Revised March 23, 2017

RECEIVED	REVIEWER	TYPE	APP NO
6-5 2017	MAM	PLC	pKSC1715647832

ABOVE THIS TABLE FOR OCD DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Geological & Engineering Bureau –
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Applicant: Devon Energy Production Co., LP **OGRID Number:** 6137
Well Name: Cotton Draw 10 Fed Com 1h, 2H, 3H, & 4H **API** 30-015-39229, 30-015-39230, 30-015-42126, 30-015-42127,
Pool: Paduca; Bone Spring & Cotton Draw; Delaware South **Pool Code** 96757, 96641

SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED BELOW

PLC-476

1) **TYPE OF APPLICATION:** Check those which apply for [A]
A. Location – Spacing Unit – Simultaneous Dedication
☐ NSL ☐ NSP (PROJECT AREA) ☐ NSP (PRORATION UNIT) ☐ SD

B. Check one only for [I] or [II]
[I] Commingling – Storage – Measurement
☐ DHC ☐ CTB ☒ PLC ☐ PC ☐ OLS ☐ OLM
[II] Injection – Disposal – Pressure Increase – Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

FOR OCD ONLY
☐ Notice Complete
☐ Application Content Complete

2) **NOTIFICATION REQUIRED TO:** Check those which apply
A ☐ Offset operators or lease holders
B. Royalty, overriding royalty owners, revenue owners
C ☐ Application requires published notice
D. ☐ Notification and/or concurrent approval by SLO
E ☒ Notification and/or concurrent approval by BLM
F ☐ Surface owner
G ☐ For all of the above, proof of notification or publication is attached, and/or,
H. ☐ No notice required

3) **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division

Note Statement must be completed by an individual with managerial and/or supervisory capacity

06/02/17
Date

Erin Workman
Print or Type Name

(405) 552-7970
Phone Number

Erin Workman
Signature

Erin.workman@dvn.com
e-mail Address

PROCESS FLOW DIAGRAM

Cotton Draw 10 Fed Com 2H
Section 10,T25S,R31E
330FNL&660FEL
Eddy County, N.M
API# 3001539230

Production System: Closed

1} Oil sales by tank gauge to tank truck.

2} Seal requirements:

A. Production Phase: On all Tanks.

(1) Both water tank valves sealed open
All 3 oil load line valves sealed open

Sales Phase: On Tank being hauled.

(1) Valve 1 sealed closed.

(2) Valve 3 sealed closed.

(3) Valve 4 sealed closed.

(4) Valve 5 sealed closed.

{5} Misc. Valves: Plugged or otherwise unaccessable.
NOTE: Valve 2 is either a test or roll line if there is a valve 2 it will be sealed closed.

Ledger for Site Diagram

Valve #1: Production Line
Valve #2: Test or Roll line
Valve #3: Equilizer Line
Valve #4: Circ./Drain Line
Valve #5: Sales Line
Valve #6: BS&W Load Line

Buried Lines:
Firewall:
Wellhead:
Stak-pak: Stak-pak
Production line:
Water line:
Gas Meter A M C

North

Production System Open
Oil Piped
1. Production Phase OT#1
{1} valve #1and 3 open
{2} valve 2,4,&5 sealed closed.
{3} Valve on tk #2 positioned.
A. Valve 1, 2,4,5 sealed closed.
B. Valve 3 open.
Sales Phase OT#1
1. Valves 1,2,3,&4 sealed closed
2. Valve #5 in open position
3. OT#2 positioned
A. Valve 1,3 open
B. Valve 2,4 & 5 sealed close

Vent Tank
500bbl Oil TK#1
500bbl Oil Tk #3
500bbl Oil #2
VRT
Lact Unit
Smith Meter # Z 4215
500bbl P/W TK#1
500bbl P/W TK#1
VRU

Devon Energy
Cotton Draw 10 Fed#2H
Section 10,T25S,R31E
330FNL&660FEL
Eddy County, N.M

Coriolis 144221213
F W K O
Turbine
3 PHASE
CDU 10-4
Coriolis 14420808
3 PHASE
CDU 10-3
Turbine
Tester Heater
Coriolis 1434669
H.T
Test 2-phase Sep
Turbine Meter
Production Heater
H.T
Prod 2-phase Sep
Turbine Meter
F W K O

390-11-306 Flare Meter
Point of Royalty Measurement 390-33-569
2-phase
HEADER
CDU 10-3 390-49-331
CDU 10-4 390-49-332
VRU Meter 390-00-240
Test Meter 390-49-1666
HEADER
CD 10-1
CD 10-2

devon

Devon Energy Corporation
333 West Sheridan Avenue
Oklahoma City, OK 73102 5010

405 552 7970 Phone
Erin workman@dvn com

June 2, 2017

Mr. Michael McMillian
State of New Mexico
Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

Re:	**CTB/PC**	**Cotton Draw 10 Fed Com 1H, 2H, 3H, & 4H**
	Sec.,T, R:	**Sec 10, T25S, R31E**
	Lease:	**CA NMNM128656, 128657, 134185, & 134288**
	API:	**30-015-39229, 30-015-39230, 30-015-42126, & 30-015-42127**
	Pool:	**Cotton Draw, Delaware, South & Paduca; Bone Spring**
	County:	**Eddy Co., New Mexico**

Dear Mr. McMillian:

Please find attached the OCD Form C-103 Notice of Intent for a Central Tank Battery & Pool Commingle for the aforementioned wells.

The working interest, royalty interest and overriding royalty interest owners are not identical; notification has been sent via certified mail (see attached).

Subsequently drilled wells that produce from the subject pools within the project areas approved by this order may be added to this commingling authority by submittal of a Sundry Notice to the Engineering Bureau in Santa Fe.

Should you have any questions or need further assistance, please do not hesitate to contact me at (405) 552-7970.

Sincerely,

Erin Workman

Erin Workman
Regulatory Compliance Professional

Enclosures

District I
1625 N French Drive, Hobbs, NM 88240
District II
1301 W Grand Ave, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S St Francis Dr, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 S St Francis Drive
Santa Fe, New Mexico 87505

Form C-107-B
Revised June 10, 2003

Submit the original application to the Santa Fe office with one copy to the appropriate District Office

APPLICATION FOR SURFACE COMMINGLING (DIVERSE OWNERSHIP)

OPERATOR NAME: Devon Energy Production Co , LP
OPERATOR ADDRESS: 333 W Sheridan Avenue, Oklahoma City, OK 73102
APPLICATION TYPE

☐ Pool Commingling ☐ Lease Commingling ☒ Pool and Lease Commingling ☐ Off-Lease Storage and Measurement (Only if not Surface Commingled)

LEASE TYPE ☐ Fee ☐ State ☒ Federal

Is this an Amendment to existing Order? ☐ Yes ☒ No If "Yes", please include the appropriate Order No ___

Have the Bureau of Land Management (BLM) and State Land office (SLO) been notified in writing of the proposed commingling ☒ Yes ☐ No

(A) POOL COMMINGLING – fill if Pool Commingle
Please attach sheets with the following information

(1) Pool Names and Codes	Gravities / BTU of Non-Commingled Production	Calculated Gravities / BTU of Commingled Production		Calculated Value of Commingled Production	Volumes
Cotton Draw, Delaware, South	45/1315				
Paduca, Bone Spring	45/1315				

(2) Are any wells producing at top allowables? ☐ Yes ☒ No
(3) Has all interest owners been notified by certified mail of the proposed commingling? ☒ Yes ☐ No
(4) Measurement type ☒ Metering ☒ Other (Coriolis & Well Test Method)
(5) Will commingling decrease the value of production? ☐ Yes ☒ No If "yes", describe why commingling should be approved

(B) LEASE COMMINGLING
Please attach sheets with the following information

(1) Pool Name and Code
(2) Is all production from same source of supply? ☐ Yes ☒ No
(3) Has all interest owners been notified by certified mail of the proposed commingling? ☒ Yes ☐ No
(4) Measurement type ☒ Metering ☒ Other (Coriolis & Well Test Method)

(C) POOL and LEASE COMMINGLING
Please attach sheets with the following information

(1) Complete Sections A and E

(D) OFF-LEASE STORAGE and MEASUREMENT
Please attached sheets with the following information

(1) Is all production from same source of supply? ☐ Yes ☒ No
(2) Include proof of notice to all interest owners

(E) ADDITIONAL INFORMATION (for all application types)
Please attach sheets with the following information

(1) A schematic diagram of facility, including legal location
(2) A plat with lease boundaries showing all well and facility locations Include lease numbers if Federal or State lands are involved
(3) Lease Names, Lease and Well Numbers, and API Numbers

I hereby certify that the information above is true and complete to the best of my knowledge and belief

SIGNATURE Erin Workman TITLE Regulatory Compliance Prof DATE 06/02/2017

TYPE OR PRINT NAME Erin Workman TELEPHONE NUMBER (405)552-7970

E-MAIL ADDRESS Erin workman@dvn com

APPLICATION FOR SURFACE\POOL COMMINGLING\OFF LEASE MEASUREMENT SALES, & STORAGE

Proposal for Cotton Draw 10 Fed Com 2H Battery
Devon Energy Production Company, LP is requesting approval for Surface\Pool Commingle\Off-Lease measurement, sales, and storage for the following wells

Federal Lease: CA NMNM128656 (12.5%)

Well Name	Location	API #	Pool 96757	BOPD	OG	MCFPD	BTU
Cotton Draw 10 Fed Com 1H	SWSE, Sec 10, T25S, R31E	30-015-39229	Cotton Draw; Delaware, South	14	45*	36	1315*

Federal Lease CA NMNM 128657(12.5%)

Well Name	Location	API #	Pool 96757	BOPD	OG	MCFPD	BTU
Cotton Draw 10 Fed Com 2H	NENE, Sec 10, T25S, R31E	30-015-39230	Cotton Draw; Delaware, South	16	45*	50	1315*

Federal Lease: CA NMNM134185 (12.5%)

Well Name	Location	API #	Pool 96641	BOPD	OG	MCFPD	BTU
Cotton Draw 10 Fed Com 3H	NENE, Sec 10, T25S, R31E	30-015-42126	Paduca; Bone Spring	140	45*	778	1315*

Federal Lease CA NMNM134188 (12.5%)

Well Name	Location	API #	Pool 96641	BOPD	OG	MCFPD	BTU
Cotton Draw 10 Fed Com 4H	NENE, Sec 10, T25S, R31E	30-015-42127	Paduca; Bone Spring	106	45*	445	1315*

These numbers are per the battery, will provide numbers upon receipt

Attached is a map that displays the federal leases and well locations in Section 10, T25S, R31E

The BLM's interest in all four wells is 12 5%

Oil & Gas metering:
The central tank battery is located on the Cotton Draw 10 Fed Com 2H in Sec 10, T25S, R31E, Eddy County, New Mexico The Cotton Draw 10 Fed Com 1H & 2H will flow into a mani-folded header with the ability to route each well to either a dedicated tester or production heater\treater One well will be routed to the dedicated tester and one routed to the production heater treater during normal operations The well test method will be utilized once a month for a minimum of 24 hours to meter the oil, water, and gas for either the 1H or 2H Oil is measured with a Micro Motion Coriolis Meter, water is measured with mag meter, and gas is measured with an orifice meter & EFM The Cotton Draw 10 Fed Com 3H & 4H production are measured continuously through three phase separators with using a Micro Motion Coriolis to meter the oil, mag meter to meter the water, and an orifice meter to meter the gas VRU gas is measured with an orifice meter and is allocated back to each well utilizing a percentage of each wells monthly oil production

The Cotton Draw 10 Fed Com 2H battery contains 3 oil tanks Oil from each well commingles downstream of the heater treaters and then flows into the tanks They will share a common Devon Point of Royalty Measurement **#390-33-569** on location at the Cotton Draw 10 Fed Com 2H Battery located in Sec 10, T25S, R31E They will also share a common LACT Smith Meter # Z 4215.

