

Reservoir Development

PathFinder, a Schlumberger Company
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519



August 25, 2015

Chevron U.S.A Inc.
15 Smith Road
Midland, Texas 79705

NM OIL CONSERVATION
ARTESIA DISTRICT
SEP 24 2015
RECEIVED

Sec 25 26S 28E Eddy NM
N 32.00701 W -103.95326

Re:

CLIENT: Chevron U.S.A. Inc.
WELL: Rustler Bluff 25 26 28 Federal 1H
FIELD: Delaware River; Bone Spring
RIG: Nabors M51
COUNTY: Eddy
API NO: 30-015-43055
JOB NO: 15MLD2009.

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>
Timothy Cramer MWD	Rustler Bluff 25 26 28 Federal 1H Original Hole	398.00 Ft to 12790.00 Ft	August 4, 2015 to August 15, 2015	HDS-1L

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

Qun Xu
Field Service Manager

Reservoir Development

PathFinder, a Schlumberger Company
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
Fax: (405) 789-1519

Well Reference:

Sec 25 26S 28E Eddy NM
N 32.00701 W -103.95326

I, Timothy Cramer certify that; I am employed by PathFinder, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 04, 2015 through August 15, 2015, conduct or supervise the taking of the HDS-1L surveys from a depth of 398.00 feet to a depth of 12790.00 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 Chevron U.S.A. Inc. for the Rustler Bluff 25 26 28 Federal 1H Well (Original Hole) API No. 30-015-43055 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 
Timothy Cramer
MWD

Subscribed and Sworn to before me this 25th day of August (month) 2015 (yr)

My Commission expires:

September 5, 2016

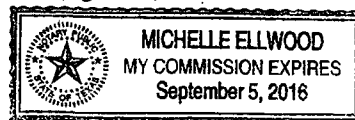
Michelle Ellwood

Notary Public

Midland, TX

(County State)

(signature)



PathFinder – a Schlumberger company

Survey Report

CHEVRON U.S.A INC.
RUSTLER BLUFF 25 26 28 FED 1H
EDDY COUNTY, NM
API#: 30-015-43055 Rig: Nabors M51
PathFinder Office Supervisor: Qun Xu
PathFinder Field Engineers: T.Cramer

Survey Horiz. Reference:WELLHEAD
Ref Coordinates: LAT:32.0.25.2584 N LON:105.57.48.2524 W
GRID Reference:NAD27 new mexico central Transverse Mercator
Ref GRID Coord: X: 588836.0000 Y: 366394.0000
North Aligned To:TRUE NORTH
Total Magnetic Correction: 7.32°EAST TO TRUE
Vertical Section Plane: 358.71
Survey Vert. Reference: 22.00' Rotary Table To Ground
Altitude:3000.00' Ground To MSL

