

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico **NM OIL CONSERVATION**
ARTESIA DISTRICT
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-41888	² Pool Code 97020	³ Pool Name Hackberry; Bone Spring, NW
⁴ Property Code 38503	⁵ Property Name SIRIUS "17" FED COM	⁶ Well Number 8H
⁷ OGRID No. 6137	⁸ Operator Name DEVON ENERGY PRODUCTION COMPANY, L.P.	⁹ Elevation 3421.9

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	17	19 S	31 E		962	SOUTH	200	WEST	EDDY

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	17	19 S	31 E		514	SOUTH	329	EAST	EDDY

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
160			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

N 89°40'09"E 2640.39 FT N 89°38'35"E 2641.21 FT NW CORNER SEC. 17 LAT. = 32.6676579°N LONG. = 103.9000749°W NMSP EAST (FT) N = 606897.08 E = 674660.66 N Q CORNER SEC. 17 LAT. = 32.6676699°N LONG. = 103.8914966°W NMSP EAST (FT) N = 606912.33 E = 677300.38 NE CORNER SEC. 17 LAT. = 32.6676846°N LONG. = 103.8829157°W NMSP EAST (FT) N = 606928.78 E = 679940.92		17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. <i>Lucretia Morris</i> 1/14/2015 Signature Date Lucretia Morris, Regulatory Analyst Printed Name Lucretia.Morris@dvn.com E-mail Address
NOTE: LATITUDE AND LONGITUDE COORDINATES ARE SHOWN USING THE NORTH AMERICAN DATUM OF 1983 (NAD83). LISTED NEW MEXICO STATE PLANE EAST COORDINATES ARE GRID (NAD83). BASIS OF BEARING AND DISTANCES USED ARE NEW MEXICO STATE PLANE EAST COORDINATES MODIFIED TO THE SURFACE. W Q CORNER SEC. 17 LAT. = 32.6604036°N LONG. = 103.9000487°W NMSP EAST (FT) N = 604257.94 E = 674679.48 E Q CORNER SEC. 17 LAT. = 32.6604256°N LONG. = 103.8828967°W NMSP EAST (FT) N = 604287.91 E = 679957.97 18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. SEPTEMBER 30, 2015 Date of Survey <i>[Signature]</i> Signature and Seal of Professional Surveyor Certificate Number: 12797 SURVEY NO. 1596B		
SIRIUS "17" FED COM #8H ELEV. = 3421.9' LAT. = 32.6557910°N (NAD83) LONG. = 103.8993810°W NMSP EAST (FT) N = 602580.64 E = 674891.83 BOTTOM OF HOLE LAT. = 32.6546791°N LONG. = 103.8839785°W NMSP EAST (FT) N = 602195.85 E = 679633.90 SW CORNER SEC. 17 LAT. = 32.6531465°N LONG. = 103.9000209°W NMSP EAST (FT) N = 601617.77 E = 674698.81 S Q CORNER SEC. 17 LAT. = 32.6531577°N LONG. = 103.8914473°W NMSP EAST (FT) N = 601632.72 E = 677337.52 SE CORNER SEC. 17 LAT. = 32.6531671°N LONG. = 103.8828777°W NMSP EAST (FT) N = 601647.20 E = 679975.01 200' SURFACE LOCATION 415' BOTTOM OF HOLE 329' S 89°40'31"W 2639.37 FT S 89°41'07"W 2638.15 FT		

PP: 218' FWL & 705' FSL, Sec 17, T19S, R31E

Project Area:

Producing Area:

3329 W. Pinhook Rd.
Lafayette, LA 70508-3506, USA
Tel. 337-233-3982
Fax 337-234-2988

PATHFINDER
A Schlumberger Company

NM OIL CONSERVATION
ARTESIA DISTRICT

JUN 11 2015

RECEIVED

DIRECTIONAL SURVEY REPORT

DEVON ENERGY PRODUCTION CO., L.P.

SIRIUS 17 FED COM 8H

EDDY COUNTY, NEW MEXICO

PREPARED BY: MARK TRAHAN

3329 W. Pinhook Rd.
Lafayette, LA 70508-3506, USA
Tel. 337-233-3982
Fax 337-234-2988



November 14, 2014

DEVON ENERGY PRODUCTION CO.
Ms. Judy Barnett
Regulatory Compliance Professional
333 West Sheridan
Oklahoma City, OK 73102

RE: DEVON ENERGY PRODUCTION CO., L.P.
SIRIUS 17 FED COM 8H
EDDY COUNTY, NM
RIG: H&P 300
API NO.: 30-015-41888
FILE NO.: 14LAF0262

Dear Ms. Barnett:

We hereby certify that the enclosed Original Field Survey Data contained in this report represents to the best of our knowledge, a true and accurate survey of the well at the time the survey was run.

DIRECTIONAL SURVEY DATA
3 – Original Directional Survey Reports

We appreciate the opportunity to work with you and we look forward to your business support. If you have any questions, I can be reached at (337) 233-3982.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Trahan".

Mark Trahan
M/LWD Service Coordinator
PathFinder, a Schlumberger company

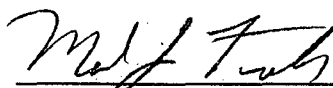
MT:tb

DIRECTIONAL SURVEY COMPANY REPORT:

1. SURVEYING COMPANY: PATHFINDER, A SCHLUMBERGER COMPANY
2. NAME OF PERSON(S) PERFORMING SURVEY:
A) NICOLAS MERCADO
3. POSITION OF SAID PERSON(S): (A) SURVEYORS (FIELD ENGINEERS)
4. DATE(S) ON WHICH SURVEY WAS PERFORMED: 10/22/14 TO 11/04/14
5. STATE IN WHICH SURVEY WAS PERFORMED: NEW MEXICO
6. LOCATION OF WELL: EDDY COUNTY
7. TYPE OF SURVEY(S) PERFORMED: MWD
8. COMPLETE IDENTIFICATION OF WELL:

DEVON ENERGY PRODUCTION CO., L.P.
SIRIUS 17 FED COM 8H
EDDY COUNTY, NM
RIG: H&P 300
API NO.: 30-015-41888
9. SURVEY CERTIFIED FROM: 3,912 TO 12,511 FEET MEASURED DEPTH.

THIS IS TO VERIFY THAT ATTACHED DOCUMENTS SHOWING THE WELL TO BE
DISPLACED AT 4,759.28 FEET ON A BEARING OF 94.98 DEGREES FROM THE CENTER
OF THE ROTARY TABLE AT A MEASURED DEPTH OF 12,511 FEET, ARE TRUE AND
CORRECT TO THE BEST OF MY KNOWLEDGE.