During well test, either the Cotton Draw 10 Fed Com 1H or 2H well is routed to the test side, production will flow into a two phase test separator where gas is separated, combined with gas from the test side heater treater, and then metered with an orifice meter # **390-49-166** Once gas from the test side is measured, the test gas combines into a header with the gas from the other 3 wells & VRU flash gas, flows through a sales gas 2 phase separator, and is metered via Devon Point of Royalty Measurement **#390-33-569** before it goes into the pipeline Oil/water flow from the 2 phase tester separator and enter into a test heater treater After separation, the oil is then metered with a Micro Motion Coriolis Meter **#1434669,** flows into an oil production line where it is combined with the other wells oil, and then to the 500 bbl oil tanks The water is metered using a turbine meter, then flows to the 500 bbl produced water tank, along with the water from the other wells

When not on test, either the Cotton Draw 10 Fed Com 1H or 2H is routed to the production 2 phase separator Production will flow into a two phase separator where after separation, gas combines with the production heater\treater gas and flows into a common header with gas from the other wells & VRU flash gas Everything goes through the sales gas 2 phase separator and then flows to the Devon Point of Royalty Measurement **#390-33-165** Produced water and oil flows from the production 2 phase separator and into the FWKO After separation, the oil then combines with the oil from the Cotton Draw 10 Fed Com 3H &4H and flows into the

production heater\treater, is metered with a turbine meter and then combines with the oil from the test side, and flows into one of the 500 oil bbl tanks The produced water is metered with a turbine meter and flows to one of the 500 bbl produced water tanks, along with the water from the other wells

The Cotton Draw 10 Fed Com 3H well has its own dedicated three phase test separator After the gas is separated, it is routed to the gas test meter **# 390-49-331**, into a common header with gas from the other wells and the VRU, through a 2-phase separator, and then flows to the Devon Point of Royalty Measurement **#390-33-569** After separation, the produced oil is then metered with a Micro Motion Coriolis Meter **#14420808,** combines with the Cotton Draw 10 Fed Com 4H & oil from the FWKO on the production side, flows into the production heater/treater, then will combine with the oil on the test side and flow to one of the 500 bbl oil tanks The water is metered utilizing a turbine meter, combines with the water from the Cotton Draw 10 Fed Com 4H, flows into the FWKO, then combines with the water from the test and production side, and flows to one of the 500 bbl produced water tanks

The Cotton Draw 10 Fed Com 4H well has its own dedicated three phase test separator After the gas is separated, it is routed to the gas test meter **# 390-49-332**, into a common header with gas from the other wells and the VRU, through a 2-phase separator, and then flows to the Devon Point of Royalty Measurement **#390-33-569** After separation, the produced oil is then metered with a Micro Motion Coriolis Meter **#144221213,** combines with the Cotton Draw 10 Fed Com 3H & oil from the FWKO on the production side, flows into the production heater/treater, then will combine with the oil on the test side and flow to one of the 500 bbl oil tanks The water is metered utilizing a turbine meter, combines with the water from the Cotton Draw 10 Fed Com 3H, flows into the FWKO, then combines with the water from the test and production side, and flows to one of the 500 bbl produced water tanks

Devon proposes to allocate production for the Cotton Draw 10 Fed Com 1H & 2H by the well test method Production from the Cotton Draw 10 Fed Com 3H & 4H will be allocated on a daily basis based on the Coriolis Test Meter, Turbine Meter, & EFM located downstream of the dedicated three phase separator. The Coriolis meter will be proven, as per API, NMOCD, and BLM specifications, when installed, once per month for the first 3 months (to establish a consistent repeatability factor), and then quarterly thereafter, the factor obtained will be used to allocate the production volumes Gas production from the Cotton Draw 10 Fed Com 3H & 4H wells will be allocated on a daily basis using the gas allocation meter The gas production from the Cotton Draw 10 Fed Com 1H & 2H will be allocated based on a monthly basis per the gas test meter **#390-49-166**. The gas production from the production equipment, test side gas meter, & gas meters from the Cotton Draw 10 Fed Com 3H & 4H will commingle come into a common header, and flow into Devon's Point of Royalty Measurement Meter **#390-33-569** These meters will be calibrated on a regular basis per API, NMOCD and BLM specifications The BLM and OCD will be notified of any future changes in the facilities

These wells are located on multiple Federal Leases and CA's that are all 12 5% royalty This is divers WI & ORRI among these wells as outlined in the attached ownership list Notice has been provided to all parties as per the attached certified mail list Wells have declined below their top allowable within the first 3 months of production Furthermore, the percent of decline 6 months after peak rate is between 33-82%

Process and Flow Descriptions:

The flow of produced fluids is shown in detail on the enclosed facility diagram, along with a description of each vessel and map which shows the lease boundaries, location of wells, facility, and gas sales meter The proposed commingling is appropriate based on the BLM's guidance in IM 2013-152 The proposed commingling will maximize the ultimate recovery of oil and/or gas from the federal leases and will reduce environmental impacts by minimizing surface disturbance and emissions. The proposed commingling will reduce operating expenses, as well as, not adversely affect federal royalty income, production accountability, or the distribution of royalty.

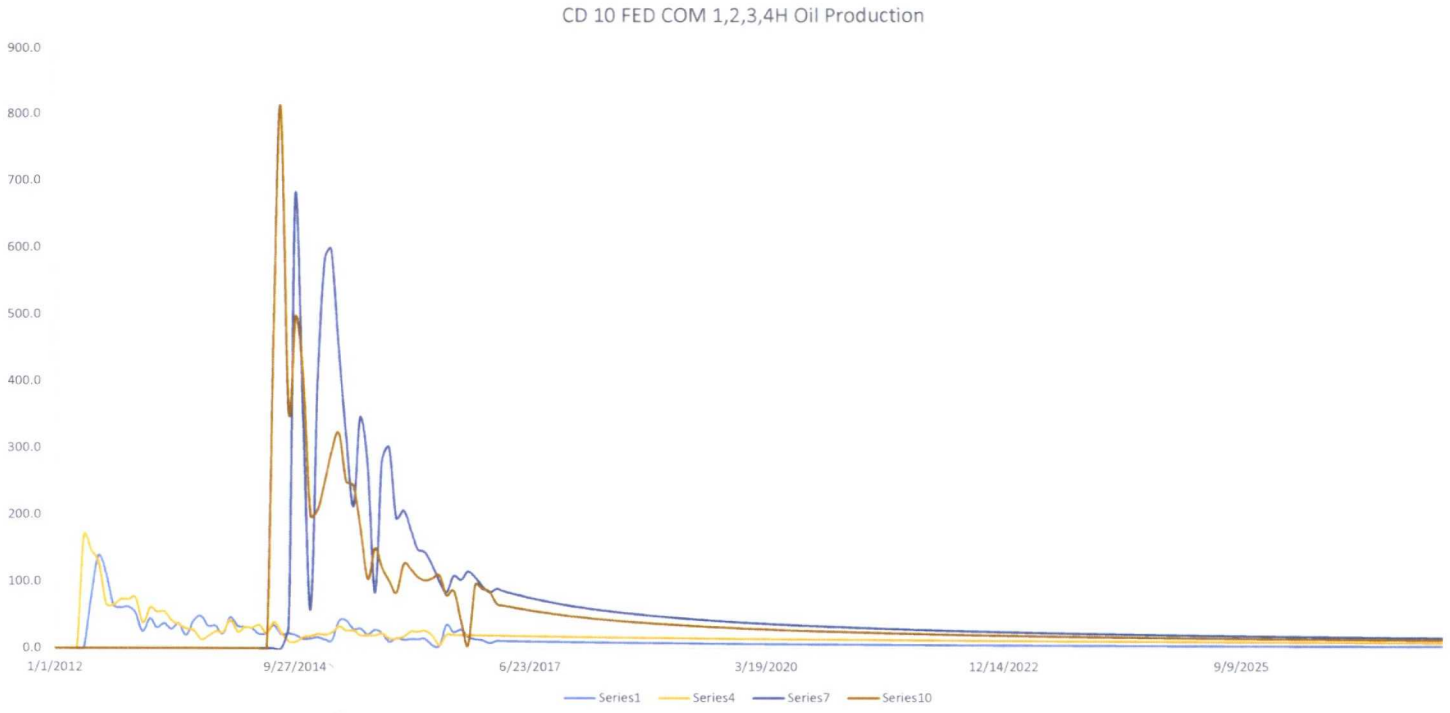
Devon Energy Production Company, LP understands the requested approval will not constitute the granting of any right-of-way or construction rights not granted by the lease instrument

Working, royalty, and overriding interest owners have been notified of this proposal via certified mail (see attached)

Signed
Printed Name Anoop Sharma
Title Reservior Engineer
Date 05 31 17

Signed
Printed Name Erin Workman
Title Regulatory Compliance Analyst
Date 05 31 17

	CD 10 FED COM 1H	CD 10 FED COM 2H	CD 10 FED COM 3H	CD 10 FED COM 4H
Peak Rate	138.5	169.3	676.4	811.8
6 Months Later	25.5	73.4	451.1	253.6
% Decline	82%	57%	33%	69%



1/1/2012	40909.00
12/31/2027	46752.00

	CD 10 FED COM 1H	CD 10 FED COM 2H	CD 10 FED COM 3H	CD 10 FED COM 4H
Date	Oil, BOD	Oil, BOD	Oil, BOD	Oil, BOD
1/1/2012	0 0	0 0	0 0	0 0
2/1/2012	0 0	0 0	0 0	0 0
3/1/2012	0 0	0.0	0 0	0 0
4/1/2012	0 0	0.7	0 0	0 0
5/1/2012	0 0	169 3	0 0	0 0
6/1/2012	76.1	146 6	0 0	0 0
7/1/2012	138 5	128 9	0 0	0 0
8/1/2012	114 1	66 9	0 0	0 0
9/1/2012	65 2	64.9	0 0	0 0
10/1/2012	60.9	73 6	0.0	0 0
11/1/2012	62.1	73 4	0 0	0 0
12/1/2012	53 7	76 1	0 0	0 0
1/1/2013	25 5	38.8	0 0	0 0
2/1/2013	44 4	61 3	0 0	0 0
3/1/2013	31.2	54 8	0 0	0 0
4/1/2013	37.3	54 7	0 0	0 0
5/1/2013	28 8	41 7	0.0	0 0
6/1/2013	37 0	35 8	0 0	0 0
7/1/2013	19 7	29.7	0 0	0 0
8/1/2013	41 3	26.8	0 0	0 0
9/1/2013	48 3	13 4	0 0	0 0
10/1/2013	33 6	18 4	0 0	0 0
11/1/2013	33 8	25 4	0.0	0 0
12/1/2013	21 7	24 3	0.0	0 0
1/1/2014	46 4	41 8	0 0	0 0
2/1/2014	33 4	24 6	0.0	0 0
3/1/2014	31.9	31.2	0 0	0 0
4/1/2014	30 1	30 7	0 0	0 0
5/1/2014	21 5	34.9	0 0	0 0
6/1/2014	22 9	22 4	0.0	0 0
7/1/2014	34 6	39 3	0 0	475 3
8/1/2014	21.0	23.5	0 0	811.8
9/1/2014	22 5	10 5	36 1	356 4
10/1/2014	19.7	10.2	676 4	496.6
11/1/2014	14 2	17 0	350.9	405 1
12/1/2014	14 7	18 7	57 7	198.3
1/1/2015	16 6	21.8	404 0	208 5
2/1/2015	13 0	20 6	583.2	253 6
3/1/2015	11 8	24 1	597 3	295 7
4/1/2015	41 1	32.7	451 1	322 4
5/1/2015	42 3	27 1	322 6	250 8
6/1/2015	28 8	26 5	212 3	243 4
7/1/2015	30.1	20 0	345.9	180 2
8/1/2015	21 1	19.3	278 5	103 8
9/1/2015	27.8	19.6	83 2	149.7

