

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

NM OIL CONSERVATION
ARTESIA DISTRICT

SEP 22 2017

September 13, 2017

OXY USA, Inc.

RECEIVED

Re:

22, 24S, 29E, Eddy New Mexico
-32.20209 -103.96763

CLIENT: OXY USA, Inc.
WELL: Cedar Canyon 23 Federal Com 33H
FIELD: Pierce Crossing (Wolfcamp)

RIG: H&P 617
COUNTY: Eddy
API NO: 30-015-44074
JOB NO: 17MLD1270

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>
Nicholas Araujo FE	Cedar Canyon 23 Federal Com 33H Original Hole	609.00 Ft to 9784.00 Ft	May 29, 2017 to June 5, 2017	TelePacer

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Azamat Akkuzhin
Field Service Manager

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)

Well Reference:

22, 24S, 29E, Eddy New Mexico

-32.20209 -103.96763

Schlumberger

I, Nicholas Araujo certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of May 29, 2017 through June 05, 2017, conduct or supervise the taking of the TelePacer surveys from a depth of 609.00 feet to a depth of 9784.00 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 Federal Com 33H Well (Original Hole) API No. 30-015-44074 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

Nicholas Araujo

FE

Nicholas Araujo

Subscribed and Sworn to before me this 15th day of September (month) 2017 (yr)

My Commission expires:

12-20-2020

J. Allemand

Notary Public

Adams County Colorado
(County State)

(signature) **JENNIFER ALLEMAND**
Notary Public
State of Colorado
Notary ID # 20164047962
My Commission Expires 12-20-2020

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

June 22, 2017

OXY USA INC
5 Greenway Plaza, Suite 110
Houston, TX 77046

Re:

22, 24S, 29E, Eddy NM
N 32.20209 W -103.96763

CLIENT: OXY USA INC
WELL: Cedar Canyon 23 Federal Com 33H
FIELD: Pierce Crossing (Wolfcamp)

RIG: HP 617
COUNTY: Eddy
API NO: 30-015-44074
JOB NO: 17MLD1720

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>
Chris Heimann FE	Cedar Canyon 23 Federal Com 33H Original Hole	9784.00 Ft to 17892.00 Ft	June 6, 2017 to June 14, 2017	SlimPulse

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Les Foster
Field Service Manager

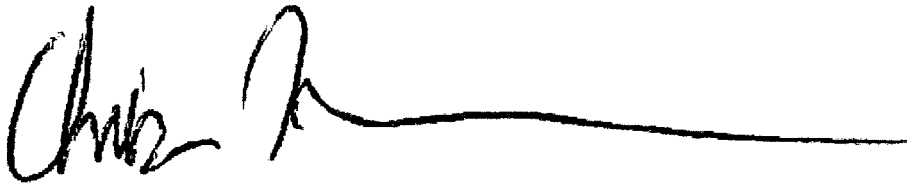
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

Well Reference:
22, 24S, 29E, Eddy NM
N 32.20209 W -103.96763

I, Chris Heimann certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of June 06, 2017 through June 14, 2017, conduct or supervise the taking of the SlimPulse surveys from a depth of 9784.00 feet to a depth of 17892.00 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 Federal Com 33H Well (Original Hole) API No. 30-015-44074 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
Chris Heimann
FE



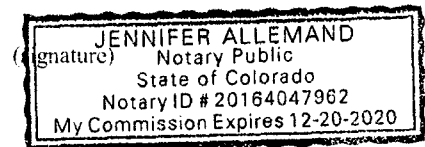
Subscribed and Sworn to before me this 22nd day of June (month) 2017 (yr)

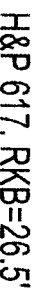
My Commission expires:

12 20 2020

J. Allemand
Notary Public

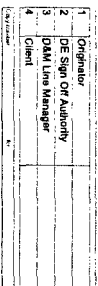
Adams Co Colorado
(County State)





