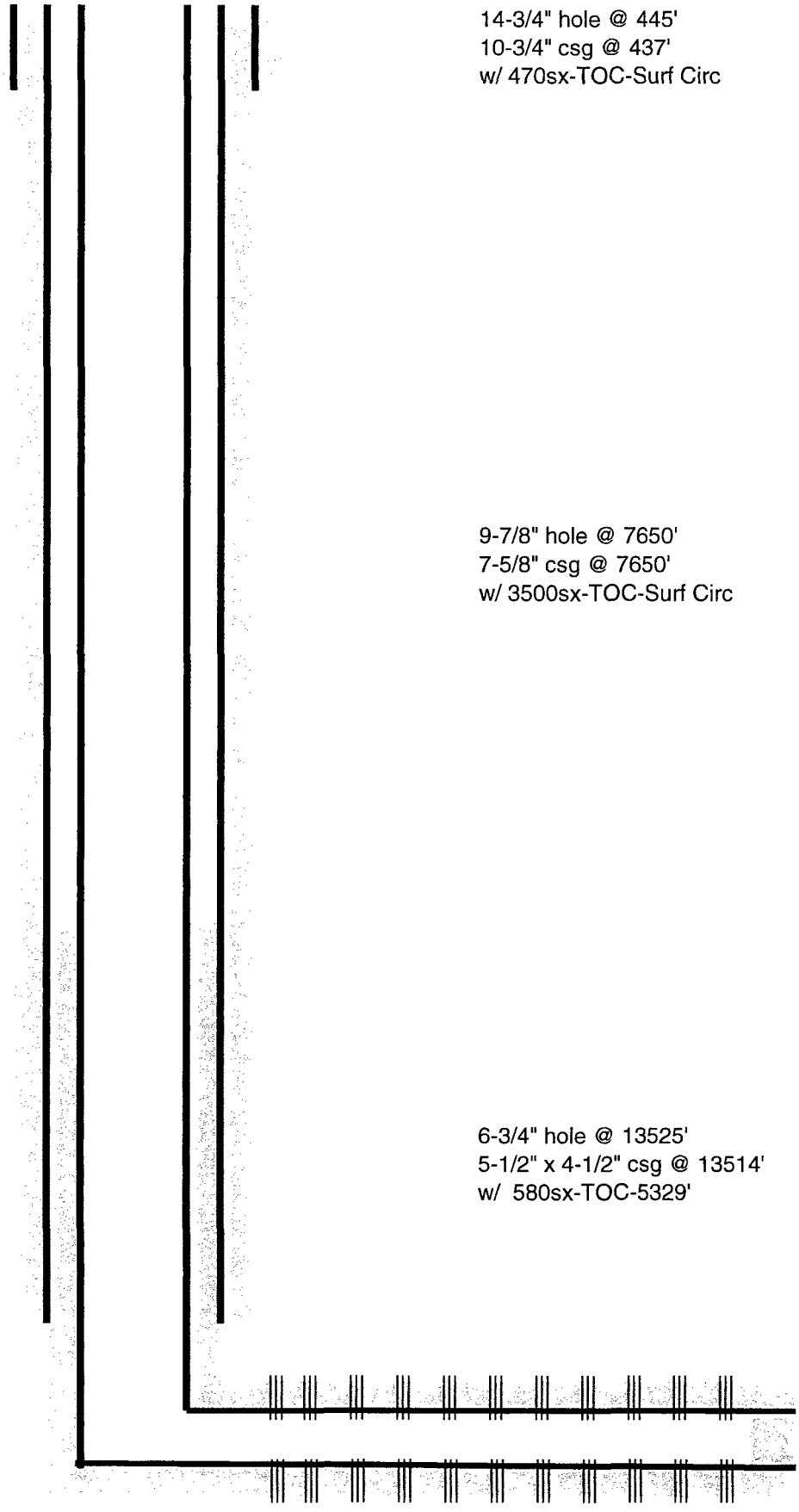
Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	436162.08	609380.48	N 32 11 55.08	W 103 58 47.00
	28.20	0.00	0.00	28.20	0.00	0.00	0.00	0.00	436162.08	609380.48	N 32 11 55.08	W 103 58 47.00
	453.00	1.49	83.96	452.95	5.52	0.58	5.49	0.35	436162.66	609385.97	N 32 11 55.08	W 103 58 46.94
	634.00	1.23	91.36	633.90	9.80	0.78	9.77	0.17	436162.86	609390.25	N 32 11 55.08	W 103 58 46.89
	815.00	1.03	123.58	814.87	12.96	-0.16	13.07	0.36	436161.92	609393.55	N 32 11 55.07	W 103 58 46.85
	906.00	1.74	164.28	905.84	13.79	-1.95	14.13	1.29	436160.13	609394.61	N 32 11 55.06	W 103 58 46.84
	996.00	2.44	172.66	995.78	14.01	-5.16	14.74	0.85	436156.92	609395.22	N 32 11 55.02	W 103 58 46.83
	1086.00	2.59	169.78	1085.70	14.14	-9.06	15.35	0.22	436153.02	609395.83	N 32 11 54.99	W 103 58 46.83
	1181.00	2.35	172.14	1180.61	14.29	-13.10	16.00	0.27	436148.98	609396.47	N 32 11 54.95	W 103 58 46.82
	1275.00	0.70	49.04	1274.58	14.79	-14.64	16.69	2.97	436147.44	609397.17	N 32 11 54.93	W 103 58 46.81
	1369.00	0.79	96.65	1368.58	15.90	-14.34	17.77	0.65	436147.75	609398.25	N 32 11 54.93	W 103 58 46.80
	1464.00	0.26	257.84	1463.57	16.32	-14.46	18.21	1.09	436147.62	609398.69	N 32 11 54.93	W 103 58 46.79
	1558.00	0.13	315.79	1557.57	16.05	-14.43	17.93	0.23	436147.66	609398.41	N 32 11 54.93	W 103 58 46.80
	1652.00	0.15	306.27	1651.57	15.89	-14.28	17.75	0.03	436147.80	609398.23	N 32 11 54.93	W 103 58 46.80
	1747.00	0.15	316.86	1746.57	15.73	-14.11	17.57	0.03	436147.97	609398.05	N 32 11 54.94	W 103 58 46.80
	1841.00	0.07	141.30	1840.57	15.68	-14.07	17.52	0.23	436148.01	609398.00	N 32 11 54.94	W 103 58 46.80
	1935.00	0.11	274.18	1934.57	15.63	-14.11	17.47	0.18	436147.98	609397.94	N 32 11 54.94	W 103 58 46.80
	2030.00	0.22	226.44	2029.57	15.39	-14.22	17.24	0.18	436147.86	609397.72	N 32 11 54.93	W 103 58 46.80
	2124.00	0.51	242.29	2123.57	14.85	-14.54	16.74	0.32	436147.54	609397.22	N 32 11 54.93	W 103 58 46.81
	2218.00	0.55	241.61	2217.57	14.04	-14.95	15.97	0.04	436147.13	609396.45	N 32 11 54.93	W 103 58 46.82
	2312.00	0.11	69.69	2311.56	13.71	-15.14	15.66	0.70	436146.95	609396.14	N 32 11 54.93	W 103 58 46.82
	2407.00	0.13	173.16	2406.56	13.80	-15.21	15.76	0.20	436146.87	609396.24	N 32 11 54.92	W 103 58 46.82
	2501.00	0.11	227.81	2500.56	13.73	-15.38	15.71	0.12	436146.70	609396.19	N 32 11 54.92	W 103 58 46.82
	2595.00	0.11	154.20	2594.56	13.68	-15.52	15.68	0.14	436146.56	609396.16	N 32 11 54.92	W 103 58 46.82
