

DEC 02 2016

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)

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Schlumberger RECEIVED

Well Reference:

22, 24S, 29E, EDDY NM

N 32.19855 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 14, 2016 through September 24, 2016, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 444.00 feet to a depth of 13504.00 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 21 FEDERAL COM 5H Well (Original Hole) API No. 30-015-43749 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 27 day of Sept (month) 2016 (yr)

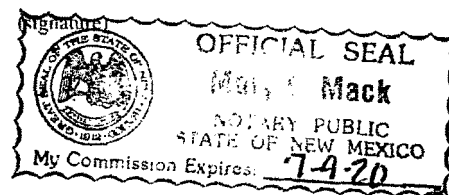
My Commission expires:

7-9-20Mary E. Mack

Notary Public

Eddy New Mexico

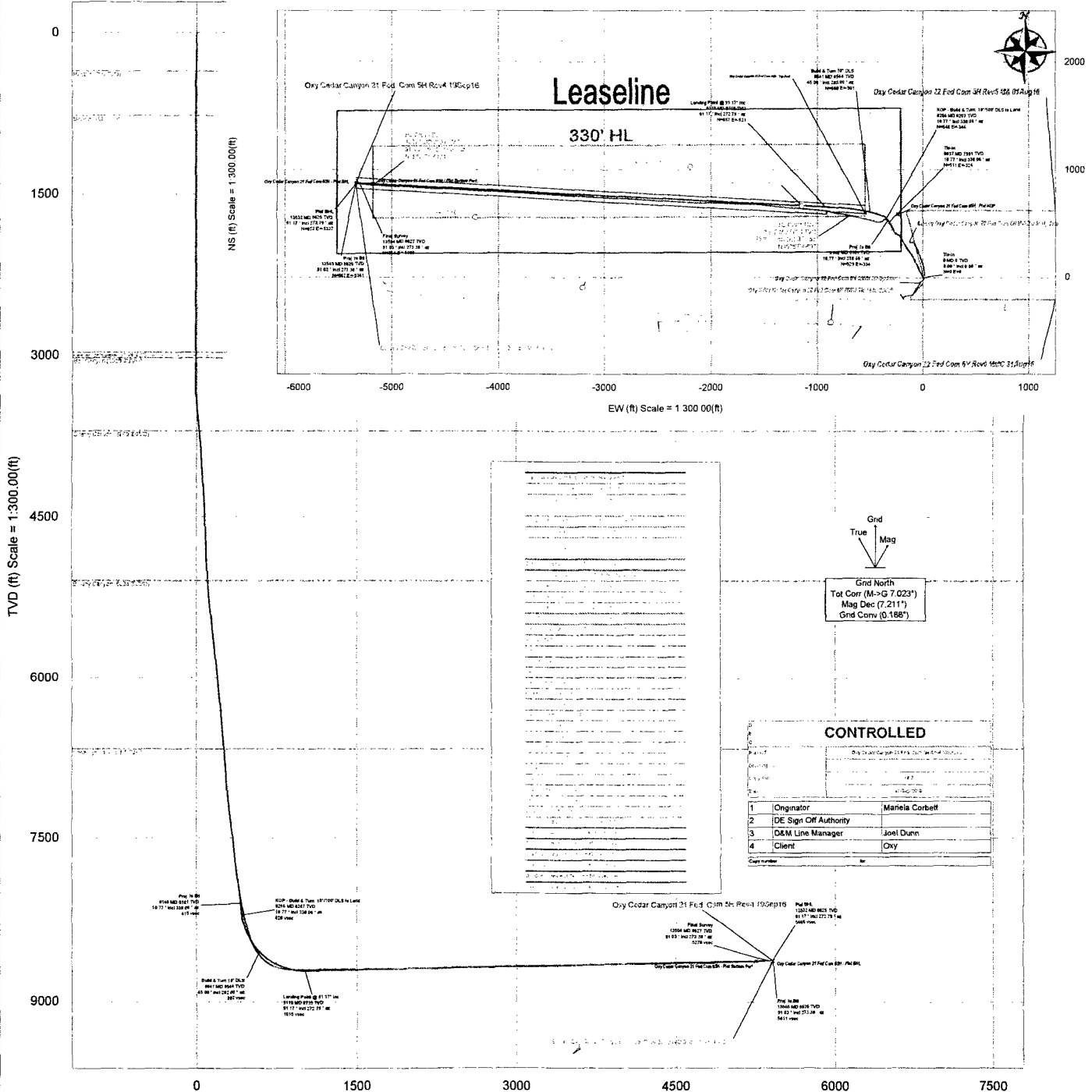
(County State)