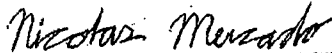
MARK TRAHAN
M/LWD SERVICE COORDINATOR

3329 W. Pinhook Rd.
Lafayette, LA 70508-3506, USA
Tel. 337-233-3982
Fax 337-234-2988



STATE OF LOUISIANA
PARISH OF LAFAYETTE

I, **Nicolas Mercado**, certify that; I am employed by PathFinder, a Schlumberger company; that I did on the day(s) of **10/22/14** through **11/04/14** conduct or supervise the taking of a **Measurement While Drilling** survey from a depth of **3,912 feet to a depth of 12,511 feet**; that the data is true, correct, complete and within the limitations of the tool as set forth by PathFinder, a Schlumberger company; that I am authorized and qualified to make this report; that this survey was conducted at the request of **DEVON ENERGY PRODUCTION CO., L.P.** for the **Sirius 17 Fed Com 8H Well API No. 30-015-41888** in **Eddy County, New Mexico**; and that I have reviewed this report and find that it conforms to the principles and procedures as set forth by PathFinder, a Schlumberger company.



PathFinder Field Engineer

PathFinder – a Schlumberger company

BHL Report

Page 01/01
Tie-in Date: 10/22/2014
Date Completed: 11/04/2014

DEVON ENERGY PRODUCTION COMPANY, LP
SIRIUS 17 FED COM 8H
Eddy COUNTY, New Mexico
API#: 30-015-41888 Rig: H&P 300
PathFinder Office Supervisor: MARK TRAHAN
PathFinder Field Engineers: NICOLAS MERCADO

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.39.20.8474 N LON: 103.53.57.7716 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 674891.8300 Y: 602580.6400
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.12° EAST TO GRID
Vertical Section Plane: 89.68
Survey Vert. Reference: 26.20' Rotary Table To Ground
Altitude: 3421.90' Ground To MSL

Measured Depth	12511.00	(feet)
Inclination	87.76	(deg)
Azimuth	89.43	(deg)
True Vertical Depth	8022.16	(feet)
Vertical Section	4738.92	(feet)
Survey X cord	679633.13	(feet)
Survey Y cord	602167.36	(feet)
Survey Lat	32.65460080 N	(deg)
Survey Lon	103.88398138 W	(deg)
Rectangular Corr. N/S	413.28 S	(feet)
Rectangular Corr. E/W	4741.30 E	(feet)
Closure Distance	4759.28	(feet)
Direction of Closure	94.98	(deg)
Dogleg Severity	0.00	(deg/100ft)

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
SIRIUS 17 FED COM. 8H
Eddy COUNTY, New Mexico
API#: 30-015-41888 Rig: H&P 300
PathFinder Office Supervisor: MARK TRAHAN
PathFinder Field Engineers: NICOLAS MERCADO

Page 01/06
Tie-in Date: 10/22/2014
Date Completed: 11/04/2014

Survey Horiz. Reference: WELLHEAD
Ref Coordinates: LAT: 32.39.20.8474 N LON: 103.53.57.7716 W
GRID Reference: NAD83 new mexico east Transverse Mercator
Ref GRID Coord: X: 674891.8300 Y: 602580.6400
North Aligned To: GRID NORTH
Total Magnetic Correction: 7.12° EAST TO GRID
Vertical Section Plane: 89.68
Survey Vert. Reference: 26.20' Rotary Table To Ground
Altitude: 3421.90' Ground To MSL

Survey Calculations by RX5 V6.05B using Minimum Curvature

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft)	Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)	DLS (dg/100ft)
THE FOLLOWING ARE EXTREME XPULSE MWD SURVEYS.										
0.00	0.00	0.00	0.00	0.00	-0.01	0.00 N 0.01 W	32.65579096 N	103.89938101 W	0.01@ 277.16	0.00
137.00	0.48	169.23	137.00	137.00	0.10	0.56 S 0.10 E	32.65578941 N	103.89938067 W	0.57@ 169.72	0.35
257.00	0.70	164.00	256.99	120.00	0.39	1.76 S 0.40 E	32.65578611 N	103.89937972 W	1.81@ 167.27	0.19
345.00	1.01	164.00	344.98	88.00	0.74	3.02 S 0.76 E	32.65578264 N	103.89937856 W	3.12@ 165.89	0.35
427.00	1.01	129.20	426.97	82.00	1.50	4.18 S 1.52 E	32.65577946 N	103.89937611 W	4.44@ 160.00	0.74
515.00	1.41	117.33	514.95	88.00	3.05	5.16 S 3.08 E	32.65577673 N	103.89937105 W	6.01@ 149.16	0.53
638.00	1.80	122.43	637.90	123.00	6.02	6.89 S 6.06 E	32.65577194 N	103.89936140 W	9.18@ 138.69	0.34
760.00	1.89	118.12	759.84	122.00	9.40	8.87 S 9.45 E	32.65576647 N	103.89935041 W	12.96@ 133.19	0.14
888.00	1.49	119.92	887.78	128.00	12.69	10.69 S 12.75 E	32.65576142 N	103.89933970 W	16.64@ 129.98	0.32
951.00	1.41	115.79	950.76	63.00	14.10	11.44 S 14.16 E	32.65575935 N	103.89933513 W	18.20@ 128.93	0.21
1014.00	1.32	113.42	1013.75	63.00	15.46	12.07 S 15.52 E	32.65575762 N	103.89933071 W	19.66@ 127.85	0.17
1139.00	1.10	109.91	1138.72	125.00	17.90	13.05 S 17.97 E	32.65575490 N	103.89932277 W	22.21@ 125.97	0.19
1262.00	1.10	111.00	1261.69	123.00	20.11	13.87 S 20.19 E	32.65575260 N	103.89931559 W	24.49@ 124.50	0.02
1383.00	1.41	95.10	1382.67	121.00	22.67	14.42 S 22.75 E	32.65575107 N	103.89930725 W	26.94@ 122.37	0.38
1506.00	2.20	83.93	1505.60	123.00	26.53	14.30 S 26.61 E	32.65575134 N	103.89929473 W	30.21@ 118.26	0.70
1547.00	2.11	80.11	1546.58	41.00	28.05	14.09 S 28.13 E	32.65575191 N	103.89928977 W	31.47@ 116.61	0.41
1629.00	2.29	79.63	1628.51	82.00	31.16	13.54 S 31.23 E	32.65575340 N	103.89927969 W	34.04@ 113.43	0.22
1756.00	2.11	80.11	1755.42	127.00	35.96	12.68 S 36.03 E	32.65575570 N	103.89926409 W	38.20@ 109.39	0.14
1882.00	2.11	77.61	1881.34	126.00	40.52	11.78 S 40.58 E	32.65575811 N	103.89924929 W	42.26@ 106.19	0.07
2008.00	1.58	86.53	2007.27	126.00	44.52	11.18 S 44.58 E	32.65575972 N	103.89923629 W	45.96@ 104.08	0.48
2197.00	0.88	97.21	2196.23	189.00	48.56	11.21 S 48.62 E	32.65575961 N	103.89922316 W	49.90@ 102.98	0.39
2320.00	0.62	47.72	2319.22	123.00	49.99	10.88 S 50.05 E	32.65576050 N	103.89921851 W	51.22@ 102.26	0.54
2415.00	0.70	126.82	2414.21	95.00	50.84	10.88 S 50.90 E	32.65576049 N	103.89921576 W	52.05@ 102.06	0.89

