

OCT 16 2017

Final PVA - Rev3

30-015-44181

H&P 656 (RKB=26.5ft)



Schlumberger

Borehole:

Original Borehole

With:

Oxy Cedar Canyon 21 Federal Com 21H

OXY

Field

NM Eddy County (NAD 83)

Structure:

Dxy Cedar Canyon 21 Federal Com 21H

Dravitz & Magnus: Perspectives
Model: HODM 20
MagnDoc: 7.145

FD: 48067.87ZNT
Onvvy P33

1992/4600mg (19.9045 mg/mL)

Surface Location	
Lat.	N 20 12 33.33
Long.	W 90 58 56.4

SAID'S New Mexico State Penit. Eastern Zone, US Post
 Northing: 646664.20725
 Easting: 645290.86165

Grid Count: 8
Scale Factor: 8

ISBN: 0-896-03800-0
Size: 5 1/2" x 8 1/2"
Pages: 128

Cedar Canyon 21 TWD Ref
 1st Corn 214
 Cedar Canyon 21 Federal Corn :

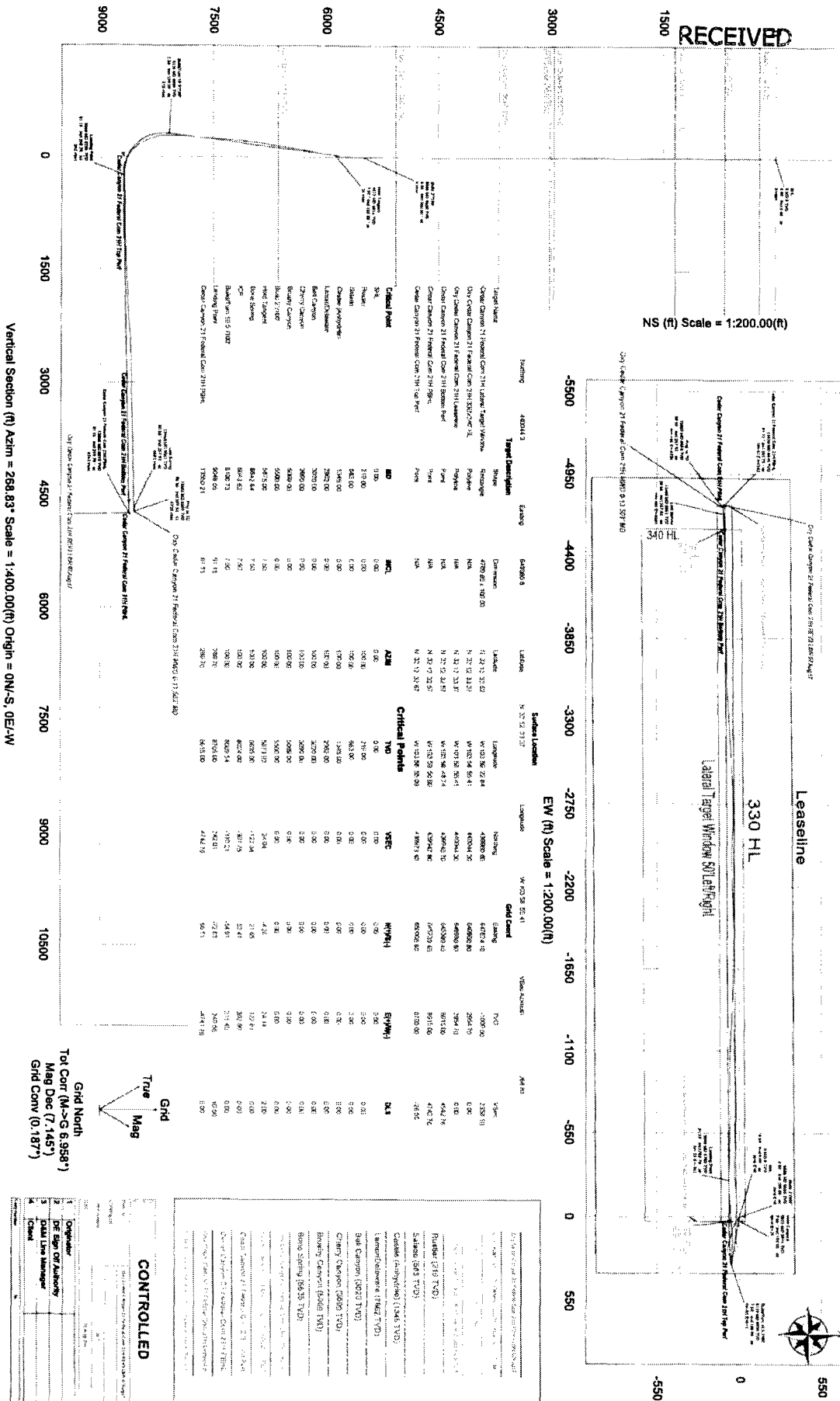
44-38861-57254, 771 at
 44-38861-57254, 771

