

Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519



5-31-16

December 31, 2015

OXY USA INCORPORATED
5 GREENWAY PLAZA STE 110
HOUSTON, TX 77046-0521

Re:

CLIENT: OXY USA INCORPORATED
WELL: Cedar Canyon 23 Federal 4H
FIELD: Pierce Crossing; Bonespring East
RIG: H&P 615
COUNTY: Eddy
API NO: 30-015-43281
JOB NO: 16MLD0311

Sec 22 T024S R029E Mer NMP SENE 1375FNL 195FEL
N 32.20639 W 103.96389

Enclosed, please find the original copy of the survey performed on the referenced well by PathFinder, a division of Schlumberger Technology Corporation.

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>
Kurt Valentine MWD	Cedar Canyon 23 Federal 4H Original Hole	495.00 Ft to 16494.00 Ft	November 30, 2015 to December 31, 2015	SlimPulse & HDS1-R

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

Mike Stephens
Field Service Manager

Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519



Well Reference:
Sec 22 T024S R029E Mer NMP SENE 1375FNL 195FEL
N 32.20639 W 103.96389

I, Kurt Valentine certify that; I am employed by Schlumberger Drilling and Measurements; that I did on the day(s) of November 30, 2015 through December 31, 2015, conduct or supervise the taking of the SlimPulse & HDS1-R surveys from a depth of 495.00 feet to a depth of 16494.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Schlumberger Drilling and Measurements; that I am authorized and qualified to make this report; that this survey W71 request of OXY USA INCORPORATED for the Cedar Canyon 23 Federal 4H Well (Original Hole) API No. 30-015-43281 and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Schlumberger Drilling and Measurements.

On behalf of Kurt Valentine,
Signed by Murad Aliyev

By
Kurt Valentine
MWD

Subscribed and Sworn to before me this 11th day of January (month) 2016 (yr)

My Commission expires:

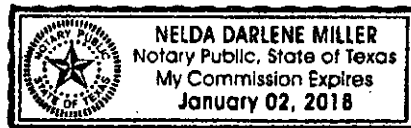
January 2, 2018

Nelda Darlene Miller

Notary Public

(signature)

Harris County, Texas
(County State)



SCHUMBERGER
Survey Report

41-Dec-2015

Client..... OXY USA WIP
Field..... Pierce Crossing Bone Spr

Well..... Cedar Canyon 21 Fred 4H
API number..... 10 015 41281
Engineer..... K Valentine

Spud date..... 30 Nov 15
Last survey date..... 31-Dec-15
Total accepted surveys .. 163
MD of first survey..... 495 00 ft
MD of last survey..... 16494 00 ft

County..... Eddy
State..... New Mexico
Rig..... H&P b15

Latitude..... 32° 12' 24.018" N
Longitude..... 103° 57' 50.021" W

----- Survey calculation methods -----
Method for positions .. Minimum curvature
Method for DLS .. Lubinski

----- Depth reference -----
Permanent datum..... MSL
Depth reference..... Driller's Depth
GI above permanent..... 2932.40
KB above permanent..... 2968.90
DI above permanent..... 2968.90

----- Vertical section origin -----
Latitude (+N/S)..... 0 00 ft
Departure (+E/W)..... 0 00 ft

----- Grid Coordinates -----
NAD27 Texas State Plane, Central Zone, US Feet
X..... 614267.05 ft
Y..... 439002.03 ft

Azimuth from Vsect Origin to target: 90.26 degrees

----- MWD Survey Reference Criteria -----

-----Run1----- Calculation Date: 22-Dec-2015
Location G..... 998.94325 mgn Tolerance G..... 2.50 mgn
Location B..... 48333.2 nT Tolerance B..... 300.00 nT
Magnetic Dip: 60.0679 degrees Tolerance Dip: 0.45 degrees