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
SIRIUS 17 FED COM 8H

Eddy COUNTY, New Mexico

API#: 30-015-41888 Rig: H&P 300

Page 02/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
2507.00	0.70	125.42	2506.20	92.00	51.74	11.54 S	51.80 E	32.65575865 N	103.89921282 W	53.07@	102.56	0.02
2601.00	0.88	125.42	2600.20	94.00	52.79	12.29 S	52.86 E	32.65575658 N	103.89920940 W	54.27@	103.09	0.19
2700.00	0.88	139.83	2699.18	99.00	53.90	13.31 S	53.97 E	32.65575376 N	103.89920581 W	55.59@	103.86	0.22
2795.00	1.20	140.10	2794.17	95.00	55.00	14.63 S	55.08 E	32.65575012 N	103.89920222 W	56.99@	104.88	0.34
2889.00	1.32	141.63	2888.15	94.00	56.29	16.24 S	56.38 E	32.65574569 N	103.89919801 W	58.67@	106.07	0.13
2983.00	1.32	147.60	2982.12	94.00	57.53	18.00 S	57.63 E	32.65574083 N	103.89919396 W	60.38@	107.34	0.15
3075.00	1.32	144.80	3074.10	92.00	58.70	19.76 S	58.81 E	32.65573598 N	103.89919016 W	62.04@	108.57	0.07
3170.00	1.32	146.03	3169.07	95.00	59.93	21.56 S	60.06 E	32.65573101 N	103.89918615 W	63.81@	109.75	0.03
3264.00	1.19	140.62	3263.05	94.00	61.15	23.22 S	61.28 E	32.65572646 N	103.89918219 W	65.53@	110.75	0.19
3362.00	1.32	149.10	3361.03	98.00	62.36	24.97 S	62.51 E	32.65572162 N	103.89917823 W	67.31@	111.78	0.23
3456.00	1.10	146.82	3455.00	94.00	63.41	26.65 S	63.56 E	32.65571698 N	103.89917484 W	68.92@	112.75	0.24
3550.00	1.49	145.02	3548.98	94.00	64.59	28.41 S	64.75 E	32.65571214 N	103.89917099 W	70.71@	113.69	0.42
3644.00	1.40	140.17	3642.95	94.00	66.02	30.29 S	66.19 E	32.65570695 N	103.89916635 W	72.79@	114.59	0.16
3740.00	1.19	143.92	3738.93	96.00	67.34	32.00 S	67.52 E	32.65570224 N	103.89916202 W	74.72@	115.36	0.24
3834.00	1.19	148.40	3832.91	94.00	68.42	33.62 S	68.61 E	32.65569777 N	103.89915851 W	76.40@	116.11	0.10
** TIED INTO EXTREME XPULSE MWD SURVEYS AT 3912'MD.												
3912.00	1.10	147.21	3910.89	78.00	69.24	34.94 S	69.44 E	32.65569414 N	103.89915583 W	77.73@	116.71	0.12
THE FOLLOWING ARE PATHFINDER MWD SURVEYS.												
4110.00	1.76	155.05	4108.83	198.00	71.53	39.29 S	71.75 E	32.65568214 N	103.89914838 W	81.81@	118.71	0.35
4204.00	2.55	175.79	4202.76	94.00	72.27	42.69 S	72.51 E	32.65567281 N	103.89914595 W	84.15@	120.49	1.17
4299.00	4.22	185.46	4297.59	95.00	72.07	48.28 S	72.34 E	32.65565745 N	103.89914660 W	86.97@	123.72	1.85
4394.00	5.28	188.59	4392.27	95.00	71.04	56.08 S	71.35 E	32.65563602 N	103.89914990 W	90.75@	128.17	1.15
4488.00	5.63	193.42	4485.84	94.00	69.27	64.84 S	69.64 E	32.65561195 N	103.89915560 W	95.15@	132.96	0.61
4583.00	5.10	192.86	4580.42	95.00	67.20	73.49 S	67.61 E	32.65558820 N	103.89916228 W	99.86@	137.38	0.56
4677.00	4.57	190.50	4674.09	94.00	65.55	81.24 S	66.00 E	32.65556690 N	103.89916762 W	104.68@	140.91	0.60
4772.00	4.92	188.76	4768.76	95.00	64.19	88.99 S	64.69 E	32.65554562 N	103.89917198 W	110.02@	143.99	0.40
4866.00	6.16	203.06	4862.33	94.00	61.56	97.62 S	62.10 E	32.65552194 N	103.89918051 W	115.70@	147.54	1.96
4961.00	5.36	206.49	4956.85	95.00	57.53	106.28 S	58.13 E	32.65549818 N	103.89919354 W	121.14@	151.32	0.92

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
SIRIUS 17 FED COM 8H
Eddy COUNTY, New Mexico
API#: 30-015-41888 Rig: H&P 300