Borehole:				Well:		Field:		Structure:	
Cedar Canyon 21 Fed. Com 5H - Original Borehole				Cedar Canyon 21 Fed. Com 5H		NM Eddy County (NAD 27)		Oxy Cedar Canyon 21 Fed. Com 5H	
Gravity & Magnetic Parameters						Surface Location		NAD27 New Mexico State Plane, Eastern Zone, US Feet	
Model: HGM 2016		Dip: 68.848°		Date: 15-Sep-2016		Lat: N 32 11 54.78		Northing: 436121.727US	
MagDec: 7.211°		PS: 49296.165m		Gravity PS: 998.457mgn (9.80665 m/s²)		Grid Conv: 0.1884°		Scale Fact: 0.99992273	
Lon: W 103 58 47.91		Easting: 609280.467US		TVD Ref: RKB(1948.48' above MSL)		Slot: Oxy Cedar Canyon		Plan: Oxy Cedar Canyon	
						21 Fed. Com 5H		21 Fed. Com 5H	
						Oxy Cedar Canyon 21 Fed. Com 5H Revd 19Sep16		Oxy Cedar Canyon 21 Fed. Com 5H Revd 19Sep16	

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(RUS)	Northing(RUS)	Closure(ft)	Closure Azimuth(deg)	DLS°/100 ft	Tool Face(deg)
Tie-In	8037.00	10.77	330.06	7991.46	5022.86	401.78	511.03	-323.57	N 32 11 59.843	W 103 58 50.752	609056.91	436642.71	604.85	327.66	1.36	0.00
Proj. to Bit	8148.00	10.77	330.06	8100.51	5131.91	414.89	529.00	-333.93	N 32 12 0.021	W 103 58 50.872	609046.56	436660.68	625.58	327.74	0.00	0.00
KOP - Build & Turn 10°/100' DLS to Land	8256.00	10.77	330.06	8206.60	5238.00	427.65	546.49	-344.00	N 32 12 0.154	W 103 58 50.989	609036.49	436678.17	645.74	327.81	0.00	-57.73
Build & Turn 10° DLS	8640.67	45.00	262.00	8544.34	5575.74	592.47	608.25	-500.91	N 32 12 0.811	W 103 58 52.812	608879.59	436739.92	787.96	320.53	10.00	-12.66
Landing Point @ 51.17° Inc	9199.52	91.17	272.79	8714.96	5746.36	1014.75	656.88	-920.84	N 32 12 1.365	W 103 58 57.697	608459.69	436788.55	1131.12	305.50	10.00	0.00
Plat EHL	13531.79	91.17	272.79	8825.00	5856.40	5407.77	672.39	-5336.94	N 32 12 3.578	W 103 59 49.681	604343.94	437004.04	5407.77	279.28	0.00	0.00



CONTROLLED	
1	Originator
2	DE Sign Off Authority
3	D&M Line Manager
4	Client
Oxy Cedar Canyon 21 Fed. Com 5H Revd 19Sep16	
15-Sep-2016	
1	Originator
2	DE Sign Off Authority
3	D&M Line Manager
4	Client
Oxy Cedar Canyon 21 Fed. Com 5H Revd 19Sep16	
15-Sep-2016	

Survey Oxy Cedar Canyon 21 Fed. Com 5H MWD 0 to 13545 ft MD Survey

Geodetic Report

(Def Survey)



