

Schlumberger

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

March 1, 2017

OXY USA INC
5 Greenway Plaza, Suite 110
Houston, TX 77046-052

Re:

35, 23 South, 31 East, Eddy NM
N 32.26750 W -103.75444

CLIENT: OXY USA INC
WELL: Cal-Mon 35 Federal 41H
FIELD: Ingle Wells Bone Spring
RIG: H&P 617
COUNTY: Eddy
API NO: 30-015-43140
JOB NO: 16MLD2159

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>
Sara Saidman FE	Cal-Mon 35 Federal 41H Original Hole	4140.00 Ft to 11889.00 Ft	December 2, 2016 to December 25, 2016	TelePacer TelePacer

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


Mike Stephens
Field Service Manager

Schlumberger

Reservoir Development
Schlumberger Drilling and Measurements
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
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Well Reference:
35, 23 South, 31 East, Eddy NM
N 32.26750 W -103.75444

I, Sara Saidman certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation, that I did on the day(s) of December 02, 2016 through December 25, 2016, conduct or supervise the taking of the TelePacer surveys from a depth of 4140.00 feet to a depth of 11889.00 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 Cal-Mon 35 Federal 41H Well (Original Hole) API No. 30-015-43140 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
Sara Saidman
FE

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

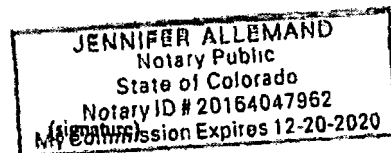
My Commission expires:

12-20-2020



Notary Public

Adams Co, Colorado
(County State)



NEW OIL CONSERVATION

ARTESIA DISTRICT

APR 10 2017

RECEIVED

PathFinder Energy Services, Inc. Survey Report

OXY USA INC.
CAL-MON 35 FEDERAL 41H
EDDY COUNTY, NM
Rig:H&P 617
PathFinder Office Supervisor: M. STEPHENS
PathFinder Field Engineers: T. AHMED
S. SAIDMAN

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.163.0032 N LON:103.4517.3734 W
GRID Reference:NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 720146.6000 Y: 461531.8100
North Aligned To:GRID NORTH
Total Magnetic Correction: 6.72° EAST TO GRID
Vertical Section Plane: 0.00
Survey Vert. Reference: 26.50' Rotary Table To Ground
Altitude:3456.20' Ground To MSL

Survey Calculations by RX5 V7.01C using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	Rectangular Offsets (ft)	TOTAL (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
ORIGIN OF WELL AT SURFACE.									
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00@ 0.00	0.00
95.60	0.57	353.33	95.60	95.60	0.47	0.47 N	0.06 W	0.48@ 353.33	0.60
124.70	0.58	350.78	124.70	29.10	0.76	0.76 N	0.10 W	0.77@ 352.84	0.09
214.00	0.51	342.63	214.29	89.60	1.59	1.59 N	0.29 W	1.62@ 349.75	0.12
304.80	0.46	327.12	304.79	90.50	2.28	2.28 N	0.60 W	2.36@ 345.14	0.16
395.00	0.44	309.25	395.19	90.40	2.80	2.80 N	1.07 W	3.00@ 339.10	0.16
485.70	0.33	289.45	485.68	90.50	3.11	3.11 N	1.59 W	3.49@ 332.99	0.19
576.00	0.21	225.16	576.18	90.50	3.08	3.08 N	1.95 W	3.64@ 327.68	0.34
666.70	0.29	198.89	666.68	90.50	2.75	2.75 N	2.14 W	3.48@ 322.07	0.15
757.20	0.43	185.09	757.18	90.50	2.19	2.19 N	2.24 W	3.14@ 314.31	0.18
847.60	0.57	186.05	847.58	90.40	1.41	1.41 N	2.32 W	2.71@ 301.20	0.16
942.10	0.62	182.34	942.07	94.50	0.43	0.43 N	2.39 W	2.43@ 280.14	0.07
1036.60	0.56	176.33	1036.57	94.50	-0.53	0.53 S	2.38 W	2.44@ 257.32	0.11
1131.10	0.32	142.77	1131.07	94.50	-1.20	1.20 S	2.18 W	2.49@ 241.23	0.35
1225.50	0.28	92.75	1225.46	94.40	-1.42	1.42 S	1.79 W	2.28@ 231.62	0.27
1320.00	0.27	66.86	1319.96	94.50	-1.34	1.34 S	1.35 W	1.91@ 225.28	0.13
1414.30	0.18	30.12	1414.26	94.30	-1.13	1.13 S	1.08 W	1.56@ 223.70	0.18
1508.60	0.16	347.63	1508.56	94.30	-0.87	0.87 S	1.03 W	1.35@ 229.84	0.13
1603.10	0.16	339.59	1603.06	94.50	-0.62	0.62 S	1.10 W	1.26@ 240.82	0.02
1697.60	0.15	336.74	1697.56	94.50	-0.38	0.38 S	1.20 W	1.26@ 252.45	0.01
1792.10	0.14	353.77	1792.06	94.50	-0.15	0.15 S	1.26 W	1.27@ 263.17	0.05
1886.50	0.10	15.72	1886.46	94.40	0.04	0.04 N	1.25 W	1.25@ 271.97	0.06
1981.10	0.09	32.34	1981.06	94.60	0.19	0.19 N	1.19 W	1.20@ 278.86	0.03
2075.40	0.15	357.41	2075.36	94.30	0.37	0.37 N	1.15 W	1.21@ 287.82	0.10

