

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Form C-104
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address Devon Energy Production Company, L.P. 333 West Sheridan, Oklahoma City, OK 73102		² OGRID Number 6137
		³ Reason for Filing Code/ Effective Date NW / 6/7/16
⁴ API Number 30-015-43269	⁵ Pool Name Paduca; Bone Spring	⁶ Pool Code 96641
⁷ Property Code 300635	⁸ Property Name Cotton Draw Unit	⁹ Well Number 238H

II. 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
D	13	25S	31E		200	North	610	West	EDDY

¹¹ Bottom Hole Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	13	25S	31E		315	South	667	West	EDDY
¹² Lse Code F	¹³ Producing Method Code F	¹⁴ Gas Connection Date 6/7/16	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
020445	Plains Marketing P.O. Box 4648 Houston, TX 77210	Oil
036785	DCP Midstream P.O. Box 50020 Midland, TX 79710-0020	Gas
051618	Enterprise Field Services, LLC P.O. Box 4324 Houston, TX 77210-4324	Gas
NM OIL CONSERVATION ARTESIA DISTRICT JUL 1 2016		

IV. Well Completion Data

²¹ Spud Date 9/7/15	²² Ready Date 6/7/16	²³ TD 15,133'	²⁴ RECEIVED 15036'	²⁵ Perforations 10708' - 15035'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17-1/2"	13-3/8"	775'	1015 sx CIC; Circ 110 bbls		
12-1/4"	9-5/8"	4341'	1325 sx CIC; Circ 2.5 bbls		
8-3/4"	5-1/2"	15,133'	2685 sx CIC; Circ 0		
	Tubing: 2-7/8"	9884			

V. Well Test Data

³¹ Date New Oil 6/20/16	³² Gas Delivery Date 6/20/16	³³ Test Date 6/20/16	³⁴ Test Length 24 hrs	³⁵ Tbg. Pressure 987 psi	³⁶ Csg. Pressure 647 psi
³⁷ Choke Size	³⁸ Oil 588 bbl	³⁹ Water 1046 bbl	⁴⁰ Gas 1251 mcf		⁴¹ Test Method
⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief. Signature: <i>Rebecca Deal</i>			OIL CONSERVATION DIVISION		
Printed name: Rebecca Deal			Approved by: <i>Karen Sharp</i>		
Title: Regulatory Analyst			Title: <i>Bushtpspec-Adv</i>		
E-mail Address: Rebecca.Deal@dvn.com			Approval Date: <i>7-12-16</i>		
Date: 6/29/2016		Phone: 405-228-8429			
Pending BLM approvals will subsequently be reviewed and scanned					

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

5. Lease Serial No. BHL: NMLC061862

6. If Indian, Allottee or Tribe Name

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

7. If Unit of CA/Agreement, Name and/or No.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Cotton Draw Unit 238H

2. Name of Operator

Devon Energy Production Company, L.P.

9. API Well No.
30-015-43269

3a. Address

333 West Sheridan, Oklahoma City, OK 73102

3b. Phone No. (include area code)

405-228-4248

10. Field and Pool or Exploratory Area

Paduca; Bone Spring

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

200' FNL & 610' FWL Unit D, Sec 13, T25S, R31E

315' FSL & 667' FWL Unit M, Sec 13, T25S, R31E

PP: 28' FNL & 514' FWL

11. Country or Parish, State

EDDY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off	
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity	
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Completion Report	
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon		
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BLA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomplate in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

12/30/15-6/7/16: DO DV Tool & cleaned WB. MIRU WL & PT. TIH & ran Tractor/CCL/Spectral GR/Compensated Neutron Porosity/Sonic Scanner Log, found ETOC @ 2428'. Set CIBP @ 15,036', pressure good, POOH. TIH w/pump through frac plug and guns. Perf Bone Spring, 10,708'-15,035'. Frac totals 3496.5 gals acid, 5,424,000# proppant. ND frac, MIRU PU, NU BOP, DO plugs & CO to PBTD 15,036'. CHC, FWB, ND BOP. RIH w/ 312 jts 2-7/8" P-110 tbg, set @ 9884'. TOP.