Report Date: September 27, 2016 - 06:25 PM
Client: OXY
Field: NM Eddy County (NAD 27)
Structure / Slot: Oxy Cedar Canyon 21 Fed. Com 5H / Oxy Cedar Canyon 21 Fed. Com 5H
Well: Cedar Canyon 21 Fed. Com 5H
Borehole: Cedar Canyon 21 Fed. Com 5H - Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Survey Oxy Cedar Canyon 21 Fed. Com 5H MWD 0 to 13545 ft MD
Survey Date: September 09, 2016
Tort / AHD / DDI / ERD Ratio: 229.585 * / 5709.009 ft / 6.309 / 0.656
Coordinate Reference System: NAD27 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 11' 54.77552", W 103° 58' 47.00630"
Location Grid N/E Y/X: N 436131.720 ftUS, E 609380.460 ftUS
CRS Grid Convergence Angle: 0.1884 °
Grid Scale Factor: 0.99992279
Version / Patch: 2.9.365.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 279.284 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 2968.600 ft above MSL
Seabed / Ground Elevation: 2939.700 ft above MSL
Magnetic Declination: 7.213 °
Total Gravity Field Strength: 998.4669mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48203.137 nT
Magnetic Dip Angle: 60.048 °
Declination Date: September 09, 2016
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.1884 °
Total Corr Mag North->Grid North: 7.0249 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (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	-2968.60	0.00	0.00	0.00	N/A	436131.72	609380.46	N 32 11 54.78	W 103 58 47.01
RKB	28.20	0.00	0.00	28.20	-2940.40	0.00	0.00	0.00	0.00	436131.72	609380.46	N 32 11 54.78	W 103 58 47.01
	444.00	2.07	107.62	443.91	-2524.69	-7.43	-2.27	7.16	0.50	436129.45	609387.62	N 32 11 54.75	W 103 58 46.92
	535.00	0.18	163.36	534.89	-2433.71	-9.12	-2.91	8.77	2.17	436128.81	609389.22	N 32 11 54.75	W 103 58 46.90
	715.00	0.09	223.26	714.89	-2253.71	-9.16	-3.28	8.75	0.09	436128.44	609389.21	N 32 11 54.74	W 103 58 46.90
	809.00	0.07	79.85	808.89	-2159.71	-9.18	-3.33	8.76	0.16	436128.39	609389.21	N 32 11 54.74	W 103 58 46.90
	987.00	0.04	350.46	986.89	-1981.71	-9.26	-3.24	8.85	0.05	436128.48	609389.31	N 32 11 54.74	W 103 58 46.90
	1078.00	0.09	38.99	1077.89	-1890.71	-9.28	-3.16	8.89	0.08	436128.56	609389.35	N 32 11 54.74	W 103 58 46.90
	1172.00	0.07	216.09	1171.89	-1796.71	-9.30	-3.15	8.90	0.17	436128.57	609389.36	N 32 11 54.74	W 103 58 46.90
	1266.00	0.24	172.20	1265.89	-1702.71	-9.33	-3.39	8.90	0.21	436128.33	609389.36	N 32 11 54.74	W 103 58 46.90
	1360.00	0.48	198.21	1359.89	-1608.71	-9.32	-3.96	8.80	0.30	436127.76	609389.26	N 32 11 54.74	W 103 58 46.90
	1455.00	0.57	165.91	1454.88	-1513.72	-9.45	-4.79	8.79	0.32	436126.93	609389.25	N 32 11 54.73	W 103 58 46.90
	1549.00	0.44	177.31	1548.88	-1419.72	-9.71	-5.61	8.92	0.17	436126.11	609389.38	N 32 11 54.72	W 103 58 46.90
	1643.00	0.26	196.70	1642.88	-1325.72	-9.76	-6.17	8.88	0.23	436125.55	609389.34	N 32 11 54.71	W 103 58 46.90
	1737.00	0.51	199.76	1736.87	-1231.73	-9.85	-6.77	8.68	0.27	436124.95	609389.13	N 32 11 54.71	W 103 58 46.91