Page 03/06

Measured Depth (ft)	Incl (deg)	Drift Dir. (deg)	TVD (ft)	Course Length (ft)	Vertical Section (ft)	TOTAL Rectangular Offsets (ft) (ft)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
5055.00	6.24	203.51	5050.36	94.00	53.49	114.89 S	54.13 E	32.65547455 N	103.89920664 W	127.01@	154.77	0.99
5150.00	6.42	197.29	5144.79	95.00	49.79	124.70 S	50.49 E	32.65544764 N	103.89921859 W	134.53@	157.96	0.75
5244.00	5.80	194.24	5238.25	94.00	47.01	134.32 S	47.76 E	32.65542122 N	103.89922759 W	142.56@	160.43	0.74
5339.00	5.19	193.84	5332.82	95.00	44.75	143.14 S	45.55 E	32.65539699 N	103.89923488 W	150.22@	162.35	0.64
5433.00	5.98	204.10	5426.37	94.00	41.69	151.74 S	42.54 E	32.65537339 N	103.89924480 W	157.59@	164.34	1.35
5528.00	6.24	208.87	5520.83	95.00	37.12	160.78 S	38.02 E	32.65534860 N	103.89925958 W	165.22@	166.69	0.60
5622.00	5.80	198.35	5614.32	94.00	33.11	169.76 S	34.06 E	32.65532395 N	103.89927258 W	173.15@	168.65	1.26
5717.00	5.98	202.22	5708.81	95.00	29.68	178.90 S	30.68 E	32.65529888 N	103.89928369 W	181.51@	170.27	0.46
5811.00	5.98	191.28	5802.31	94.00	26.82	188.24 S	27.87 E	32.65527325 N	103.89929294 W	190.29@	171.58	1.21
5905.00	6.60	193.04	5895.74	94.00	24.58	198.30 S	25.69 E	32.65524561 N	103.89930015 W	199.96@	172.62	0.69
6000.00	5.63	193.69	5990.20	95.00	22.19	208.15 S	23.36 E	32.65521857 N	103.89930786 W	209.45@	173.60	1.02
6094.00	5.89	198.67	6083.72	94.00	19.51	217.20 S	20.72 E	32.65519373 N	103.89931655 W	218.18@	174.55	0.60
6189.00	5.45	195.23	6178.26	95.00	16.71	226.17 S	17.98 E	32.65516910 N	103.89932559 W	226.88@	175.46	0.59
6284.00	4.92	198.13	6272.87	95.00	14.21	234.39 S	15.52 E	32.65514652 N	103.89933367 W	234.91@	176.21	0.62
6378.00	5.10	207.42	6366.51	94.00	10.99	241.93 S	12.35 E	32.65512583 N	103.89934409 W	242.25@	177.08	0.88
6472.00	4.04	211.67	6460.21	94.00	7.29	248.46 S	8.68 E	32.65510794 N	103.89935608 W	248.61@	178.00	1.18
6567.00	5.54	202.29	6554.88	95.00	3.76	255.55 S	5.19 E	32.65508848 N	103.89936753 W	255.60@	178.84	1.78
6661.00	6.95	194.80	6648.32	94.00	0.53	265.25 S	2.01 E	32.65506186 N	103.89937798 W	265.26@	179.57	1.73
6756.00	6.60	188.91	6742.66	95.00	-1.84	276.20 S	0.30 W	32.65503179 N	103.89938564 W	276.20@	180.06	0.82
6850.00	5.54	187.25	6836.13	94.00	-3.31	286.04 S	1.71 W	32.65500476 N	103.89939035 W	286.04@	180.34	1.14
6945.00	4.75	184.79	6930.75	95.00	-4.26	294.51 S	2.62 W	32.65498150 N	103.89939341 W	294.52@	180.51	0.86
7039.00	6.51	189.07	7024.29	94.00	-5.48	303.65 S	3.78 W	32.65495638 N	103.89939732 W	303.67@	180.71	1.92
7133.00	6.24	188.84	7117.71	94.00	-7.16	313.96 S	5.41 W	32.65492806 N	103.89940273 W	314.00@	180.99	0.29
7228.00	5.80	182.44	7212.19	95.00	-8.21	323.85 S	6.41 W	32.65490087 N	103.89940611 W	323.92@	181.13	0.84
7323.00	5.54	182.99	7306.72	95.00	-8.71	333.23 S	6.85 W	32.65487510 N	103.89940767 W	333.30@	181.18	0.28
7416.00	4.48	183.17	7399.37	93.00	-9.19	341.34 S	7.28 W	32.65485282 N	103.89940919 W	341.42@	181.22	1.14
7448.00	6.24	167.38	7431.23	32.00	-8.90	344.29 S	6.97 W	32.65484472 N	103.89940822 W	344.36@	181.16	7.13

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
SIRIUS 17 FED COM 8H

Eddy COUNTY, New Mexico

API#: 30-015-41888 Rig: H&P 300

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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)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
7479.00	8.71	157.37	7461.96	31.00	-7.65	348.10 S	5.70 W	32.65483423 N	103.89940414 W	348.14@	180.94	8.98
7511.00	11.08	154.26	7493.48	32.00	-5.41	353.10 S	3.43 W	32.65482044 N	103.89939684 W	353.12@	180.56	7.59
7542.00	14.07	145.39	7523.74	31.00	-2.00	358.89 S	0.00 E	32.65480450 N	103.89938576 W	358.89@	180.00	11.46
7574.00	17.41	136.36	7554.54	32.00	3.47	365.56 S	5.52 E	32.65478611 N	103.89936792 W	365.60@	179.14	12.91
7605.00	20.58	128.51	7583.85	31.00	10.90	372.31 S	12.98 E	32.65476746 N	103.89934375 W	372.54@	178.00	13.11
7637.00	23.39	118.25	7613.53	32.00	20.87	378.82 S	22.99 E	32.65474945 N	103.89931134 W	379.52@	176.53	14.84
7668.00	25.76	109.29	7641.73	31.00	32.62	383.96 S	34.77 E	32.65473519 N	103.89927312 W	385.53@	174.83	14.23
7700.00	27.87	104.38	7670.29	32.00	46.41	388.12 S	48.58 E	32.65472361 N	103.89922830 W	391.15@	172.87	9.55
7731.00	30.95	100.19	7697.30	31.00	61.26	391.33 S	63.45 E	32.65471462 N	103.89918003 W	396.44@	170.79	11.94
7763.00	34.12	98.46	7724.27	32.00	78.23	394.11 S	80.43 E	32.65470680 N	103.89912489 W	402.23@	168.47	10.32
7794.00	37.55	98.53	7749.40	31.00	96.16	396.79 S	98.38 E	32.65469923 N	103.89906661 W	408.80@	166.07	11.07
7826.00	40.89	96.76	7774.19	32.00	116.20	399.47 S	118.43 E	32.65469163 N	103.89900150 W	416.65@	163.49	11.01
7857.00	44.05	94.14	7797.06	31.00	137.02	401.44 S	139.26 E	32.65468598 N	103.89893384 W	424.91@	160.87	11.68
7889.00	47.48	93.74	7819.38	32.00	159.88	403.01 S	162.13 E	32.65468140 N	103.89885956 W	434.40@	158.09	10.76
7920.00	51.44	93.33	7839.52	31.00	183.38	404.46 S	185.64 E	32.65467715 N	103.89878319 W	445.03@	155.35	12.81
7952.00	54.43	93.55	7858.81	32.00	208.85	406.00 S	211.13 E	32.65467265 N	103.89870041 W	457.61@	152.52	9.36
7983.00	56.98	93.31	7876.27	31.00	234.41	407.53 S	236.69 E	32.65466815 N	103.89861737 W	471.27@	149.85	8.25
8015.00	59.53	93.08	7893.11	32.00	261.57	409.04 S	263.86 E	32.65466368 N	103.89852912 W	486.76@	147.18	7.99
8046.00	62.61	92.72	7908.10	31.00	288.65	410.41 S	290.95 E	32.65465960 N	103.89844110 W	503.08@	144.67	9.99
8078.00	65.33	92.40	7922.14	32.00	317.37	411.70 S	319.67 E	32.65465575 N	103.89834780 W	521.23@	142.17	8.55
8109.00	67.53	92.08	7934.54	31.00	345.75	412.81 S	348.06 E	32.65465238 N	103.89825557 W	539.96@	139.86	7.16
8141.00	70.43	91.68	7946.02	32.00	375.60	413.79 S	377.91 E	32.65464936 N	103.89815859 W	560.39@	137.59	9.14
8172.00	74.13	91.42	7955.45	31.00	405.11	414.58 S	407.43 E	32.65464683 N	103.89806271 W	581.27@	135.50	11.96
8204.00	77.03	91.34	7963.42	32.00	436.08	415.33 S	438.41 E	32.65464443 N	103.89796206 W	603.90@	133.45	9.07
8235.00	79.76	90.81	7969.65	31.00	466.44	415.90 S	468.77 E	32.65464252 N	103.89786343 W	626.67@	131.58	8.96
8267.00	82.92	90.77	7974.47	32.00	498.06	416.34 S	500.39 E	32.65464097 N	103.89776068 W	650.94@	129.76	9.88
8360.00	87.58	89.55	7982.17	93.00	590.71	416.59 S	593.05 E	32.65463922 N	103.89745964 W	724.74@	125.09	5.18