	2689.00	0.13	170.97	2688.56	13.71	-15.71	15.74	0.04	436146.38	609396.21	N 32 11 54.92	W 103 58 46.82
	2783.00	0.15	90.83	2782.56	13.84	-15.81	15.87	0.19	436146.27	609396.35	N 32 11 54.92	W 103 58 46.82
	2877.00	0.29	108.08	2876.56	14.18	-15.89	16.22	0.16	436146.19	609396.70	N 32 11 54.92	W 103 58 46.82
	2971.00	0.26	64.46	2970.56	14.59	-15.87	16.64	0.22	436146.21	609397.12	N 32 11 54.92	W 103 58 46.81
	3065.00	1.30	358.19	3064.55	14.89	-14.71	16.80	1.30	436147.37	609397.28	N 32 11 54.93	W 103 58 46.81
	3159.00	2.68	357.09	3158.49	15.14	-11.45	16.66	1.47	436150.63	609397.13	N 32 11 54.96	W 103 58 46.81
	3253.00	3.93	355.53	3252.34	15.44	-6.05	16.29	1.33	436156.04	609396.77	N 32 11 55.02	W 103 58 46.82
	3347.00	4.79	355.21	3346.06	15.73	1.08	15.71	0.92	436163.16	609396.19	N 32 11 55.09	W 103 58 46.82
	3441.00	5.19	352.74	3439.71	15.86	9.21	14.85	0.48	436171.29	609395.33	N 32 11 55.17	W 103 58 46.83
	3535.00	5.63	350.54	3533.29	15.63	17.97	13.55	0.52	436180.05	609394.03	N 32 11 55.25	W 103 58 46.85
	3629.00	6.37	350.52	3626.77	15.21	27.66	11.94	0.79	436189.74	609392.42	N 32 11 55.35	W 103 58 46.86
	3723.00	7.19	350.03	3720.11	14.67	38.60	10.06	0.87	436200.68	609390.54	N 32 11 55.46	W 103 58 46.89
	3817.00	6.92	349.77	3813.40	14.04	49.97	8.04	0.29	436212.04	609388.52	N 32 11 55.57	W 103 58 46.91
	3911.00	6.79	346.37	3906.73	13.07	60.94	5.72	0.45	436223.02	609386.20	N 32 11 55.68	W 103 58 46.94
	4005.00	7.08	345.99	4000.04	11.72	71.96	3.01	0.31	436234.04	609383.49	N 32 11 55.79	W 103 58 46.97
	4099.00	7.60	344.30	4093.27	10.06	83.57	-0.08	0.60	436245.64	609380.40	N 32 11 55.90	W 103 58 47.00
	4288.00	8.79	343.85	4280.34	5.86	109.47	-7.47	0.63	436271.54	609373.01	N 32 11 56.16	W 103 58 47.09
	4382.00	8.77	342.27	4373.24	3.37	123.19	-11.65	0.26	436285.26	609368.83	N 32 11 56.30	W 103 58 47.14
	4476.00	8.26	340.95	4466.20	0.62	136.40	-16.04	0.58	436298.47	609364.44	N 32 11 56.43	W 103 58 47.19
	4571.00	7.52	339.65	4560.30	-2.24	148.68	-20.43	0.80	436310.75	609360.05	N 32 11 56.55	W 103 58 47.24
	4665.00	7.47	339.45	4653.50	-5.10	160.17	-24.71	0.06	436322.24	609355.77	N 32 11 56.66	W 103 58 47.29
	4759.00	7.65	338.21	4746.68	-8.14	171.70	-29.18	0.26	436333.77	609351.30	N 32 11 56.78	W 103 58 47.34
	4853.00	8.00	338.46	4839.81	-11.39	183.60	-33.91	0.37	436345.66	609346.58	N 32 11 56.89	W 103 58 47.39
	4947.00	7.96	338.54	4932.90	-14.66	195.74	-38.69	0.04	436357.80	609341.79	N 32 11 57.01	W 103 58 47.45