ARTESIA DISTRICT
APR 10 2017
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PathFinder Energy Services, Inc. Survey Report

OXY USA INC.
CAL-MON 35 FEDERAL 41H
EDDY COUNTY, NM
RIG:H&P 617

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
2168.90	0.19	345.88	2169.86	94.50	0.65	0.65 N 1.20 W	1.36@ 298.35	0.06
2264.50	0.21	338.28	2264.46	94.60	0.96	0.96 N 1.30 W	1.62@ 306.42	0.03
2359.00	0.19	330.24	2358.96	94.50	1.26	1.26 N 1.44 W	1.91@ 311.06	0.04
2453.50	0.16	327.92	2453.46	94.50	1.50	1.50 N 1.59 W	2.19@ 313.41	0.03
2548.00	0.16	325.81	2547.96	94.50	1.72	1.72 N 1.73 W	2.44@ 314.81	0.01
2642.40	0.17	333.33	2642.36	94.40	1.95	1.95 N 1.86 W	2.69@ 316.26	0.03
2737.00	0.21	335.10	2736.96	94.60	2.23	2.23 N 2.00 W	2.99@ 318.12	0.04
2831.40	0.27	328.43	2831.36	94.40	2.58	2.58 N 2.19 W	3.38@ 319.65	0.07
2925.90	0.36	340.26	2925.85	94.50	3.04	3.04 N 2.40 W	3.88@ 321.70	0.12
3020.30	0.42	339.58	3020.25	94.40	3.65	3.65 N 2.63 W	4.49@ 324.26	0.06
3114.70	0.40	338.23	3114.65	94.40	4.28	4.28 N 2.87 W	5.15@ 326.16	0.02
3209.30	0.37	339.16	3209.26	94.60	4.87	4.87 N 3.10 W	5.77@ 327.53	0.03
3303.60	0.36	325.63	3303.55	94.30	5.40	5.40 N 3.38 W	6.37@ 327.99	0.09
3397.90	0.37	323.89	3397.84	94.30	5.89	5.89 N 3.72 W	6.97@ 327.71	0.02
3492.30	0.38	328.33	3492.24	94.40	6.40	6.40 N 4.07 W	7.58@ 327.58	0.03
3586.50	0.18	21.14	3586.44	94.20	6.81	6.81 N 4.18 W	7.99@ 328.47	0.32
3680.90	0.53	127.58	3680.84	94.40	6.68	6.68 N 3.78 W	7.67@ 330.51	0.64
3775.40	0.80	137.83	3775.33	94.50	5.92	5.92 N 2.99 W	6.63@ 333.23	0.31
3869.80	0.74	145.17	3869.73	94.40	4.93	4.93 N 2.20 W	5.40@ 336.00	0.12
3964.20	0.87	150.64	3964.12	94.40	3.81	3.81 N 1.50 W	4.09@ 338.54	0.16
4032.00	0.99	154.58	4031.91	67.80	2.83	2.83 N 0.99 W	3.00@ 340.66	0.20
4140.00	1.43	145.38	4139.88	108.00	0.88	0.88 N 0.17 E	0.90@ 11.09	0.44
4329.00	1.58	145.85	4328.82	189.00	-3.22	3.22 S 2.97 E	4.38@ 137.24	0.08
4462.00	0.22	154.94	4461.80	133.00	-4.97	4.97 S 4.11 E	6.45@ 140.37	1.03
4651.00	0.04	344.27	4650.80	189.00	-5.23	5.23 S 4.25 E	6.74@ 140.92	0.14
4839.00	0.04	103.16	4838.80	188.00	-5.18	5.18 S 4.29 E	6.73@ 140.36	0.04
4934.00	0.07	95.58	4933.80	95.00	-5.20	5.20 S 4.38 E	6.80@ 139.84	0.03