Dry Cedar Canyon 23 Federal Com 33H

Miscellaneous
 Slot: Ory Cedar Canyon 23
 Federal Con 33H
 Ory Cedar Canyon 23 Federal Con 33H REV A 5 04 Jun 17
 Plan: TVD Ref: RKB=26 512374 4ft above MSL



Oxy Cedar Canyon 23 Federal Com 33H Gyro+MWD 0-17,935ft Survey

Geodetic Report

(Def Survey)



Report Date: June 16, 2017 - 02:35 PM
 Client: OXY
 Field: NM Eddy County (NAD 83)
 Structure / Slot: Oxy Cedar Canyon 23 Federal Com 33H / Oxy Cedar Canyon 23 Federal Com 33H
 Well: Oxy Cedar Canyon 23 Federal Com 33H
 Borehole: Original Borehole
 UWI / API#: Unknown / Unknown
 Survey Name: Oxy Cedar Canyon 23 Federal Com 33H Gyro+MWD 0-17.935ft
 Survey Date: May 18, 2017
 Tort / AHD / DDI / ERD Ratio: 267.347' / 9007.026 ft / 6.621' / 0.872
 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
 Location Lat / Long: N 32° 12' 7.53917" W 103° 58' 3.47702"
 Location Grid N/E Y/X: N 437448 500 ftUS, E 654451 370 ftUS
 CRS Grid Convergence Angle: 0.1949°
 Grid Scale Factor: 0.99992374
 Version / Patch: 2 10 302 0