-----Run2----- Calculation Date: 24-Dec-2015
Location G..... 998.94325 mgn Tolerance G..... 2.50 mgn
Location B..... 48332.61 nT Tolerance B..... 300.00 nT
Magnetic Dip: 60.0679 degrees Tolerance Dip: 0.45 degrees

-----Run3----- Calculation Date: 25-Dec-2015
Location G..... 998.94325 mgn Tolerance G..... 2.50 mgn
Location B..... 48332.32 nT Tolerance B..... 300.00 nT
Magnetic Dip: 60.0678 degrees Tolerance Dip: 0.45 degrees

-----Run4----- Calculation Date: 27-Dec-2015
Location G..... 998.94325 mgn Tolerance G..... 2.50 mgn
Location B..... 48331.73 nT Tolerance B..... 300.00 nT
Magnetic Dip: 60.0678 degrees Tolerance Dip: 0.45 degrees

-----Run5----- Calculation Date: 28-Dec-2015
Location G..... 998.94325 mgn Tolerance G..... 2.50 mgn
Location B..... 48331.44 nT Tolerance B..... 300.00 nT
Magnetic Dip: 60.0677 degrees Tolerance Dip: 0.45 degrees

-----Run6----- Calculation Date: 30-Dec-2015
Location G..... 998.94325 mgn Tolerance G..... 2.50 mgn
Location B..... 48330.85 nT Tolerance B..... 300.00 nT
Magnetic Dip: 60.0677 degrees Tolerance Dip: 0.45 degrees

HDGM Model: 2015

-----Run1-----
Magnetic dec (+E/W)..... 7.2584 degrees
Grid Conv (+E/W)..... 0.1984 degrees
Total Azim Corr (+E/W)..... 7.06 degrees

-----Run2-----
Magnetic dec (+E/W)..... 7.2578 degrees
Grid Conv (+E/W)..... 0.1978 degrees
Total Azim Corr (+E/W)..... 7.06 degrees

-----Run3-----
Magnetic dec (+E/W)..... 7.2575 degrees
Grid Conv (+E/W)..... 0.1975 degrees
Total Azim Corr (+E/W)..... 7.06 degrees

-----Run4-----

Magnetic dec (+E/W) : 7.257 degrees
Grid Conv (+E/W) : 0.197 degrees
Total Azim Corr (+E/W) : 7.06 degrees

-----Run5-----

Magnetic dec (+E/W) : 7.2567 degrees
Grid Conv (+E/W) : 0.1967 degrees
Total Azim Corr (+E/W) : 7.06 degrees

-----Run6-----

Magnetic dec (+E/W) : 7.2561 degrees
Grid Conv (+E/W) : 0.1961 degrees
Total Azim Corr (+E/W) : 7.06 degrees

Survey Correction Index Description

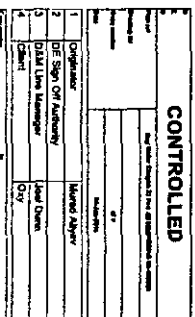
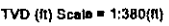
0 = Uncorrected 1 = DMAG Corrected
2 = INC only 3 = Sag + DMAG Corrected 7 = Proj to bit