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
SIRIUS 17 FED COM 8H

Eddy COUNTY, New Mexico

API#: 30-015-41888 Rig: H&P 300

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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)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
8455.00	86.17	89.70	7987.35	95.00	685.57	415.97 S	687.90 E	32.65463986 N	103.89715143 W	803.89@	121.16	1.49
8549.00	87.67	89.11	7992.40	94.00	779.43	414.99 S	781.76 E	32.65464148 N	103.89684647 W	885.08@	117.96	1.71
8644.00	89.96	88.40	7994.36	95.00	874.39	412.93 S	876.71 E	32.65464608 N	103.89653794 W	969.09@	115.22	2.52
8738.00	88.64	90.44	7995.51	94.00	968.37	411.98 S	970.69 E	32.65464763 N	103.89623257 W	1054.50@	113.00	2.58
8833.00	88.81	90.16	7997.63	95.00	1063.34	412.48 S	1065.66 E	32.65464519 N	103.89592399 W	1142.70@	111.16	0.34
8927.00	91.54	88.58	7997.34	94.00	1157.33	411.44 S	1159.64 E	32.65464696 N	103.89561861 W	1230.47@	109.53	3.35
9022.00	90.48	88.16	7995.66	95.00	1252.29	408.74 S	1254.59 E	32.65465332 N	103.89531009 W	1319.49@	108.05	1.20
9116.00	89.34	88.24	7995.81	94.00	1346.26	405.79 S	1348.54 E	32.65466037 N	103.89500478 W	1408.27@	106.75	1.22
9210.00	89.34	88.97	7996.89	94.00	1440.23	403.50 S	1442.51 E	32.65466559 N	103.89469945 W	1497.88@	105.63	0.78
9305.00	88.64	88.58	7998.57	95.00	1535.20	401.47 S	1537.47 E	32.65467009 N	103.89439087 W	1589.02@	104.63	0.84
9399.00	87.58	89.66	8001.67	94.00	1629.15	400.03 S	1631.41 E	32.65467299 N	103.89408565 W	1679.73@	103.78	1.61
9494.00	88.55	88.81	8004.88	95.00	1724.09	398.76 S	1726.34 E	32.65467539 N	103.89377717 W	1771.80@	103.01	1.36
9588.00	89.16	88.02	8006.76	94.00	1818.04	396.16 S	1820.28 E	32.65468147 N	103.89347190 W	1862.90@	102.28	1.06
9683.00	87.93	89.07	8009.17	95.00	1912.99	393.75 S	1915.22 E	32.65468702 N	103.89316341 W	1955.28@	101.62	1.70
9778.00	88.72	88.79	8011.94	95.00	2007.94	391.97 S	2010.16 E	32.65469081 N	103.89285491 W	2048.02@	101.03	0.88
9872.00	89.87	88.17	8013.10	94.00	2101.91	389.48 S	2104.12 E	32.65469659 N	103.89254959 W	2139.86@	100.49	1.39
9966.00	88.37	88.43	8014.54	94.00	2195.87	386.69 S	2198.06 E	32.65470318 N	103.89224432 W	2231.82@	99.98	1.62
10061.00	89.52	88.69	8016.29	95.00	2290.83	384.31 S	2293.02 E	32.65470866 N	103.89193577 W	2325.00@	99.51	1.24
10155.00	90.13	88.48	8016.58	94.00	2384.82	381.99 S	2386.99 E	32.65471397 N	103.89163042 W	2417.36@	99.09	0.69
10249.00	90.04	88.36	8016.44	94.00	2478.79	379.39 S	2480.95 E	32.65472001 N	103.89132508 W	2509.79@	98.69	0.16
10344.00	92.51	89.95	8014.33	95.00	2573.76	377.99 S	2575.91 E	32.65472278 N	103.89101654 W	2603.49@	98.35	3.09
10438.00	92.24	89.50	8010.43	94.00	2667.68	377.54 S	2669.83 E	32.65472294 N	103.89071138 W	2696.39@	98.05	0.56
10533.00	91.63	89.38	8007.22	95.00	2762.62	376.61 S	2764.77 E	32.65472440 N	103.89040289 W	2790.30@	97.76	0.65
10627.00	92.51	90.46	8003.83	94.00	2856.56	376.48 S	2858.70 E	32.65472369 N	103.89009768 W	2883.39@	97.50	1.48
10722.00	92.86	91.84	7999.38	95.00	2951.42	378.39 S	2953.58 E	32.65471737 N	103.88978944 W	2977.72@	97.30	1.50
10817.00	92.33	91.23	7995.08	95.00	3046.27	380.93 S	3048.44 E	32.65470929 N	103.88948124 W	3072.15@	97.12	0.85
10911.00	92.15	91.87	7991.40	94.00	3140.15	383.47 S	3142.34 E	32.65470123 N	103.88917620 W	3165.65@	96.96	0.71

PathFinder – a Schlumberger company

Survey Report

DEVON ENERGY PRODUCTION COMPANY, LP
SIRIUS 17 FED COM 8H

Eddy COUNTY, New Mexico

API#: 30-015-41888 Rig: H&P 300

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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)		Survey Latitude (deg)	Survey Longitude (deg)	Closure Dist Dir (ft) (deg)		DLS (dg/100ft)
11005.00	89.96	91.75	7989.67	94.00	3234.06	386.44 S	3236.27 E	32.65469199 N	103.88887105 W	3259.26@	96.81	2.33
11100.00	88.90	91.40	7990.62	95.00	3329.00	389.05 S	3331.23 E	32.65468372 N	103.88856255 W	3353.87@	96.66	1.18
11194.00	87.85	91.77	7993.28	94.00	3422.91	391.65 S	3425.15 E	32.65467549 N	103.88825741 W	3447.47@	96.52	1.18
11289.00	88.81	94.29	7996.05	95.00	3517.70	396.67 S	3519.97 E	32.65466060 N	103.88794940 W	3542.25@	96.43	2.84
11383.00	88.46	93.02	7998.29	94.00	3611.44	402.66 S	3613.75 E	32.65464306 N	103.88764478 W	3636.11@	96.36	1.40
11478.00	88.11	90.92	8001.13	95.00	3706.32	405.92 S	3708.65 E	32.65463299 N	103.88733650 W	3730.79@	96.25	2.24
11572.00	89.96	90.32	8002.72	94.00	3800.29	406.94 S	3802.62 E	32.65462911 N	103.88703117 W	3824.33@	96.11	2.07
11666.00	88.90	90.45	8003.65	94.00	3894.28	407.57 S	3896.61 E	32.65462629 N	103.88672579 W	3917.87@	95.97	1.14
11761.00	87.58	91.23	8006.57	95.00	3989.21	408.96 S	3991.56 E	32.65462136 N	103.88641733 W	4012.45@	95.85	1.61
11855.00	89.43	90.50	8009.02	94.00	4083.15	410.38 S	4085.51 E	32.65461638 N	103.88611208 W	4106.07@	95.74	2.11
11950.00	90.22	90.62	8009.31	95.00	4178.14	411.31 S	4180.50 E	32.65461272 N	103.88580345 W	4200.69@	95.62	0.84
12044.00	89.34	90.82	8009.67	94.00	4272.12	412.49 S	4274.49 E	32.65460839 N	103.88549807 W	4294.35@	95.51	0.96
12139.00	88.72	90.05	8011.28	95.00	4367.10	413.21 S	4369.48 E	32.65460530 N	103.88518947 W	4388.97@	95.40	1.04
12233.00	88.72	90.38	8013.38	94.00	4461.07	413.56 S	4463.45 E	32.65460324 N	103.88488414 W	4482.57@	95.29	0.35
12327.00	88.55	90.46	8015.62	94.00	4555.04	414.25 S	4557.42 E	32.65460026 N	103.88457883 W	4576.21@	95.19	0.20
12422.00	87.76	89.43	8018.68	95.00	4649.99	414.16 S	4652.37 E	32.65459941 N	103.88427033 W	4670.77@	95.09	1.37
STRAIGHT PROJECTION TO BIT DEPTH AT 12511' MD.												
12511.00	87.76	89.43	8022.16	89.00	4738.92	413.28 S	4741.30 E	32.65460080 N	103.88398138 W	4759.28@	94.98	0.00