Survey / DLS Computation: Minimum Curvature / Lubinski
 Vertical Section Azimuth: 90.235° (Grid North)
 Vertical Section Origin: 0 000 ft, 0 000 ft
 TVD Reference Datum: RKB=26.5'
 TVD Reference Elevation: 2974.400 ft above MSL
 Seabed / Ground Elevation: 2947.900 ft above MSL
 Magnetic Declination: 7.131°
 Total Gravity Field Strength: 998.4679mgm (9 80665 Based)
 Gravity Model: GARM
 Total Magnetic Field Strength: 48130.026 nT
 Magnetic Dip Angle: 60.041°
 Declination Date: May 18, 2017
 Magnetic Declination Model: HDGM 2016
 North Reference: Grid North
 Grid Convergence Used: 0.1949°
 Total Corr Mag North->Grid North: 6.9361°
 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	437448.50	654451.37	N 32 12 7.54 W 103 58 3.48	
Last Gyro	137.70	0.50	93.17	137.70	0.60	-0.03	0.60	0.36	437448.47	654451.97	N 32 12 7.54 W 103 58 3.47	
	200.70	0.70	45.17	200.70	1.15	0.22	1.15	0.83	437448.72	654452.52	N 32 12 7.54 W 103 58 3.46	
	320.70	1.40	35.17	320.67	2.50	1.94	2.51	0.60	437450.44	654453.88	N 32 12 7.56 W 103 58 3.45	
	421.70	1.30	43.17	421.65	3.99	3.78	4.01	0.21	437452.28	654455.38	N 32 12 7.58 W 103 58 3.43	
	609.00	0.00	73.22	608.93	5.44	5.33	5.46	0.69	437453.83	654456.83	N 32 12 7.59 W 103 58 3.41	
	705.00	0.06	62.72	704.93	5.48	5.35	5.50	0.06	437453.85	654456.87	N 32 12 7.59 W 103 58 3.41	
	774.00	0.06	288.91	773.93	5.48	5.38	5.50	0.16	437453.88	654456.87	N 32 12 7.59 W 103 58 3.41	
	866.00	0.06	234.57	865.93	5.40	5.37	5.42	0.06	437453.87	654456.79	N 32 12 7.59 W 103 58 3.41	
	958.00	0.08	103.68	957.93	5.42	5.33	5.44	0.14	437453.83	654456.81	N 32 12 7.59 W 103 58 3.41	
	1048.00	0.08	284.94	1047.93	5.42	5.33	5.44	0.18	437453.83	654456.81	N 32 12 7.59 W 103 58 3.41	
	1140.00	0.08	111.23	1139.93	5.42	5.32	5.44	0.17	437453.82	654456.81	N 32 12 7.59 W 103 58 3.41	
	1231.00	0.08	255.49	1230.93	5.41	5.28	5.44	0.17	437453.78	654456.81	N 32 12 7.59 W 103 58 3.41	
	1325.00	0.06	35.08	1324.93	5.38	5.31	5.40	0.14	437453.81	654456.77	N 32 12 7.59 W 103 58 3.41	
	1419.00	0.08	165.96	1418.93	5.42	5.28	5.45	0.14	437453.78	654456.82	N 32 12 7.59 W 103 58 3.41	
	1608.00	0.08	26.90	1607.93	5.52	5.27	5.54	0.08	437453.77	654456.91	N 32 12 7.59 W 103 58 3.41	
	1702.00	0.08	89.52	1701.93	5.61	5.33	5.63	0.09	437453.83	654457.00	N 32 12 7.59 W 103 58 3.41	
	1796.00	0.08	318.41	1795.93	5.63	5.38	5.65	0.15	437453.88	654457.02	N 32 12 7.59 W 103 58 3.41	
	1890.00	0.00	18.70	1889.93	5.59	5.43	5.61	0.09	437453.93	654456.98	N 32 12 7.59 W 103 58 3.41	
	1985.00	0.22	235.43	1984.93	5.44	5.33	5.46	0.23	437453.83	654456.83	N 32 12 7.59 W 103 58 3.41	
	2079.00	0.08	317.25	2078.93	5.25	5.27	5.27	0.24	437453.77	654456.84	N 32 12 7.59 W 103 58 3.42	
	2173.00	0.11	5.77	2172.93	5.21	5.41	5.23	0.09	437453.91	654456.60	N 32 12 7.59 W 103 58 3.42	