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 1 2016

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14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)

Rebecca Deal

Title Regulatory Analyst

Signature

Rebecca Deal

Date 6/29/2016

THIS SPACE FOR FEDERAL OR STATE OFFICIAL USE

Approved by

Title

Office

Pending BLM approvals will
subsequently be reviewed
and scanned

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No. **BHL: NMLC061862**

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion: ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.,
Other: _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator **Devon Energy Production Company, L.P.**

8. Lease Name and Well No.
Cotton Draw Unit 238H

3. Address **333 West Sheridan Ave, Oklahoma City, OK 73102** 5a. Phone No. (include area code) **405-228-4248**

9. API Well No.
30-015-43269

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

10. Field and Pool or Exploratory
Paducah Bone Spring

11. Sec., T., R., M., on Block and
Survey or Area
Sec 13, T25S, R31E

12. County or Parish **EDDY** 13. State **NM**

At surface
200' FNL & 610' FWL Unit D, Sec 13, T25S, R31E

At top prod. interval reported below

At total depth **315' FSL & 667' FWL Unit M, Sec 13, T25S, R31E**

14. Date Spudded **9/7/15** 15. Date T.D. Reached **9/22/15** 16. Date Completed **6/7/16**
☐ D & A ☒ Ready to Prod. 17. Elevations (DF, RKB, RT, GL)*
GL: 3404.7'

18. Total Depth: MD **15,133'** TVD **10531'** 19. Plug Back T.D.: MD **15036'** TVD _____ 20. Depth Bridge Plug Set: MD _____ TVD _____

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

Tractor/CCL/Spectral GR/Compensated Neutron Porosity/Sonic Scanner Log

22. Was well cored? ☐ No ☐ Yes (Submit analysis)
Was DST run? ☐ No ☐ Yes (Submit report)
Directional Survey? ☐ No ☒ Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17-1/2"	13-3/8" J-55	54.5#	0	775'		1015 sx CIC		0	110 bbls
12-1/4"	9-5/8" J-55	40#	0	4341'		1325 sx CIC		0	2.5 bbls
8-3/4"	5-1/2" P110RY	17#	0	15,133'	DV @ 4557.2'	2685 sx CIC		2047'	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2-7/8"	9884							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Bone Spring	10708'	15035'	10708' - 15035'		531	open
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material
10708' - 15035'	3496.5 gals acid, 5,424,000# proppant

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method	Flow
6/7/16	6/20/16	24	→	588	1251	1046				
Choke Size	Tbg. Press. Flwg. SI	Csg. Press. SI	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status		
	987psi	647psi	→				2127.551			

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API
			→				
Choke Size	Tbg. Press. Flwg. SI	Csg. Press. SI	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio
			→				

Pending BLM approvals will
subsequently be reviewed
and scanned

*(See instructions and spaces for additional data on page 2)

NM OIL CONSERVATION
ARTESIA DISTRICT

JUL 1 2016

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29. Disposition of Gas (Solid, used for fluid, vented, etc.)

SOLD

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
Bone Spring	8203'			Rustler Top of Salt Delaware Brushy Canyon Bone Spring	600' 994' 4350' 6621' 8203'

32. Additional remarks (include plugging procedure):

33. Indicate which items have been attached by placing a check in the appropriate boxes:

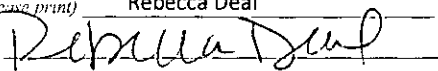
- ☒ Electrical/Mechanical Logs (1 full set req'd.)
 ☐ Geologic Report
 ☐ DST Report
 ☒ Directional Survey
- ☐ Sundry Notice for plugging and cement verification
 ☐ Core Analysis
 ☐ Other.