** The survey data at tie-in point was furnished by a recognized survey company and entered as submitted. Survey stations above the tie-in point represent recalculated data by PathFinder – a Schlumberger company and may reflect minor changes due to rounding differences between survey programs. Only survey stations taken by qualified PathFinder personnel are subject to certification.



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 17 T19S R31E	API/UWI 3001541888	Latitude (") 32° 39' 20.848" N	Longitude (") 103° 53' 57.772" W	Ground Elev... 3,421.90
			KB - GL (ft) 26.20	Orig KB Elev (ft) 3,448.10
				Tubing Head Elevation (ft)

Wellbores				
Wellbore Name OH	Parent Wellbore OH	SAP Well ID	Kick Off Depth (ftKB) 7,435.0	Vertical Section Direction (") 89.68
Actual Deviation Survey EXTREME XPULSE / MWD, Proposed? No	Definitive? Yes	Proposed? No	Proposed Deviation Survey EXTREME XPULSE / MWD, Proposed? No	

Deviation Survey				
Date 10/6/2014	Description EXTREME XPULSE / MWD			
MD Tie In (ftKB) 0.00	TVD Tie In (ftKB) 0.00	Inclination Tie In (") 0.00	Azimuth Tie In (") 0.00	NST Tie In (ft) 0.00
				EW Tie In (ft) 0.00

Date	MD (ftKB)	Incl (")	Azm (")	TVD (ftKB)	VS (ft)	N/S (ft)	EW (ft)	DLS (")/100m	Survey Tool	Survey Company
10/14/2...	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MS	EXTREME ENGINEERING
10/6/2014	137.00	0.48	169.23	137.00	0.10	-0.56	0.11	0.35	MS	EXTREME ENGINEERING
10/6/2014	257.00	0.70	164.00	256.99	0.39	-1.76	0.40	0.19	MS	EXTREME ENGINEERING
10/6/2014	345.00	1.01	164.00	344.98	0.75	-3.02	0.77	0.35	MS	EXTREME ENGINEERING
10/6/2014	427.00	1.01	129.20	426.97	1.50	-4.18	1.52	0.74	MS	EXTREME ENGINEERING
10/14/2...	515.00	1.41	117.33	514.95	3.06	-5.16	3.09	0.53	MS	EXTREME ENGINEERING
10/14/2...	638.00	1.80	122.43	637.90	6.02	-6.89	6.06	0.34	MS	EXTREME ENGINEERING
10/14/2...	760.00	1.89	118.12	759.84	9.40	-8.87	9.45	0.14	MS	EXTREME ENGINEERING
10/14/2...	888.00	1.49	119.92	887.78	12.70	-10.69	12.76	0.32	MS	EXTREME ENGINEERING
10/14/2...	951.00	1.41	115.79	950.76	14.10	-11.44	14.17	0.21	MS	EXTREME ENGINEERING
10/14/2...	1,014.00	1.32	113.42	1,013.74	15.46	-12.07	15.53	0.17	MS	EXTREME ENGINEERING
10/14/2...	1,139.00	1.10	109.91	1,138.72	17.91	-13.05	17.98	0.19	MS	EXTREME ENGINEERING
10/14/2...	1,262.00	1.10	111.00	1,261.69	20.11	-13.87	20.19	0.02	MS	EXTREME ENGINEERING
10/14/2...	1,383.00	1.41	95.10	1,382.67	22.68	-14.42	22.76	0.38	MS	EXTREME ENGINEERING
10/14/2...	1,506.00	2.20	83.93	1,505.60	26.53	-14.31	26.61	0.70	MS	EXTREME ENGINEERING
10/14/2...	1,547.00	2.11	80.11	1,546.57	28.06	-14.09	28.14	0.41	MS	EXTREME ENGINEERING
10/14/2...	1,629.00	2.29	79.63	1,628.51	31.16	-13.54	31.24	0.22	MS	EXTREME ENGINEERING
10/14/2...	1,756.00	2.11	80.11	1,755.42	35.97	-12.68	36.04	0.14	MS	EXTREME ENGINEERING
10/14/2...	1,882.00	2.11	77.61	1,881.34	40.52	-11.78	40.59	0.07	MS	EXTREME ENGINEERING
10/14/2...	2,008.00	1.58	86.53	2,007.27	44.52	-11.18	44.59	0.48	MS	EXTREME ENGINEERING
10/14/2...	2,197.00	0.88	97.21	2,196.23	48.56	-11.21	48.63	0.39	MS	EXTREME ENGINEERING
10/14/2...	2,320.00	0.62	47.72	2,319.22	50.00	-10.88	50.06	0.55	MS	EXTREME ENGINEERING
10/14/2...	2,415.00	0.70	126.82	2,414.21	50.84	-10.88	50.90	0.89	MS	EXTREME ENGINEERING
10/14/2...	2,507.00	0.70	125.42	2,506.20	51.74	-11.54	51.81	0.02	MS	EXTREME ENGINEERING
10/14/2...	2,601.00	0.88	125.42	2,600.20	52.80	-12.29	52.87	0.19	MS	EXTREME ENGINEERING
10/14/2...	2,700.00	0.88	139.83	2,699.18	53.90	-13.31	53.98	0.22	MS	EXTREME ENGINEERING
10/14/2...	2,795.00	1.20	140.10	2,794.17	55.00	-14.63	55.08	0.34	MS	EXTREME ENGINEERING
10/14/2...	2,889.00	1.32	141.63	2,888.15	56.30	-16.24	56.39	0.13	MS	EXTREME ENGINEERING
10/14/2...	2,983.00	1.32	147.60	2,982.12	57.54	-18.00	57.64	0.15	MS	EXTREME ENGINEERING
10/14/2...	3,075.00	1.32	144.80	3,074.10	58.71	-19.76	58.82	0.07	MS	EXTREME ENGINEERING
10/14/2...	3,170.00	1.32	146.03	3,169.07	59.94	-21.56	60.06	0.03	MS	EXTREME ENGINEERING
10/14/2...	3,264.00	1.19	140.62	3,263.05	61.15	-23.22	61.29	0.19	MS	EXTREME ENGINEERING
10/14/2...	3,362.00	1.32	149.10	3,361.02	62.37	-24.97	62.51	0.23	MS	EXTREME ENGINEERING
10/14/2...	3,456.00	1.10	146.82	3,455.00	63.41	-26.66	63.56	0.24	MS	EXTREME ENGINEERING
10/14/2...	3,550.00	1.49	145.02	3,548.98	64.60	-28.41	64.75	0.42	MS	EXTREME ENGINEERING
10/14/2...	3,644.00	1.40	140.17	3,642.95	66.02	-30.29	66.19	0.16	MS	EXTREME ENGINEERING
10/14/2...	3,739.00	1.19	143.92	3,737.93	67.34	-31.98	67.52	0.24	MS	EXTREME ENGINEERING
10/14/2...	3,834.00	1.19	148.40	3,832.90	68.42	-33.62	68.61	0.10	MS	EXTREME ENGINEERING
10/14/2...	3,912.00	1.10	147.21	3,910.89	69.25	-34.94	69.44	0.12	MS	EXTREME ENGINEERING
10/23/2...	4,110.00	1.76	155.05	4,108.83	71.53	-39.29	71.75	0.35	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,204.00	2.55	175.79	4,202.76	72.28	-42.69	72.52	1.17	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,299.00	4.22	185.46	4,297.59	72.07	-48.28	72.34	1.85	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,394.00	5.28	188.59	4,392.27	71.04	-56.08	71.35	1.15	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,488.00	5.63	193.42	4,485.84	69.28	-64.84	69.64	0.61	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,583.00	5.10	192.86	4,580.42	67.21	-73.49	67.62	0.56	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,677.00	4.57	190.50	4,674.09	65.55	-81.24	66.00	0.60	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,772.00	4.92	188.76	4,768.76	64.20	-88.99	64.69	0.40	MWD	PATHFINDER ENERGY SE...