10/1/2015	23 1	22.1	279 7	120 4
11/1/2015	10 0	15 4	301.8	100 8
12/1/2015	15 5	14 5	195 6	83 6
1/1/2016	13 0	18 4	207 0	126 5
2/1/2016	14 0	25 6	177.6	118 6
3/1/2016	13 6	25 1	149.2	107 3
4/1/2016	14.5	26 8	144.1	102 0
5/1/2016	4 8	19 2	124 1	105 0
6/1/2016	4 4	5.0	100 5	109 6
7/1/2016	35 4	20.4	83 9	79 2
8/1/2016	24 7	20 2	108 4	86 2
9/1/2016	27 9	20.0	102 8	40 3
10/1/2016	17 5	19.8	115 3	4 7
11/1/2016	13 7	19.6	106 8	95 1
12/1/2016	12 4	19 4	93.3	89 2
1/1/2017	7 9	19 2	84.2	84 5
2/1/2017	11 0	19 0	89.2	66 4
3/1/2017	10 8	18 8	86 0	64 2
4/1/2017	10 6	18 6	83 0	62 1
5/1/2017	10.4	18 5	80 2	60 1
6/1/2017	10 3	18 3	77 6	58 2
7/1/2017	10 1	18 1	75 1	56 5
8/1/2017	9 9	17 9	72 8	54 8
9/1/2017	9 8	17 8	70 6	53 2
10/1/2017	9 6	17 6	68 5	51 8
11/1/2017	9 5	17 4	66 6	50 4
12/1/2017	9 3	17 3	64 8	49 1
1/1/2018	9 2	17 1	63 0	47 8
2/1/2018	9 1	17 0	61 4	46 6
3/1/2018	8 9	16 8	59 9	45 5
4/1/2018	8.8	16.7	58.5	44 4
5/1/2018	8 7	16 5	57 1	43 4
6/1/2018	8 5	16 4	55 7	42 4
7/1/2018	8.4	16 2	54 4	41 5
8/1/2018	8.3	16 1	53 2	40 6
9/1/2018	8 2	16 0	52.0	39 7
10/1/2018	8 1	15 8	50 9	38 9
11/1/2018	7 9	15 7	49 8	38 1
12/1/2018	7.8	15.6	48 8	37.3
1/1/2019	7 7	15 5	47 8	36 6
2/1/2019	7 6	15 3	46 9	35.9
3/1/2019	7 5	15 2	46 0	35.3
4/1/2019	7 4	15 1	45.1	34 6
5/1/2019	7 3	15 0	44 3	34 0
6/1/2019	7 2	14 9	43 5	33.4
7/1/2019	7 1	14.8	42 7	32 8
8/1/2019	7.0	14 7	41 9	32 2

9/1/2019	6 9	14 5	41 2	31 7
10/1/2019	6 8	14 4	40 5	31 1
11/1/2019	6 7	14 3	39 8	30 6
12/1/2019	6 7	14 2	39 1	30 1
1/1/2020	6 6	14 1	38.4	29 6
2/1/2020	6 5	14 0	37 8	29 1
3/1/2020	6 4	13 9	37 2	28 7
4/1/2020	6 3	13 8	36 6	28 3
5/1/2020	6 2	13 7	36 1	27.8
6/1/2020	6 2	13 6	35 5	27 4
7/1/2020	6 1	13 5	35 0	27 0
8/1/2020	6 0	13.4	34 5	26 6
9/1/2020	5 9	13 3	34 0	26 3
10/1/2020	5 9	13 2	33 5	25 9
11/1/2020	5 8	13 2	33 0	25 5
12/1/2020	5.7	13.1	32 6	25 2
1/1/2021	5 7	13 0	32 2	24 9
2/1/2021	5 6	12 9	31 8	24 6
3/1/2021	5.5	12.9	31.4	24 3
4/1/2021	5 5	12 8	31 0	24 0
5/1/2021	5 4	12 7	30 6	23 7
6/1/2021	5 3	12 6	30 2	23 4
7/1/2021	5 3	12.5	29.8	23 1
8/1/2021	5 2	12 5	29 4	22 8
9/1/2021	5 2	12 4	29 1	22 5
10/1/2021	5.1	12.3	28.7	22 3
11/1/2021	5 0	12.2	28 4	22 0
12/1/2021	5 0	12 1	28 0	21 8
1/1/2022	4 9	12 1	27.7	21 5
2/1/2022	4 9	12 0	27 4	21.3
3/1/2022	4 8	11 9	27 1	21.0
4/1/2022	4 8	11 8	26 8	20 8
5/1/2022	4 7	11 8	26 5	20 6
6/1/2022	4 7	11 7	26.2	20 4
7/1/2022	4 6	11 6	25 9	20 1
8/1/2022	4 6	11 5	25.6	19 9
9/1/2022	4 5	11 5	25 3	19 7
10/1/2022	4 5	11 4	25.1	19 5
11/1/2022	4 4	11 3	24.8	19 3
12/1/2022	4 4	11.3	24 6	19 1
1/1/2023	4 3	11 2	24.3	18.9
2/1/2023	4 3	11 1	24 1	18.7
3/1/2023	4 2	11.0	23 8	18 5
4/1/2023	4 2	11 0	23 6	18 4
5/1/2023	4 2	10 9	23.4	18 2
6/1/2023	4 1	10 8	23.1	18 0
7/1/2023	4 1	10 8	22 9	17.8

8/1/2023	4 0	10 7	22 7	17 7
9/1/2023	4 0	10 6	22 5	17 5
10/1/2023	4 0	10 6	22 3	17 3
11/1/2023	3 9	10 5	22 0	17 2
12/1/2023	3 9	10 4	21 8	17 0
1/1/2024	3 8	10 3	21 6	16 8
2/1/2024	3 8	10 3	21 4	16 7
3/1/2024	3 8	10 2	21 2	16 5
4/1/2024	3 7	10 1	21 0	16 4
5/1/2024	3 7	10 1	20 8	16 2
6/1/2024	3 6	10 0	20 6	16 1
7/1/2024	3 6	10 0	20 5	16 0
8/1/2024	3 6	9 9	20 3	15 8
9/1/2024	3 5	9 8	20 1	15 7
10/1/2024	3 5	9 8	19 9	15 6
11/1/2024	3 5	9 7	19 8	15 4
12/1/2024	3 4	9.6	19 6	15 3
1/1/2025	3 4	9 6	19 5	15 2
2/1/2025	3 4	9 6	19 4	15 1
3/1/2025	3 4	9.5	19 2	15.0
4/1/2025	3 3	9 4	19 0	14 9
5/1/2025	3 3	9 4	18 9	14 8
6/1/2025	3 3	9 3	18 7	14.6
7/1/2025	3 2	9 3	18 6	14 5
8/1/2025	3 2	9 2	18 5	14 4
9/1/2025	3 2	9 1	18 3	14.3
10/1/2025	3 2	9 1	18.2	14 2
11/1/2025	3 1	9 0	18 0	14 1
12/1/2025	3 1	9 0	17 9	14 0
1/1/2026	3 1	8 9	17 8	13 9
2/1/2026	3 0	8 9	17 6	13 8
3/1/2026	3 0	8 8	17 5	13 7
4/1/2026	3 0	8 7	17 4	13 6
5/1/2026	3 0	8 7	17 2	13 5
6/1/2026	2 9	8 6	17 1	13 4
7/1/2026	2 9	8 6	17 0	13.3
8/1/2026	2 9	8 5	16 9	13 2
9/1/2026	2 9	8 5	16 8	13 1
10/1/2026	2 8	8 4	16 6	13.0
11/1/2026	2 8	8 4	16 5	12 9
12/1/2026	2 8	8 3	16.4	12 8
1/1/2027	2 8	8 3	16 3	12.7
2/1/2027	2 7	8 2	16 2	12 7
3/1/2027	2 7	8 2	16 1	12 6
4/1/2027	2 7	8 1	16 0	12 5
5/1/2027	2 7	8 1	15 9	12 4
6/1/2027	2 7	8 0	15 8	12 3

7/1/2027	2 6	8 0	15 7	12.3
8/1/2027	2 6	7 9	15 5	12 2
9/1/2027	2 6	7 9	15 4	12.1
10/1/2027	2 6	7 8	15.3	12 0
11/1/2027	2 6	7 8	15.2	11 9
12/1/2027	2 5	7 7	15.2	11 9
1/1/2028	2 5	7 6	15 0	11 8
2/1/2028	2 5	7 6	14.9	11 7
3/1/2028	2 5	7.5	14 8	11 6
4/1/2028	2 4	7 5	14 7	11.5
5/1/2028	2 4	7 4	14.6	11 5
6/1/2028	2 4	7 4	14.6	11 4
7/1/2028	2 4	7 4	14.5	11 3
8/1/2028	2 4	7 3	14 4	11 3
9/1/2028	2 4	7 3	14.3	11 2
10/1/2028	2 3	7 2	14.2	11 1
11/1/2028	2 3	7 2	14.1	11 1
12/1/2028	2 3	7 1	14.0	11 0
1/1/2029	2 3	7.1	14 0	11 0
2/1/2029	2 3	7 1	13 9	10 9
3/1/2029	2 3	7 0	13 8	10 8
4/1/2029	2.2	7 0	13 7	10.8
5/1/2029	2 2	6 9	13 7	10.7
6/1/2029	2 2	6 9	13 6	10.6
7/1/2029	2.2	6 8	13 5	10.6
8/1/2029	2 2	6 8	13 4	10.5
9/1/2029	2 2	6 8	13 3	10 4
10/1/2029	2 1	6.7	13 2	10 4
11/1/2029	2 1	6.7	13 2	10 3
12/1/2029	2 1	6.6	13.1	10.3
1/1/2030	2 1	6.6	13.0	10 2
2/1/2030	2 1	6.5	12.9	10 1
3/1/2030	2 1	6.5	12.9	10 1
4/1/2030	2.1	6.5	12.8	10 0
5/1/2030	2 0	6 4	12 7	9.9
6/1/2030	2 0	6 4	12 6	9.9
7/1/2030	2 0	6 3	12 5	9 8
8/1/2030	2 0	6 3	12 5	9 8
9/1/2030	2.0	6.3	12 4	9 7
10/1/2030	2.0	6.2	12.3	9 6
11/1/2030	2 0	6 2	12.2	9.6
12/1/2030	1 9	6 1	12 2	9 5
1/1/2031	1.9	6.1	12 1	9 5
2/1/2031	1 9	6 1	12.0	9 4
3/1/2031	1 9	6 0	12 0	9 4
4/1/2031	1.9	6.0	11.9	9.3
5/1/2031	1 9	6.0	11 8	9 3