	5135.00	6.99	337.31	5119.30	-21.02	218.41	-47.86	0.52	436380.47	609332.62	N 32 11 57.24	W 103 58 47.55
	5229.00	6.39	336.88	5212.66	-24.02	228.49	-52.12	0.64	436390.56	609328.36	N 32 11 57.34	W 103 58 47.60
	5418.00	5.63	334.08	5400.62	-29.96	246.51	-60.31	0.43	436408.57	609320.18	N 32 11 57.52	W 103 58 47.70
	5512.00	4.46	328.14	5494.25	-33.00	253.76	-64.25	1.36	436415.82	609316.23	N 32 11 57.59	W 103 58 47.74
	5606.00	4.07	326.51	5587.99	-36.02	259.64	-68.02	0.43	436421.70	609312.46	N 32 11 57.65	W 103 58 47.79
	5700.00	3.91	329.79	5681.76	-38.78	265.20	-71.47	0.30	436427.25	609309.01	N 32 11 57.70	W 103 58 47.83
	5794.00	3.82	331.43	5775.55	-41.20	270.71	-74.58	0.15	436432.77	609305.90	N 32 11 57.76	W 103 58 47.86
	5889.00	3.49	334.13	5870.36	-43.30	276.10	-77.36	0.39	436438.15	609303.13	N 32 11 57.81	W 103 58 47.89
	5983.00	3.25	334.68	5964.19	-45.06	281.08	-79.75	0.26	436443.14	609300.74	N 32 11 57.86	W 103 58 47.92
	6077.00	3.10	338.04	6058.05	-46.56	285.84	-81.84	0.25	436447.90	609298.65	N 32 11 57.91	W 103 58 47.95
	6170.00	2.75	338.65	6150.93	-47.77	290.25	-83.59	0.38	436452.31	609296.90	N 32 11 57.95	W 103 58 47.97
	6264.00	2.15	332.03	6244.84	-48.96	293.91	-85.24	0.70	436455.97	609295.25	N 32 11 57.99	W 103 58 47.99
	6358.00	1.69	318.74	6338.79	-50.37	296.51	-86.98	0.68	436458.57	609293.51	N 32 11 58.01	W 103 58 48.01
	6452.00	1.38	297.70	6432.76	-52.08	298.08	-88.90	0.68	436460.14	609291.59	N 32 11 58.03	W 103 58 48.03
	6546.00	1.38	277.76	6526.73	-54.11	298.76	-91.02	0.51	436460.82	609289.47	N 32 11 58.04	W 103 58 48.05
	6640.00	1.60	249.61	6620.70	-56.48	298.45	-93.37	0.80	436460.51	609287.12	N 32 11 58.03	W 103 58 48.08
	6726.00	1.98	244.94	6706.66	-59.06	297.41	-95.84	0.47	436459.46	609284.65	N 32 11 58.02	W 103 58 48.11
	6820.00	3.16	258.21	6800.56	-63.18	296.19	-99.85	1.40	436458.25	609280.64	N 32 11 58.01	W 103 58 48.16
	6914.00	3.03	260.16	6894.42	-68.25	295.24	-104.83	0.18	436457.29	609275.65	N 32 11 58.00	W 103 58 48.21
	7009.00	2.97	262.19	6989.29	-73.22	294.47	-109.75	0.13	436456.53	609270.74	N 32 11 57.99	W 103 58 48.27
	7103.00	2.66	251.61	7083.18	-77.79	293.45	-114.23	0.64	436455.51	609266.26	N 32 11 57.98	W 103 58 48.32
	7197.00	2.62	299.92	7177.09	-81.65	293.84	-118.16	2.30	436455.89	609262.33	N 32 11 57.99	W 103 58 48.37

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 ° ' ")
	7291.00	6.04	342.16	7270.83	-84.30	299.62	-121.54	4.75	436461.67	609258.95	N 32 11 58.04	W 103 58 48.41