Survey Calculations by RX4 using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist (ft)	Dir (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
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
398.00	0.26	42.63	398.00	398.00	0.65	0.66 N	0.61 E	0.90@	42.63	0.06
522.00	0.18	69.65	522.00	124.00	0.92	0.94 N	0.98 E	1.36@	46.36	0.10
710.00	0.35	319.51	710.00	188.00	1.46	1.48 N	0.89 E	1.73@	31.01	0.24
896.00	0.62	263.09	895.99	186.00	1.80	1.79 N	0.48 W	1.85@	345.01	0.28
1082.00	0.70	265.58	1081.98	186.00	1.64	1.58 N	2.61 W	3.05@	301.19	0.05
1273.00	0.88	256.40	1272.96	191.00	1.26	1.15 N	5.20 W	5.32@	282.43	0.12
1463.00	1.14	236.19	1462.93	190.00	-0.06	0.25 S	8.19 W	8.19@	268.26	0.23
1654.00	1.58	244.03	1653.88	191.00	-2.19	2.46 S	12.13 W	12.38@	258.54	0.25
1845.00	0.44	337.81	1844.85	191.00	-2.60	2.93 S	14.78 W	15.07@	258.77	0.87
2036.00	1.23	47.98	2035.83	191.00	-0.58	0.88 S	13.53 W	13.56@	266.27	0.61
2226.00	0.26	37.53	2225.81	190.00	1.09	0.83 N	11.76 W	11.78@	274.02	0.51
2417.00	2.29	104.70	2416.76	191.00	0.38	0.20 N	7.80 W	7.80@	271.47	1.15
2581.00	1.14	169.65	2580.70	164.00	-2.14	2.24 S	4.34 W	4.88@	242.73	1.27
2705.00	1.58	174.22	2704.66	124.00	-5.06	5.15 S	3.94 W	6.49@	217.44	0.36
2895.00	1.41	176.11	2894.60	190.00	-10.01	10.09 S	3.52 W	10.69@	199.24	0.09
3086.00	1.41	171.87	3085.54	191.00	-14.69	14.76 S	3.03 W	15.07@	191.60	0.05
3276.00	1.58	172.09	3275.47	190.00	-19.61	19.67 S	2.34 W	19.81@	186.78	0.09
3466.00	1.67	178.13	3465.40	190.00	-24.98	25.03 S	1.89 W	25.10@	184.31	0.10
3657.00	0.62	356.43	3656.38	191.00	-26.73	26.78 S	1.86 W	26.84@	183.97	1.20
3847.00	0.88	356.29	3846.36	190.00	-24.25	24.30 S	2.02 W	24.38@	184.75	0.14
4038.00	0.88	353.02	4037.34	191.00	-21.32	21.38 S	2.29 W	21.50@	186.12	0.03
4229.00	0.88	334.51	4228.32	191.00	-18.52	18.60 S	3.10 W	18.86@	189.47	0.15
4420.00	0.79	311.84	4419.30	191.00	-16.29	16.40 S	4.71 W	17.06@	196.04	0.18

PathFinder – a Schlumberger company

Survey Report

CHEVRON U.S.A INC.
RUSTLER BLUFF 25 26 28 FED 1H
EDDY COUNTY, NM
API#: 30-015-43055 Rig: Nabors M51

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
4610.00	0.79	308.13	4609.28	190.00	-14.56	14.71 S	6.72 W	16.18@	204.55	0.03
4801.00	0.88	302.34	4800.26	191.00	-12.91	13.12 S	9.00 W	15.90@	214.44	0.06
4991.00	0.79	280.68	4990.24	190.00	-11.83	12.09 S	11.51 W	16.70@	223.60	0.17
5182.00	0.70	271.36	5181.22	191.00	-11.50	11.82 S	13.98 W	18.30@	229.77	0.08
5373.00	0.62	268.62	5372.21	191.00	-11.45	11.82 S	16.17 W	20.03@	233.84	0.05
5564.00	0.70	273.75	5563.20	191.00	-11.35	11.77 S	18.37 W	21.82@	237.36	0.05
5754.00	0.53	276.50	5753.19	190.00	-11.13	11.59 S	20.40 W	23.47@	240.40	0.09
5944.00	0.44	261.76	5943.18	190.00	-11.10	11.60 S	22.00 W	24.87@	242.20	0.08
6135.00	0.53	225.28	6134.17	191.00	-11.79	12.32 S	23.35 W	26.40@	242.18	0.17
6325.00	0.62	271.47	6324.16	190.00	-12.35	12.92 S	25.00 W	28.14@	242.68	0.24
6516.00	1.58	340.60	6515.13	191.00	-9.80	10.41 S	26.91 W	28.85@	248.86	0.77
6706.00	1.58	310.42	6705.06	190.00	-5.56	6.24 S	29.78 W	30.42@	258.17	0.43
6897.00	1.14	208.31	6896.03	191.00	-5.46	6.20 S	32.68 W	33.27@	259.26	1.12
7088.00	1.23	280.72	7087.00	191.00	-6.69	7.49 S	35.60 W	36.38@	258.11	0.73
7278.00	0.62	233.10	7276.98	190.00	-6.86	7.73 S	38.42 W	39.19@	258.62	0.49
7469.00	0.79	215.31	7467.96	191.00	-8.52	9.43 S	40.01 W	41.11@	256.74	0.14
7659.00	0.44	216.21	7657.95	190.00	-10.15	11.08 S	41.20 W	42.66@	254.94	0.19
7748.00	0.62	315.32	7746.95	89.00	-10.07	11.02 S	41.74 W	43.17@	255.21	0.92
7843.00	11.96	340.12	7841.23	95.00	-0.34	1.36 S	45.46 W	45.48@	268.28	12.00
7893.00	17.67	342.59	7889.54	50.00	11.87	10.76 N	49.50 W	50.65@	282.26	11.49
7939.00	21.54	343.35	7932.87	46.00	26.73	25.52 N	54.01 W	59.73@	295.29	8.43
8034.00	32.27	352.56	8017.50	95.00	68.90	67.51 N	62.31 W	91.88@	317.29	12.09
8130.00	40.80	355.44	8094.57	96.00	125.80	124.30 N	68.14 W	141.75@	331.27	9.06
8225.00	53.11	354.51	8159.29	95.00	194.94	193.32 N	74.26 W	207.09@	338.99	12.98
8321.00	64.28	0.64	8209.13	96.00	276.77	275.09 N	77.47 W	285.79@	344.27	12.84
8416.00	72.90	2.25	8243.77	95.00	365.02	363.42 N	75.20 W	371.12@	348.31	9.21
8497.00	83.89	357.65	8260.05	81.00	444.20	442.62 N	75.33 W	448.99@	350.34	14.66
8536.00	89.78	355.70	8262.20	39.00	483.10	481.48 N	77.59 W	487.69@	350.85	15.91