6/1/2031	1 9	5 9	11 7	9 2
7/1/2031	1 8	5 9	11 7	9 1
8/1/2031	1 8	5 8	11.6	9 1
9/1/2031	1 8	5 8	11 5	9 0
10/1/2031	1 8	5 8	11.5	9 0
11/1/2031	1 8	5 7	11 4	8 9
12/1/2031	1 8	5 7	11.3	8 9
1/1/2032	1 8	5.6	11 2	8.8
2/1/2032	1 8	5 6	11.2	8 7
3/1/2032	1 7	5 6	11 1	8 7
4/1/2032	1 7	5 5	11.0	8 6
5/1/2032	1 7	5 5	11 0	8 6
6/1/2032	1 7	5.5	10 9	8.5
7/1/2032	1 7	5 4	10 8	8 5
8/1/2032	1 7	5 4	10 8	8.4
9/1/2032	1 7	5 4	10 7	8.4
10/1/2032	1 7	5 3	10 6	8.3
11/1/2032	1 7	5 3	10 6	8.3
12/1/2032	1 6	5 3	10.5	8.2
1/1/2033	1 6	5 2	10 5	8.2
2/1/2033	1 6	5 2	10 4	8.1
3/1/2033	1 6	5.2	10 3	8 1
4/1/2033	1 6	5.1	10 3	8 1
5/1/2033	1 6	5 1	10 2	8 0
6/1/2033	1 6	5 1	10.2	8.0
7/1/2033	1.6	5 0	10.1	7.9
8/1/2033	1 6	5 0	10 0	7.9
9/1/2033	1.6	5 0	10.0	7.8
10/1/2033	1 5	5 0	9.9	7.8
11/1/2033	1 5	4 9	9 9	7 7
12/1/2033	1 5	4 9	9 8	7 7
1/1/2034	1 5	4 9	9 7	7 6
2/1/2034	1.5	4 8	9 7	7.6
3/1/2034	1.5	4.8	9 6	7 5
4/1/2034	1 5	4 8	9 6	7 5
5/1/2034	1 5	4 7	9 5	7.4
6/1/2034	1 5	4 7	9 4	7 4
7/1/2034	1 5	4.7	9.4	7.4
8/1/2034	1 5	4 7	9 3	7.3
9/1/2034	1 4	4 6	9 3	7.3
10/1/2034	1.4	4.6	9 2	7 2
11/1/2034	1 4	4 6	9 2	7 2
12/1/2034	1 4	4.5	9.1	7 1
1/1/2035	1 4	4 5	9.0	7 1
2/1/2035	1 4	4 5	9 0	7.0
3/1/2035	1 4	4.5	8.9	7.0
4/1/2035	1 4	4 4	8.9	7.0

5/1/2035	1 4	4 4	8 8	6 9
6/1/2035	1 4	4 4	8 8	6 9
7/1/2035	1 4	4.3	8 7	6 8
8/1/2035	1 4	4 3	8 7	6 8
9/1/2035	1 3	4 3	8 6	6 8
10/1/2035	1 3	4 3	8 6	6 7
11/1/2035	1.3	4.2	8 5	6.7
12/1/2035	1.3	4 2	8 5	6 6
1/1/2036	1.3	4 2	8 4	6 6
2/1/2036	1.3	4 1	8 3	6 5
3/1/2036	1.3	4.1	8 3	6 5
4/1/2036	1 3	4 1	8 2	6 5
5/1/2036	1 3	4 1	8 2	6.4
6/1/2036	1 3	4 0	8 1	6 4
7/1/2036	1 3	4 0	8 1	6 3
8/1/2036	1 3	4 0	8 0	6 3
9/1/2036	1 3	4 0	8 0	6 3
10/1/2036	1 3	3 9	8 0	6 2
11/1/2036	1 2	3 9	7 9	6 2
12/1/2036	1 2	3 9	7 9	6 2
1/1/2037	1.2	3 9	7 8	6 1
2/1/2037	1 2	3 8	7 8	6 1
3/1/2037	1.2	3 8	7 7	6 1
4/1/2037	1 2	3.8	7 7	6 0
5/1/2037	1 2	3.8	7 6	6 0
6/1/2037	1 2	3.8	7 6	6 0
7/1/2037	1 2	3 7	7.6	5 9
8/1/2037	1.2	3 7	7.5	5 9
9/1/2037	1 2	3 7	7 5	5 8
10/1/2037	1.2	3 7	7 4	5.8
11/1/2037	1 2	3.6	7 4	5.8
12/1/2037	1 2	3.6	7 3	5.7
1/1/2038	1 2	3 6	7.3	5 7
2/1/2038	1.1	3 6	7.2	5.7
3/1/2038	1 1	3 5	7 2	5 6
4/1/2038	1.1	3 5	7.2	5 6
5/1/2038	1 1	3 5	7 1	5 6
6/1/2038	1 1	3 5	7 1	5 5
7/1/2038	1.1	3 5	7 0	5.5
8/1/2038	1 1	3 4	7 0	5 5
9/1/2038	1 1	3.4	6.9	5.4
10/1/2038	1 1	3 4	6.9	5.4
11/1/2038	1 1	3.4	6.9	5.4
12/1/2038	1.1	3 3	6 8	5.3
1/1/2039	1 1	3 3	6.8	5 3
2/1/2039	1 1	3.3	6.7	5.3
3/1/2039	1.1	3 3	6 7	5.2

4/1/2039	1 1	3 3	6 7	5 2
5/1/2039	1 1	3 2	6.6	5 2
6/1/2039	1 1	3 2	6 6	5 1
7/1/2039	1 1	3 2	6 5	5 1
8/1/2039	1 0	3 2	6 5	5 1
9/1/2039	1.0	3 2	6 5	5 1
10/1/2039	1 0	3 1	6 4	5 0
11/1/2039	1.0	3 1	6.4	5 0
12/1/2039	1 0	3 1	6.3	5.0
1/1/2040	1 0	3 1	6 3	4.9
2/1/2040	1 0	3 1	6 2	4.9
3/1/2040	1 0	3 0	6 2	4.9
4/1/2040	0.2	3 0	6 2	4 8
5/1/2040	0 0	3 0	6 1	4 8
6/1/2040	0 0	3 0	6.1	4 8
7/1/2040	0 0	3 0	6.1	4.7
8/1/2040	0 0	2 9	6 0	4 7
9/1/2040	0 0	2 9	6 0	4 7
10/1/2040	0.0	2 9	5 9	4 7
11/1/2040	0 0	2 9	5 9	4 6
12/1/2040	0 0	2 9	5 9	4 6
1/1/2041	0 0	2 9	5 9	4 6
2/1/2041	0 0	2 8	5 8	4 6
3/1/2041	0 0	2 8	5.8	4 5
4/1/2041	0 0	2 8	5 8	4 5
5/1/2041	0 0	2 8	5 7	4 5
6/1/2041	0 0	2 8	5 7	4 5
7/1/2041	0 0	2 8	5 7	4 4
8/1/2041	0 0	2 7	5 6	4 4
9/1/2041	0.0	2 7	5.6	4 4
10/1/2041	0 0	2 7	5 5	4.3
11/1/2041	0 0	2 7	5 5	4 3
12/1/2041	0 0	2 7	5.5	4 3
1/1/2042	0.0	2 7	5 4	4 3
2/1/2042	0 0	2 6	5 4	4 2
3/1/2042	0.0	2 6	5 4	4.2
4/1/2042	0 0	2 6	5 4	4 2
5/1/2042	0 0	2 6	5 3	4.2
6/1/2042	0 0	2 6	5 3	4.1
7/1/2042	0 0	2 6	5 3	4 1
8/1/2042	0 0	2.5	5 2	4.1
9/1/2042	0.0	2 5	5.2	4 1
10/1/2042	0 0	2 5	5 2	4 0
11/1/2042	0 0	2 5	5 1	4 0
12/1/2042	0.0	2 5	5.1	4.0
1/1/2043	0.0	2 5	5 1	4 0
2/1/2043	0.0	2 4	5 0	3.9

3/1/2043	0 0	2 4	5 0	3 9
4/1/2043	0 0	2 4	5 0	3.9
5/1/2043	0 0	2 4	4 9	3 9
6/1/2043	0 0	2 4	4 9	3.9
7/1/2043	0 0	2 4	4 9	3.8
8/1/2043	0 0	2 4	4 9	3.8
9/1/2043	0 0	2 3	4 8	3 8
10/1/2043	0 0	2 3	4 8	3 8
11/1/2043	0 0	2 3	4 8	3 7
12/1/2043	0 0	2 3	4 7	3 7
1/1/2044	0 0	2 3	4 7	3 7
2/1/2044	0 0	2 3	4 7	3 7
3/1/2044	0 0	2 2	4 6	3.6
4/1/2044	0 0	2 2	4 6	3.6
5/1/2044	0 0	2 2	4 6	3 6
6/1/2044	0.0	2 2	4.6	3 6
7/1/2044	0 0	2 2	4.5	3 6
8/1/2044	0 0	2 2	4 5	3 5
9/1/2044	0 0	2 2	4 5	3 5
10/1/2044	0.0	2 1	4 5	3.5
11/1/2044	0 0	2 1	4 4	3 5
12/1/2044	0 0	2 1	4 4	3 4
1/1/2045	0 0	2 1	4 4	3 4
2/1/2045	0 0	2 1	4 4	3 4
3/1/2045	0 0	2 1	4 3	3 4
4/1/2045	0 0	2 1	4 3	3 4
5/1/2045	0.0	2 1	4 3	3 4
6/1/2045	0 0	2 0	4 3	3 3
7/1/2045	0 0	2 0	4 2	3 3
8/1/2045	0 0	2 0	4 2	3 3
9/1/2045	0 0	2 0	4 2	3 3
10/1/2045	0 0	2 0	4 2	3 3
11/1/2045	0.0	2.0	4.1	3.2
12/1/2045	0 0	2 0	4 1	3 2
1/1/2046	0 0	2 0	4 1	3 2
2/1/2046	0.0	1.9	4 1	3 2
3/1/2046	0 0	1 9	4 0	3 2
4/1/2046	0 0	1 9	4 0	3.1
5/1/2046	0.0	1 9	4 0	3.1
6/1/2046	0 0	1 9	4 0	3 1
7/1/2046	0 0	1 9	3 9	3.1
8/1/2046	0 0	1.9	3 9	3 1
9/1/2046	0 0	1 9	3 9	3 0
10/1/2046	0 0	1 9	3 9	3 0
11/1/2046	0.0	1 8	3 8	3 0
12/1/2046	0.0	1 8	3 8	3.0
1/1/2047	0 0	1 8	3 8	3 0

2/1/2047	0 0	1 8	3 8	3 0
3/1/2047	0 0	1 8	3 7	2 9
4/1/2047	0 0	1 8	3 7	2 9
5/1/2047	0 0	1 8	3 7	2 9
6/1/2047	0 0	1 8	3 7	2 9
7/1/2047	0 0	1 8	3 7	2 9
8/1/2047	0 0	1 7	3 6	2 8
9/1/2047	0 0	1 7	3 6	2 8
10/1/2047	0 0	1 7	3 6	2 8
11/1/2047	0.0	1 7	3 6	2.8
12/1/2047	0.0	1 7	3 5	2 8
1/1/2048	0 0	1 7	3 5	2 8
2/1/2048	0 0	1 7	3 5	2 7
3/1/2048	0 0	1 7	3 5	2 7
4/1/2048	0 0	1 6	3.5	2 7
5/1/2048	0 0	1 6	3 4	2 7
6/1/2048	0 0	1 6	3 4	2 7
7/1/2048	0 0	1.6	3 4	2 7
8/1/2048	0 0	1 6	3 4	2 6
9/1/2048	0 0	1 6	3 4	2 6
10/1/2048	0 0	1 6	3 3	2.6
11/1/2048	0 0	1 6	3 3	2.6
12/1/2048	0 0	1 6	3 3	2 6
1/1/2049	0 0	1 6	3 3	2 6
2/1/2049	0 0	1 6	3 3	2 6
3/1/2049	0 0	1 5	3 2	2 5
4/1/2049	0 0	1 5	3 2	2 5
5/1/2049	0 0	1.5	3 2	2.5
6/1/2049	0 0	1 5	3 2	2.5
7/1/2049	0 0	1 5	3 2	2 5
8/1/2049	0 0	1 5	3.1	2.5
9/1/2049	0.0	1.5	3 1	2.4
10/1/2049	0 0	1 5	3 1	2 4
11/1/2049	0.0	1 5	3 1	2 4
12/1/2049	0 0	1 5	3 1	2 4
1/1/2050	0.0	1.4	3.1	2 4
2/1/2050	0 0	1 4	3 0	2 4
3/1/2050	0 0	1 4	3 0	2.4
4/1/2050	0.0	1 4	3 0	2.3
5/1/2050	0 0	1 4	3 0	2 3
6/1/2050	0 0	1 4	3 0	2 3
7/1/2050	0 0	1 4	2 9	2 3
8/1/2050	0 0	1.4	2 9	2.3
9/1/2050	0 0	1 4	2 9	2.3
10/1/2050	0 0	1 4	2 9	2 3
11/1/2050	0 0	1.4	2 9	2.3
12/1/2050	0 0	1.4	2 9	2 2