13

RECEIVED

NS (ft) Scale = 1:200.00(ft)

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



Grid North
Tot Corr (M->G 6.958")
Mag Dec (7.145")
Grid Conv (0.187")

CONTROLLED

1	Originator
2	DE Sign Off Authority
3	DEAL Line Manager
4	Client

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:
21, 24S, 29E, Eddy NM
N 32.20927 W -103.98206

I, Kurt Valentine certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 18, 2017 through August 27, 2017, conduct or supervise the taking of the TelePacer & SlimPulse surveys from a depth of 495.00 feet to a depth of 13460.00 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 Fed Com 21H Well (Original Hole) API No. 30-015-44181 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
Kurt Valentine
FS

Kurt Valentine

Subscribed and Sworn to before me this 8th day of September (month) 2017 (yr)

My Commission expires:

12-20-2020

J Allemand

Notary Public

Adams County Colorado
(County State)

JENNIFER ALLEMAND (signature) Notary Public State of Colorado Notary ID # 20164047962 My Commission Expires 12-20-2020
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Oxy Cedar Canyon 21 Federal Com 21H MWD 0-13,503' MD Survey

Geodetic Report

(Def Survey)



Report Date: August 31, 2017 - 12:44 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Cedar Canyon 21 Federal Com 21H / Oxy Cedar Canyon 21 Federal Com 21H
 Well: Oxy Cedar Canyon 21 Federal Com 21H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Cedar Canyon 21 Federal Com 21H MWD 0-13,503' MD
 Survey Date: August 15, 2017
 Tort / AHD / DDI / ERD Ratio: 192.144 " / 5348.843 R / 6.203 / 0.615
 Coordinate Reference System: NAD83 New Mexico State Plane Eastern Zone US Feet
 Location Lat / Long: N 32° 12' 33.7447", W 103° 58' 55.41004"
 Location Grid N/E Y/X: N 440044 300 NUS E 649980 800 NUS
 CRS Grid Convergence Angle: 0.1872 °
 Grid Scale Factor: 0.99992261
 Version / Patch: 2.10.544.0