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Rebecca Deal

Title Regulatory Analyst

Signature



Date

6/29/2016

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 3)

(Form 3160-4, page 2)



Well Name: COTTON DRAW UNIT 238H

Sub-Division DELAWARE BASIN WEST		Region BASIN WEST		Field Name PADUCA		County EDDY		State/Province NM		
Surface Legal Location SEC13 T25S R31E		AP/WI/WI 3001543269		Latitude (°) 32° 8' 13.228" N		Longitude (°) 103° 44' 17.292" W		Ong KB Elevation (ft) 3,429.70		
								Ground Elev MSL (ft) 3,404.70		
								KB - GL (ft) 25.00		
Wellbores				Parent Wellbore		SAP Well ID		Vertical Section Direction (°)		
OH						38842		179.16		
Kick Offs & Key Depths										
Date 9/17/2015				Type CURVE				Top Depth (ftKB) 9,832.0		
Actual Deviation Survey MWD SURVEYS, Proposed? No				Definitive? Yes		Proposed? No		Proposed Deviation Survey		
Deviation Survey										
Date 9/6/2015				Description MWD SURVEYS						
MD Tie In (ftKB)		TVD Tie In (ftKB)		Inclination Tie In (°)		Azimuth Tie In (°)		NSTie In (ft)		
								EWtie In (ft)		
Survey Data										
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
9/16/2015	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	MWD	PATHFINDER ENERGY SE...
9/7/2015	140.00	0.31	265.96	140.00	0.02	-0.03	-0.38	0.22	MWD	EXTREME
9/7/2015	231.00	0.40	285.30	231.00	-0.05	0.04	-0.93	0.16	MWD	EXTREME
9/7/2015	366.00	1.01	244.38	365.99	0.31	-0.35	-2.46	0.56	MWD	EXTREME
9/7/2015	466.00	1.18	235.77	465.97	1.25	-1.31	-4.10	0.24	MWD	EXTREME
9/7/2015	553.00	1.80	232.48	552.94	2.56	-2.65	-5.93	0.72	MWD	EXTREME
9/7/2015	648.00	2.11	227.60	647.88	4.61	-4.73	-8.40	0.37	MWD	EXTREME
9/7/2015	695.00	2.11	224.30	694.85	5.80	-5.94	-9.65	0.26	MWD	EXTREME
9/10/2015	867.00	1.49	254.00	866.77	8.61	-8.82	-14.01	0.64	MWD	PATHFINDER ENERGY SE...
9/10/2015	962.00	1.32	256.29	961.74	9.18	-9.42	-16.26	0.19	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,057.00	1.58	290.75	1,056.71	8.94	-9.22	-18.54	0.94	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,245.00	1.67	287.95	1,244.64	7.11	-7.45	-23.57	0.06	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,334.00	1.67	283.11	1,333.60	6.38	-6.76	-26.07	0.16	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,424.00	1.85	283.36	1,423.56	5.70	-6.13	-28.76	0.20	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,513.00	1.85	282.09	1,512.51	5.03	-5.49	-31.56	0.05	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,603.00	1.67	278.84	1,602.47	4.48	-4.99	-34.28	0.23	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,692.00	1.85	282.49	1,691.43	3.93	-4.48	-36.97	0.24	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,782.00	1.76	310.63	1,781.38	2.68	-3.25	-39.43	0.98	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,871.00	1.93	290.98	1,870.34	1.47	-2.09	-41.94	1.08	MWD	PATHFINDER ENERGY SE...
9/10/2015	1,960.00	2.02	307.46	1,959.29	0.19	-0.85	-44.66	1.02	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,049.00	2.73	327.12	2,048.21	-2.58	1.89	-47.05	1.20	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,139.00	2.81	328.43	2,138.11	-6.29	5.57	-49.37	0.11	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,228.00	2.73	327.61	2,227.00	-9.97	9.21	-51.65	0.10	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,318.00	2.64	325.90	2,316.90	-13.53	12.74	-53.96	0.13	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,407.00	2.81	328.44	2,405.80	-17.12	16.30	-56.25	0.23	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,497.00	2.73	326.43	2,495.70	-20.82	19.96	-58.59	0.14	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,586.00	2.64	328.12	2,584.60	-24.35	23.47	-60.84	0.13	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,676.00	2.64	326.71	2,674.51	-27.88	26.96	-63.08	0.07	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,765.00	2.73	321.76	2,763.41	-31.30	30.34	-65.51	0.28	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,854.00	2.73	320.70	2,852.31	-34.64	33.64	-68.17	0.06	MWD	PATHFINDER ENERGY SE...