1/1/2051	0 0	1 3	2 8	2 2
2/1/2051	0 0	1 3	2 8	2 2
3/1/2051	0 0	1 3	2 8	2 2
4/1/2051	0 0	1 3	2 8	2 2
5/1/2051	0 0	1 3	2 8	2 2
6/1/2051	0 0	1.3	2 8	2 2
7/1/2051	0 0	1.3	2 7	2 1
8/1/2051	0 0	1.3	2 7	2 1
9/1/2051	0 0	1 3	2 7	2 1
10/1/2051	0 0	1 3	2 7	2 1
11/1/2051	0 0	1.3	2 7	2.1
12/1/2051	0 0	1 3	2 7	2 1
1/1/2052	0 0	1 2	2 6	2 1
2/1/2052	0 0	1.2	2 6	2 1
3/1/2052	0 0	1.2	2 6	2.0
4/1/2052	0 0	1 2	2 6	2 0
5/1/2052	0.0	1.2	2 6	2 0
6/1/2052	0 0	1.2	2 6	2 0
7/1/2052	0 0	1 2	2 5	2 0
8/1/2052	0 0	1 2	2 5	2 0
9/1/2052	0 0	1 2	2.5	2 0
10/1/2052	0 0	1 2	2 5	2.0
11/1/2052	0 0	1 2	2 5	1 9
12/1/2052	0 0	1 2	2 5	1 9
1/1/2053	0 0	1 2	2 5	1 9
2/1/2053	0 0	1 1	2 4	1 9
3/1/2053	0 0	1 1	2 4	1 9
4/1/2053	0 0	1 1	2 4	1 9
5/1/2053	0 0	1 1	2 4	1 9
6/1/2053	0 0	1 1	2 4	1 9
7/1/2053	0 0	1 1	2 4	1 9
8/1/2053	0 0	1.1	2 4	1 8
9/1/2053	0 0	1 1	2 3	1 8
10/1/2053	0.0	1.1	2.3	1.8
11/1/2053	0 0	1 1	2 3	1 8
12/1/2053	0 0	1 1	2 3	1 8
1/1/2054	0 0	1 1	2 3	1 8
2/1/2054	0 0	1 1	2 3	1 8
3/1/2054	0 0	1 1	2.3	1.8
4/1/2054	0 0	1 1	2 2	1 8
5/1/2054	0 0	1 0	2 2	1 7
6/1/2054	0.0	1 0	2 2	1 7
7/1/2054	0 0	1.0	2 2	1 7
8/1/2054	0 0	1 0	2 2	1 7
9/1/2054	0 0	1 0	2 2	1 7
10/1/2054	0 0	1 0	2 2	1 7
11/1/2054	0 0	0 5	2 1	1 7

12/1/2054	0 0	0 0	2 1	1 7
1/1/2055	0 0	0 0	2 1	1 7
2/1/2055	0 0	0 0	2 1	1 7
3/1/2055	0 0	0 0	2 1	1 6
4/1/2055	0 0	0 0	2 1	1 6
5/1/2055	0 0	0 0	2 1	1 6
6/1/2055	0.0	0 0	2 1	1 6
7/1/2055	0.0	0 0	2.0	1 6
8/1/2055	0 0	0 0	2 0	1.6
9/1/2055	0 0	0 0	2 0	1.6
10/1/2055	0 0	0 0	2 0	1.6
11/1/2055	0 0	0 0	2 0	1.6
12/1/2055	0 0	0 0	2 0	1 6
1/1/2056	0.0	0 0	2 0	1.5
2/1/2056	0.0	0.0	2 0	1 5
3/1/2056	0 0	0 0	1 9	1 5
4/1/2056	0 0	0 0	1 9	1 5
5/1/2056	0.0	0 0	1 9	1 5
6/1/2056	0 0	0 0	1 9	1.5
7/1/2056	0 0	0 0	1 9	1 5
8/1/2056	0 0	0 0	1 9	1 5
9/1/2056	0.0	0.0	1 9	1 5
10/1/2056	0 0	0 0	1 9	1 5
11/1/2056	0 0	0 0	1 9	1 5
12/1/2056	0 0	0.0	1 8	1 4
1/1/2057	0 0	0 0	1 8	1 4
2/1/2057	0 0	0 0	1 8	1 4
3/1/2057	0 0	0 0	1 8	1.4
4/1/2057	0.0	0 0	1 8	1.4
5/1/2057	0 0	0 0	1 8	1 4
6/1/2057	0 0	0.0	1 8	1 4
7/1/2057	0 0	0.0	1 8	1.4
8/1/2057	0 0	0 0	1 8	1 4
9/1/2057	0.0	0 0	1.8	1 4
10/1/2057	0 0	0 0	1 7	1 4
11/1/2057	0.0	0 0	1 7	1 4
12/1/2057	0 0	0.0	1 7	1 3
1/1/2058	0 0	0 0	1 7	1 3
2/1/2058	0.0	0 0	1 7	1 3
3/1/2058	0.0	0 0	1 7	1.3
4/1/2058	0 0	0 0	1 7	1.3
5/1/2058	0.0	0 0	1 7	1 3
6/1/2058	0.0	0 0	1 7	1 3
7/1/2058	0 0	0 0	1 6	1 3
8/1/2058	0 0	0 0	1 6	1 3
9/1/2058	0 0	0 0	1 6	1 3
10/1/2058	0.0	0 0	1 6	1 3

11/1/2058	0 0	0 0	1 6	1 3
12/1/2058	0 0	0 0	1.6	1 3
1/1/2059	0 0	0 0	1 6	1 2
2/1/2059	0 0	0 0	1 6	1 2
3/1/2059	0.0	0 0	1 6	1.2
4/1/2059	0 0	0 0	1 6	1 2
5/1/2059	0 0	0 0	1 6	1 2
6/1/2059	0 0	0 0	1.5	1 2
7/1/2059	0 0	0 0	1.5	1 2
8/1/2059	0 0	0 0	1 5	1 2
9/1/2059	0 0	0 0	1 5	1 2
10/1/2059	0 0	0 0	1 5	1 2
11/1/2059	0 0	0 0	1 5	1 2
12/1/2059	0 0	0 0	1 5	1 2

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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 Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 15,2009
Submit one copy to appropriate
District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-015-39229	96757	COTTON DRAW; DEL, SOUTH

4 Property Code	5 Property Name	6 Well Number
38723	COTTON DRAW "10" FED. COM	1H

7 OGRID No.	8 Operator Name	9 Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3375.6

10 Surface Location

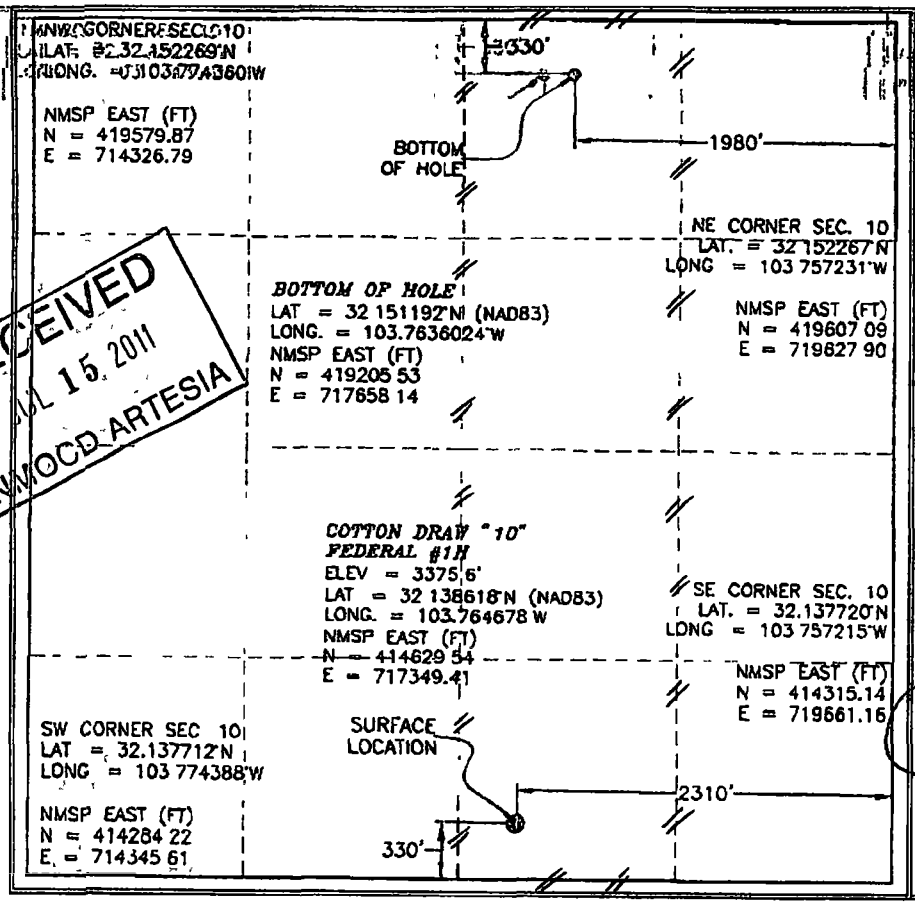
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	10	25 S	31 E		330	SOUTH	2310	EAST	EDDY

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
B	10	25 S	31 E		330	NORTH	1980	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.



RECEIVED
JUL 15 2011
NMOCD ARTESIA

16 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 unleased 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.

Signature — Date: 3/30/11

Printed Name: SPENCE LAIRD, REGULATORY ANALYST

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.

FEBRUARY 14, 2011

Date of Survey

Signature and Seal of Professional Surveyor

Certificate Number: FILIMON F. JARAMILLO, PLS 12797

SURVEY NO 237-R2

RECEIVED
AUG 14 2012
NMOCD ARTESIA

District I
1625 N French Dr , Hobbs, NM 88240
District II
1301 W Grand Avenue, 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 Department
OIL CONSERVATION DIVISION
1220 South St Francis Dr
Santa Fe, NM 87505

Form C-102
Revised October 15,2009
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30 015 39230	96757	COTTON DRAW, DELAWARE SOUTH

[4] Property Code	[5] Property Name	[6] Well Number
38723	COTTON DRAW "10" FEDERAL	2H

[7] OGRID No	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L P	3422 3

[10] Surface Location

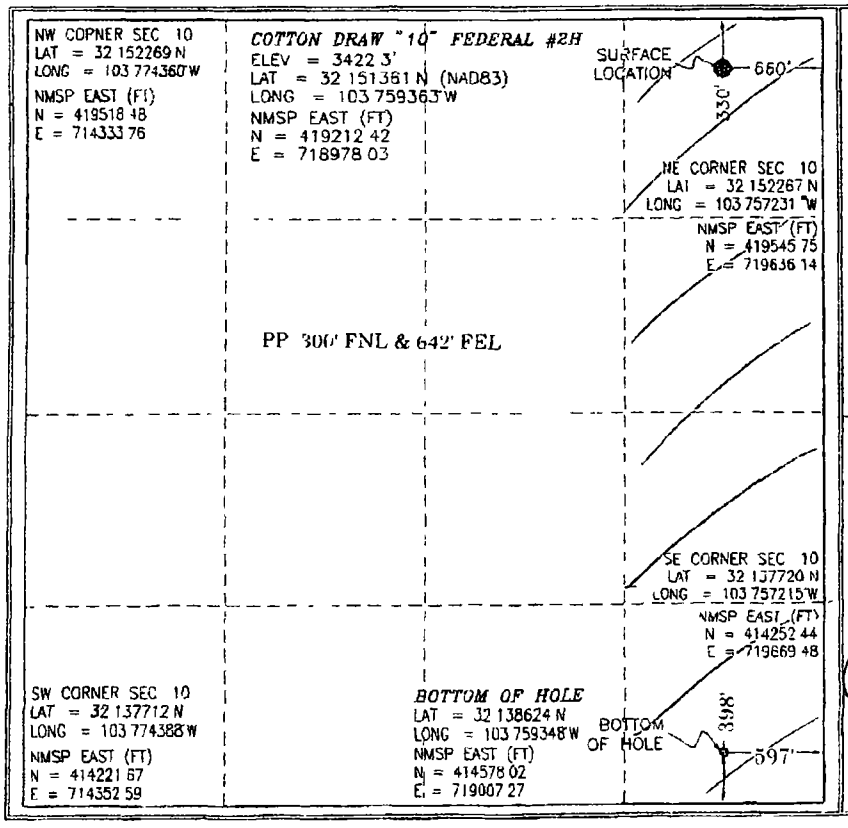
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	25 S	31 E		330	NORTH	660	EAST	EDDY