Seq	MD (ft)	Incl (deg)	Azim (deg)	Course (ft)	Survey List FVD (ft)	V Sec (ft)	N/S (ft)	E/W (ft)	Closure (ft)	at Azi (deg)	DIS (deg/100ft)	Tool	Correction
1	0.00	0.00	0.00	-999.75	0.00	0.00	0.00	0.00	0	90.00	0.00	TIP	0
2	495.00	0.09	243.34	495.00	495.00	-0.35	-0.17	-0.35	0.39	243.34	0.02	HDS-1R	2
3	585.00	0.09	112.60	90.00	585.00	-0.34	-0.23	-0.35	0.42	235.96	0.18	HDS-1R	0
4	677.00	0.09	58.50	97.00	677.00	-0.22	-0.22	-0.22	0.31	224.18	0.09	HDS-1R	0
5	768.00	0.09	248.34	91.00	768.00	-0.22	-0.21	-0.22	0.31	226.34	0.20	HDS-1R	0
6	859.00	0.09	91.70	91.00	859.00	-0.22	-0.24	-0.22	0.33	221.80	0.19	HDS-1R	0
7	950.00	0.09	321.49	91.00	950.00	-0.19	-0.19	-0.19	0.27	224.81	0.18	HDS-1R	0
8	1039.00	0.18	21.42	89.00	1039.00	-0.18	-0.01	-0.18	0.18	267.75	0.18	HDS-1R	0
9	1132.00	0.09	164.96	93.00	1132.00	-0.11	0.06	-0.11	0.13	297.69	0.28	HDS-1R	0
10	1226.00	0.09	315.53	94.00	1226.00	-0.14	0.04	-0.14	0.15	285.44	0.19	HDS-1R	0
11	1320.00	0.00	0.00	94.00	1320.00	-0.20	0.09	-0.20	0.22	295.31	0.10	HDS-1R	0
12	1414.00	0.09	162.84	94.00	1414.00	-0.17	0.02	-0.17	0.17	277.16	0.10	HDS-1R	0
13	1508.00	0.09	207.49	94.00	1508.00	-0.19	-0.11	-0.19	0.22	238.41	0.07	HDS-1R	0
14	1602.00	0.09	102.80	94.00	1602.00	-0.15	-0.20	-0.15	0.25	217.01	0.15	HDS-1R	0
15	1696.00	0.00	0.00	94.00	1696.00	-0.07	-0.21	-0.08	0.23	199.65	0.10	HDS-1R	0
16	1790.00	0.00	0.00	94.00	1790.00	-0.07	-0.21	-0.08	0.23	199.65	0.00	HDS-1R	0
17	1884.00	0.00	0.00	94.00	1884.00	-0.07	-0.21	-0.08	0.23	199.65	0.00	HDS-1R	0
18	1977.00	0.26	233.57	93.00	1977.00	-0.24	-0.34	-0.25	0.42	216.03	0.28	HDS-1R	0
19	2071.00	0.18	195.61	94.00	2071.00	-0.45	-0.61	-0.46	0.76	216.99	0.17	HDS-1R	0
20	2165.00	0.18	138.20	94.00	2165.00	-0.39	-0.86	-0.40	0.95	204.88	0.18	HDS-1R	0
21	2259.00	0.18	215.64	94.00	2259.00	-0.38	-1.09	-0.39	1.16	199.51	0.24	HDS-1R	0
22	2354.00	0.00	0.00	95.00	2354.00	-0.47	-1.21	-0.47	1.3	201.34	0.19	HDS-1R	0
23	2447.00	0.09	50.11	93.00	2447.00	-0.41	-1.16	-0.42	1.24	199.71	0.10	HDS-1R	0
