

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 2 26S 27E Eddy NM

N 32.07836 W -103.83344

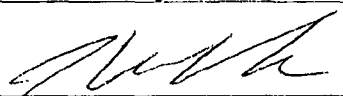
I, Timothy Cramer certify that; I am employed by PathFinder, a division of Schlumberger Technology Corporation; that I did on the day(s) of June 12, 2015 through July 22, 2015, conduct or supervise the taking of the HDS-11. surveys from a depth of 510.00 feet to a depth of 14068.00 feet referenced to 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 Midnight Sun 2 26 27 5H ST2 Well (Original Hole) API No. 30-015-43040 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 31 day of July (month) 2015 (yr)

My Commission expires:

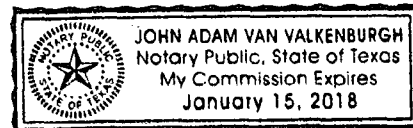
01-15-2018



Notary Public

(signature)

Bell County, TX
(County State)



Reservoir Development

PathFinder, a Schlumberger Company
9200 West Reno Avenue
Oklahoma City, Oklahoma 73127 USA
Phone: (405) 789-1515
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July 31, 2015

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

Sec 2 26S 27E Eddy NM
N 32.07836 W -103.83344

Re:

CLIENT: Chevron U.S.A. Inc.
WELL: Midnight Sun 2 26 27 5H ST2
FIELD: Delaware River; Bone Spring
RIG: Nabors M51
COUNTY: Eddy
API NO: 30-015-43040
JOB NO: 15MLD2008

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	Midnight Sun 2 26 27 5H ST2 Original Hole	510.00 Ft to 14068.00 Ft	June 12, 2015 to July 22, 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

PathFinder – a Schlumberger company

Survey Report

CHEVRON U.S.A INC.

MIDNIGHT SUN 2 26 27 5H ST02

EDDY COUNTY, NM

API#: 30-015-43040 Rig: Nabors M51

PathFinder Office Supervisor: Qun Xu

PathFinder Field Engineers: T.Cramer

Survey Horiz. Reference:WELLHEAD

Ref Coordinates: LAT:32.4.42.1117 N LON:104.9.59.6144 W

GRID Reference:NAD27 new mexico east Transverse Mercator

Ref GRID Coord: X: 551655.0000 Y: 392273.0000

North Aligned To:GRID NORTH

Total Magnetic Correction: 7.47°EAST TO GRID

Vertical Section Plane: 182.41

Survey Vert. Reference: 22.00' Rotary Table To Ground

Altitude:3222.00' 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 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	
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.										
510.00	4.40	286.92	509.50	510.00	-4.90	5.70 N	18.73 W	19.57@ 286.92	0.86	
618.00	2.11	283.36	617.32	108.00	-6.32	7.36 N	24.62 W	25.70@ 286.64	2.13	
709.00	0.70	128.62	708.30	91.00	-6.31	7.40 N	25.82 W	26.86@ 286.00	3.03	
894.00	1.32	106.51	893.27	185.00	-5.12	6.09 N	22.89 W	23.69@ 284.90	0.39	
1081.00	1.41	108.99	1080.22	187.00	-3.94	4.73 N	18.65 W	19.24@ 284.23	0.06	
1271.00	1.76	97.98	1270.15	190.00	-2.99	3.56 N	13.55 W	14.01@ 284.73	0.24	
1462.00	1.58	89.34	1461.07	191.00	-2.85	3.19 N	8.02 W	8.63@ 291.69	0.16	
1652.00	2.37	89.79	1650.95	190.00	-3.17	3.23 N	1.47 W	3.55@ 335.57	0.42	
1843.00	0.88	59.75	1841.87	191.00	-4.14	3.99 N	3.75 E	5.47@ 43.24	0.87	
2033.00	2.02	89.06	2031.81	190.00	-5.12	4.78 N	8.36 E	9.63@ 60.25	0.70	
2223.00	1.23	286.73	2221.78	190.00	-5.82	5.42 N	9.75 E	11.16@ 60.95	1.69	
2414.00	2.20	281.17	2412.69	191.00	-6.89	6.72 N	4.19 E	7.92@ 31.97	0.52	
2605.00	0.53	79.62	2603.65	191.00	-7.64	7.59 N	1.46 E	7.73@ 10.92	1.41	
2795.00	1.06	104.21	2793.63	190.00	-7.48	7.31 N	4.03 E	8.35@ 28.87	0.32	
2986.00	1.58	102.08	2984.58	191.00	-6.67	6.33 N	8.32 E	10.45@ 52.74	0.27	
3177.00	1.76	103.96	3175.50	191.00	-5.64	5.07 N	13.74 E	14.65@ 69.74	0.10	
3367.00	2.20	109.21	3365.39	190.00	-4.01	3.17 N	20.02 E	20.27@ 81.01	0.25	
3558.00	1.67	194.18	3556.31	191.00	-0.22	0.74 S	22.80 E	22.81@ 91.85	1.38	
3749.00	2.02	209.24	3747.21	191.00	5.51	6.37 S	20.47 E	21.44@ 107.29	0.31	
3939.00	2.11	209.67	3937.09	190.00	11.60	12.33 S	17.10 E	21.09@ 125.80	0.05	
4130.00	1.58	247.78	4128.00	191.00	15.83	16.39 S	12.93 E	20.87@ 141.73	0.68	
4321.00	1.14	295.83	4318.95	191.00	16.17	16.55 S	8.78 E	18.74@ 152.06	0.62	
4511.00	1.49	279.02	4508.90	190.00	15.13	15.34 S	4.64 E	16.03@ 163.18	0.27	