[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	10	25 S	31 E		398	SOUTH	597	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



[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 unleased 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

8/2/2012
Signature Date

Printed Name
David H Cook Regulatory Specialist

[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

FEBRUARY 27, 2011
Date of Survey

FLUMON F. JARAMILLO
NEW MEXICO
12797
REGISTERED PROFESSIONAL SURVEYOR

Signature and Seal of Professional Surveyor

Certificate Number FLUMON F JARAMILLO PLS 12797

SURVEY NO 258-R1

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
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

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-42126	96641	Paduca; Bone Spring

[4] Property Code	[5] Property Name	[6] Well Number
38723	COTTON DRAW 10 FED COM	3H

[7] OGRID No.	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L.P.	3427.4

[10] Surface Location

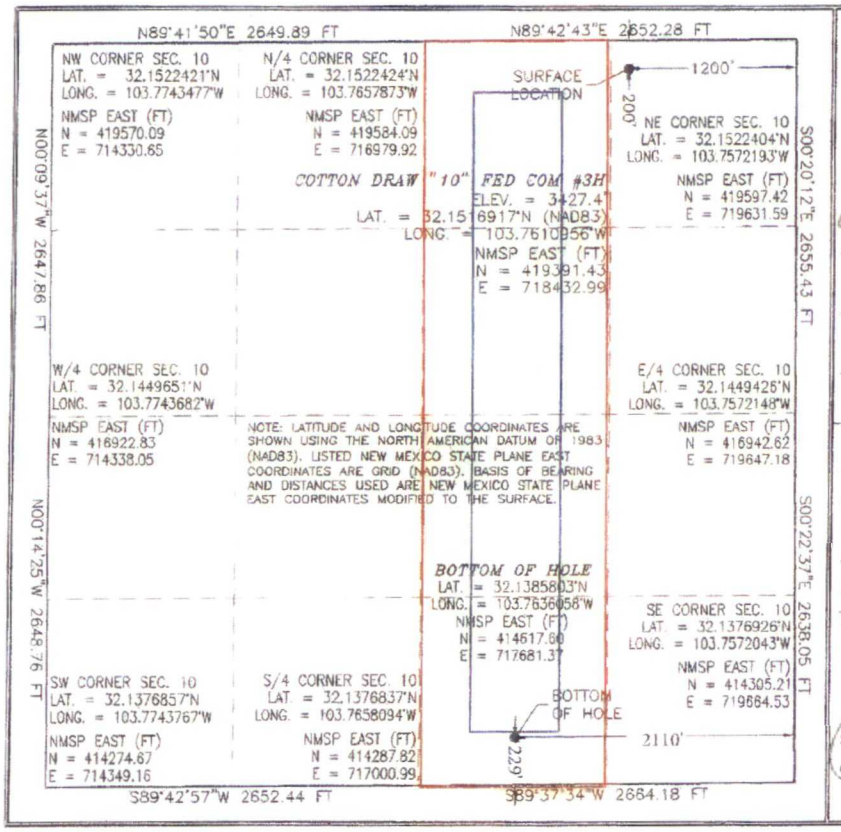
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	25 S	31 E		200	NORTH	1200	EAST	EDDY

[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
O	10	25 S	31 E		229	SOUTH	2110	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.



[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 unleased 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.

Megan Moravec — 10/20/2014
Signature — Date

Megan Moravec, Regulatory Analyst
Printed Name

Megan.Moravec@dvn.com
E-mail Address

[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.

JULY 9, 2013
Date of Survey

12797

Signature and Seal of Professional Surveyor:

Certificate Number: FILIMON F. JARAMILLO, PLS 12797

SURVEY NO. 2020

PP: 311' FNL & 1383' FEL, Sec 10, T25S, R31E

Project Area:
Producing Area:

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

NM OIL CONSERVATION
ARTESIA DISTRICT
AUG 12 2014
RECEIVED

State of New Mexico
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

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-015-42127	96641	Paduca, Bone Spring

[4] Property Code	[5] Property Name	[6] Well Number
38723	COTTON DRAW 10 FED COM	4H

OGRID No	[8] Operator Name	[9] Elevation
6137	DEVON ENERGY PRODUCTION COMPANY, L P	3428 2

[10] Surface Location

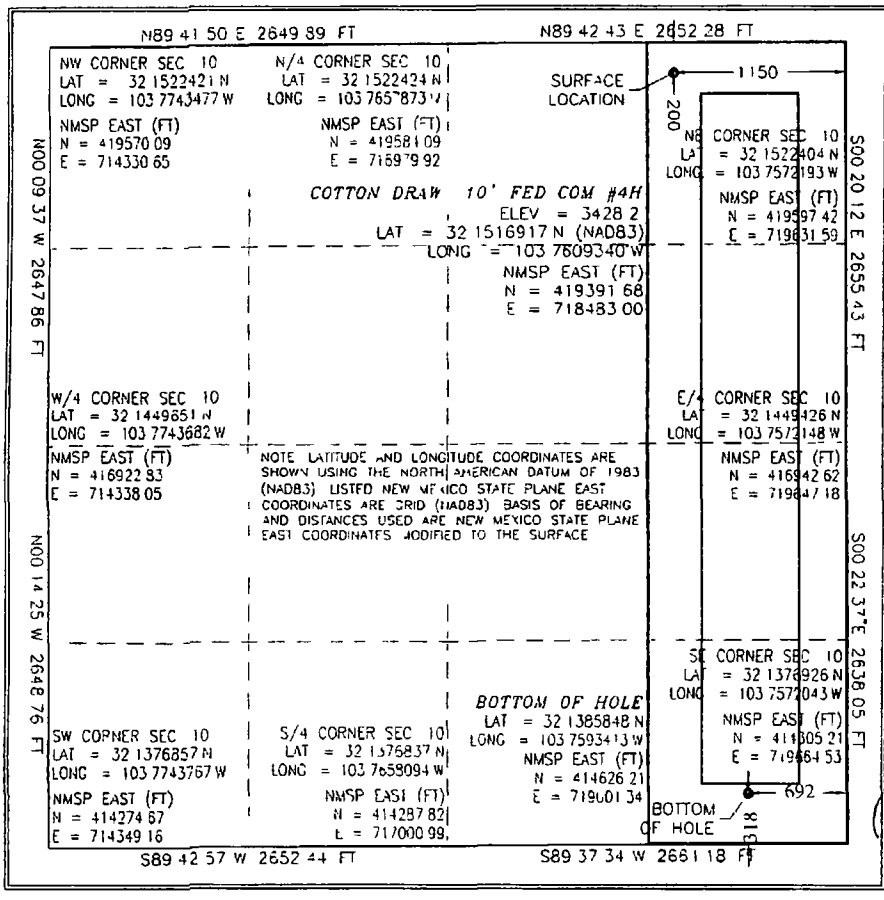
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	10	25 S	31 E		200	NORTH	1150	EAST	EDDY

[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	10	25 S	31 E		318	SOUTH	692	EAST	EDDY

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No

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



[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 if an organization either owns a working interest or unleased 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

Megan Moravec 8/8/2014
Signature Date

Megan Moravec, Regulatory Analyst
Printed Name

Megan Moravec@dvn com
E-mail Address

[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

JULY 9, 2014
Date of Survey

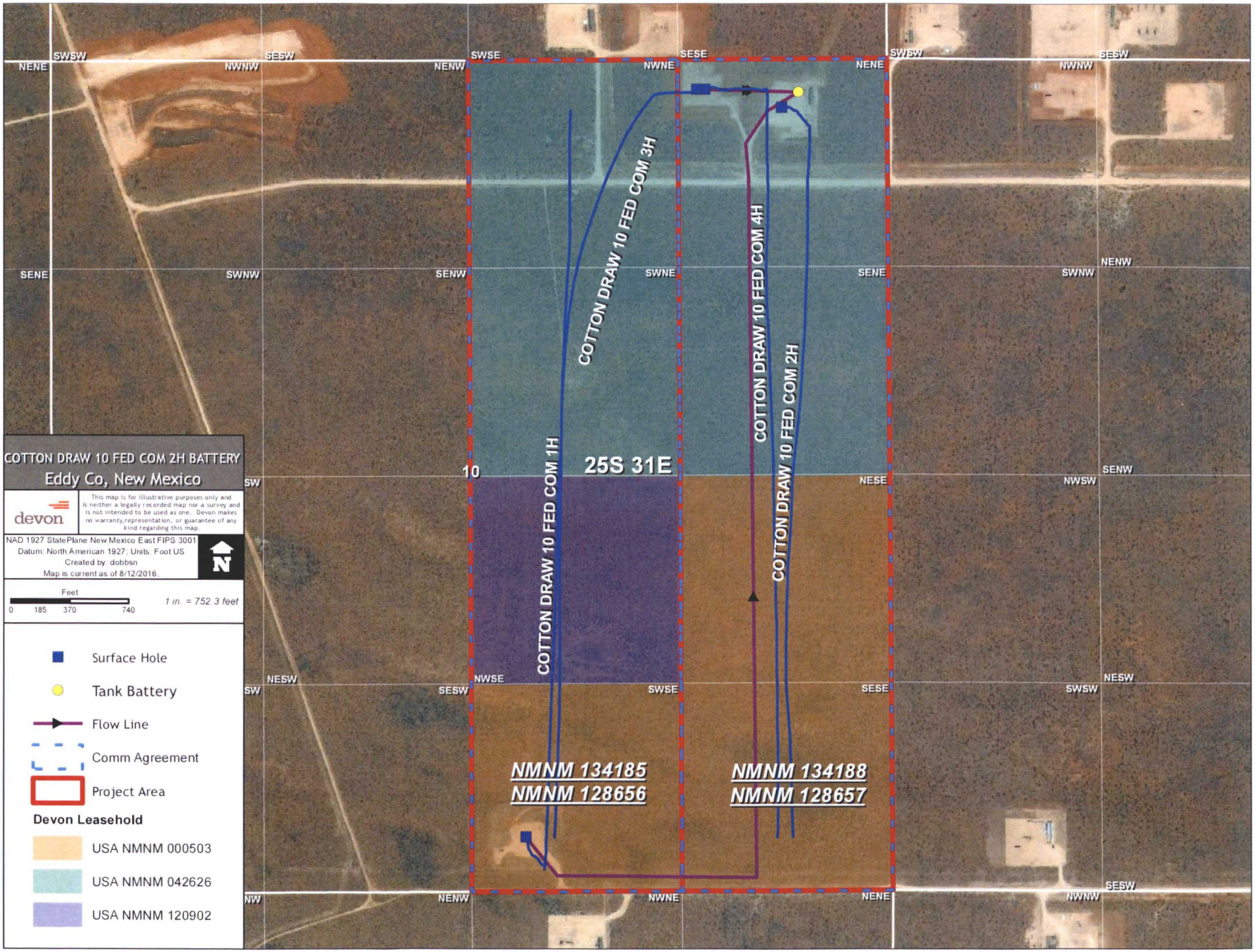
Signature and Seal of Professional Surveyor
Certificate Number FILIMON F JARAMILLO PLS 12797