24	2542.00	0.00	0.00	95.00	2542.00	-0.35	-1.12	-0.36	1.17	197.86	0.09	HDS-1R	0
25	2635.00	0.00	0.00	93.00	2635.00	-0.35	-1.12	-0.36	1.17	197.86	0.00	HDS-1R	0
26	2730.00	0.26	30.67	95.00	2730.00	-0.25	-0.93	-0.25	0.96	195.02	0.27	HDS-1R	0
27	2918.00	0.09	324.26	188.00	2918.00	-0.12	-0.44	-0.12	0.46	194.93	0.13	HDS-1R	0
28	3012.00	0.09	85.01	94.00	3012.00	-0.09	-0.38	-0.09	0.39	193.11	0.17	HDS-1R	0
29	3106.00	0.00	0.00	94.00	3106.00	-0.03	-0.37	-0.03	0.37	182.21	0.10	HDS-1R	0
30	3200.00	0.09	53.94	94.00	3200.00	0.05	-0.33	0.05	0.33	172.10	0.10	HDS-1R	0
31	3293.00	0.09	110.18	93.00	3293.00	0.17	-0.31	0.17	0.35	150.79	0.09	HDS-1R	0
32	3387.00	0.09	278.27	94.00	3387.00	0.17	-0.32	0.17	0.37	152.44	0.19	HDS-1R	0
33	3482.00	0.09	214.25	95.00	3482.00	0.06	-0.38	0.05	0.38	171.90	0.10	HDS-1R	0
34	3576.00	0.09	164.21	94.00	3576.00	0.03	-0.51	0.03	0.51	176.40	0.08	HDS-1R	0
35	3670.00	0.09	296.05	94.00	3670.00	-0.01	-0.55	-0.01	0.55	181.50	0.17	HDS-1R	0
36	3764.00	0.09	109.02	94.00	3764.00	-0.14	-0.47	-0.14	0.49	196.46	0.02	HDS-1R	0
37	3858.00	0.09	232.87	94.00	3858.00	-0.25	-0.47	-0.25	0.53	208.66	0.12	HDS-1R	0
38	3952.00	0.09	46.72	94.00	3951.99	-0.26	-0.46	-0.26	0.53	209.46	0.19	HDS-1R	0
39	4046.00	0.09	182.19	94.00	4045.99	-0.21	-0.48	-0.21	0.53	203.37	0.18	HDS-1R	0
40	4140.00	0.09	116.37	94.00	4139.99	-0.14	-0.59	-0.15	0.61	193.84	0.10	HDS-1R	0
41	4234.00	0.09	197.99	94.00	4233.99	-0.10	-0.69	-0.10	0.7	188.37	0.13	HDS-1R	0
42	4328.00	0.09	77.59	94.00	4327.99	-0.05	-0.75	-0.05	0.75	184.02	0.17	HDS-1R	0
43	4422.00	0.09	170.50	94.00	4421.99	0.04	-0.80	0.03	0.8	177.73	0.14	HDS-1R	0
44	4513.00	0.09	41.69	191.00	4512.99	0.16	-0.84	0.16	0.85	169.44	0.08	HDS-1R	0
45	4707.00	0.00	0.00	94.00	4706.99	0.21	-0.78	0.21	0.81	165.31	0.10	HDS-1R	0
46	4893.00	0.09	64.47	186.00	4892.99	0.34	-0.72	0.34	0.8	154.92	0.05	HDS-1R	0
47	4988.00	0.09	76.82	95.00	4987.99	0.48	-0.67	0.48	0.82	144.60	0.02	HDS-1R	0