THE FOLLOWING ARE SCHLUMBERGER MWD SURVEYS.

PathFinder Energy Services, Inc. Survey Report

OXY USA INC.
CAL-MON 35 FEDERAL 41H
EDDY COUNTY, NM
RIG:H&P 617

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
5028.00	0.07	90.19	5027.80	94.00	-5.20	5.20 S	6.88@ 139.15	0.01
5217.00	0.07	117.94	5216.80	189.00	-5.26	5.26 S	7.06@ 138.10	0.02
5312.00	0.04	112.03	5311.80	95.00	-5.30	5.30 S	7.15@ 137.82	0.03
5500.00	0.04	327.87	5499.80	188.00	-5.27	5.27 S	7.14@ 137.50	0.04
5689.00	0.04	203.38	5688.80	189.00	-5.27	5.27 S	7.10@ 137.89	0.04
5878.00	0.07	98.60	5877.80	189.00	-5.35	5.35 S	7.22@ 137.79	0.05
5972.00	0.07	236.98	5971.80	94.00	-5.39	5.39 S	7.26@ 137.95	0.14
6162.00	0.04	97.66	6161.80	190.00	-5.46	5.46 S	7.29@ 138.51	0.05
6350.00	0.07	327.15	6349.80	188.00	-5.37	5.37 S	7.22@ 138.04	0.05
6539.00	0.04	101.05	6538.80	189.00	-5.29	5.29 S	7.16@ 137.57	0.05
6728.00	0.04	83.43	6727.80	189.00	-5.29	5.29 S	7.26@ 136.84	0.01
6917.00	0.09	43.71	6916.80	189.00	-5.18	5.18 S	7.29@ 135.26	0.03
7011.00	0.04	126.47	7010.80	94.00	-5.14	5.14 S	7.32@ 134.64	0.10
7106.00	1.01	175.27	7105.79	95.00	-6.00	6.00 S	8.01@ 138.51	1.04
7294.00	0.97	170.47	7293.76	188.00	-9.22	9.22 S	10.84@ 148.25	0.05
7389.00	0.11	95.17	7388.76	95.00	-10.02	10.02 S	11.64@ 149.39	1.00
7483.00	0.35	134.41	7482.76	94.00	-10.23	10.23 S	11.97@ 148.68	0.29
7577.00	0.11	169.50	7576.76	94.00	-10.52	10.52 S	12.34@ 148.50	0.28
7672.00	0.07	178.21	7671.76	95.00	-10.67	10.67 S	12.47@ 148.79	0.04
7861.00	0.07	177.97	7860.76	189.00	-10.90	10.90 S	12.67@ 149.30	0.00
8050.00	0.40	203.25	8049.75	189.00	-11.62	11.62 S	13.18@ 151.86	0.18
8144.00	0.73	190.76	8143.75	94.00	-12.51	12.51 S	13.86@ 154.47	0.37
8239.00	0.44	198.93	8238.75	95.00	-13.45	13.45 S	14.62@ 156.88	0.32
8427.00	0.18	355.14	8426.74	188.00	-13.84	13.84 S	14.88@ 158.38	0.32
8522.00	0.07	285.92	8521.74	95.00	-13.67	13.67 S	14.71@ 158.40	0.18
8709.00	0.09	6.84	8708.74	187.00	-13.50	13.50 S	14.51@ 158.48	0.06
8803.00	0.24	206.36	8802.74	94.00	-13.60	13.60 S	14.57@ 158.91	0.35
8897.00	0.20	351.90	8896.74	94.00	-13.61	13.61 S	14.55@ 159.34	0.45

PathFinder Energy Services, Inc.