9/10/2015	2,943.00	2.90	322.39	2,941.20	-38.10	37.07	-70.88	0.21	MWD	PATHFINDER ENERGY SE...
9/10/2015	3,032.00	2.81	322.91	3,030.09	-41.67	40.59	-73.57	0.11	MWD	PATHFINDER ENERGY SE...
9/10/2015	3,122.00	2.81	350.67	3,119.98	-45.63	44.53	-75.26	1.50	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,211.00	3.08	359.63	3,208.87	-50.18	49.07	-75.63	0.60	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,300.00	3.17	10.59	3,297.74	-54.98	53.88	-75.19	0.68	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,390.00	3.08	10.70	3,387.60	-59.79	58.70	-74.29	0.10	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,479.00	3.17	11.63	3,476.47	-64.53	63.46	-73.35	0.12	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,568.00	3.08	9.22	3,565.34	-69.29	68.23	-72.47	0.18	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,658.00	3.08	12.07	3,655.21	-74.03	72.99	-71.58	0.17	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,747.00	2.81	21.12	3,744.09	-78.38	77.36	-70.29	0.60	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,836.00	2.81	28.60	3,832.98	-82.30	81.31	-68.46	0.41	MWD	PATHFINDER ENERGY SE...
9/11/2015	3,925.00	2.81	32.26	3,921.88	-86.03	85.07	-66.25	0.20	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,014.00	2.37	20.31	4,010.79	-89.57	88.64	-64.45	0.78	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,103.00	2.55	13.44	4,099.70	-93.21	92.29	-63.35	0.39	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,281.00	2.55	23.61	4,277.53	-100.65	99.77	-60.84	0.25	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,381.00	2.73	24.20	4,377.42	-104.83	103.98	-58.98	0.18	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,470.00	2.45	23.26	4,466.33	-108.50	107.67	-57.35	0.31	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,560.00	2.73	28.85	4,556.24	-112.12	111.32	-55.56	0.41	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,649.00	2.64	29.58	4,645.14	-115.73	114.96	-53.52	0.11	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,738.00	2.55	28.72	4,734.05	-119.22	118.48	-51.56	0.11	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,828.00	2.55	24.55	4,823.96	-122.77	122.06	-49.76	0.21	MWD	PATHFINDER ENERGY SE...
9/11/2015	4,917.00	2.81	349.75	4,912.87	-126.71	126.00	-49.33	1.82	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,006.00	3.08	340.99	5,001.75	-131.14	130.41	-50.50	0.59	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,096.00	3.08	339.91	5,091.62	-135.72	134.97	-52.11	0.06	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,185.00	3.17	341.28	5,180.49	-140.32	139.54	-53.73	0.13	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,275.00	3.43	338.97	5,270.34	-145.21	144.41	-55.49	0.32	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,453.00	2.02	304.20	5,448.15	-152.01	151.15	-60.00	1.19	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,632.00	1.85	306.96	5,627.04	-155.59	154.66	-64.91	0.11	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,811.00	1.67	317.49	5,805.96	-159.31	158.32	-68.99	0.21	MWD	PATHFINDER ENERGY SE...
9/11/2015	5,989.00	1.76	304.88	5,983.88	-162.85	161.79	-72.98	0.22	MWD	PATHFINDER ENERGY SE...
9/11/2015	6,168.00	1.93	299.95	6,162.79	-165.99	164.87	-77.85	0.13	MWD	PATHFINDER ENERGY SE...
9/11/2015	6,347.00	1.58	296.60	6,341.70	-168.67	167.48	-82.67	0.20	MWD	PATHFINDER ENERGY SE...
9/11/2015	6,526.00	1.67	298.62	6,520.63	-171.09	169.83	-87.16	0.06	MWD	PATHFINDER ENERGY SE...