	7385.00	8.48	347.90	7364.07	-85.85	311.11	-124.51	2.70	436473.16	609255.98	N 32 11 58.16	W 103 58 48.44
	7479.00	7.03	5.02	7457.22	-85.28	323.61	-125.46	2.88	436485.67	609255.03	N 32 11 58.28	W 103 58 48.45
	7667.00	8.68	26.84	7643.49	-74.99	347.74	-118.04	1.80	436509.79	609262.45	N 32 11 58.52	W 103 58 48.37
	7737.00	12.26	8.80	7712.33	-70.03	359.80	-114.52	6.88	436521.86	609265.97	N 32 11 58.64	W 103 58 48.32
	7831.00	15.29	19.34	7803.63	-61.82	381.37	-108.89	4.17	436543.42	609271.60	N 32 11 58.85	W 103 58 48.26
	7924.00	12.17	333.42	7894.22	-59.67	401.77	-109.21	11.84	436563.82	609271.28	N 32 11 59.06	W 103 58 48.26
	8018.00	8.95	7.00	7986.70	-61.23	417.91	-112.76	7.24	436579.95	609267.73	N 32 11 59.22	W 103 58 48.30
	8112.00	16.13	44.57	8078.54	-49.21	434.51	-102.68	11.19	436596.56	609277.81	N 32 11 59.38	W 103 58 48.18
	8205.00	17.91	29.58	8167.50	-30.57	456.17	-86.54	5.07	436618.21	609293.95	N 32 11 59.59	W 103 58 47.99
	8299.00	18.79	45.74	8256.78	-9.91	479.32	-68.55	5.48	436641.36	609311.93	N 32 11 59.82	W 103 58 47.78
	8392.00	24.92	42.93	8343.06	17.02	504.14	-44.46	6.68	436666.18	609336.03	N 32 12 0.07	W 103 58 47.50
	8486.00	33.28	54.60	8425.18	54.95	533.66	-9.86	10.71	436695.69	609370.62	N 32 12 0.36	W 103 58 47.10
	8580.00	39.23	68.94	8501.09	106.60	559.35	39.04	10.99	436721.38	609419.51	N 32 12 0.61	W 103 58 46.53
	8674.00	41.56	77.07	8572.72	166.49	577.02	97.21	6.12	436739.05	609477.69	N 32 12 0.78	W 103 58 45.85
	8768.00	46.62	87.67	8640.31	231.68	585.40	161.87	9.50	436747.44	609542.33	N 32 12 0.86	W 103 58 45.10
	8862.00	57.71	88.71	8697.88	305.50	587.69	235.95	11.83	436749.73	609616.41	N 32 12 0.88	W 103 58 44.24
	8892.00	61.79	88.57	8712.99	331.28	588.31	261.85	13.61	436750.34	609642.31	N 32 12 0.89	W 103 58 43.94
	8984.00	75.39	87.80	8746.50	416.39	591.04	347.26	14.80	436753.07	609727.71	N 32 12 0.91	W 103 58 42.94
	9015.00	81.92	86.68	8752.59	446.68	592.51	377.60	21.36	436754.54	609758.05	N 32 12 0.93	W 103 58 42.59
	9078.00	91.24	87.79	8756.34	509.33	595.53	440.35	14.90	436757.57	609820.79	N 32 12 0.95	W 103 58 41.86
	9145.00	92.24	86.16	8754.31	576.14	599.07	507.22	2.85	436761.10	609887.66	N 32 12 0.99	W 103 58 41.08
	9238.00	92.27	79.17	8750.65	669.01	610.92	599.33	7.51	436772.96	609979.76	N 32 12 1.10	W 103 58 40.01
	9332.00	89.17	77.87	8749.47	762.70	629.63	691.43	3.58	436791.66	610071.85	N 32 12 1.28	W 103 58 38.93