PathFinder – a Schlumberger company

Survey Report

CHEVRON U.S.A INC.
MIDNIGHT SUN 2 26 27 5H ST02
EDDY COUNTY, NM
API#: 30-015-43040 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)
ST01 DEPARTS ORIGINAL WELLBORE AT 4648' MD.										
4698.00	8.09	298.92	4695.15	187.00	8.97	8.59 S	9.30 W	12.66@	227.26	3.59
4793.00	7.65	298.05	4789.25	95.00	3.25	2.38 S	20.73 W	20.87@	263.44	0.48
4889.00	8.09	297.27	4884.35	96.00	-2.35	3.71 N	32.37 W	32.58@	276.55	0.47
4984.00	8.35	295.49	4978.37	95.00	-7.86	9.75 N	44.54 W	45.59@	282.34	0.38
5080.00	7.83	301.90	5073.42	96.00	-13.82	16.20 N	56.38 W	58.67@	286.03	1.08
5175.00	7.30	307.45	5167.59	95.00	-20.47	23.29 N	66.67 W	70.62@	289.26	0.95
5271.00	7.74	313.58	5262.77	96.00	-28.23	31.46 N	76.20 W	82.43@	292.43	0.95
5366.00	7.21	322.88	5356.96	95.00	-37.03	40.62 N	84.43 W	93.69@	295.69	1.39
5461.00	6.95	330.07	5451.24	95.00	-46.49	50.36 N	90.89 W	103.91@	298.99	0.97
5652.00	6.77	328.64	5640.87	191.00	-65.61	69.98 N	102.52 W	124.13@	304.32	0.13
5843.00	6.33	331.14	5830.63	191.00	-83.97	88.82 N	113.46 W	144.09@	308.05	0.27
6033.00	4.84	0.87	6019.76	190.00	-100.94	106.01 N	118.39 W	158.92@	311.84	1.69
6224.00	4.04	15.06	6210.19	191.00	-115.56	120.57 N	116.52 W	167.67@	315.98	0.71
6414.00	2.11	11.47	6399.91	190.00	-125.54	130.46 N	114.09 W	173.31@	318.83	1.02
6605.00	1.32	38.71	6590.82	191.00	-130.79	135.62 N	112.01 W	175.90@	320.45	0.58
6795.00	2.02	42.41	6780.74	190.00	-135.12	139.80 N	108.39 W	176.89@	322.21	0.37
6986.00	2.90	41.29	6971.56	191.00	-141.46	145.92 N	102.93 W	178.57@	324.80	0.46
7176.00	0.79	35.84	7161.46	190.00	-146.29	150.59 N	98.99 W	180.21@	326.68	1.11
7367.00	0.79	24.43	7352.44	191.00	-148.61	152.86 N	97.67 W	181.40@	327.42	0.08
7497.00	1.06	27.59	7482.42	130.00	-150.53	154.74 N	96.75 W	182.49@	327.99	0.21
7651.00	1.14	257.30	7636.41	154.00	-151.42	155.66 N	97.58 W	183.72@	327.92	1.30
7747.00	1.67	234.08	7732.38	96.00	-150.31	154.63 N	99.64 W	183.96@	327.20	0.80
7937.00	1.76	222.09	7922.29	190.00	-146.34	150.84 N	103.84 W	183.13@	325.46	0.19
8128.00	1.23	233.30	8113.23	191.00	-142.79	147.44 N	107.45 W	182.44@	323.92	0.32
8318.00	0.97	248.90	8303.19	190.00	-140.87	145.64 N	110.59 W	182.87@	322.79	0.21
8509.00	2.11	239.57	8494.12	191.00	-138.31	143.28 N	115.13 W	183.80@	321.22	0.61
8564.00	6.07	191.84	8548.98	55.00	-134.89	139.92 N	116.60 W	182.13@	320.19	8.92