Provide signature page for survey



Directional Survey

DELAWARE BASIN WEST UNRESTRICTED

Well Name: COTTON DRAW UNIT 238H

Sub-Division		Region		Field Name		County		State/Province		
DELAWARE BASIN WEST		BASIN WEST		PADUCA		EDDY		NM		
Surface Legal Location		AP/UMI		Latitude (°)		Longitude (°)		Ong KB Elevation (ft)		
SEC13 T25S R31E		3001543269		32° 8' 13.228" N		103° 44' 17.292" W		3,429.70		
								Ground Elev MSL (ft)		
								3,404.70		
								KB - GL (ft)		
								25.00		
Survey Data										
Date	MD (ftKB)	Incl (°)	Azm (°)	TVD (ftKB)	VS (ft)	N/S (ft)	EW (ft)	DLS (°/100ft)	Survey Tool	Survey Company
9/11/2015	6,704.00	1.41	234.55	6,698.58	-171.13	169.81	-91.22	0.93	MWD	PATHFINDER ENERGY SE...
9/11/2015	6,883.00	1.14	245.09	6,877.54	-169.15	167.78	-94.63	0.20	MWD	PATHFINDER ENERGY SE...
9/11/2015	7,061.00	0.44	256.03	7,055.52	-168.27	166.87	-96.90	0.40	MWD	PATHFINDER ENERGY SE...
9/11/2015	7,150.00	0.26	257.23	7,144.52	-168.15	166.74	-97.43	0.20	MWD	PATHFINDER ENERGY SE...
9/14/2015	7,329.00	0.53	347.62	7,323.51	-168.88	167.46	-98.00	0.33	MWD	PATHFINDER ENERGY SE...
9/14/2015	7,508.00	0.79	57.40	7,502.50	-170.34	168.93	-97.14	0.44	MWD	PATHFINDER ENERGY SE...
9/15/2015	7,687.00	1.06	44.37	7,681.48	-172.16	170.78	-94.94	0.19	MWD	PATHFINDER ENERGY SE...
9/15/2015	7,865.00	0.79	44.47	7,859.46	-174.18	172.83	-92.93	0.15	MWD	PATHFINDER ENERGY SE...
9/15/2015	8,044.00	0.97	114.09	8,038.44	-174.41	173.10	-90.69	0.57	MWD	PATHFINDER ENERGY SE...
9/15/2015	8,223.00	0.88	112.05	8,217.42	-173.23	171.96	-88.03	0.05	MWD	PATHFINDER ENERGY SE...
9/15/2015	8,401.00	1.14	74.35	8,395.39	-173.16	171.93	-85.06	0.39	MWD	PATHFINDER ENERGY SE...
9/16/2015	8,579.00	0.35	77.16	8,573.37	-173.72	172.53	-82.82	0.44	MWD	PATHFINDER ENERGY SE...
9/16/2015	8,758.00	0.70	330.16	8,752.37	-174.79	173.60	-82.83	0.49	MWD	PATHFINDER ENERGY SE...
9/16/2015	8,937.00	2.20	317.09	8,931.31	-178.30	177.06	-85.72	0.85	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,115.00	1.49	296.57	9,109.22	-181.90	180.60	-90.11	0.54	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,294.00	2.02	248.74	9,288.14	-181.87	180.50	-95.13	0.84	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,472.00	2.11	242.72	9,466.02	-179.32	177.86	-100.97	0.13	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,651.00	0.97	273.34	9,644.96	-177.96	176.43	-105.41	0.76	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,741.00	1.23	297.55	9,734.94	-178.47	176.92	-107.03	0.59	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,857.00	1.67	170.52	9,850.93	-177.40	175.83	-107.85	2.24	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,901.00	6.60	164.82	9,894.80	-174.31	172.76	-107.08	11.23	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,946.00	11.08	162.87	9,939.25	-167.55	166.13	-105.13	9.98	MWD	PATHFINDER ENERGY SE...
9/16/2015	9,991.00	16.71	165.56	9,982.92	-157.20	155.72	-102.24	12.59	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,035.00	20.93	166.31	10,024.56	-143.39	141.95	-98.81	9.61	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,080.00	24.80	167.29	10,066.01	-126.31	124.93	-94.82	8.64	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,125.00	28.93	166.67	10,106.15	-106.44	105.13	-90.24	9.20	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,170.00	33.24	166.62	10,144.68	-83.76	82.53	-84.87	9.58	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,214.00	36.67	167.79	10,180.73	-59.10	57.94	-79.30	7.94	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,259.00	38.34	173.04	10,216.44	-32.04	30.95	-74.77	8.01	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,304.00	41.33	177.18	10,251.00	-3.30	2.24	-72.34	8.88	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,349.00	46.52	181.58	10,283.41	27.89	-28.95	-72.06	13.37	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,393.00	52.32	182.69	10,312.02	61.25	-62.33	-73.32	13.32	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,438.00	57.68	182.52	10,337.82	98.03	-99.14	-74.99	11.92	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,482.00	62.78	181.31	10,359.66	136.16	-137.30	-76.26	11.83	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,527.00	67.09	179.63	10,378.72	176.90	-178.05	-76.58	10.16	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,572.00	