48	5082.00	0.09	242.02	94.00	5081.99	0.49	-0.69	0.48	0.84	144.94	0.19	HDS-1R	0
49	5176.00	0.09	227.36	94.00	5175.99	0.37	-0.77	0.36	0.86	154.79	0.02	HDS-1R	0
50	5270.00	0.18	237.29	94.00	5269.99	0.19	-0.90	0.19	0.92	168.38	0.10	HDS-1R	0
51	5364.00	0.18	252.62	94.00	5363.99	-0.07	-1.03	-0.08	1.03	184.41	0.05	HDS-1R	0
52	5552.00	0.09	78.49	188.00	5551.99	-0.21	-1.09	-0.22	1.11	191.26	0.14	HDS-1R	0
53	5740.00	0.26	131.84	188.00	5739.99	0.25	-1.34	0.25	1.36	169.61	0.12	HDS-1R	0
54	5834.00	0.35	0.00	94.00	5833.99	0.41	-1.20	0.40	1.26	161.30	0.59	HDS-1R	0
55	5922.00	0.53	167.76	88.00	5921.99	0.50	-1.33	0.49	1.41	159.67	0.99	HDS-1R	0
56	6116.00	0.70	146.94	194.00	6115.98	1.34	-3.20	1.33	3.46	157.44	0.14	HDS-1R	0
57	6210.00	0.53	141.63	94.00	6209.97	1.93	-4.02	1.91	4.45	154.56	0.19	HDS-1R	0
58	6306.00	0.35	161.80	96.00	6305.97	2.30	-4.54	2.28	5.17	153.87	0.24	HDS-1R	0
59	6400.00	0.44	137.65	94.00	6399.97	2.63	-5.18	2.61	5.8	153.27	0.20	HDS-1R	0
60	6588.00	0.44	189.30	188.00	6587.96	3.01	-6.43	2.98	7.09	155.13	0.20	HDS-1R	0
61	6776.00	0.70	1.13	188.00	6775.96	2.91	-5.99	2.89	6.65	154.29	0.60	HDS-1R	0
62	6870.00	1.76	351.23	94.00	6869.94	2.70	-3.99	2.68	4.81	146.15	1.15	HDS-1R	0
63	6964.00	1.76	352.45	94.00	6963.89	2.27	-1.14	2.27	2.54	116.60	0.04	HDS-1R	0
64	7058.00	2.20	345.39	94.00	7057.84	1.61	2.04	1.62	2.61	38.50	0.53	HDS-1R	0
65	7152.00	2.11	322.69	94.00	7151.77	0.10	5.16	0.12	5.16	1.32	0.91	HDS-1R	0
66	7246.00	1.49	339.30	94.00	7245.73	-1.40	7.68	-1.36	7.8	349.95	0.86	HDS-1R	0
67	7340.00	1.32	333.26	94.00	7339.70	-2.33	9.79	-2.28	10.06	346.89	0.24	HDS-1R	0
68	7432.00	1.85	300.86	112.00	7431.66	-4.47	11.87	-4.41	12.67	339.61	0.91	HDS-1R	0
69	7528.00	1.60	308.52	76.00	7527.62	-6.36	13.16	-6.30	14.59	334.43	0.45	SlimPulse	0
70	7622.00	0.84	342.12	94.00	7621.60	-7.60	14.63	-7.54	16.46	332.76	1.08	SlimPulse	0
71	7715.00	0.58	193.40	93.00	7714.60	-7.92	14.82	-7.85	16.77	332.08	1.47	SlimPulse	0