PathFinder – a Schlumberger company

Survey Report

CHEVRON U.S.A INC.
MIDNIGHT SUN 2 26 27 5H ST02
EDDY COUNTY, NM
API#: 30-015-43040 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)
8603.00	9.15	188.29	8587.63	39.00	-129.77	134.83 N	117.47 W	178.83@	318.94	7.98
8698.00	16.71	182.21	8680.16	95.00	-108.57	113.68 N	119.09 W	164.64@	313.67	8.08
8730.00	20.58	180.22	8710.48	32.00	-98.35	103.45 N	119.29 W	157.90@	310.93	12.25
8794.00	27.00	180.42	8769.01	64.00	-72.56	77.65 N	119.44 W	142.46@	303.03	10.03
8828.00	31.57	181.10	8798.66	34.00	-55.94	61.03 N	119.66 W	134.33@	297.02	13.48
8889.00	39.39	180.63	8848.29	61.00	-20.58	25.65 N	120.18 W	122.89@	282.05	12.83
8936.00	45.90	179.95	8882.84	47.00	11.22	6.17 S	120.33 W	120.49@	267.06	13.89
8984.00	52.58	179.96	8914.17	48.00	47.53	42.51 S	120.30 W	127.59@	250.54	13.92
9080.00	66.30	181.83	8962.86	96.00	129.96	124.96 S	121.69 W	174.42@	224.24	14.39
9175.00	79.67	182.69	8990.60	95.00	220.60	215.52 S	125.29 W	249.29@	210.17	14.10
9218.00	83.98	182.32	8996.71	43.00	263.15	258.03 S	127.15 W	287.66@	206.23	10.06
9270.00	85.74	182.33	9001.37	52.00	314.94	309.78 S	129.25 W	335.66@	202.65	3.38
9357.00	91.89	182.82	9003.17	87.00	401.88	396.63 S	133.15 W	418.39@	198.56	7.09
9452.00	92.15	183.31	8999.82	95.00	496.81	491.44 S	138.23 W	510.51@	195.71	0.58
9548.00	89.69	182.97	8998.28	96.00	592.79	587.27 S	143.49 W	604.55@	193.73	2.59
9643.00	89.34	183.04	8999.08	95.00	687.78	682.14 S	148.47 W	698.11@	192.28	0.38
9738.00	89.25	183.83	9000.25	95.00	782.75	776.96 S	154.16 W	792.11@	191.22	0.84
9834.00	88.99	184.58	9001.73	96.00	878.70	872.69 S	161.20 W	887.45@	190.47	0.83
9929.00	89.52	182.07	9002.96	95.00	973.67	967.51 S	166.71 W	981.77@	189.78	2.70
10024.00	89.34	182.53	9003.91	95.00	1068.66	1062.43 S	170.52 W	1076.03@	189.12	0.52
10119.00	89.34	181.51	9005.00	95.00	1163.65	1157.37 S	173.87 W	1170.35@	188.54	1.07
10214.00	89.96	178.01	9005.58	95.00	1258.53	1252.35 S	173.47 W	1264.30@	187.89	3.74
10310.00	90.22	175.61	9005.43	96.00	1354.07	1348.19 S	168.13 W	1358.63@	187.11	2.51
10405.00	90.22	176.32	9005.07	95.00	1448.47	1442.95 S	161.44 W	1451.96@	186.38	0.75
10501.00	90.13	177.35	9004.77	96.00	1544.01	1538.81 S	156.14 W	1546.71@	185.79	1.08
10596.00	90.75	178.20	9004.04	95.00	1638.70	1633.73 S	152.45 W	1640.83@	185.33	1.11
10691.00	90.84	178.65	9002.73	95.00	1733.46	1728.68 S	149.84 W	1735.17@	184.95	0.48
10787.00	90.92	178.55	9001.25	96.00	1829.23	1824.65 S	147.50 W	1830.60@	184.62	0.13