72.28	179.21	10,394.34	219.09	-220.23	-76.15	11.57	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,616.00	74.92	179.09	10,406.76	261.30	-262.43	-75.53	6.01	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,661.00	75.80	178.63	10,418.13	304.83	-305.96	-74.66	2.19	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,706.00	78.88	178.52	10,427.99	348.73	-349.85	-73.57	6.85	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,750.00	84.94	178.81	10,434.18	392.27	-393.38	-72.55	13.79	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,836.00	90.04	179.18	10,437.95	478.16	-479.26	-71.05	5.95	MWD	PATHFINDER ENERGY SE...
9/16/2015	10,925.00	88.46	178.78	10,439.11	567.15	-568.23	-69.46	1.83	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,015.00	88.37	178.84	10,441.60	657.11	-658.18	-67.59	0.12	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,104.00	89.08	179.38	10,443.58	746.09	-747.14	-66.21	1.00	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,194.00	90.04	179.99	10,444.27	836.08	-837.14	-65.72	1.26	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,283.00	88.37	179.95	10,445.51	925.06	-926.12	-65.67	1.88	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,372.00	88.64	180.27	10,447.83	1,014.02	-1,015.09	-65.84	0.47	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,462.00	88.46	178.93	10,450.11	1,103.99	-1,105.06	-65.21	1.50	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,551.00	89.60	179.51	10,451.61	1,192.97	-1,194.04	-64.00	1.44	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,640.00	87.67	179.47	10,453.73	1,281.94	-1,283.01	-63.21	2.17	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,730.00	87.76	179.50	10,457.32	1,371.87	-1,372.93	-62.40	0.11	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,819.00	87.76	179.51	10,460.80	1,460.80	-1,461.86	-61.63	0.01	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,908.00	86.97	179.29	10,454.89	1,549.70	-1,550.76	-60.70	0.92	MWD	PATHFINDER ENERGY SE...
9/16/2015	11,997.00	87.76	179.91	10,468.98	1,638.60	-1,639.66	-60.08	1.13	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,086.00	88.11	180.15	10,472.19	1,727.54	-1,728.60	-60.13	0.48	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,176.00	88.29	180.27	10,475.02	1,817.48	-1,818.56	-60.46	0.24	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,265.00	88.46	181.09	10,477.54	1,906.41	-1,907.52	-61.52	0.94	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,355.00	85.82	178.04	10,482.03	1,996.28	-1,997.38	-60.84	4.48	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,444.00	85.47	177.69	10,488.79	2,085.00	-2,086.06	-57.53	0.56	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,533.00	85.74	177.68	10,495.61	2,173.70	-2,174.73	-53.95	0.30	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,623.00	86.09	176.38	10,502.02	2,263.41	-2,264.38	-49.29	1.49	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,712.00	90.66	177.86	10,504.55	2,352.29	-2,353.20	-44.83	5.40	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,801.00	90.31	177.89	10,503.79	2,441.27	-2,442.14	-41.53	0.39	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,891.00	87.85	178.50	10,505.24	2,531.24	-2,532.08	-38.69	2.82	MWD	PATHFINDER ENERGY SE...
9/16/2015	12,980.00	87.67	179.83	10,508.72	2,620.17	-2,621.00	-37.40	1.51	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,070.00	88.46	179.86	10,511.76	2,710.11	-2,710.94	-37.15	0.88	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,159.00	89.69	178.92	10,513.19	2,799.09	-2,799.92	-36.21	1.74	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,248.00	89.96	179.96	10,513.46	2,888.09	-2,888.92	-35.34	1.21	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,337.00	89.69	178.68	10,513.74	2,977.09	-2,977.91	-34.28	1.47	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,427.00	89.43	177.04	10,514.43	3,067.06	-3,067.84	-30.92	1.84	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,516.00	89.08	174.69	10,515.58	3,155.90	-3,156.60	-24.50	2.67	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,605.00	88.20	174.19	10,517.70	3,244.57	-3,245.15	-15.88	1.14	MWD	PATHFINDER ENERGY SE...
9/16/2015	13,694.00	88.90	174.41	10,519.95	3,333.22	-3,333.68	-7.05	0.82	MWD	PATHFINDER ENERGY SE...