	2267.00	0.00	41.82	2266.93	5.22	5.50	5.24	0.12	437454.00	654456.61	N 32 12 7.59 W 103 58 3.42	
	2362.00	0.08	121.99	2361.93	5.28	5.47	5.30	0.08	437453.97	654456.67	N 32 12 7.59 W 103 58 3.42	
	2457.00	0.06	27.08	2456.93	5.35	5.48	5.38	0.11	437453.97	654456.75	N 32 12 7.59 W 103 58 3.41	
	2551.00	0.06	321.84	2550.93	5.35	5.56	5.37	0.07	437454.06	654456.74	N 32 12 7.59 W 103 58 3.41	
	2646.00	0.00	69.04	2645.93	5.31	5.60	5.34	0.06	437454.10	654456.71	N 32 12 7.59 W 103 58 3.41	
	2740.00	0.13	305.89	2739.93	5.23	5.66	5.25	0.14	437454.16	654456.62	N 32 12 7.59 W 103 58 3.42	
	2834.00	0.06	6.12	2833.93	5.15	5.77	5.17	0.12	437454.27	654456.54	N 32 12 7.60 W 103 58 3.42	
	3023.00	0.08	78.85	3022.93	5.29	5.89	5.31	0.04	437454.39	654456.68	N 32 12 7.60 W 103 58 3.41	
	3212.00	0.08	149.79	3211.93	5.48	5.81	5.51	0.05	437454.31	654456.88	N 32 12 7.60 W 103 58 3.41	
	3307.00	0.13	233.78	3306.93	5.43	5.69	5.45	0.15	437454.18	654456.82	N 32 12 7.60 W 103 58 3.41	
	3495.00	0.13	135.43	3494.93	5.41	5.41	5.43	0.10	437453.91	654456.80	N 32 12 7.59 W 103 58 3.41	
	3590.00	0.08	174.03	3589.93	5.49	5.26	5.51	0.09	437453.76	654456.88	N 32 12 7.59 W 103 58 3.41	
	3778.00	0.13	79.55	3777.93	5.71	5.17	5.74	0.08	437453.67	654457.11	N 32 12 7.59 W 103 58 3.41	
	3873.00	0.13	232.09	3872.93	5.74	5.13	5.76	0.27	437453.63	654457.13	N 32 12 7.59 W 103 58 3.41	
	3967.00	0.13	22.92	3966.93	5.69	5.16	5.71	0.27	437453.66	654457.08	N 32 12 7.59 W 103 58 3.41	
	4061.00	0.08	110.29	4060.93	5.80	5.23	5.82	0.16	437453.73	654457.19	N 32 12 7.59 W 103 58 3.41	
	4155.00	0.13	193.04	4154.93	5.83	5.11	5.85	0.15	437453.61	654457.22	N 32 12 7.59 W 103 58 3.41	
	4249.00	0.13	343.95	4248.93	5.78	5.11	5.80	0.27	437453.61	654457.17	N 32 12 7.59 W 103 58 3.41	
	4343.00	1.08	193.81	4342.92	5.54	4.35	5.56	1.27	437452.85	654456.93	N 32 12 7.58 W 103 58 3.41	
4438.00	3.46	134.03	4437.85	7.40	1.49	7.41	3.22	437449.99	654458.78	N 32 12 7.55 W 103 58 3.39		
4532.00	6.22	122.42	4531.51	13.76	-3.22	13.75	3.10	437445.28	654465.12	N 32 12 7.51 W 103 58 3.32		
4626.00	9.24	117.38	4624.64	24.79	-9.42	24.75	3.29	437439.08	654476.12	N 32 12 7.45 W 103 58 3.19		
4721.00	11.17	113.01	4718.14	40.06	-16.52	39.99	2.19	437431.98	654491.36	N 32 12 7.37 W 103 58 3.01		
4815.00	13.10	111.54	4810.03	58.38	-24.00	58.29	2.08	437424.51	654509.65	N 32 12 7.30 W 103 58 2.80		
4909.00	14.79	108.96	4901.26	79.67	-31.81	79.54	1.92	437416.70	654530.91	N 32 12 7.22 W 103 58 2.55		
5004.00	17.22	105.31	4992.57	104.74	-39.46	104.58	2.77	437409.04	654555.94	N 32 12 7.15 W 103 58 2.26		
5098.00	20.20	101.45	5081.60	134.10	-46.36	133.91	3.43	437402.15	654585.27	N 32 12 7.08 W 103 58 1.92		
5192.00	21.11	93.74	5169.57	166.92	-50.68	166.72	3.05	437397.82	654618.07	N 32 12 7.03 W 103 58 1.54		