	1832.00	0.53	188.43	1831.87	-1136.73	-9.58	-7.60	8.47	0.11	436124.12	609388.93	N 32 11 54.70	W 103 58 46.91
	1926.00	0.88	184.02	1925.86	-1042.74	-9.66	-8.75	8.35	0.38	436122.97	609388.81	N 32 11 54.69	W 103 58 46.91
	2020.00	1.30	191.53	2019.85	-948.75	-9.68	-10.52	8.09	0.47	436121.20	609388.55	N 32 11 54.67	W 103 58 46.91
	2115.00	1.49	192.95	2114.82	-853.78	-9.56	-12.78	7.60	0.20	436118.94	609388.06	N 32 11 54.65	W 103 58 46.92
	2209.00	1.63	189.07	2208.78	-759.82	-9.49	-15.29	7.11	0.19	436116.43	609387.57	N 32 11 54.62	W 103 58 46.92
	2304.00	0.20	112.62	2303.77	-664.83	-9.65	-16.69	7.05	0.68	436115.03	609387.51	N 32 11 54.61	W 103 58 46.92
	2398.00	0.15	107.66	2397.77	-570.83	-9.93	-16.79	7.32	0.66	436114.93	609387.78	N 32 11 54.61	W 103 58 46.92
	2492.00	0.11	188.92	2491.77	-476.83	-10.06	-16.91	7.43	0.18	436114.81	609387.88	N 32 11 54.61	W 103 58 46.92
	2586.00	0.07	68.18	2585.77	-382.83	-10.11	-16.98	7.46	0.17	436114.74	609387.92	N 32 11 54.61	W 103 58 46.92
	2681.00	0.07	275.72	2680.77	-287.83	-10.10	-16.95	7.46	0.14	436114.77	609387.92	N 32 11 54.61	W 103 58 46.92
	2775.00	0.11	162.16	2774.77	-193.83	-10.08	-17.03	7.43	0.16	436114.69	609387.89	N 32 11 54.61	W 103 58 46.92
	2869.00	0.44	88.21	2868.77	-99.83	-10.48	-17.11	7.82	0.45	436114.61	609388.28	N 32 11 54.61	W 103 58 46.92
	2963.00	0.59	89.09	2962.76	-5.84	-11.31	-17.09	8.65	0.16	436114.63	609389.12	N 32 11 54.61	W 103 58 46.91
	3057.00	0.09	220.64	3056.76	88.16	-11.75	-17.14	9.10	0.69	436114.58	609389.56	N 32 11 54.61	W 103 58 46.90
	3151.00	0.09	173.10	3150.76	182.16	-11.73	-17.27	9.06	0.08	436114.45	609389.52	N 32 11 54.60	W 103 58 46.90
	3245.00	0.31	314.17	3244.76	276.16	-11.54	-17.16	8.89	0.41	436114.56	609389.35	N 32 11 54.61	W 103 58 46.90
	3340.00	0.60	336.27	3339.69	371.09	-9.70	-14.25	7.50	3.49	436117.47	609387.96	N 32 11 54.63	W 103 58 46.92
	3434.00	7.32	332.59	3433.25	464.65	-4.52	-6.23	3.56	3.97	436125.49	609384.02	N 32 11 54.71	W 103 58 46.97
	3528.00	10.24	333.29	3526.14	557.54	3.97	6.55	-2.96	3.11	436138.27	609377.50	N 32 11 54.84	W 103 58 47.04
	3622.00	10.44	332.87	3618.61	650.01	13.94	21.59	-10.60	0.23	436153.31	609369.66	N 32 11 54.99	W 103 58 47.13
	3716.00	9.91	333.04	3711.13	742.53	23.78	36.38	-18.15	0.56	436168.10	609362.31	N 32 11 55.14	W 103 58 47.22
	3810.00	8.64	334.62	3803.90	835.30	32.58	49.97	-24.84	1.38	436181.69	609355.62	N 32 11 55.27	W 103 58 47.29
	3904.00	7.49	332.56	3896.97	928.37	40.26	61.79	-30.69	1.26	436193.50	609349.77	N 32 11 55.39	W 103 58 47.36
	3998.00	6.67	332.86	3990.26	1021.68	47.16	72.08	-36.00	0.87	436203.80	609344.46	N 32 11 55.49	W 103 58 47.42
	4091.00	6.37	334.51	4082.65	1114.05	53.31	81.55	-40.69	0.88	436213.26	609339.77	N 32 11 55.58	W 103 58 47.48
	4186.00	6.20	332.16	4177.08	1208.48	58.41	90.84	-45.35	0.32	436222.55	609335.11	N 32 11 55.68	W 103 58 47.53