Survey / DLS Computations: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 268.834 ° (Grid North)
 Vertical Section Origin: 0.000 R, 0.003 R
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 2954.700 R above MSL
 Seabed / Ground Elevation: 2928.200 R above MSL
 Magnetic Declination: 7.145 °
 Total Gravity Field Strength: 988.4693mgn (9.80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48097.972 nT
 Magnetic Dip Angle: 60.015 °
 Declination Date: August 15, 2017
 Magnetic Declination Model: HDGM 2017
 North Reference: Grid North
 Grid Convergence Used: 0.1872 °
 Total Corr Mag North->Grid North: 6.9582 °
 Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (NUS)	Easting (EUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	440044.30	649980.80	N 32 12 33.37	W 103 58 55.41
	495.00	0.84	44.31	494.98	-2.59	2.80	2.53	0.17	440046.90	649983.33	N 32 12 33.40	W 103 58 55.38
	680.00	0.13	238.48	679.98	-3.37	3.46	3.30	0.52	440047.76	649984.10	N 32 12 33.41	W 103 58 55.37
	863.00	0.13	233.26	862.98	-3.02	3.22	2.96	0.01	440047.52	649983.76	N 32 12 33.41	W 103 58 55.38
	955.00	0.13	202.53	954.98	-2.80	3.07	2.84	0.07	440047.37	649983.64	N 32 12 33.40	W 103 58 55.38
	1045.00	0.13	170.78	1044.98	-2.87	2.87	2.81	0.08	440047.17	649983.61	N 32 12 33.40	W 103 58 55.38
	1138.00	0.08	239.70	1135.98	-2.83	2.74	2.78	0.14	440047.04	649983.57	N 32 12 33.40	W 103 58 55.38
	1228.00	0.16	36.52	1227.98	-2.85	2.81	2.80	0.26	440047.11	649983.60	N 32 12 33.40	W 103 58 55.38
	1414.00	0.17	223.13	1413.98	-2.82	2.81	2.78	0.18	440047.11	649983.56	N 32 12 33.40	W 103 58 55.38
	1508.00	0.18	266.31	1507.97	-2.87	2.70	2.52	0.14	440047.00	649983.32	N 32 12 33.40	W 103 58 55.38
	1803.00	0.32	247.07	1802.87	-2.18	2.59	2.13	0.17	440046.89	649982.93	N 32 12 33.40	W 103 58 55.39
	1898.00	0.38	232.79	1897.87	-1.68	2.30	1.83	0.11	440046.80	649982.43	N 32 12 33.40	W 103 58 55.39
	1988.00	0.40	351.76	1987.87	-1.09	2.57	1.03	0.35	440046.87	649981.83	N 32 12 33.40	W 103 58 55.40
	1982.00	0.79	283.65	1981.87	-0.42	3.05	0.38	0.78	440047.35	649981.16	N 32 12 33.40	W 103 58 55.41
	2077.00	0.34	289.48	2076.96	0.50	3.20	-0.56	0.49	440047.50	649980.24	N 32 12 33.41	W 103 58 55.42
	2172.00	0.29	319.98	2171.96	0.93	3.38	-1.00	0.29	440047.88	649979.80	N 32 12 33.41	W 103 58 55.42
	2265.00	0.30	190.85	2265.98	1.13	3.32	-1.20	0.57	440047.62	649979.80	N 32 12 33.41	W 103 58 55.42
	2361.00	0.18	267.28	2360.96	1.33	3.07	-1.39	0.33	440047.37	649979.41	N 32 12 33.40	W 103 58 55.43
	2456.00	0.30	277.12	2455.96	1.72	3.10	-1.79	0.13	440047.40	649979.01	N 32 12 33.41	W 103 58 55.43
	2550.00	0.08	102.21	2549.96	1.90	3.11	-1.87	0.40	440047.41	649978.83	N 32 12 33.41	W 103 58 55.43
	2740.00	0.18	240.24	2739.96	2.04	2.94	-2.10	0.13	440047.24	649978.70	N 32 12 33.40	W 103 58 55.43