SURVEY NO 2021

PP 206' FNL & 791 FEL, Sec 10, T25S, R31E

Project Area
Producing Area

Name1	Int Type	Name2	Name3	Street 1	City	State	Postal Code	certified mailing tracking number
XTO ENERGY INC	WI	JP MORGAN CHASE DALLAS		PO BOX 730586	DALLAS	TX	75373-0586	9214 8901 5271 8100 1734 72
CHEVRON U S A INC	WI			PO BOX 730436	DALLAS	TX	75373-0436	9214 8901 5271 8100 1745 47
JOHN E COCHRAN	OR	AKA JOHN EDWIN COCHRAN III		PO BOX 1046	TROY	AL	36081-1046	9214 8901 5271 8100 1734 96
BALLARD E SPENCER TRUST INC	OR			PO BOX 6	ARTESIA	NM	88211-0006	9214 8901 5271 8100 1735 02
JANICE MENDOZA BRYAN	OR			PO BOX 972	POHNPEI	FM	96941	9214 8901 5271 8100 1745 30
BARRY EUGENE BRYAN	OR			PO BOX 207	VIDA	OR	97488	9214 8901 5271 8100 1735 19
BRYNNE LEE BRYAN	OR			900 W 14TH ST APT 7	SAN PEDRO	CA	90731-3938	9214 8901 5271 8100 1735 26
EDEN MENDOZA BRYAN	OR			31 MEYERS CT	GREENVILLE	SC	29609	9214 8901 5271 8100 1735 33
BETTY JO BRYAN BRADSHAW	OR			PO BOX 761	PLACITAS	NM	87043	9214 8901 5271 8100 1735 40
DON R MERCHANT	OR	% JOHN N MERCHANT & MARGARET	J HIDEK POA	59 DAMONTE RANCH PRKWY STE B 205	RENO	NV	89521	9214 8901 5271 8100 1745 16
WALLACE MERCHANT TRUST	OR	CHARLES MERCHANT &	DOROTHY LEE SMITH SUCC TTEES	1552 MADISON 1520	HUNTSVILLE	AR	72740	9214 8901 5271 8100 1735 64
ONRR	RI	ROYALTY MANAGEMENT PROGRAM		PO BOX 25627	DENVER	CO	80225-0627	9214 8901 5271 8100 1735 71
690 COMPANY LLC	OR	VAN A WEBSTER REGISTERED	AGENT	PO BOX 690	ARTESIA	NM	88211-0690	9214 8901 5271 8100 1735 88
JAF 335 LLC	OR	BEN P FAIREY MGR		PO BOX 5948	GRANBURY	TX	76049-0948	9214 8901 5271 8100 1735 95
SHIRLEY MAY CHILDRESS	OR			604 N DELAWARE AVE APT 2	ROSWELL	NM	88201	9214 8901 5271 8100 1736 01
MCCAW PROPERTIES LLC	OR	A NEW MEXICO LIMITED LIABILITY CO	WILLIAM J MCCAW PARTNER	PO BOX 127	ARTESIA	NM	88211-0376	9214 8901 5271 8100 1736 18


COTTON DRAW 10 FED COM 2H BATTERY
Eddy Co, New Mexico
devon
This map is for illustrative purposes only and is neither a legally recorded map nor a survey and is not intended to be used as one. Devon makes no warranty,representation, or guarantee of any kind regarding this map.
NAD 1927 StatePlane New Mexico East FIPS 3001
Datum: North American 1927; Units: Foot US
Created by: dobbsn
Map is current as of 8/12/2016.
N
Feet
0 185 370 740
1 in. = 752.3 feet
Surface Hole
Tank Battery
Flow Line
Comm Agreement
Project Area
Devon Leasehold
USA NMNM 000503
USA NMNM 042626
USA NMNM 120902
COTTON DRAW 10 FED COM 3H
COTTON DRAW 10 FED COM 4H
COTTON DRAW 10 FED COM 2H
COTTON DRAW 10 FED COM 1H
10
25S 31E
NMNM 134185
NMNM 128656
NMNM 134188
NMNM 128657

Gas Production

WC Name	Year	Month	Gas DOI/Unit Name	Prod Days	Prod	Flare	Fuel 1
COTTON DRAW 10 FED COM 1	2016	1	COTTON DRAW 10 FED COM 1H	30	1,030	224	77
COTTON DRAW 10 FED COM 2H	2016	1	COTTON DRAW 10 FED COM 2H	30	2,052	446	155
COTTON DRAW 10 FED COM 3H	2016	1	COTTON DRAW 10 FED COM 3H	30	28,712	6,239	2,162
COTTON DRAW 10 FED COM 4H	2016	1	COTTON DRAW 10 FED COM 4H	28	12,012	2,610	904
COTTON DRAW 10 FED COM 1	2016	2	COTTON DRAW 10 FED COM 1H	29	952	74	62
COTTON DRAW 10 FED COM 2H	2016	2	COTTON DRAW 10 FED COM 2H	29	2,186	171	143
COTTON DRAW 10 FED COM 3H	2016	2	COTTON DRAW 10 FED COM 3H	29	30,479	2,385	1,987
COTTON DRAW 10 FED COM 4H	2016	2	COTTON DRAW 10 FED COM 4H	29	15,302	1,198	998
COTTON DRAW 10 FED COM 1	2016	3	COTTON DRAW 10 FED COM 1H	31	891	5	35
COTTON DRAW 10 FED COM 2H	2016	3	COTTON DRAW 10 FED COM 2H	31	2,069	12	83
COTTON DRAW 10 FED COM 3H	2016	3	COTTON DRAW 10 FED COM 3H	31	27,057	151	1,081
COTTON DRAW 10 FED COM 4H	2016	3	COTTON DRAW 10 FED COM 4H	31	14,130	79	566
COTTON DRAW 10 FED COM 1	2016	4	COTTON DRAW 10 FED COM 1H	30	1,120	7	39
COTTON DRAW 10 FED COM 2H	2016	4	COTTON DRAW 10 FED COM 2H	30	2,611	17	92
COTTON DRAW 10 FED COM 3H	2016	4	COTTON DRAW 10 FED COM 3H	30	29,885	196	1,059
COTTON DRAW 10 FED COM 4H	2016	4	COTTON DRAW 10 FED COM 4H	30	14,701	97	520
COTTON DRAW 10 FED COM 1	2016	5	COTTON DRAW 10 FED COM 1H	30	1,297	12	55
COTTON DRAW 10 FED COM 2H	2016	5	COTTON DRAW 10 FED COM 2H	31	1,797	17	77
COTTON DRAW 10 FED COM 3H	2016	5	COTTON DRAW 10 FED COM 3H	31	24,297	223	1,029
COTTON DRAW 10 FED COM 4H	2016	5	COTTON DRAW 10 FED COM 4H	31	14,317	132	606
COTTON DRAW 10 FED COM 1	2015	12	COTTON DRAW 10 FED COM 1H	26	980	179	62
COTTON DRAW 10 FED COM 2H	2015	12	COTTON DRAW 10 FED COM 2H	24	1,267	232	80
COTTON DRAW 10 FED COM 3H	2015	12	COTTON DRAW 10 FED COM 3H	26	33,454	6,103	2,138
COTTON DRAW 10 FED COM 4H	2015	12	COTTON DRAW 10 FED COM 4H	26	9,063	1,654	578

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO 1004-0135
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS **Operator**

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 reverse side.

5 Lease Serial No
NMNM0503

6 If Indian, Allottee or Tribe Name

7 If Unit or CA/Agreement, Name an
NMNM128657

1 Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8 Well Name and No
COTTON DRAW 10 FED COM 2

2 Name of Operator
DEVON ENERGY PRODUCTION CO EMail: Erin workman@dvn com
Contact ERIN WORKMAN

9 API Well No
30-015-39230-00-S1

3a Address
333 WEST SHERIDAN AVE
OKLAHOMA CITY, OK 73102

3b Phone No (include area code)
Ph 405-552-7970

10 Field and Pool, or Exploratory
COTTON DRAW

4 Location of Well *(Footage, Sec , T , R , M , or Survey Description)*
Sec 10 T25S R31E NENE 330FNL 660FEL
32 152267 N Lat, 103 757231 W Lon

11 County or Parish, and State
EDDY COUNTY, NM

12 CHECK 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 Sh
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Inte
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Surface Con
	☐ 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 th If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and Attach the Bond under which the work will be performed or provide the Bond No on file with BLM/BIA Required subsequent reports shall be filed within 30 d following completion of the involved operations If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed testing has been completed Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator h determined that the site is ready for final inspection)

See attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

FEB 28 2017

Artesia, N.M.

14 I hereby certify that the foregoing is true and correct
Electronic Submission #347758 verified by the BLM Well Information System
For DEVON ENERGY PRODUCTION CO LP, sent to the Carlsbad
Committed to AFMSS for processing by PRISCILLA PEREZ on 08/12/2016 (16PP2049SE)

Name *(Printed/Typed)* ERIN WORKMAN — Title REGULATORY COMPLIANCE PROF

Signature (Electronic Submission) — Date 08/12/2016

APPROVED
FEB 2 2017
BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By — Title — Date

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 — Office

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 Un States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

In response to Notice of Written orders DMB1606242 & DMB1606243, Devon Energy Production Co , LP respectfully requ approval for surface\pool commingling\off-lease measurement, sales, & storage at the Cotton Draw 10 Fed Com 2H Batte the following wells

Cotton Draw 10 Fed Com 1H
SWSW, Sec 10, T25S, R31E
30-015-39229
Cotton Draw, Delaware, South
NMNM128656 (12.5%)

Cotton Draw 10 Fed Com 2H
NENE, Sec 10, T25S, R31E
30-015-39230
Cotton Draw, Delaware, South
NMNM128657

Cotton Draw 10 Fed Com 3H
NENE, Sec 10, T25S, R31E
30-015-42126
Paduca, Bone Spring
NMNM134185

Cotton Draw 10 Fed Com 4H
NENE, Sec. 10, T25S, r31E
30-015-42127
Paduca, Bone Spring
NMNM134188

The central tank battery is located on the Cotton Draw 10 Fed Com 2H in Sec 10, T25S, R31E, Eddy County, New Mexico Th Cotton Draw 10 Fed Com 1H & 2H will flow into a mani-folded header with the ability to route each well to either a dedicat tester or production heater\treater One well will be routed to the dedicated tester and one routed to the production heater\treater during operations The well test method will be utilized once a month for a minimum of 24 hours to meter th oil, water, and gas for either the 1H or 2H Oil is measured with a Micro Motion Coriolis Meter, waters is measured with m meter, and gas is measured with an orifice meter & EFM The Cotton Draw 10 Fed Com 3H & 4H production are measured continuously through three phase separators using a Micro Motion Coriolis to meter the oil, mag meter to meter the water and an orifice meter to meter the gas VRU gas is measured with an orifice meter and is allocated back to each well utilizing percentage of each wells monthly oil production

The Cotton Draw 10 Fed Com 2H Battery contains 3 oil tanks Oil form each well commingles downstream of the heater treaters and then flows into the tanks They will share a common Devon Point of Royalty Measurement #390-33-569 on location at the Cotton Draw 10 Fed Com 2H battery located in Sec 10, T25S, R31E They will also share a common LACT Sm Meter #Z 4215.

Attachments Deliverables & Notice of Written Orders

Bureau of Land Management
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220
575-234-5972

Condition of Approval

Surface commingling

1 This approval is subject to like approval by the New Mexico Oil Conservation Division

2. This agency shall be notified of any spill or discharge as required by NTL-3A

3 This agency reserves the right to modify or rescind approval whenever it determines continued use of the approved method may adversely affect the surface or subsurface environments

4. This approval does not constitute right-of-way approval for any off-lease activities Within 30 days, an applicat for right-of-way approval must be submitted to the Realty Section if not already done.