	4280.00	6.20	331.80	4270.53	1301.93	65.57	99.80	-50.12	0.04	436231.51	609330.34	N 32 11 55.76	W 103 58 47.59
	4374.00	5.69	332.88	4364.03	1395.43	71.42	108.42	-54.64	0.56	436240.13	609325.82	N 32 11 55.85	W 103 58 47.64
	4468.00	4.55	333.61	4457.65	1489.05	76.36	115.91	-58.43	1.21	436247.62	609322.04	N 32 11 55.92	W 103 58 47.66
	4562.00	3.89	334.15	4551.40	1582.80	80.37	122.12	-61.47	0.70	436253.83	609318.99	N 32 11 55.99	W 103 58 47.72
	4656.00	3.30	331.88	4645.21	1676.61	83.85	127.38	-64.14	0.65	436259.09	609316.33	N 32 11 56.04	W 103 58 47.75
	4751.00	3.27	332.64	4740.05	1771.45	87.13	132.19	-66.67	0.06	436263.90	609313.79	N 32 11 56.09	W 103 58 47.81
	4845.00	4.70	336.77	4833.82	1865.22	90.80	138.11	-69.42	1.55	436269.82	609311.04	N 32 11 56.14	W 103 58 47.81
	4939.00	6.28	340.46	4927.39	1958.79	95.34	146.50	-72.66	1.72	436278.21	609307.80	N 32 11 56.23	W 103 58 47.85
	5033.00	7.32	339.15	5020.73	2052.13	100.83	156.94	-76.51	1.12	436288.65	609303.95	N 32 11 56.33	W 103 58 47.89
	5128.00	7.58	335.71	5114.93	2146.33	107.33	168.31	-81.25	0.54	436300.01	609299.22	N 32 11 56.44	W 103 58 47.95
	5222.00	8.15	334.22	5208.04	2239.44	114.59	179.96	-86.69	0.64	436311.66	609293.77	N 32 11 56.56	W 103 58 48.01
	5316.00	8.88	331.50	5301.01	2332.41	122.86	192.33	-93.05	0.89	436324.04	609287.41	N 32 11 56.68	W 103 58 48.08
	5410.00	9.05	318.62	5393.87	2425.27	133.03	204.26	-101.40	2.14	436335.96	609279.06	N 32 11 56.80	W 103 58 48.18
	5504.00	8.26	323.48	5486.80	2518.20	143.59	215.23	-110.31	1.14	436346.94	609270.16	N 32 11 56.91	W 103 58 48.28
	5598.00	8.37	321.45	5579.81	2611.21	153.50	226.01	-118.59	0.33	436357.71	609261.88	N 32 11 57.02	W 103 58 48.38
	5692.00	8.55	321.35	5672.79	2704.19	163.76	236.82	-127.22	0.19	436368.52	609253.25	N 32 11 57.12	W 103 58 48.48
	5786.00	8.68	321.45	5765.73	2797.13	174.20	247.82	-136.00	0.14	436379.52	609244.47	N 32 11 57.23	W 103 58 48.58
	5880.00	8.59	323.78	5858.66	2890.06	184.47	259.03	-144.57	0.38	436390.73	609235.90	N 32 11 57.34	W 103 58 48.68
	5975.00	8.39	327.06	5952.62	2984.02	194.19	270.57	-152.54	0.55	436402.27	609227.94	N 32 11 57.46	W 103 58 48.77
	6069.00	8.75	330.01	6045.57	3076.97	203.32	282.52	-159.84	0.60	436414.22	609220.63	N 32 11 57.58	W 103 58 48.86
	6163.00	9.25	332.21	6138.41	3169.81	212.40	295.39	-166.94	0.65	436427.09	609213.54	N 32 11 57.70	W 103 58 48.94
	6257.00	8.64	331.12	6231.27	3262.67	221.32	308.26	-173.87	0.87	436439.96	609206.61	N 32 11 57.83	W 103 58 49.02
	6351.00	8.79	330.58	6324.18	3355.58	230.17	320.70	-180.81	0.18	436452.39	609199.67	N 32 11 57.95	W 103 58 49.10
	6445.00	7.98	331.38	6417.18	3448.58	238.67	332.68	-187.46	0.87	436464.38	609193.02	N 32 11 58.07	W 103 58 49.18
	6539.00	7.63	331.07	6510.31	3541.71	246.54	343.87	-193.60	0.36	436475.56	609186.87	N 32 11 58.18	W 103 58 49.25
	6633.00	7.32	327.17	6603.51	3634.91	254.42	354.37	-199.87	0.63	436486.06	609180.61	N 32 11 58.29	W 103 58 49.32