	2834.00	0.25	108.30	2833.96	1.97	2.80	-2.03	0.42	440047.10	649978.77	N 32 12 33.40	W 103 58 55.43
	2929.00	0.22	12.82	2928.96	1.73	2.91	-1.78	0.37	440047.21	649978.77	N 32 12 33.40	W 103 58 55.43
	3024.00	0.17	130.04	3023.96	1.58	3.00	-1.84	0.35	440047.30	649978.16	N 32 12 33.40	W 103 58 55.43
	3119.00	0.18	285.93	3118.96	1.62	2.95	-1.68	0.36	440047.25	649978.12	N 32 12 33.40	W 103 58 55.43
	3213.00	0.23	338.42	3212.95	1.83	3.16	-1.89	0.20	440047.46	649978.91	N 32 12 33.41	W 103 58 55.43
	3308.00	0.18	248.25	3307.95	2.03	3.29	-2.10	0.31	440047.59	649978.70	N 32 12 33.41	W 103 58 55.43
	3498.00	0.18	84.41	3497.95	2.01	3.20	-2.08	0.19	440047.50	649978.72	N 32 12 33.41	W 103 58 55.43
	3593.00	0.18	9.81	3592.95	1.84	3.37	-1.81	0.23	440047.67	649978.69	N 32 12 33.41	W 103 58 55.43
	3687.00	0.18	42.48	3686.95	1.71	3.62	-1.78	0.11	440047.92	649979.02	N 32 12 33.41	W 103 58 55.43
	3782.00	0.18	126.28	3781.85	1.49	3.84	-1.58	0.25	440047.94	649979.24	N 32 12 33.41	W 103 58 55.43
	3877.00	0.18	332.99	3876.85	1.43	3.69	-1.51	0.37	440047.99	649979.29	N 32 12 33.41	W 103 58 55.43
	4066.00	0.18	59.35	4065.95	1.30	4.10	-1.39	0.13	440048.40	649979.41	N 32 12 33.42	W 103 58 55.43
	4161.00	0.23	15.29	4160.95	1.12	4.38	-1.21	0.17	440048.66	649979.58	N 32 12 33.42	W 103 58 55.42
	4350.00	0.17	78.04	4349.95	0.74	4.78	-0.83	0.11	440049.08	649979.97	N 32 12 33.42	W 103 58 55.42
	4540.00	0.17	341.04	4539.95	0.54	5.10	-0.65	0.14	440049.40	649980.15	N 32 12 33.42	W 103 58 55.42
	4729.00	0.23	328.24	4728.95	0.82	5.89	-0.94	0.04	440049.89	649979.86	N 32 12 33.43	W 103 58 55.42
	4918.00	0.11	314.30	4917.95	1.14	8.14	-1.27	0.07	440050.44	649979.53	N 32 12 33.44	W 103 58 55.42
	5013.00	0.22	269.73	5012.95	1.39	8.20	-1.52	0.17	440050.50	649979.28	N 32 12 33.44	W 103 58 55.43
	5107.00	0.18	261.89	5106.95	1.72	6.18	-1.84	0.05	440050.48	649978.98	N 32 12 33.44	W 103 58 55.43
	5202.00	0.08	64.65	5201.95	1.80	6.19	-1.93	0.27	440050.49	649978.87	N 32 12 33.44	W 103 58 55.43
	5297.00	0.11	157.77	5296.95	1.71	8.13	-1.84	0.15	440050.43	649978.96	N 32 12 33.44	W 103 58 55.43
	5391.00	1.36	183.45	5390.94	1.77	4.93	-1.87	1.34	440049.23	649978.93	N 32 12 33.42	W 103 58 55.43
	5486.00	2.45	150.66	5485.89	0.50	2.04	-0.94	1.58	440046.34	649979.86	N 32 12 33.38	W 103 58 55.42
	5580.00	3.70	136.79	5579.75	-2.08	-1.92	2.12	1.54	440042.38	649982.92	N 32 12 33.36	W 103 58 55.38
	5675.00	4.47	133.98	5674.51	-6.74	-8.73	8.88	0.84	440037.57	649987.68	N 32 12 33.31	W 103 58 55.33
	5769.00	5.85	126.06	5768.14	-13.01	-12.00	13.26	1.46	440032.31	649994.06	N 32 12 33.26	W 103 58 55.26
	5864.00	7.03	124.88	5862.56	-21.44	-18.07	21.81	1.48	440026.23	650002.61	N 32 12 33.19	W 103 58 55.16