PathFinder – a Schlumberger company

Survey Report

CHEVRON U.S.A INC.
 RUSTLER BLUFF 25 26 28 FED 1H
 EDDY COUNTY, NM
 API#: 30-015-43055 Rig: Nabors M51

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8599.00	90.92	356.44	8261.82	63.00	546.03	544.33 N	81.91 W	550.45@	351.44	2.16
8694.00	91.36	359.24	8259.93	95.00	640.99	639.23 N	85.49 W	644.92@	352.38	2.98
8790.00	90.75	0.31	8258.16	96.00	736.96	735.21 N	85.87 W	740.21@	353.34	1.28
8885.00	91.19	0.72	8256.55	95.00	831.90	830.19 N	85.01 W	834.53@	354.15	0.63
8980.00	91.89	0.92	8254.00	95.00	926.80	925.15 N	83.65 W	928.92@	354.83	0.77
9076.00	92.59	0.94	8250.25	96.00	1022.65	1021.06 N	82.10 W	1024.36@	355.40	0.73
9171.00	91.54	1.45	8246.82	95.00	1117.50	1115.98 N	80.12 W	1118.85@	355.89	1.23
9266.00	88.90	359.67	8246.46	95.00	1212.44	1210.96 N	79.19 W	1213.55@	356.26	3.35
9361.00	89.43	0.32	8247.84	95.00	1307.40	1305.95 N	79.20 W	1308.35@	356.53	0.88
9456.00	89.78	0.50	8248.50	95.00	1402.36	1400.94 N	78.52 W	1403.14@	356.79	0.41
9551.00	90.48	0.77	8248.28	95.00	1497.30	1495.94 N	77.46 W	1497.94@	357.04	0.79
9647.00	91.19	1.12	8246.88	96.00	1593.22	1591.91 N	75.88 W	1593.72@	357.27	0.82
9742.00	89.34	359.70	8246.45	95.00	1688.17	1686.90 N	75.20 W	1688.58@	357.45	2.46
9837.00	89.08	358.61	8247.75	95.00	1783.16	1781.88 N	76.60 W	1783.53@	357.54	1.18
9933.00	89.69	359.21	8248.79	96.00	1879.15	1877.86 N	78.43 W	1879.50@	357.61	0.89
10028.00	90.13	359.64	8248.93	95.00	1974.14	1972.85 N	79.38 W	1974.45@	357.70	0.65
10124.00	90.48	0.38	8248.42	96.00	2070.11	2068.85 N	79.36 W	2070.37@	357.80	0.85
10219.00	91.01	359.75	8247.19	95.00	2165.08	2163.84 N	79.26 W	2165.29@	357.90	0.87
10314.00	89.52	359.04	8246.75	95.00	2260.07	2258.83 N	80.26 W	2260.26@	357.97	1.74
10410.00	89.96	358.92	8247.18	96.00	2356.06	2354.82 N	81.97 W	2356.24@	358.01	0.48
10505.00	90.22	358.40	8247.04	95.00	2451.06	2449.79 N	84.19 W	2451.24@	358.03	0.61
10600.00	90.75	358.04	8246.23	95.00	2546.06	2544.74 N	87.14 W	2546.23@	358.04	0.67
10695.00	91.63	358.33	8244.26	95.00	2641.03	2639.67 N	90.15 W	2641.21@	358.04	0.97
10791.00	91.36	358.75	8241.75	96.00	2737.00	2735.61 N	92.59 W	2737.17@	358.06	0.52
10886.00	91.10	359.24	8239.71	95.00	2831.97	2830.57 N	94.26 W	2832.14@	358.09	0.58
10981.00	89.78	359.73	8238.98	95.00	2926.96	2925.56 N	95.11 W	2927.11@	358.14	1.48
11077.00	89.52	359.23	8239.57	96.00	3022.95	3021.55 N	95.99 W	3023.08@	358.18	0.59
11172.00	89.78	358.79	8240.15	95.00	3117.95	3116.54 N	97.63 W	3118.07@	358.21	0.54