72	7809.00	0.85	167.60	94.00	7808.59	-7.88	17.67	-7.82	15.75	310.25	0.44	SlimPulse	0
73	7903.00	0.24	181.31	94.00	7902.59	-7.73	12.79	-7.67	14.92	329.05	0.66	SlimPulse	0
74	7996.00	0.53	291.64	93.00	7995.59	-8.14	12.76	-8.08	15.1	327.65	0.73	SlimPulse	0
75	8088.00	0.9	31.37	92.00	8087.58	-8.29	11.12	-8.23	15.65	328.28	0.93	SlimPulse	0
76	8182.00	2.91	115.33	94.00	8181.54	-5.86	12.70	-5.81	13.96	315.41	3.12	SlimPulse	0
77	8275.00	6.34	77.26	93.00	8274.74	1.30	12.81	1.36	12.89	6.04	4.75	SlimPulse	0
78	8368.00	14.77	116.98	93.00	8365.68	16.31	8.56	16.97	19.01	63.74	11.48	SlimPulse	0
79	8461.00	20.90	81.06	93.00	8454.40	44.07	5.17	44.10	44.4	83.11	12.71	SlimPulse	0
80	8555.00	28.70	108.20	94.00	8540.08	81.99	0.24	81.99	81.99	89.83	13.40	SlimPulse	0
81	8649.00	27.18	115.15	94.00	8624.33	122.60	-15.82	122.53	123.55	97.46	3.60	SlimPulse	0
82	8742.00	39.52	100.09	93.00	8701.00	171.30	-30.11	171.16	173.79	99.98	15.89	SlimPulse	0
83	8835.00	50.94	90.28	93.00	8766.47	236.86	-35.50	236.70	239.35	98.53	14.36	SlimPulse	0
84	8929.00	67.42	91.65	94.00	8814.46	317.30	-36.94	317.13	319.28	96.64	17.58	SlimPulse	0
85	9023.00	82.81	95.64	94.00	8838.53	407.69	-42.81	407.50	409.74	96.00	16.89	SlimPulse	0
86	9116.00	88.45	96.54	93.00	8845.59	499.90	-52.65	499.67	502.44	96.02	6.11	SlimPulse	0
87	9209.00	88.62	92.46	93.00	8847.97	592.60	-59.95	592.33	595.36	95.78	4.40	SlimPulse	0
88	9306.00	89.00	91.50	97.00	8849.98	689.53	-61.30	689.25	692.15	95.25	1.06	SlimPulse	1
89	9400.00	86.42	90.04	94.00	8853.73	783.44	-64.56	783.16	785.81	94.71	3.15	SlimPulse	1
90	9494.00	87.18	89.77	94.00	8858.98	877.30	-64.40	877.01	879.37	94.70	0.86	SlimPulse	1
91	9587.00	88.59	89.97	93.00	8862.41	970.23	-64.19	969.94	972.07	93.79	1.53	SlimPulse	1
92	9681.00	88.81	90.00	94.00	8864.53	1064.20	-64.17	1063.92	1065.85	93.45	0.26	SlimPulse	1
93	9774.00	88.38	90.09	93.00	8866.79	1157.17	-64.24	1156.89	1158.67	93.18	0.49	SlimPulse	1
94	9868.00	88.76	90.46	94.00	8869.14	1251.14	-64.69	1250.86	1252.53	92.96	0.56	SlimPulse	1
95	9961.00	89.07	89.53	93.00	8870.90	1344.13	-64.68	1343.84	1345.4	92.76	1.05	SlimPulse	1
96	10055.00	88.76	90.13	94.00	8872.68	1438.11	-64.41	1437.83	1439.27	92.56	0.72	SlimPulse	1
97	10148.00	88.62	89.85	93.00	8874.81	1531.08	-64.39	1530.80	1532.16	92.41	0.34	SlimPulse	1
98	10241.00	88.24	89.51	93.00	8877.36	1624.04	-63.87	1623.77	1625.02	92.25	0.55	SlimPulse	1
99	10334.00	88.45	89.69	93.00	8880.04	1717.00	-63.22	1716.72	1717.89	92.11	0.30	SlimPulse	1
100	10427.00	88.62	89.74	93.00	8882.42	1809.96	-62.76	1809.69	1810.78	91.99	0.19	SlimPulse	1
101	10521.00	88.45	89.68	94.00	8884.82	1903.93	-62.28	1903.66	1904.68	91.87	0.19	SlimPulse	1
102	10614.00	87.97	89.56	93.00	8887.73	1996.87	-61.67	1996.61	1997.56	91.77	0.53	SlimPulse	1