Survey Report

OXY USA INC.
CAL-MON 35 FEDERAL 41H
EDDY COUNTY, NM
RIG:H&P 617

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
8991.00	0.46	298.59	8990.74	94.00	-13.27	13.27 S 4.78 E	14.10@ 160.19	0.40
9086.00	1.16	300.19	9085.73	95.00	-12.60	12.60 S 3.61 E	13.11@ 164.01	0.74
9180.00	1.32	287.79	9179.71	94.00	-11.79	11.79 S 1.76 E	11.92@ 171.52	0.33
9275.00	1.63	282.61	9274.68	95.00	-11.16	11.16 S 0.60 W	11.18@ 183.08	0.35
9369.00	1.58	276.20	9368.64	94.00	-10.73	10.73 S 3.19 W	11.20@ 196.57	0.20
9463.00	1.23	279.93	9462.61	94.00	-10.42	10.42 S 5.48 W	11.77@ 207.73	0.38
9558.00	1.32	276.62	9557.59	95.00	-10.12	10.12 S 7.57 W	12.63@ 216.80	0.12
9653.00	1.74	262.74	9652.56	95.00	-10.17	10.17 S 10.09 W	14.32@ 224.75	0.59
9747.00	2.20	266.73	9746.50	94.00	-10.46	10.46 S 13.30 W	16.92@ 231.83	0.51
9842.00	2.22	261.21	9841.43	95.00	-10.84	10.84 S 16.94 W	20.11@ 237.38	0.23
9936.00	1.93	263.60	9935.37	94.00	-11.57	11.57 S 20.26 W	23.33@ 240.28	0.42
10030.00	2.48	259.50	10029.30	94.00	-12.38	12.38 S 23.78 W	26.81@ 242.49	0.63
10125.00	2.86	262.99	10124.20	95.00	-13.05	13.05 S 28.15 W	31.03@ 245.13	0.43
10219.00	2.68	273.80	10218.09	94.00	-13.19	13.19 S 32.67 W	35.23@ 248.02	0.59
10314.00	2.13	291.87	10313.00	95.00	-12.38	12.38 S 36.53 W	38.57@ 251.27	0.98
10408.00	2.02	284.17	10406.94	94.00	-11.33	11.33 S 39.75 W	41.34@ 254.10	0.32
10503.00	2.31	272.97	10501.87	95.00	-10.82	10.82 S 43.29 W	44.62@ 255.97	0.54
10597.00	2.13	269.07	10595.80	94.00	-10.75	10.75 S 46.93 W	48.14@ 257.10	0.25
10692.00	1.05	205.67	10690.77	95.00	-11.56	11.56 S 49.07 W	50.41@ 256.74	2.01
10786.00	1.98	201.06	10784.74	94.00	-13.85	13.85 S 50.03 W	51.91@ 254.52	1.00
10975.00	1.82	164.40	10973.64	189.00	-19.79	19.79 S 50.39 W	54.14@ 248.56	0.64
11070.00	1.54	172.17	11068.60	95.00	-22.51	22.51 S 49.81 W	54.66@ 245.68	0.38
11164.00	1.25	192.31	11162.57	94.00	-24.76	24.76 S 49.86 W	55.67@ 243.59	0.60
11258.00	1.65	205.07	11256.54	94.00	-26.99	26.99 S 50.65 W	57.39@ 241.95	0.54
11353.00	1.63	204.02	11351.50	95.00	-29.46	29.46 S 51.78 W	59.58@ 240.36	0.04
11542.00	1.78	201.32	11540.42	189.00	-34.65	34.65 S 53.94 W	64.11@ 237.28	0.09
11636.00	1.63	209.61	11634.38	94.00	-37.17	37.17 S 55.13 W	66.50@ 236.01	0.31
11731.00	1.23	217.70	11729.35	95.00	-39.16	39.16 S 56.42 W	68.68@ 235.24	0.47

PathFinder Energy Services, Inc. Survey Report

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RIG:H&P 617

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
11825.00	0.88	214.52	11823.33	94.00	-40.55	40.55 S 57.45 W	70.32@ 234.78	0.38
11889.00	1.01	241.00	11887.32	64.00	-41.23	41.23 S 58.22 W	71.34@ 234.70	0.70