	9426.00	87.25	87.45	8752.41	856.53	641.62	784.50	10.39	436803.65	610164.92	N 32 12 1.40	W 103 58 37.85
	9520.00	89.86	91.76	8754.78	949.86	642.27	878.44	5.36	436804.30	610258.85	N 32 12 1.40	W 103 58 36.76
	9613.00	89.52	91.11	8755.28	1041.86	639.94	971.41	0.79	436801.97	610351.81	N 32 12 1.38	W 103 58 35.68
	9707.00	89.00	92.01	8756.50	1134.81	637.38	1065.36	1.11	436799.41	610445.76	N 32 12 1.35	W 103 58 34.58
	9801.00	89.00	92.48	8758.14	1227.58	633.70	1159.27	0.50	436795.73	610539.66	N 32 12 1.31	W 103 58 33.49
	9894.00	88.80	92.12	8759.92	1319.35	629.97	1252.18	0.44	436792.00	610632.56	N 32 12 1.27	W 103 58 32.41
	9988.00	89.24	92.02	8761.53	1412.17	626.57	1346.11	0.48	436788.60	610726.48	N 32 12 1.23	W 103 58 31.32
	10177.00	89.45	92.03	8763.69	1598.83	619.89	1534.98	0.11	436781.93	610915.34	N 32 12 1.16	W 103 58 29.12
	10365.00	89.38	91.57	8765.61	1784.63	613.99	1722.87	0.25	436776.02	611103.22	N 32 12 1.10	W 103 58 26.93
	10552.00	89.07	91.87	8768.14	1969.47	608.38	1909.77	0.23	436770.41	611290.10	N 32 12 1.03	W 103 58 24.76
	10647.00	89.52	91.88	8769.31	2063.33	605.27	2004.71	0.47	436767.30	611385.03	N 32 12 1.00	W 103 58 23.65
	10741.00	90.58	91.90	8769.23	2156.21	602.17	2098.66	1.13	436764.20	611478.97	N 32 12 0.97	W 103 58 22.56
	10834.00	89.52	91.80	8769.15	2248.11	599.17	2191.61	1.14	436761.20	611571.92	N 32 12 0.93	W 103 58 21.48
	10928.00	89.45	91.07	8769.99	2341.09	596.81	2285.58	0.78	436758.85	611665.88	N 32 12 0.91	W 103 58 20.38
	11116.00	89.38	89.49	8771.91	2527.58	595.89	2473.56	0.84	436757.93	611853.84	N 32 12 0.89	W 103 58 18.20
	11210.00	89.55	90.00	8772.79	2620.93	596.31	2567.55	0.57	436758.34	611947.83	N 32 12 0.89	W 103 58 17.10
	11304.00	89.52	90.04	8773.55	2714.23	596.28	2661.55	0.05	436758.31	612041.82	N 32 12 0.89	W 103 58 16.01
	11398.00	89.62	90.07	8774.26	2807.52	596.19	2755.55	0.11	436758.22	612135.81	N 32 12 0.88	W 103 58 14.91
	11492.00	89.45	89.82	8775.02	2900.83	596.28	2849.54	0.32	436758.31	612229.80	N 32 12 0.88	W 103 58 13.82
	11586.00	89.38	89.90	8775.98	2994.16	596.51	2943.54	0.11	436758.54	612323.79	N 32 12 0.88	W 103 58 12.73
	11772.00	88.62	89.98	8779.23	3178.78	596.70	3129.51	0.41	436758.74	612509.74	N 32 12 0.88	W 103 58 10.56
	11866.00	88.45	90.06	8781.63	3272.05	596.67	3223.48	0.20	436758.70	612603.70	N 32 12 0.87	W 103 58 9.47
	11960.00	89.24	90.14	8783.52	3365.32	596.51	3317.46	0.84	436758.54	612697.68	N 32 12 0.87	W 103 58 8.38