	5959.00	8.35	118.05	5958.59	-32.87	-25.03	33.39	2.84	440019.27	650014.19	N 32 12 33.13	W 103 58 55.02
	6053.00	11.10	114.87	6049.09	-47.67	-32.42	48.34	1.86	440011.88	650029.14	N 32 12 33.05	W 103 58 54.85
	6148.00	11.74	113.35	6142.21	-64.68	-40.10	65.51	0.74	440004.20	650046.31	N 32 12 32.98	W 103 58 54.65
	6243.00	10.79	111.08	6235.38	-81.71	-47.13	82.68	1.11	439997.18	650063.48	N 32 12 32.91	W 103 58 54.45
	6337.00	10.47	107.56	6327.77	-97.54	-52.87	99.04	0.77	439991.44	650079.83	N 32 12 32.85	W 103 58 54.26
	6432.00	10.52	105.32	6421.18	-114.43	-57.76	115.63	0.43	439986.54	650096.42	N 32 12 32.80	W 103 58 54.07
	6526.00	9.85	103.70	6513.69	-130.43	-61.93	131.72	0.78	439982.37	650112.51	N 32 12 32.76	W 103 58 53.88
	6621.00	9.73	102.45	6607.31	-146.09	-65.59	147.45	0.26	439978.72	650128.24	N 32 12 32.72	W 103 58 53.70
	6716.00	9.78	103.49	6700.94	-161.70	-69.20	163.14	0.19	439975.10	650143.92	N 32 12 32.68	W 103 58 53.51
	6810.00	9.87	102.88	6793.56	-177.24	-72.83	178.76	0.18	439971.47	650159.55	N 32 12 32.65	W 103 58 53.33
	6905.00	8.51	102.83	6887.32	-192.04	-76.21	193.84	1.33	439968.10	650174.42	N 32 12 32.61	W 103 58 53.15
	6999.00	6.63	101.28	6980.49	-210.17	-78.84	205.82	2.12	439965.46	650186.60	N 32 12 32.59	W 103 58 53.02
	7094.00	4.58	84.19	7075.04	-213.31	-79.53	214.97	2.76	439964.77	650195.75	N 32 12 32.58	W 103 58 52.91
	7189.00	3.57	60.33	7168.80	-219.62	-77.70	221.25	2.08	439960.60	650202.03	N 32 12 32.56	W 103 58 52.84
	7284.00	2.88	58.02	7263.59	-225.40	-75.03	228.97	0.81	439958.28	650207.78	N 32 12 32.62	W 103 58 52.77
	7378.00	4.23	75.80	7358.34	-231.99	-72.96	233.53	0.54	439971.35	650214.31	N 32 12 32.64	W 103 58 52.69
	7472.00	4.98	86.71	7452.04	-239.15	-70.50	240.83	1.11	439873.81	650221.41	N 32 12 32.67	W 103 58 52.61
	7567.00	5.21	58.73	7546.67	-246.70	-66.63	248.11	0.78	439877.88	650228.89	N 32 12 32.71	W 103 58 52.52
	7662.00	5.56	59.16	7641.25	-254.43	-62.03	255.75	0.37	439882.28	650236.53	N 32 12 32.75	W 103 58 52.44
	7757.00	6.12	67.44	7735.76	-263.15	-57.73	264.37	1.06	439886.58	650245.15	N 32 12 32.79	W 103 58 52.34
	7851.00	5.84	67.57	7779.52	-267.42	-55.98	268.81	0.84	439888.33	650249.39	N 32 12 32.81	W 103 58 52.29
	7946.00	4.96	66.40	7894.01	-277.47	-51.76	278.58	0.77	439892.54	650258.38	N 32 12 32.85	W 103 58 52.17
	8041.00	1.51	31.58	7989.94	-281.99	-49.02	283.05	3.98	439895.28	650263.82	N 32 12 32.88	W 103 58 52.12
	8120.00	1.28	38.44	8097.81	-283.54	-46.88	284.58	0.28	439897.43	650265.33	N 32 12 32.89	W 103 58 52.10
	8204.00	3.95	233.56	8181.78	-281.79	-47.88	282.82	6.20	439896.43	650263.80	N 32 12 32.89	W 103 58 52.12
	8299.00	18.90	280.05	8274.65	-283.79	-52.51	284.92	16.27	439891.79	650245.69	N 32 12 32.85	W 103 58 52.11
	8394.00	20.70	272.78	8364.07	-231.82	-54.36	232.97					