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 17 T19S R31E	API/UWI 3001541888	Latitude (°) 32° 39' 20.848" N	Longitude (°) 103° 53' 57.772" W	Ground Elev. 3,421.90
			KB - GL (ft) 26.20	Orig KB Elev (ft) 3,448.10
				Tubing Head Elevation (ft)

Survey Data

Date	MD (ft)	Incl (°)	Azm (°)	TVD (ft)	VS (ft)	N/S (ft)	E/W (ft)	DLS (7/100ft)	Survey Tool	Survey Company
10/23/2...	4,866.00	6.16	203.06	4,862.33	61.56	-97.62	62.10	1.96	MWD	PATHFINDER ENERGY SE...
10/23/2...	4,961.00	5.36	206.49	4,956.85	57.53	-106.28	58.13	0.92	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,055.00	6.24	203.51	5,050.36	53.49	-114.89	54.13	0.99	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,150.00	6.42	197.29	5,144.79	49.80	-124.70	50.49	0.75	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,244.00	5.80	194.24	5,238.25	47.01	-134.32	47.76	0.74	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,339.00	5.19	193.84	5,332.82	44.76	-143.15	45.56	0.64	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,433.00	5.98	204.10	5,426.37	41.69	-151.74	42.54	1.35	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,528.00	6.24	208.87	5,520.83	37.13	-160.78	38.03	0.60	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,622.00	5.80	198.35	5,614.32	33.12	-169.76	34.06	1.26	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,717.00	5.98	202.22	5,708.81	29.68	-178.90	30.68	0.46	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,811.00	5.98	191.28	5,802.31	26.82	-188.24	27.87	1.21	MWD	PATHFINDER ENERGY SE...
10/23/2...	5,905.00	6.60	193.04	5,895.74	24.59	-198.30	25.70	0.69	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,000.00	5.63	193.69	5,990.20	22.20	-208.15	23.36	1.02	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,094.00	5.89	198.67	6,083.72	19.51	-217.20	20.73	0.60	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,189.00	5.45	195.23	6,178.26	16.72	-226.17	17.98	0.59	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,284.00	4.92	198.13	6,272.87	14.22	-234.39	15.53	0.62	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,378.00	5.10	207.42	6,366.51	11.00	-241.93	12.35	0.88	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,472.00	4.04	211.67	6,460.21	7.30	-248.46	8.69	1.18	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,567.00	5.54	202.29	6,554.88	3.76	-255.55	5.19	1.78	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,661.00	6.95	194.80	6,648.32	0.53	-265.25	2.02	1.73	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,756.00	6.60	188.91	6,742.66	-1.84	-276.20	-0.30	0.82	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,850.00	5.54	187.25	6,836.13	-3.31	-286.04	-1.71	1.14	MWD	PATHFINDER ENERGY SE...
10/23/2...	6,945.00	4.75	184.79	6,930.75	-4.26	-294.51	-2.62	0.86	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,039.00	6.51	189.07	7,024.29	-5.48	-303.65	-3.78	1.92	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,133.00	6.24	188.84	7,117.71	-7.16	-313.96	-5.41	0.29	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,228.00	5.80	182.44	7,212.19	-8.21	-323.86	-6.40	0.84	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,323.00	5.54	182.99	7,306.72	-8.71	-333.23	-6.85	0.28	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,416.00	4.48	183.17	7,399.36	-9.19	-341.34	-7.28	1.14	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,448.00	6.24	167.38	7,431.22	-8.89	-344.29	-6.97	7.13	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,479.00	8.71	157.37	7,461.96	-7.64	-348.10	-5.70	8.98	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,511.00	11.08	154.26	7,493.48	-5.40	-353.10	-3.43	7.59	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,542.00	14.07	145.39	7,523.74	-2.00	-358.89	0.00	11.46	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,574.00	17.41	136.36	7,554.54	3.48	-365.56	5.52	12.91	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,605.00	20.58	128.51	7,583.85	10.91	-372.31	12.99	13.11	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,637.00	23.39	118.25	7,613.53	20.87	-378.82	22.99	14.84	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,668.00	25.76	109.29	7,641.73	32.63	-383.96	34.77	14.23	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,700.00	27.87	104.38	7,670.29	46.42	-388.12	48.58	9.55	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,731.00	30.95	100.19	7,697.30	61.27	-391.33	63.45	11.94	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,763.00	34.12	98.46	7,724.27	78.23	-394.11	80.43	10.32	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,794.00	37.55	98.53	7,749.40	96.16	-396.79	98.38	11.07	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,826.00	40.89	96.76	7,774.19	116.20	-399.47	118.43	11.01	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,857.00	44.05	94.14	7,797.06	137.02	-401.44	139.26	11.68	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,889.00	47.48	93.74	7,819.38	159.88	-403.01	162.13	10.76	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,920.00	51.44	93.33	7,839.52	183.38	-404.46	185.64	12.81	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,952.00	54.43	93.55	7,858.81	208.86	-406.00	211.13	9.36	MWD	PATHFINDER ENERGY SE...
10/23/2...	7,983.00	56.98	93.31	7,876.27	234.41	-407.53	236.69	8.25	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,015.00	59.53	93.08	7,893.11	261.57	-409.04	263.86	7.99	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,046.00	62.61	92.72	7,908.10	288.66	-410.41	290.95	9.99	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,078.00	65.33	92.40	7,922.14	317.37	-411.70	319.68	8.55	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,109.00	67.53	92.08	7,934.54	345.75	-412.81	348.07	7.16	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,141.00	70.43	91.68	7,946.01	375.60	-413.79	377.92	9.14	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,172.00	74.13	91.42	7,955.45	405.11	-414.58	407.43	11.96	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,204.00	77.03	91.34	7,963.42	436.08	-415.33	438.41	9.07	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,235.00	79.76	90.81	7,969.65	466.44	-415.90	468.77	8.96	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,267.00	82.92	90.77	7,974.47	498.06	-416.34	500.40	9.88	MWD	PATHFINDER ENERGY SE...