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	TVDSS (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ° °)	Longitude (E/W ° ° °)
	7763.00	11.10	330.26	7722.84	4754.24	366.25	465.76	-294.98	1.90	436597.44	609085.50	N 32 11 59.39	W 103 58 50.42
	7857.00	11.89	327.60	7814.95	4846.35	378.39	481.79	-304.66	1.01	436613.47	609075.83	N 32 11 59.55	W 103 58 50.53
	7951.00	11.23	324.40	7907.04	4938.44	391.29	497.41	-315.17	0.98	436629.09	609065.31	N 32 11 59.71	W 103 58 50.66
	8037.00	10.77	330.06	7991.47	5022.87	402.28	511.18	-324.06	1.36	436642.86	609056.43	N 32 11 59.84	W 103 58 50.76
	8205.00	15.37	296.77	8155.29	5186.69	433.50	534.86	-351.82	5.14	436666.53	609028.66	N 32 12 0.08	W 103 58 51.08
	8236.00	13.06	274.37	8185.36	5216.78	440.92	536.98	-358.99	19.09	436668.85	609021.50	N 32 12 0.10	W 103 58 51.16
	8267.00	12.79	249.01	8215.60	5247.00	447.37	536.01	-365.69	18.18	436667.89	609014.80	N 32 12 0.09	W 103 58 51.24
	8299.00	17.23	235.78	8246.51	5277.91	453.88	532.08	-372.92	17.44	436663.75	609007.56	N 32 12 0.05	W 103 58 51.33
	8330.00	19.65	240.37	8275.92	5307.32	461.26	526.92	-381.25	9.10	436658.59	608999.24	N 32 12 0.00	W 103 58 51.42
	8361.00	15.84	247.21	8305.44	5336.84	468.91	522.70	-389.69	13.99	436654.38	608990.80	N 32 11 59.96	W 103 58 51.52
	8392.00	16.96	252.15	8335.18	5366.58	476.52	519.67	-397.89	5.77	436651.35	608982.60	N 32 11 59.93	W 103 58 51.62
	8424.00	19.36	257.39	8365.59	5396.99	485.59	517.08	-407.51	9.06	436648.76	608972.98	N 32 11 59.91	W 103 58 51.73
	8486.00	19.53	271.77	8424.09	5455.49	505.41	515.16	-427.91	7.71	436646.84	608952.58	N 32 11 59.89	W 103 58 51.97
	8580.00	31.34	289.24	8508.94	5540.34	545.26	523.74	-466.89	14.76	436655.42	608913.61	N 32 11 59.97	W 103 58 52.42
	8674.00	41.63	281.25	8584.46	5615.86	600.73	537.93	-520.77	12.04	436669.61	608859.73	N 32 12 0.12	W 103 58 53.05
	8768.00	57.30	282.94	8645.36	5676.76	671.85	552.98	-590.37	16.73	436684.65	608790.13	N 32 12 0.27	W 103 58 53.86
	8861.00	73.42	282.09	8684.01	5715.41	755.97	571.19	-672.83	17.35	436702.87	608707.88	N 32 12 0.45	W 103 58 54.81
	8955.00	84.39	278.95	8702.07	5733.47	848.04	587.96	-763.18	12.12	436719.63	608617.34	N 32 12 0.62	W 103 58 55.87
	9049.00	90.79	284.73	8706.03	5737.43	941.77	607.22	-855.01	9.17	436738.90	608525.61	N 32 12 0.81	W 103 58 56.93
	9147.00	90.38	274.12	8705.02	5736.42	1039.63	623.25	-951.55	10.83	436754.92	608428.99	N 32 12 0.97	W 103 58 58.06
	9240.00	90.41	274.98	8704.38	5735.78	1132.31	630.63	-1044.25	0.93	436762.30	608336.29	N 32 12 1.05	W 103 58 59.13
	9334.00	90.34	274.85	8703.77	5735.17	1226.03	638.68	-1137.90	0.16	436770.35	608245.65	N 32 12 1.13	W 103 59 0.22