PathFinder – a Schlumberger company

Survey Report

CHEVRON U.S.A INC.
MIDNIGHT SUN 2 26 27 5H ST02
EDDY COUNTY, NM
API#: 30-015-43040 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 (ft)	Dir (deg)	DLS (dg/100ft)
10882.00	91.01	178.76	8999.65	95.00	1924.02	1919.61 S	145.27 W	1925.09@	184.33	0.24
10977.00	89.34	179.83	8999.36	95.00	2018.87	2014.59 S	144.10 W	2019.74@	184.09	2.09
11073.00	89.25	180.47	9000.54	96.00	2114.79	2110.58 S	144.35 W	2115.52@	183.91	0.67
11168.00	89.08	180.68	9001.93	95.00	2209.73	2205.57 S	145.30 W	2210.35@	183.77	0.28
11263.00	89.25	180.82	9003.31	95.00	2304.68	2300.55 S	146.55 W	2305.21@	183.64	0.23
11359.00	89.25	181.44	9004.57	96.00	2400.65	2396.52 S	148.44 W	2401.12@	183.54	0.65
11454.00	89.34	181.92	9005.74	95.00	2495.63	2491.48 S	151.23 W	2496.06@	183.47	0.51
11549.00	89.78	181.73	9006.47	95.00	2590.62	2586.43 S	154.25 W	2591.02@	183.41	0.50
11644.00	89.96	182.40	9006.68	95.00	2685.62	2681.36 S	157.67 W	2685.99@	183.37	0.73
11740.00	90.13	182.40	9006.61	96.00	2781.62	2777.28 S	161.69 W	2781.98@	183.33	0.18
11835.00	90.13	182.22	9006.39	95.00	2876.62	2872.20 S	165.52 W	2876.97@	183.30	0.19
11930.00	90.13	182.29	9006.18	95.00	2971.62	2967.13 S	169.26 W	2971.95@	183.26	0.07
12026.00	89.69	182.46	9006.33	96.00	3067.62	3063.04 S	173.24 W	3067.94@	183.24	0.49
12121.00	90.13	180.98	9006.48	95.00	3162.61	3158.00 S	176.09 W	3162.90@	183.19	1.63
12216.00	90.66	180.89	9005.82	95.00	3257.58	3252.98 S	177.64 W	3257.83@	183.13	0.57
12312.00	90.40	181.61	9004.93	96.00	3353.55	3348.96 S	179.73 W	3353.77@	183.07	0.80
12407.00	90.31	181.64	9004.34	95.00	3448.54	3443.92 S	182.43 W	3448.74@	183.03	0.10
12503.00	90.48	181.57	9003.68	96.00	3544.53	3539.87 S	185.12 W	3544.71@	182.99	0.19
12598.00	90.75	181.60	9002.66	95.00	3639.51	3634.83 S	187.75 W	3639.68@	182.96	0.29
12693.00	90.84	181.88	9001.34	95.00	3734.50	3729.78 S	190.63 W	3734.65@	182.93	0.31
12789.00	91.36	182.33	8999.50	96.00	3830.48	3825.70 S	194.15 W	3830.62@	182.91	0.72
12884.00	91.54	182.89	8997.10	95.00	3925.45	3920.57 S	198.48 W	3925.59@	182.90	0.62
12979.00	91.71	183.63	8994.40	95.00	4020.40	4015.38 S	203.88 W	4020.55@	182.91	0.80
13075.00	90.75	182.42	8992.34	96.00	4116.37	4111.22 S	208.94 W	4116.52@	182.91	1.61
13170.00	90.66	182.36	8991.17	95.00	4211.36	4206.13 S	212.91 W	4211.51@	182.90	0.11
13265.00	90.75	182.28	8990.00	95.00	4306.35	4301.04 S	216.75 W	4306.50@	182.88	0.13
13360.00	91.01	182.60	8988.55	95.00	4401.34	4395.94 S	220.79 W	4401.49@	182.88	0.43
13456.00	91.54	182.97	8986.41	96.00	4497.31	4491.81 S	225.46 W	4497.46@	182.87	0.67

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Survey Report

CHEVRON U.S.A INC.
MIDNIGHT SUN 2 26 27 5H ST02
EDDY COUNTY, NM
API#: 30-015-43040 Rig: Nabors M51

Page 05/05

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets		Closure Dist Dir		DLS
						(ft)	(ft)	(ft)	(deg)	(dg/100ft)
13551.00	90.31	181.33	8984.88	95.00	4592.30	4586.72 S	229.02 W	4592.44@	182.86	2.16
13647.00	90.84	180.31	8983.91	96.00	4688.25	4682.71 S	230.39 W	4688.37@	182.82	1.20
13742.00	91.63	180.48	8981.86	95.00	4783.17	4777.68 S	231.05 W	4783.26@	182.77	0.85
13837.00	89.25	179.81	8981.14	95.00	4878.09	4872.67 S	231.29 W	4878.16@	182.72	2.60
13932.00	89.25	180.20	8982.38	95.00	4972.99	4967.66 S	231.30 W	4973.04@	182.67	0.41
14028.00	89.60	180.41	8983.34	96.00	5068.92	5063.66 S	231.81 W	5068.96@	182.62	0.42
14068.00	89.78	180.64	8983.56	40.00	5108.90	5103.65 S	232.18 W	5108.93@	182.60	0.73
STRAIGHT LINE PROJECTION TO BIT AT 14126'MD.										
14126.00	89.78	180.64	8983.78	58.00	5166.87	5161.65 S	232.82 W	5166.90@	182.58	0.00