5287.00	20.00	78.63	5258.59	199.94	-48.59	199.74	5.69	437399.91	654651.09	N 32 12 7.05 W 103 58 1.15		
5381.00	18.03	71.24	5347.47	229.44	-40.75	229.28	3.31	437407.76	654680.63	N 32 12 7.13 W 103 58 0.81		
5475.00	15.49	71.47	5437.47	255.09	-32.08	254.96	2.70	437416.43	654706.31	N 32 12 7.21 W 103 58 0.51		
5569.00	12.47	74.73	5528.67	276.76	-25.41	276.66	3.32	437423.09	654728.01	N 32 12 7.28 W 103 58 0.26		
5664.00	11.70	82.06	5621.57	296.18	-21.38	296.09	1.81	437427.12	654747.44	N 32 12 7.32 W 103 58 0.03		
5758.00	10.20	90.35	5713.86	313.94	-20.11	313.86	2.31	437428.39	654765.20	N 32 12 7.33 W 103 57 59.83		
5853.00	8.66	97.43	5807.58	329.45	-21.09	329.36	2.03	437427.41	654780.71	N 32 12 7.32 W 103 57 59.64		
5947.00	8.68	108.19	5900.51	343.22	-24.22	343.12	1.72	437424.28	654794.46	N 32 12 7.29 W 103 57 59.48		
6136.00	10.19	111.69	6086.95	372.34	-34.85	372.20	0.85	437413.65	654823.55	N 32 12 7.18 W 103 57 59.15		
6230.00	11.51	110.48	6179.27	388.88	-41.21	388.72	1.42	437407.30	654840.06	N 32 12 7.12 W 103 57 58.95		
6324.00	11.63	106.47	6271.36	406.78	-47.17	406.69	0.86	437401.33	654857.93	N 32 12 7.06 W 103 57 58.75		
6419.00	12.17	101.80	6364.32	425.78	-51.94	425.67	1.16	437396.57	654876.91	N 32 12 7.01 W 103 57 58.53		
6513.00	12.35	97.72	6456.18	445.46	-55.31	445.24	0.94	437393.19	654896.57	N 32 12 6.98 W 103 57 58.30		
6607.00	12.01	92.12	6548.07	465.20	-57.03	464.97	1.31	437391.48	654916.30	N 32 12 6.96 W 103 57 58.07		
6702.00	11.44	87.46	6641.09	484.49	-56.97	484.26	1.16	437391.53	654935.59	N 32 12 6.96 W 103 57 57.84		
6796.00	10.22	89.90	6733.41	502.14	-56.55	501.91	1.39	437391.96	654953.24	N 32 12 6.96 W 103 57 57.64		
6891.00	8.18	89.98	6827.18	517.33	-56.53	517.10	2.15	437391.98	654968.43	N 32 12 6.96 W 103 57 57.46		
6985.00	6.38	89.51	6920.42	529.24	-56.48	529.01	1.92	437392.02	654980.34	N 32 12 6.96 W 103 57 57.32		
7079.00	4.94	83.64	7013.96	538.48	-55.99	538.26	1.65	437392.52	654989.59	N 32 12 6.97 W 103 57 57.22		
7173.00	4.76	68.58	7107.63	546.13	-54.12	545.91	1.36	437394.39	654997.24	N 32 12 6.99 W 103 57 57.13		
7268.00	5.69	62.47	7202.23	553.96	-50.50	553.76	1.14	437398.00	655005.08	N 32 12 7.02 W 103 57 57.03		
7362.00	6.93	85.69	7295.68	563.74	-47.92	563.55	2.99	437400.58	655014.87	N 32 12 7.05 W 103 57 56.92		
7456.00	6.97	120.32	7389.03	574.33	-50.37	574.13	4.39	437398.13	655025.45	N 32 12 7.02 W 103 57 56.80		
7551.00	4.87	153.46	7483.54	581.14	-56.89	580.91	4.13	437391.61	655032.23	N 32 12 6.96 W 103 57 56.72		
7647.00	6.12	165.34	7579.10	584.29	-65.49	584.02	1.75	437383.01	655035.35	N 32 12 6.87 W 103 57 56.68		
7741.00	4.50	148.94	7672.70	587.49	-73.50	587.20	2.35	437375.01	655038.52	N 32 12 6.79 W 103 57 56.65		
7836.00	5.01	124.20	7767.38	592.87	-79.02	592.55	2.21	437369.48	655043.87	N 32 12 6.74 W 103 57 56.58		