103	10707.00	87.04	89.56	93.00	8891.78	2089.78	-60.95	2089.52	2090.41	91.67	1.00	SlimPulse	1
104	10802.00	88.38	90.18	95.00	8895.57	2184.70	-60.74	2184.44	2185.29	91.59	1.55	SlimPulse	1
105	10895.00	88.69	90.07	93.00	8897.95	2277.67	-60.94	2277.41	2278.23	91.53	0.35	SlimPulse	1
106	10988.00	88.28	90.16	93.00	8900.41	2370.63	-61.13	2370.38	2371.17	91.48	0.45	SlimPulse	1
107	11082.00	89.04	90.26	94.00	8902.61	2464.61	-61.47	2464.35	2465.12	91.43	0.82	SlimPulse	1
108	11176.00	89.24	90.06	94.00	8904.02	2558.60	-61.73	2558.34	2559.09	91.38	0.30	SlimPulse	1
109	11269.00	89.35	89.91	93.00	8905.16	2651.59	-61.71	2651.33	2652.05	91.33	0.70	SlimPulse	1
110	11362.00	89.14	90.13	93.00	8906.39	2744.58	-61.74	2744.33	2745.02	91.29	0.33	SlimPulse	1
111	11407.00	89.38	89.86	45.00	8906.97	2789.57	-61.74	2789.32	2790	91.27	0.80	SlimPulse	1
112	11456.00	89.75	90.43	49.00	8907.34	2838.57	-61.86	2838.32	2838.99	91.25	1.39	SlimPulse	1
113	11549.00	90.54	90.43	93.00	8907.10	2931.57	-62.56	2931.32	2931.98	91.22	0.85	SlimPulse	1
114	11643.00	90.54	90.18	94.00	8906.22	3025.57	-63.06	3025.31	3025.97	91.19	0.27	SlimPulse	1
115	11737.00	90.67	90.49	94.00	8905.23	3119.56	-63.61	3119.30	3119.95	91.17	0.36	SlimPulse	1
116	11830.00	90.12	90.42	93.00	8904.58	3212.56	-64.35	3212.30	3212.94	91.15	0.60	SlimPulse	1
117	11923.00	91.19	91.87	93.00	8903.52	3305.54	-66.21	3305.27	3305.93	91.15	1.94	SlimPulse	1
118	12017.00	89.33	90.43	94.00	8903.10	3399.52	-68.09	3399.24	3399.92	91.15	2.50	SlimPulse	1
119	12110.00	88.47	90.20	93.00	8904.88	3492.50	-68.60	3492.22	3492.9	91.13	0.96	SlimPulse	1
120	12203.00	89.64	91.49	93.00	8906.41	3585.48	-69.98	3585.20	3585.88	91.12	1.87	SlimPulse	1
121	12297.00	90.64	93.07	94.00	8906.18	3679.42	-73.72	3679.12	3679.86	91.15	1.99	SlimPulse	1
122	12391.00	88.99	91.30	94.00	8906.49	3773.36	-77.30	3773.04	3773.83	91.17	2.57	SlimPulse	1
123	12484.00	90.26	91.93	93.00	8907.10	3866.33	-79.92	3866.00	3866.83	91.18	1.52	SlimPulse	1
124	12577.00	88.13	89.47	93.00	8908.40	3959.30	-81.06	3958.97	3959.8	91.17	3.50	SlimPulse	1
125	12670.00	88.54	88.74	93.00	8911.11	4052.24	-79.60	4051.92	4052.7	91.13	0.90	SlimPulse	1
126	12764.00	87.96	88.38	94.00	8913.98	4146.16	-77.24	4145.85	4146.57	91.07	0.73	SlimPulse	1
127	12850.00	87.58	88.49	186.00	8921.21	4331.92	-72.17	4331.64	4332.24	90.95	0.21	SlimPulse	1
128	13043.00	87.92	88.31	93.00	8924.86	4424.80	-69.57	4424.53	4425.08	90.90	0.41	SlimPulse	1
129	13137.00	89.23	88.61	94.00	8927.20	4518.72	-67.05	4518.46	4518.96	90.85	1.43	SlimPulse	1
130	13230.00	88.23	88.45	93.00	8929.26	4611.66	-64.66	4611.41	4611.86	90.80	1.09	SlimPulse	1
131	13324.00	88.10	88.42	94.00	8932.27	4705.56	-62.10	4705.33	4705.73	90.76	0.14	SlimPulse	1