	9428.00	91.03	275.83	8702.64	5734.04	1319.80	647.43	-1231.49	1.27	436779.09	608149.07	N 32 12 1.22	W 103 59 1.31
	9521.00	90.45	274.80	8701.44	5732.84	1412.57	656.04	-1324.08	1.27	436787.71	608056.49	N 32 12 1.31	W 103 59 2.39
	9707.00	90.96	275.94	8699.15	5730.55	1598.12	673.45	-1509.24	0.67	436805.11	607871.34	N 32 12 1.49	W 103 59 4.54
	9894.00	90.31	270.99	8697.08	5728.48	1784.08	684.74	-1695.83	2.67	436816.41	607684.76	N 32 12 1.61	W 103 59 6.72
	9987.00	90.93	272.29	8696.07	5727.47	1876.25	687.40	-1788.79	1.55	436819.07	607591.82	N 32 12 1.64	W 103 59 7.80
	10080.00	90.86	271.59	8694.62	5726.02	1968.47	690.55	-1881.72	0.76	436822.22	607498.89	N 32 12 1.87	W 103 59 8.88
	10174.00	90.58	271.12	8693.44	5724.84	2061.57	692.77	-1975.69	0.58	436824.44	607404.93	N 32 12 1.99	W 103 59 9.97
	10269.00	90.69	271.07	8692.39	5723.79	2155.59	694.59	-2070.66	0.13	436826.25	607309.96	N 32 12 1.72	W 103 59 11.08
	10362.00	90.52	272.02	8691.41	5722.81	2247.74	697.10	-2163.62	1.04	436828.76	607217.01	N 32 12 1.74	W 103 59 12.16
	10457.00	90.89	273.05	8690.24	5721.64	2342.07	701.30	-2258.52	1.15	436832.96	607122.12	N 32 12 1.79	W 103 59 13.26
	10550.00	91.27	273.25	8688.48	5719.88	2434.52	706.41	-2351.36	0.46	436838.07	607029.28	N 32 12 1.84	W 103 59 14.34
	10644.00	91.07	273.11	8686.56	5717.96	2527.97	711.62	-2445.20	0.26	436843.28	606935.45	N 32 12 1.90	W 103 59 15.43
	10737.00	91.20	273.35	8684.72	5716.12	2620.43	716.86	-2538.03	0.29	436848.52	606842.63	N 32 12 1.95	W 103 59 16.51
	10832.00	91.03	272.92	8682.87	5714.27	2714.87	722.05	-2632.87	0.49	436853.72	606747.80	N 32 12 2.01	W 103 59 17.62
	10926.00	91.03	273.17	8681.18	5712.58	2808.30	727.05	-2726.73	0.27	436858.71	606653.95	N 32 12 2.06	W 103 59 18.71
	11019.00	90.86	272.86	8679.65	5711.05	2900.73	731.94	-2819.58	0.38	436863.60	606561.10	N 32 12 2.11	W 103 59 19.79
	11113.00	90.79	272.97	8678.30	5709.70	2994.14	736.72	-2913.45	0.14	436868.38	606467.24	N 32 12 2.16	W 103 59 20.88
	11206.00	90.79	272.85	8677.01	5708.41	3086.56	741.44	-3006.32	0.13	436873.10	606374.37	N 32 12 2.21	W 103 59 21.96
	11299.00	91.48	273.49	8675.17	5706.57	3179.01	746.58	-3099.16	1.01	436878.24	606281.54	N 32 12 2.26	W 103 59 23.04
	11393.00	91.48	273.37	8672.74	5704.14	3272.49	752.20	-3192.96	0.13	436883.86	606187.75	N 32 12 2.32	W 103 59 24.14
	11486.00	91.37	273.09	8670.43	5701.83	3364.94	757.44	-3285.79	0.32	436889.10	606094.93	N 32 12 2.38	W 103 59 25.22
	11580.00	91.51	273.42	8668.07	5699.47	3458.39	762.78	-3379.60	0.38	436894.44	606001.12	N 32 12 2.43	W 103 59 26.31
	11673.00	91.58	273.32	8665.56	5696.96	3550.86	768.24	-3472.41	0.13	436899.90	605908.33	N 32 12 2.49	W 103 59 27.39
	11767.00	91.55	272.90	8663.00	5694.40	3644.28	773.34	-3566.24	0.45	436905.00	605814.51	N 32 12 2.54	W 103 59 28.48