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 ° ' ")
	8024.00	8.63	93.45	7954.06	613.97	-84.25	613.63	2.49	437364.25	655064.95	N 32 12 6.68	W 103 57 56.34
	8119.00	9.69	80.25	8047.86	628.97	-83.33	628.63	2.47	437365.18	655079.95	N 32 12 6.69	W 103 57 56.16
	8213.00	10.65	69.39	8140.39	644.88	-78.93	644.56	2.28	437369.58	655095.88	N 32 12 6.74	W 103 57 55.98
	8308.00	10.72	77.40	8233.75	661.70	-73.91	661.40	1.56	437374.59	655112.72	N 32 12 6.79	W 103 57 55.78
	8402.00	10.57	87.80	8326.14	678.83	-71.67	678.55	2.05	437376.83	655129.86	N 32 12 6.81	W 103 57 55.58
	8496.00	10.40	93.33	8418.57	695.92	-71.84	695.63	1.09	437376.67	655146.95	N 32 12 6.80	W 103 57 55.38
	8590.00	10.66	98.38	8510.99	713.00	-73.60	712.70	1.02	437374.91	655164.02	N 32 12 6.79	W 103 57 55.19
	8685.00	12.96	101.99	8603.98	732.13	-77.09	731.82	2.54	437371.42	655183.13	N 32 12 6.75	W 103 57 54.96
	8779.00	14.24	98.26	8695.34	753.90	-80.94	753.57	1.65	437367.56	655204.88	N 32 12 6.71	W 103 57 54.71
	8874.00	14.99	99.07	8787.27	777.61	-84.56	777.27	0.82	437363.95	655228.58	N 32 12 6.68	W 103 57 54.43
	8968.00	16.65	96.56	8877.70	803.01	-88.01	802.65	1.91	437360.49	655253.96	N 32 12 6.64	W 103 57 54.14
	9063.00	16.75	93.59	8968.70	830.20	-90.42	829.84	0.90	437358.08	655281.14	N 32 12 6.62	W 103 57 53.82
	9157.00	15.50	92.19	9059.00	856.28	-91.75	855.91	1.39	437356.75	655307.21	N 32 12 6.60	W 103 57 53.52
	9252.00	14.54	92.43	9150.75	880.88	-92.74	880.51	1.01	437355.76	655331.81	N 32 12 6.59	W 103 57 53.23
	9346.00	15.60	91.60	9241.52	905.31	-93.60	904.93	1.15	437354.91	655356.23	N 32 12 6.58	W 103 57 52.95
	9440.00	15.96	90.45	9331.98	930.87	-94.05	930.49	0.51	437354.46	655381.79	N 32 12 6.58	W 103 57 52.65
	9535.00	15.30	91.04	9423.46	956.46	-94.38	956.08	0.71	437354.13	655407.38	N 32 12 6.57	W 103 57 52.35
	9633.00	15.72	91.54	9537.16	988.01	-95.09	987.63	0.37	437353.41	655438.92	N 32 12 6.56	W 103 57 51.99
	9734.00	15.88	96.15	9663.22	1023.58	-97.49	1023.19	0.97	437351.02	655474.48	N 32 12 6.54	W 103 57 51.57
	9879.00	29.83	94.33	9750.55	1060.26	-100.68	1059.85	14.70	437347.83	655511.14	N 32 12 6.51	W 103 57 51.15
	9974.00	37.24	90.68	9829.69	1112.65	-102.81	1112.23	8.08	437345.70	655563.52	N 32 12 6.48	W 103 57 50.54
	10068.00	38.12	90.97	9904.08	1170.10	-103.64	1169.69	0.95	437344.87	655620.96	N 32 12 6.47	W 103 57 49.87
	10163.00	42.46	88.21	9976.53	1231.50	-103.13	1231.09	4.94	437345.37	655682.36	N 32 12 6.48	W 103 57 49.15
	10258.00	54.57	84.31	10039.36	1302.32	-98.28	1301.93	13.11	437350.23	655753.20	N 32 12 6.52	W 103 57 48.33
	10352.00	65.60	87.45	10086.18	1383.43	-92.56	1383.07	12.08	437355.95	655834.33	N 32 12 6.58	W 103 57 47.38
	10446.00	75.00	88.60	10117.83	1471.77	-89.54	1471.41	10.07	437358.97	655922.67	N 32 12 6.60	W 103 57 46.36
	10541.00	85.17	88.48	10134.16	1565.18	-87.15	1564.84	10.71	437361.35	656016.09	N 32 12 6.62	W 103 57 45.27