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	8774.00	63.03	266.04	8647.44	8.10	-59.83	-6.88	15.02	439984.47	649973.92	N 32 12 32.78	W 103 58 55.49
	8869.00	78.12	264.60	8678.33	97.50	-67.19	-96.15	15.11	439977.12	649984.65	N 32 12 32.71	W 103 58 55.53
	8964.00	86.39	268.45	8691.13	191.46	-72.86	-190.02	9.59	439971.45	649790.80	N 32 12 32.66	W 103 58 57.62
	9027.00	90.76	271.22	8692.69	254.41	-73.04	-252.97	8.21	439971.27	649727.85	N 32 12 32.66	W 103 58 58.38
	9075.00	92.41	272.81	8691.37	302.31	-71.35	-300.92	4.77	439972.95	649679.90	N 32 12 32.68	W 103 58 58.82
	9170.00	91.34	271.02	8688.28	387.12	-68.18	-395.81	2.19	439976.13	649585.02	N 32 12 32.71	W 103 59 0.02
	9263.00	91.13	270.69	8686.25	480.04	-66.79	-488.78	0.42	439977.51	649492.06	N 32 12 32.73	W 103 59 1.10
	9361.00	91.31	270.93	8684.17	587.96	-65.41	-586.75	0.31	439978.90	649394.10	N 32 12 32.75	W 103 59 2.24
	9458.00	91.00	270.22	8682.25	682.90	-64.45	-681.72	0.82	439979.85	649299.13	N 32 12 32.78	W 103 59 3.35
	9551.00	90.89	269.72	8680.85	777.87	-64.50	-776.71	0.62	439979.80	649204.15	N 32 12 32.78	W 103 59 4.45
	9646.00	90.89	268.99	8678.71	872.85	-65.57	-871.70	0.77	439978.73	649109.17	N 32 12 32.75	W 103 59 5.56
	9740.00	91.34	271.57	8678.04	968.80	-65.11	-965.68	2.83	439979.19	649015.20	N 32 12 32.78	W 103 59 6.65
	9835.00	91.10	270.97	8678.02	1061.69	-63.01	-1060.83	0.68	439981.30	648920.25	N 32 12 32.79	W 103 59 7.76
	9930.00	91.86	272.24	8673.56	1156.55	-60.35	-1155.56	1.56	439983.96	648825.33	N 32 12 32.81	W 103 59 8.86
	10025.00	92.20	272.31	8670.20	1251.32	-56.58	-1250.42	0.37	439987.72	648730.47	N 32 12 32.85	W 103 59 9.97
	10120.00	92.10	272.98	8666.83	1346.04	-52.20	-1345.26	0.71	439992.11	648635.65	N 32 12 32.90	W 103 59 11.07
	10215.00	92.03	272.78	8663.21	1440.74	-47.43	-1440.07	0.22	439996.87	648540.84	N 32 12 32.95	W 103 59 12.17
	10310.00	92.24	272.61	8659.87	1535.48	-42.97	-1534.00	0.28	440001.34	648446.02	N 32 12 33.00	W 103 59 13.28
	10405.00	93.44	271.42	8654.97	1630.19	-39.83	-1628.72	1.78	440004.67	648351.20	N 32 12 33.03	W 103 59 14.38
	10500.00	93.10	270.29	8649.55	1724.98	-38.21	-1724.56	1.24	440008.09	648256.38	N 32 12 33.05	W 103 59 15.46
	10595.00	93.82	269.75	8643.81	1819.78	-38.18	-1819.38	0.95	440008.12	648161.56	N 32 12 33.08	W 103 59 16.59
	10690.00	93.61	268.96	8637.66	1914.58	-39.25	-1914.18	0.89	440005.08	648066.77	N 32 12 33.05	W 103 59 17.69
	10785.00	93.20	268.37	8632.01	2009.41	-41.46	-2008.98	0.76	440002.85	647971.98	N 32 12 33.03	W 103 59 18.79
	10880.00	93.30	268.22	8626.63	2104.25	-44.28	-2103.78	0.19	440000.02	647877.18	N 32 12 33.00	W 103 59 19.80
	10975.00	93.03	267.92	8621.38	2199.10	-47.47	-2198.59	0.42	439996.83	647782.39	N 32 12 32.98	W 103 59 21.00
	11070.00	94.99	266.57	8614.74	2293.86	-50.38	-2293.31	2.17	439993.93	647687.67	N 32 12 32.95	W 103 59 22.10
	11166.00	93.48	269.64	8607.65	2389.59	-51.87	-2389.03	1.93	439992.43	647591.98	N 32 12 32.94	W 103 59 23.22
	11261.00	91.69	272.16	8603.37	2484.42	-50.38	-2483.91	3.25	439993.92	647497.09	N 32 12 32.96	W 103 59 24.32
	11358.00	91.72	272.45	8600.54	2579.20	-46.56	-2578.79	0.31	439997.74	647402.21	N 32 12 33.00	W 103 59 25.43