132	13510.00	88.16	88.45	186.00	8938.34	4891.37	-57.02	4891.16	4891.49	90.67	0.04	SlimPulse	1
133	13604.00	87.58	87.95	94.00	8941.84	4985.24	-54.07	4985.04	4985.34	90.62	0.81	SlimPulse	1
134	13696.00	87.75	88.22	92.00	8945.59	5077.10	-51.00	5076.92	5077.17	90.58	0.35	SlimPulse	1
135	13790.00	88.61	88.65	94.00	8948.57	5171.00	-48.43	5170.83	5171.06	90.54	1.02	SlimPulse	1
136	13883.00	87.89	88.27	93.00	8951.41	5263.91	-45.93	5263.76	5263.96	90.50	0.88	SlimPulse	1
137	13977.00	89.20	88.04	94.00	8953.80	5357.81	-42.91	5357.67	5357.85	90.46	1.41	SlimPulse	1
138	14070.00	89.82	88.36	93.00	8954.59	5450.75	-39.99	5450.62	5450.77	90.42	0.75	SlimPulse	1
139	14164.00	88.92	88.08	94.00	8955.63	5544.68	-37.07	5544.57	5544.7	90.38	1.00	SlimPulse	1
140	14258.00	89.20	89.20	94.00	8957.17	5638.63	-34.84	5638.53	5638.64	90.35	1.23	SlimPulse	1
141	14352.00	89.16	89.94	94.00	8958.51	5732.61	-34.13	5732.52	5732.62	90.34	0.79	SlimPulse	1
142	14445.00	89.89	90.11	93.00	8959.28	5825.61	-34.17	5825.51	5825.62	90.34	0.81	SlimPulse	1
143	14540.00	89.47	90.01	95.00	8959.82	5920.61	-34.27	5920.51	5920.61	90.33	0.45	SlimPulse	1
144	14634.00	89.09	89.60	94.00	8961.00	6014.60	-33.95	6014.50	6014.6	90.32	0.59	SlimPulse	1
145	14728.00	90.06	90.42	94.00	8961.69	6108.59	-33.97	6108.50	6108.59	90.32	1.35	SlimPulse	1
146	14822.00	90.23	90.09	94.00	8961.46	6202.59	-34.39	6202.50	6202.59	90.32	0.39	SlimPulse	1
147	14916.00	88.37	89.15	94.00	8962.60	6296.57	-33.76	6296.48	6296.58	90.31	2.22	SlimPulse	1
148	15009.00	87.82	88.82	93.00	8965.70	6389.50	-32.12	6389.42	6389.5	90.29	0.69	SlimPulse	1
149	15102.00	88.89	89.37	93.00	8968.37	6482.44	-30.65	6482.37	6482.44	90.27	1.29	SlimPulse	1
150	15196.00	89.78	90.11	94.00	8969.46	6576.43	-30.22	6576.36	6576.43	90.26	1.23	SlimPulse	1
151	15290.00	89.93	89.20	94.00	8969.69	6670.42	-29.65	6670.35	6670.42	90.25	0.99	SlimPulse	0
152	15384.00	89.42	88.32	94.00	8970.23	6764.39	-27.61	6764.33	6764.39	90.23	1.08	SlimPulse	0
153	15478.00	88.73	87.92	94.00	8971.75	6858.31	-24.53	6858.27	6858.31	90.20	0.85	SlimPulse	0
154	15571.00	88.04	87.36	93.00	8974.38	6951.17	-20.70	6951.15	6951.18	90.17	0.96	SlimPulse	0
155	15663.00	88.21	88.57	92.00	8977.39	7043.05	-17.43	7043.04	7043.06	90.14	1.33	SlimPulse	0
156	15756.00	88.32	89.51	93.00	8980.21	7135.98	-15.87	7135.98	7136	90.13	1.01	SlimPulse	0
157	158												



H&P 615



Vertical Section (ft) Azim = 90.258° Scale = 1:380(ft) Origin = 0N/S, 0E/W

OXY USA INC.
Cedar Canyon 23 Federal #4H
API No. 30-015-43281

14-3/4" hole @ 459'
10-3/4" csg @ 444'
w/ 550sx-TOC-Surf-Circ.

9-7/8" hole @ 7500'
7-5/8" csg @ 7490'
w/ 4000sx-TOC-Surf-Circ.
DVT @ 3069'

6-3/4" hole @ 16535'
5-1/2" X 4-1/2" csg @ 16509'
w/ 1090sx-TOC-6330' CBL

Perfs @ 9312-16403'

TD- 16535'M 9006'V