	10573.00	87.00	88.66	10136.35	1597.09	-86.36	1596.75	5.75	437362.15	656048.00	N 32 12 6.64	W 103 57 44.17
	10636.00	88.28	88.45	10138.94	1660.01	-84.77	1659.68	2.06	437363.74	656110.92	N 32 12 6.66	W 103 57 43.07
	10730.00	87.42	88.68	10142.47	1753.90	-82.42	1753.58	0.95	437366.09	656204.81	N 32 12 6.66	W 103 57 41.97
	10825.00	87.52	88.97	10146.66	1848.78	-80.47	1848.47	0.32	437368.04	656299.69	N 32 12 6.69	W 103 57 41.07
	10919.00	86.97	89.02	10151.18	1942.65	-78.82	1942.35	0.59	437369.68	656393.56	N 32 12 6.71	W 103 57 40.88
	11014.00	87.49	88.62	10155.77	2037.51	-76.87	2037.21	0.69	437371.64	656488.42	N 32 12 6.71	W 103 57 39.77
	11109.00	87.32	88.40	10160.07	2132.37	-74.40	2132.08	0.29	437374.10	656583.29	N 32 12 6.71	W 103 57 38.67
	11204.00	87.63	88.80	10164.26	2227.24	-72.08	2226.96	0.53	437376.42	656678.16	N 32 12 6.75	W 103 57 37.56
	11298.00	87.07	89.06	10167.79	2321.15	-70.33	2320.88	0.54	437378.18	656772.07	N 32 12 6.76	W 103 57 36.47
	11488.00	87.65	87.95	10174.86	2510.93	-65.38	2510.68	0.82	437383.13	656961.85	N 32 12 6.81	W 103 57 34.26
	11582.00	91.17	88.27	10175.82	2604.84	-62.38	2604.61	3.75	437386.23	657055.78	N 32 12 6.83	W 103 57 33.17
	11677.00	89.86	88.71	10174.97	2699.79	-58.77	2699.57	1.45	437388.73	657150.73	N 32 12 6.86	W 103 57 32.06
	11772.00	89.52	89.76	10175.48	2794.78	-58.50	2794.56	1.16	437390.00	657245.71	N 32 12 6.87	W 103 57 30.96
	11866.00	90.38	90.68	10175.57	2888.77	-58.87	2888.56	1.34	437389.64	657339.70	N 32 12 6.86	W 103 57 29.86
	11961.00	86.83	90.52	10177.88	2983.73	-59.86	2983.51	3.74	437388.64	657434.64	N 32 12 6.85	W 103 57 28.76
	12055.00	86.76	90.05	10183.13	3077.58	-60.33	3077.36	0.50	437388.18	657528.49	N 32 12 6.84	W 103 57 27.67
	12150.00	87.28	90.07	10188.07	3172.45	-60.43	3172.23	0.55	437388.08	657623.35	N 32 12 6.83	W 103 57 26.56
	12245.00	88.93	90.43	10191.21	3267.40	-60.84	3267.17	1.78	437387.66	657718.29	N 32 12 6.83	W 103 57 25.46
	12339.00	89.04	90.36	10192.88	3361.38	-61.49	3361.16	0.14	437387.02	657812.26	N 32 12 6.82	W 103 57 24.36
	12434.00	88.76	90.15	10194.70	3456.36	-61.91	3456.14	0.37	437386.59	657907.24	N 32 12 6.81	W 103 57 23.26
	12529.00	89.41	90.28	10196.22	3551.35	-62.27	3551.13	0.70	437386.24	658002.22	N 32 12 6.80	W 103 57 22.15
	12623.00	88.38	90.23	10198.03	3645.33	-62.69	3645.11	1.10	437385.82	658096.19	N 32 12 6.79	W 103 57 21.06
	12718.00	88.97	91.04	10200.23	3740.30	-63.74	3740.07	1.05	437384.77	658191.15	N 32 12 6.78	W 103 57 19.95
	12813.00	88.18	90.47	10202.59	3835.27	-64.99	3835.03	1.03	437383.52	658286.10	N 32 12 6.76	W 103 57 18.85
	12907.00	89.45	91.36	10204.54	3929.24	-66.49	3929.00	1.65	437382.01	658380.06	N 32 12 6.75	W 103 57 17.75
	13002.00	88.45	92.74	10206.28	4024.17	-69.89	4023.92	1.79	437378.62	658474.97	N 32 12 6.71	W 103 57 16.65
	13097.00	90.93	93.16	10206.79	4119.06	-74.78	4118.78	2.65	437373.73	658569.83	N 32 12 6.66	W 103 57 15.55