	11861.00	91.44	273.20	8660.54	5691.94	3737.69	778.34	-3660.07	0.34	436910.00	605720.68	N 32 12 2.59	W 103 59 29.57
	11954.00	91.48	273.27	8658.17	5689.57	3830.15	783.59	-3752.89	0.09	436915.24	605627.86	N 32 12 2.65	W 103 59 30.65
	12047.00	90.79	272.41	8655.33	5687.73	3922.54	788.19	-3845.76	1.19	436919.85	605535.01	N 32 12 2.70	W 103 59 31.73
	12141.00	91.13	273.13	8654.76	5686.16	4015.92	792.73	-3939.63	0.85	436924.39	605441.14	N 32 12 2.75	W 103 59 32.82
	12234.00	89.83	272.25	8653.98	5685.38	4108.30	797.10	-4032.53	1.69	436928.76	605348.25	N 32 12 2.79	W 103 59 33.90
	12422.00	91.38	273.20	8651.99	5683.39	4295.05	806.04	-4220.30	0.97	436937.69	605160.50	N 32 12 2.89	W 103 59 36.09
	12516.00	91.34	273.13	8649.76	5681.16	4388.49	811.22	-4314.13	0.09	436942.88	605066.68	N 32 12 2.94	W 103 59 37.18
	12610.00	90.93	272.76	8647.90	5679.30	4481.89	816.05	-4407.98	0.59	436947.71	604972.83	N 32 12 2.99	W 103 59 38.27
	12704.00	91.17	273.06	8646.18	5677.58	4575.30	820.82	-4501.85	0.41	436952.48	604878.97	N 32 12 3.04	W 103 59 39.36
	12799.00	89.14	271.28	8645.95	5677.35	4659.63	824.04	-4586.78	3.18	436955.70	604794.05	N 32 12 3.08	W 103 59 40.35
	12892.00	91.27	273.24	8645.58	5676.98	4761.85	828.10	-4669.68	2.81	436959.76	604691.15	N 32 12 3.12	W 103 59 41.55
	12986.00	92.20	273.60	8642.73	5674.13	4855.31	833.71	-4753.47	1.06	436965.36	604597.37	N 32 12 3.18	W 103 59 42.64
	13079.00	91.75	272.93	8639.53	5670.93	4947.74	839.00	-4876.27	0.87	436970.65	604504.58	N 32 12 3.23	W 103 59 43.72
	13173.00	91.96	273.19	8636.48	5667.88	5041.14	844.02	-4970.08	0.36	436975.67	604410.77	N 32 12 3.29	W 103 59 44.81
	13266.00	91.75	273.26	8633.47	5664.87	5133.57	849.25	-5062.89	0.24	436980.90	604317.97	N 32 12 3.34	W 103 59 45.89
	13360.00	91.34	273.62	8630.94	5662.34	5227.05	854.68	-5156.68	0.58	436986.54	604224.19	N 32 12 3.40	W 103 59 46.98
	13453.00	91.82	273.85	8628.37	5659.77	5319.58	860.94	-5249.45	0.57	436992.59	604131.43	N 32 12 3.46	W 103 59 48.06
	13504.00	91.03	273.38	8627.11	5658.51	5370.31	864.15	-5300.33	1.80	436995.81	604080.55	N 32 12 3.50	W 103 59 48.66
	13545.00	91.03	273.38	8626.37	5657.77	5411.09	866.57	-5341.25	0.00	436998.22	604039.63	N 32 12 3.52	W 103 59 49.13

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	28.900	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Cedar Canyon 21 Fed. Com 5H - Original Borehole / Survey Oxy
	1	28.900	444.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Cedar Canyon 21 Fed. Com 5H - Original Borehole / Survey Oxy
	1	444.000	13545.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Cedar Canyon 21 Fed. Com 5H - Original Borehole / Survey Oxy