Directional Survey

District DELAWARE BASIN	County EDDY	Field Name HACKBERRY	Project Group DELAWARE BASIN REG	State/Province NM
Surface Legal Location Sec. 17 T19S R31E	API/UWI 3001541888	Latitude (°) 32° 39' 20.848" N	Longitude (°) 103° 53' 57.772" W	Ground Elev... 3,421.90
			KB - GL (ft) 26.20	Orig KB Elev (ft) 3,448.10
				Tubing Head Elevation (ft)

Survey Data										
Date	MD (ftKB)	Inc (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
10/23/2...	8,360.00	87.58	89.55	7,982.17	590.71	-416.59	593.05	5.18	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,455.00	86.17	89.70	7,987.35	685.57	-415.97	687.90	1.49	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,549.00	87.67	89.11	7,992.40	779.43	-415.00	781.76	1.71	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,644.00	89.96	88.40	7,994.36	874.39	-412.93	876.71	2.52	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,738.00	88.64	90.44	7,995.51	968.37	-411.98	970.69	2.58	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,833.00	88.81	90.16	7,997.62	1,063.35	-412.48	1,065.67	0.34	MWD	PATHFINDER ENERGY SE...
10/23/2...	8,927.00	91.54	88.58	7,997.34	1,157.33	-411.44	1,159.65	3.36	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,022.00	90.48	88.16	7,995.66	1,252.29	-408.74	1,254.59	1.20	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,116.00	89.34	88.24	7,995.81	1,346.26	-405.79	1,348.55	1.22	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,210.00	89.34	88.97	7,996.89	1,440.23	-403.50	1,442.51	0.78	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,305.00	88.64	88.58	7,998.57	1,535.21	-401.47	1,537.47	0.84	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,399.00	87.58	89.66	8,001.67	1,629.15	-400.03	1,631.41	1.61	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,494.00	88.55	88.81	8,004.88	1,724.09	-398.76	1,726.34	1.36	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,588.00	89.16	88.02	8,006.75	1,818.05	-396.16	1,820.29	1.06	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,683.00	87.93	89.07	8,009.17	1,912.99	-393.75	1,915.22	1.70	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,778.00	88.72	88.79	8,011.94	2,007.94	-391.97	2,010.17	0.88	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,872.00	89.87	88.17	8,013.10	2,101.91	-389.48	2,104.12	1.39	MWD	PATHFINDER ENERGY SE...
10/23/2...	9,966.00	88.37	88.43	8,014.54	2,195.87	-386.69	2,198.07	1.62	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,061.00	89.52	88.69	8,016.29	2,290.84	-384.31	2,293.02	1.24	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,155.00	90.13	88.48	8,016.58	2,384.82	-381.99	2,386.99	0.69	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,249.00	90.04	88.36	8,016.44	2,478.80	-379.39	2,480.95	0.16	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,344.00	92.51	89.95	8,014.33	2,573.76	-377.99	2,575.91	3.09	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,438.00	92.24	89.50	8,010.43	2,667.68	-377.54	2,669.83	0.56	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,533.00	91.63	89.38	8,007.22	2,762.62	-376.61	2,764.77	0.65	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,627.00	92.51	90.46	8,003.83	2,856.56	-376.48	2,858.71	1.48	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,722.00	92.86	91.84	7,999.38	2,951.42	-378.39	2,953.58	1.50	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,817.00	92.33	91.23	7,995.08	3,046.27	-380.93	3,048.45	0.85	MWD	PATHFINDER ENERGY SE...
10/23/2...	10,911.00	92.15	91.87	7,991.40	3,140.15	-383.47	3,142.34	0.71	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,005.00	89.96	91.75	7,989.67	3,234.06	-386.44	3,236.27	2.33	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,100.00	88.90	91.40	7,990.62	3,329.00	-389.05	3,331.23	1.18	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,194.00	87.85	91.77	7,993.28	3,422.91	-391.65	3,425.15	1.18	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,289.00	88.81	94.29	7,996.05	3,517.70	-396.67	3,519.97	2.84	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,383.00	88.46	93.02	7,998.29	3,611.45	-402.66	3,613.75	1.40	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,478.00	88.11	90.92	8,001.13	3,706.32	-405.92	3,708.65	2.24	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,572.00	89.96	90.32	8,002.72	3,800.29	-406.94	3,802.63	2.07	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,666.00	88.90	90.45	8,003.65	3,894.28	-407.57	3,896.62	1.14	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,761.00	87.58	91.23	8,006.57	3,989.21	-408.96	3,991.56	1.61	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,855.00	89.43	90.50	8,009.02	4,083.16	-410.38	4,085.51	2.12	MWD	PATHFINDER ENERGY SE...
10/23/2...	11,950.00	90.22	90.62	8,009.31	4,178.14	-411.31	4,180.51	0.84	MWD	PATHFINDER ENERGY SE...
10/23/2...	12,044.00	89.34	90.82	8,009.67	4,272.13	-412.49	4,274.50	0.96	MWD	PATHFINDER ENERGY SE...
10/23/2...	12,139.00	88.72	90.05	8,011.28	4,367.10	-413.21	4,369.48	1.04	MWD	PATHFINDER ENERGY SE...
10/23/2...	12,233.00	88.72	90.38	8,013.38	4,461.08	-413.56	4,463.46	0.35	MWD	PATHFINDER ENERGY SE...
10/23/2...	12,327.00	88.55	90.46	8,015.62	4,555.04	-414.25	4,557.43	0.20	MWD	PATHFINDER ENERGY SE...
10/23/2...	12,422.00	87.76	89.43	8,018.68	4,649.99	-414.16	4,652.37	1.37	MWD	PATHFINDER ENERGY SE...
11/4/2014	12,511.00	87.76	89.43	8,022.16	4,738.92	-413.28	4,741.30	0.00	BIT	PATHFINDER ENERGY SE...