	12054.00	88.52	90.13	8785.36	3458.58	596.29	3411.44	0.77	436758.32	612791.65	N 32 12 0.86	W 103 58 7.28
	12149.00	88.25	90.15	8788.04	3552.81	596.05	3506.40	0.28	436758.09	612886.60	N 32 12 0.86	W 103 58 6.18
	12243.00	88.11	89.83	8791.02	3646.07	596.07	3600.35	0.37	436758.10	612980.55	N 32 12 0.86	W 103 58 5.08
	12337.00	88.25	89.81	8794.01	3739.37	596.37	3694.31	0.15	436758.40	613074.49	N 32 12 0.86	W 103 58 3.99
	12431.00	88.73	89.78	8796.49	3832.68	596.70	3788.27	0.51	436758.73	613168.45	N 32 12 0.86	W 103 58 2.90
	12525.00	88.59	89.59	8798.68	3926.02	597.22	3882.25	0.25	436759.25	613262.42	N 32 12 0.86	W 103 58 1.80
	12618.00	87.76	89.39	8801.65	4018.38	598.05	3975.19	0.92	436760.08	613355.36	N 32 12 0.86	W 103 58 0.72
	12711.00	88.42	89.88	8804.75	4110.71	598.64	4068.14	0.88	436760.67	613448.30	N 32 12 0.86	W 103 57 59.64
	12804.00	89.04	89.96	8806.81	4203.02	598.77	4161.12	0.67	436760.80	613541.27	N 32 12 0.86	W 103 57 58.56
	12899.00	89.07	89.67	8808.37	4297.34	599.07	4256.10	0.31	436761.11	613636.25	N 32 12 0.86	W 103 57 57.45
	12992.00	89.42	89.64	8809.60	4389.71	599.63	4349.09	0.38	436761.67	613729.23	N 32 12 0.87	W 103 57 56.37
	13085.00	90.24	89.91	8809.87	4482.07	600.00	4442.09	0.93	436762.03	613822.22	N 32 12 0.87	W 103 57 55.29
	13178.00	88.80	91.06	8810.65	4574.28	599.21	4535.08	1.98	436761.24	613915.20	N 32 12 0.85	W 103 57 54.21
	13272.00	89.79	91.75	8811.81	4667.27	596.91	4629.04	1.28	436758.94	614009.16	N 32 12 0.83	W 103 57 53.11
	13366.00	87.90	90.75	8813.71	4760.28	594.86	4723.00	2.27	436756.89	614103.10	N 32 12 0.81	W 103 57 52.02
	13460.00	88.45	91.08	8816.70	4853.34	593.36	4816.94	0.68	436755.39	614197.03	N 32 12 0.79	W 103 57 50.93
Final Survey	13482.00	88.38	91.18	8817.31	4875.11	592.92	4838.92	0.55	436754.96	614219.02	N 32 12 0.78	W 103 57 50.67
Proj. to bit	13525.00	88.38	91.18	8818.52	4917.66	592.04	4881.90	0.00	436754.07	614261.99	N 32 12 0.77	W 103 57 50.17

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	28.200	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG-Depth Only	Oxy CC 22 Fed Com 5H -Original Borehole / Final Survey Oxy Cedar Canyon 22 Fed Com 5H
	1	28.200	453.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Oxy CC 22 Fed Com 5H -Original Borehole / Final Survey Oxy
	1	453.000	13525.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Oxy CC 22 Fed Com 5H -Original Borehole / Final Survey Oxy

OXY USA Inc.
Cedar Canyon 22 Federal Com 5H
API No. 30-015-43758