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Well Name: COTTON DRAW UNIT 238H

Sub-Division DELAWARE BASIN WEST	Region BASIN WEST	Field Name PADUCA	County EDDY	State/Province NM
Surface Legal Location SEC13 T25S R31E	APRAM 3001543269	Latitude (°) 32° 8' 13.228" N	Longitude (°) 103° 44' 17.292" W	Orig KB Elevation (ft) 3,429.70
				Ground Elev MSL (ft) 3,404.70
				K/S - GL (ft) 25.00

Survey Data									
Date	MD (ftKB)	Ind (°)	Azm (°)	TVD (ftKB)	VS (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Survey Tool
9/16/2015	13,793.00	89.52	174.65	10,521.18	3,421.92	-3,422.27	1.44	0.75	MWD
9/16/2015	13,873.00	90.31	174.52	10,521.31	3,511.63	-3,511.87	9.93	0.89	MWD
9/16/2015	13,962.00	89.69	174.45	10,521.31	3,600.34	-3,600.45	18.48	0.70	MWD
9/16/2015	14,051.00	90.57	174.39	10,521.11	3,689.03	-3,689.03	27.14	0.99	MWD
9/16/2015	14,141.00	90.66	174.55	10,520.14	3,778.72	-3,778.61	35.81	0.20	MWD
9/16/2015	14,230.00	90.31	174.66	10,519.39	3,867.44	-3,867.21	44.18	0.41	MWD
9/16/2015	14,319.00	90.22	174.76	10,518.98	3,956.17	-3,955.83	52.38	0.15	MWD
9/16/2015	14,408.00	90.31	176.28	10,518.57	4,044.99	-4,044.55	59.34	1.71	MWD
9/16/2015	14,497.00	89.69	176.25	10,518.57	4,133.87	-4,133.36	65.13	0.70	MWD
9/16/2015	14,587.00	89.96	177.65	10,518.84	4,223.80	-4,223.23	69.92	1.58	MWD
9/16/2015	14,677.00	90.04	178.40	10,518.84	4,313.79	-4,313.18	73.02	0.84	MWD
9/16/2015	14,766.00	89.52	178.84	10,519.18	4,402.78	-4,402.15	75.17	0.77	MWD
9/16/2015	14,855.00	88.90	179.22	10,520.41	4,491.77	-4,491.13	76.67	0.82	MWD
9/16/2015	14,945.00	88.02	179.53	10,522.83	4,581.74	-4,581.09	77.65	1.04	MWD
9/16/2015	15,034.00	87.41	179.19	10,526.38	4,670.67	-4,670.01	78.65	0.78	MWD
9/16/2015	15,076.00	87.05	178.99	10,528.41	4,712.62	-4,711.96	79.31	0.98	MWD
9/16/2015	15,133.00	87.05	178.99	10,531.34	4,769.54	-4,768.88	80.32	0.00	BIT