	13191.00	86.04	90.36	10209.28	4212.95	-77.66	4212.67	5.99	437370.84	658663.71	N 32 12 6.63	W 103 57 14.45
	13280.00	87.66	88.83	10219.66	4401.64	-76.33	4401.37	1.18	437372.18	658852.39	N 32 12 6.63	W 103 57 12.26
	13375.00	87.94	88.01	10223.31	4496.52	-73.71	4496.26	0.91	437374.79	658947.28	N 32 12 6.66	W 103 57 11.15
	13664.00	89.69	87.93	10227.22	4685.33	-67.02	4685.09	0.93	437381.49	659136.10	N 32 12 6.72	W 103 57 8.96
	13759.00	88.73	88.53	10228.53	4780.26	-64.08	4780.04	1.19	437384.42	659231.03	N 32 12 6.74	W 103 57 7.85
	13948.00	89.00	89.39	10232.27	4969.17	-60.65	4968.97	0.48	437387.85	659419.95	N 32 12 6.77	W 103 57 5.65
	14043.00	88.66	88.11	10234.21	5064.12	-58.58	5063.92	1.39	437389.92	659514.90	N 32 12 6.79	W 103 57 4.55
	14232.00	88.76	88.30	10238.47	5252.95	-52.66	5252.78	0.11	437395.84	659703.74	N 32 12 6.84	W 103 57 2.35
	14327.00	88.28	88.31	10240.92	5347.87	-49.85	5347.71	0.51	437398.65	659798.66	N 32 12 6.86	W 103 57 1.24
	14421.00	88.97	88.95	10243.17	5441.80	-47.61	5441.65	1.00	437400.90	659892.60	N 32 12 6.88	W 103 57 0.15
	14516.00	88.08	88.40	10245.62	5536.74	-45.41	5536.60	1.10	437403.09	659987.53	N 32 12 6.90	W 103 56 59.05
	14610.00	88.01	90.72	10248.83	5630.67	-44.69	5630.53	2.47	437403.81	660081.46	N 32 12 6.90	W 103 56 57.95
	14705.00	86.49	90.92	10253.39	5725.55	-46.05	5725.41	1.61	437402.46	660176.33	N 32 12 6.89	W 103 56 56.85
	14799.00	86.91	89.88	10258.80	5819.39	-46.70	5819.25	1.19	437401.80	660270.16	N 32 12 6.88	W 103 56 55.76
	14894.00	87.42	90.15	10263.49	5914.28	-46.73	5914.13	0.61	437401.78	660365.04	N 32 12 6.87	W 103 56 54.65
	14989.00	87.32	90.30	10267.85	6009.18	-47.10	6009.03	0.19	437401.40	660459.93	N 32 12 6.87	W 103 56 53.55
	15083.00	87.87	90.09	10271.72	6103.10	-47.42	6102.95	0.73	437401.08	660553.84	N 32 12 6.86	W 103 56 52.45
	15178.00	88.49	90.37	10274.65	6198.05	-47.80	6197.91	0.82	437400.70	660648.79	N 32 12 6.85	W 103 56 51.35
	15273.00	88.76	89.78	10279.19	6286.99	-48.05	6286.85	0.34	437400.45	660737.72	N 32 12 6.84	W 103 56 49.15
	15368.00	89.07	90.98	10282.77	6375.95	-49.30	6375.81	0.66	437399.20	660826.66	N 32 12 6.82	W 103 56 46.95
	15463.00	88.73	90.64	10286.39	6464.91	-51.97	6464.75	0.25	437396.53	660915.59	N 32 12 6.79	W 103 56 44.75
	15558.00	88.66	89.70	10288.56	6553.88	-52.26	6553.73	0.99	437396.25	661004.56	N 32 12 6.78	W 103 56 43.65
	15653.00	89.14	91.22	10292.19</								

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	26.500	26.500	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only			Original Borehole / Oxy Cedar Canyon 23 Federal Com 33H Gyro+MWD 0-17,935ft	
		1	26.500	421.700	Act Stns	30.000	30.000	NAL_NSG+MSHOT			Original Borehole / Oxy Cedar Canyon 23 Federal Com 33H	
		1	421.700	17935.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG			Original Borehole / Oxy Cedar Canyon 23 Federal Com 33H	