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Survey Report

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 RUSTLER BLUFF 25 26 28 FED 1H
 EDDY COUNTY, NM
 API#: 30-015-43055 Rig: Nabors M51

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Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS (dg/100ft)
						(ft)	(ft)	(ft)	(deg)	
11267.00	90.75	359.41	8239.71	95.00	3212.94	3211.52 N	99.12 W	3213.05@	358.23	1.21
11362.00	91.01	359.58	8238.25	95.00	3307.92	3306.51 N	99.96 W	3308.02@	358.27	0.33
11457.00	89.96	0.69	8237.45	95.00	3402.89	3401.50 N	99.73 W	3402.96@	358.32	1.61
11552.00	89.60	1.19	8237.81	95.00	3497.81	3496.49 N	98.17 W	3497.87@	358.39	0.65
11648.00	90.13	1.09	8238.04	96.00	3593.73	3592.47 N	96.26 W	3593.76@	358.47	0.56
11743.00	90.84	1.56	8237.24	95.00	3688.62	3687.44 N	94.07 W	3688.64@	358.54	0.90
11838.00	89.43	1.14	8237.01	95.00	3783.52	3782.41 N	91.83 W	3783.52@	358.61	1.55
11934.00	89.96	1.39	8237.52	96.00	3879.42	3878.39 N	89.71 W	3879.42@	358.67	0.61
12029.00	90.66	1.17	8237.01	95.00	3974.32	3973.36 N	87.59 W	3974.32@	358.74	0.77
12124.00	90.75	1.06	8235.84	95.00	4069.23	4068.33 N	85.74 W	4069.24@	358.79	0.15
12219.00	90.57	0.90	8234.75	95.00	4164.15	4163.31 N	84.11 W	4164.16@	358.84	0.25
12314.00	88.64	359.68	8235.40	95.00	4259.11	4258.30 N	83.63 W	4259.12@	358.87	2.40
12409.00	89.25	359.64	8237.15	95.00	4354.08	4353.29 N	84.20 W	4354.10@	358.89	0.64
12505.00	89.52	359.46	8238.18	96.00	4450.06	4449.28 N	84.95 W	4450.09@	358.91	0.34
12600.00	90.22	359.28	8238.40	95.00	4545.05	4544.27 N	86.00 W	4545.08@	358.92	0.76
12695.00	91.10	359.69	8237.30	95.00	4640.04	4639.26 N	86.85 W	4640.07@	358.93	1.02
12790.00	92.07	359.71	8234.67	95.00	4734.99	4734.22 N	87.35 W	4735.03@	358.94	1.02
STRAIGHT LINE PROJECTION TO BIT AT 12850'MD.										
12850.00	92.07	359.71	8232.51	60.00	4794.94	4794.18 N	87.65 W	4794.98@	358.95	0.00