	11451.00	91.51	270.82	8597.86	2674.05	-43.85	-2673.71	1.73	440000.45	647307.30	N 32 12 33.03	W 103 59 26.53
	11546.00	91.24	268.83	8595.58	2769.00	-44.14	-2768.68	2.11	440000.16	647212.34	N 32 12 33.03	W 103 59 27.64
	11641.00	91.24	268.70	8593.53	2863.98	-46.19	-2863.63	0.14	439998.12	647117.39	N 32 12 33.01	W 103 59 28.74
	11736.00	91.17	266.77	8591.53	2958.94	-49.94	-2958.53	2.03	439994.36	647022.50	N 32 12 32.97	W 103 59 29.85
	11831.00	91.24	266.85	8589.53	3053.86	-55.23	-3053.37	0.11	439989.08	646927.68	N 32 12 32.93	W 103 59 30.95
	11926.00	91.45	266.87	8587.30	3148.77	-60.43	-3148.20	0.22	439983.88	646832.85	N 32 12 32.88	W 103 59 32.05
	12021.00	91.82	266.50	8584.59	3243.67	-65.92	-3243.00	0.55	439978.39	646738.06	N 32 12 32.83	W 103 59 33.16
	12116.00	91.31	267.24	8582.00	3338.58	-71.11	-3337.82	0.95	439973.20	646643.24	N 32 12 32.78	W 103 59 34.26
	12211.00	91.38	267.06	8579.77	3433.51	-75.83	-3432.68	0.20	439968.48	646548.40	N 32 12 32.73	W 103 59 35.36
	12306.00	91.31	266.96	8577.54	3528.44	-80.78	-3527.52	0.13	439963.53	646453.56	N 32 12 32.69	W 103 59 36.47
	12401.00	91.24	268.88	8575.42	3623.39	-84.24	-3622.43	2.00	439960.06	646358.65	N 32 12 32.66	W 103 59 37.57
	12496.00	91.31	269.00	8573.31	3718.37	-86.02	-3717.39	0.16	439958.29	646263.70	N 32 12 32.64	W 103 59 38.68
	12591.00	91.27	268.71	8571.17	3813.35	-87.92	-3812.35	0.31	439956.38	646168.76	N 32 12 32.63	W 103 59 39.78
	12686.00	91.48	269.25	8568.89	3908.32	-89.61	-3907.30	0.81	439954.70	646073.81	N 32 12 32.61	W 103 59 40.89
	12781.00	91.72	269.56	8566.24	4003.28	-90.59	-4002.28	0.41	439953.71	645978.86	N 32 12 32.61	W 103 59 41.99
	12876.00	91.27	269.03	8563.78	4098.24	-91.76	-4097.22	0.73	439952.55	645883.90	N 32 12 32.60	W 103 59 43.10
	12971.00	90.76	268.34	8562.08	4193.22	-93.94	-4192.18	0.90	439950.37	645788.95	N 32 12 32.58	W 103 59 44.21
	13066.00	91.51	269.44	8560.19	4288.20	-95.78	-4287.14	1.40	439948.53	645694.00	N 32 12 32.56	W 103 59 45.31
	13161.00	92.41	270.08	8556.94	4383.13	-96.18	-4382.08	1.16	439948.13	645599.06	N 32 12 32.58	W 103 59 46.42
	13256.00	90.17	267.89	8554.81	4478.10	-97.86	-4477.03	3.30	439946.45	645504.12	N 32 12 32.55	W 103 59 47.52
	13351.00	91.65	268.44	8553.30	4573.08	-100.90	-4571.97	1.86	439943.40	645409.19	N 32 12 32.52	W 103 59 48.63
	13446.00	91.17	268.24	8550.96	4668.04	-103.66	-4666.90	0.55	439940.65	645314.27	N 32 12 32.50	W 103 59 49.73
Last Survey	13480.00	90.58	267.53	8550.75	4662.04	-104.12	-4660.89	4.76	439940.19	645300.28	N 32 12 32.49	W 103 59 49.88
Proj. to TD	13503.00	90.58	267.93	8550.31	4726.03	-105.68	-4723.88	0.00	439938.83	645257.31	N 32 12 32.48	W 103 59 50.39

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7855 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	26.500	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Oxy Cedar Canyon 21 Federal Com 21H MWD 0-13,503' MD
	1	26.500	495.000	1/98.425	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Cedar Canyon 21 Federal Com 21H
	1	495.000	13503.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Cedar Canyon 21 Federal Com 21H