5. Approval for combining production from various sources is a privilege which is granted to lessees for the purpo of aiding conservation and extending the economic life of leases. Applicants should be cognizant that failure tc operate in accordance with the provisions outlined in the Authorized Officer's conditions of approval and/or subsequent stipulations or modifications will subject such approval to revocation.

6. Gas measurement for allocation must be measured as per Onshore Order #5 for sales meters

7 All gas and oil subject to royalty shall be measured as per federal regulations and shall be reported to ONRR a required. All gas which is vented, flared or used on lease shall be reported as per NTL-4A to ONRR All gas which is vented or flared shall be subject to royalty, unless prior approval was given by the authorized officer

8 This agency shall be notified of any change in sales method or location of sales point

9 Additional wells and/or leases require additional commingling approvals

10 Notify this office 24 Hrs prior to any meter proving to allow time for an inspector to witness

Four wells are being commingled (30-015-39229, 30-015-39230, 30-015-42126, & 30-015-42127). Three Federal Lea are involved NMNM-0503, NMNM-120902 and NMNM-042626. All four Wells have approved Com Agreements. Formations being produced are Delaware and Bone Spring. The Operator stated that the quality of hydrocarbons from the two formations will not affect the overall value when combined. Each well is 100% Federal and all leases a 12.5%, thus no royalties will be affected.

JAM 020217

McMillan, Michael, EMNRD

From: Workman, Erin <Erin Workman@dvn com>
Sent: Tuesday, June 27, 2017 12 05 PM
To: McMillan, Michael, EMNRD
Subject: FW Proposal for Cotton Draw 10 Fed Com 2H Battery

Below is the statement received from my engineer on the range for the wells producing to the Cotton Draw 10 Fed Com 2H Battery Thanks and have a great day!

From: Sharma, Anoop
Sent: Monday, June 26, 2017 4 10 PM
To: Workman, Erin <Erin Workman@dvn com>
Subject: Proposal for Cotton Draw 10 Fed Com 2H Battery

Erin,

Production declines for Cotton Draw 10 Fed Com 1H, Cotton Draw 10 Fed Com 2H, Cotton Draw 10 Fed Com 3H and Cotton Draw 10 Fed Com 4H are indicating that they are in the Range 3 decline

Regards,

Anoop Sharma
Reservoir Engineer

Devon Energy Corporation
333 West Sheridan Ave
Oklahoma City, OK 73102
Office 405-552-4694
Cell 405-245-9457

Confidentiality Warning This message and any attachments are intended only for the use of the intended recipient(s), are confidential, and may be privileged If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or any portion of this message and any attachments is strictly prohibited If you are not the intended recipient, please notify the sender immediately by return e-mail, and delete this message and any attachments from your system

STATE OF NEW MEXICO
ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 15540
ORDER NO. R-14299

APPLICATION OF OXY USA, INC. FOR APPROVAL OF SURFACE LEASE COMMINGLING, OFF-LEASE STORAGE, AND OFF-LEASE MEASUREMENT, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8 15 a m on September 15, 2016 at Santa Fe, New Mexico, and again on January 5, 2017, both before Examiner William V Jones

NOW, on this 14th day of February, 2017, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner,

FINDS THAT

(1) Due public notice has been given, and the Division has jurisdiction of this case and its subject matter

(2) The applicant, OXY USA, Inc ("OXY"), seeks approval for surface lease commingling within one pool, off-lease storage, and off-lease measurement of oil and associated gas production

(3) OXY also seeks an exception to the metering requirements of 19 15 12 10 C (1) NMAC by authorizing the allocation of production from diversely owned, horizontally drilled oil wells on the basis of periodic well tests

(4) OXY proposes to commingle oil and gas production from all current and future wells producing from the Pierce Crossing, Bone Spring, East Pool (96473) underlying the following acreage ("subject acreage")

Township 24 South, Range 29 East, NMPM, Eddy County, New Mexico
Section 22 S/2 N/2 and N/2 S/2
Section 23 All

Section 24 W/2

(5) The following wells (with associated acreage dedication) are drilled or currently planned for drilling within the subject acreage

Cedar Canyon 22 Federal Well No 21H S/2 N/2 Section 22	(API No 30-015-43642) (160 acres)
Cedar Canyon 22 Federal Com Well No 4H N/2 S/2 Section 22	(API No 30-015-43708) (160 acres)
Cedar Canyon 23 Federal Well No 3H Cedar Canyon 23 Federal Well No 4H S/2 N/2 Section 23 and S/2 NW/4 Section 24	(API No 30-015-43290) (API No 30-015-43281) (240 acres)
Cedar Canyon 23 Federal Well No 5H N/2 N/2 Section 23 and N/2 SW/4 Section 24	(API No 30-015-43282) (240 acres)
Cedar Canyon 23 Federal Com Well No 6H Cedar Canyon 23 Federal Com Well No 33H N/2 S/2 Section 23 and N/2 SW/4 Section 24	(API No 30-015-Pending) (API No 30-015-Pending) (240 acres)
S/2 S/2 Section 23 SW/4 Section 24	No Wells Permitted at this time No Wells Permitted at this time

(6) Each well proposed for commingling within this acreage produces from the Pierce Crossing, Bone Spring, East Pool (96473) which is governed by Special Rules promulgated by Division Order No R-13248 in Case No 14420 Said rules allow a Limiting Gas Oil Ratio of 5000 to 1, but retain all other Division rules for oil wells

(7) OXY intends to utilize a production and a test separator at the Cedar Canyon 23-3H satellite facility (the "facility"), located at the well pad of the Cedar Canyon 23 Federal Well No 3H in Unit I of Section 22, and use periodic well tests to allocate oil and gas production back to diversely owned wells feeding into that facility

(8) Gas from that facility will be metered from both separators and combined into the low pressure gas gathering system and transported approximately two miles north to the Enterprise Sales Meter

(9) Oil from that facility will be measured using a test turbine meter and a production turbine meter, then combined and transported southwest to the Cedar Canyon 22 Satellite located in Unit L of Section 22 where it will be tanked, metered through a Coriolis meter and sold at the nearby central tank battery, also within Unit L

(10) OXY provided the following testimony at the hearing from a Landman and two engineers

(a) OXY proposed this diversely owned commingle using well tests for allocation in an earlier administrative application The Division asked that it be presented before an examiner where the well test method for horizontal Bone Spring wells which have been hydraulically fractured and are exhibiting hyperbolic oil production decline behavior could be presented in more detail

(b) The SW/4 SW/4 of Section 23 is privately owned and leased at higher than 1/8th royalty rate All other lands being proposed for commingling are federally owned and leased at 1/8th royalty Four Federal oil and gas leases (NMNM013996, NMNM088138, NMNM081586, and NMNM093477) cover the federal lands being proposed for commingling

(c) The horizontal well project areas being proposed for commingling are diversely owned There are numerous overriding royalty owners in the federal leases The leases in Section 23 are 100 percent OXY working interest

(d) All owners, including the Bureau of Land Management ("BLM"), were noticed of the administrative application as well as the application(s) for hearing, and no one has voiced an objection

(e) The production from each well will be gathered into the Cedar Canyon 23-3H satellite facility, located on fee surface at the well pad of the Cedar Canyon 23 Federal Well No 3H in Unit I of Section 22 where the oil and gas from each well will be tested and measured using periodic well tests

(f) The Cedar Canyon 22 Satellite is located in Unit L of Section 22 where oil production from all the wells will be tanked, metered through a Coriolis LACT and sold at the nearby central tank battery, also within Unit L

(g) There would be considerable additional costs to install the additional separators needed to provide constant metering from the diversely owned tracts, and those additional meters would also be turbine meters and not Coriolis meters

(h) Approval of this commingle as proposed would allow OXY to efficiently and effectively transport, store, and market production from the subject acreage

(i) OXY's proposed testing methodology is based on the American Petroleum Institute Manual of Petroleum Measurement Standards, Chapter 20 (API MPMS 20 1)

(j) The decline life cycle of these Bone Spring horizontal wells would be partitioned into four stages beginning with the flow back after fracturing to peak production rate For each of these stages, the wells would be tested at differing frequencies for optimum accuracy For example, the early time stage would need more frequent testing of that well to accurately utilize well tests to allocate monthly production volumes among all wells being commingled prior to sales

(k) For this commingle application consisting of hyperbolically declining horizontally drilled Bone Spring wells, OXY is proposing Range 1 as the period from peak production to two months after peak production Range 2 would be months 3 to 12 Range 3 would begin at month 12 and continue through the life of the well Range 1 would require more frequent well testing, with an adequately sized test separator, than the frequency needed while the same well is within Range 3

(l) To adequately install production equipment for each well would require equipment designed for the peak production, which would be an over design for the period commencing only a few months after peak production from that well due to the rapid decline The wells would in most cases begin production at staggered times, therefore, production equipment designed around the concept of well testing is most efficient and increases the likelihood of a proper design and utilization of the turbine and gas meters

(m) The initial production from these wells sometimes includes slug flow which requires larger vessels to have adequate retention time Early flow also sometimes contains sand from the hydraulic fracture treatment which also creates problems with operation of equipment

(n) The time increment for sales through the custody transfer meters is monthly

(o) Most of the newer oil custody transfer sites (or LACT) include a Coriolis meter which is fed by a pump, while the older LACTs had displacement meters The Coriolis meter has been accepted as a sales measurement by the BLM in Onshore Order No 4 and is regarded as more accurate than the displacement meters The turbine meters handle gas better than the Coriolis meters and are less expensive, so they are used upstream of the actual sales point

(p) OXY generated "type curves" for production from the various Bone Spring sands using available production "Rate vs Time" data and volumetric estimates of recoverable oil The generated Rate vs

Time plots were supplied to the facilities engineer for properly designing production equipment The engineers identified the separate segments of the decline behavior for purposes of frequency of well testing

(q) These wells may produce over the top allowable for a short, three month period in their early life, then are expected to produce below top allowable for the remaining life of each well After an initial period of hyperbolic decline, production stabilizes at a more predictable exponential decline rate

The Division concludes as follows

(11) The application was properly advertised to affected parties including to the BLM No other parties entered appearances in this case or otherwise opposed this application

(12) The proposed method of measurement and allocation of production between the subject wells is reasonable and sufficiently reliable to protect the correlative rights of owners of separate interests in the production from the wells

(13) The requested exception to the metering requirements of 19 15.12 10 C (1) NMAC should be approved The use of periodic well tests for diversely owned wells prior to commingling for oil and gas production and sales should be approved to ensure efficient use of surface facilities and to protect correlative rights The operator should use more frequent well tests, as proposed in this application, during the earlier stages of each well to ensure accuracy of allocation

(14) Measurement and allocation methods for commingling of diversely owned production is governed by Division Rule 19 15 12 10 C (1) NMAC These methods include continuous metering or "other methods the division has specifically approved prior to commingling" There is a need to allow the commonly used "well test method" as proposed in this case, as an "other method"

(15) Henceforth the Division, upon receiving administrative requests for diversely owned commingling of oil wells, should have the option of considering approval of the Well Testing Method Any such proposed application should include "type curves" showing expected oil production versus time behavior, the expected completion schedule of all wells to be serviced by the test separator, the maximum number of wells to be serviced at any time by each test separator, the maximum expected daily production from any well, the size and type of the test separator and specifics of the test meters The application should propose a well testing frequency which is acceptable based on these parameters, which varies based on the stages of oil production decline, and which follows guidance provided in the American Petroleum Institute Manual of Petroleum Measurement Standards, Chapter 20 (API MPMS 20 1) These requirements should be in the application advertised to all affected parties and the administrative application must be unopposed

(16) OXY's proposed commingling of oil and gas production from the Pierce Crossing, Bone Spring, East Pool (96473) within the lands described above for all existing and future wells should be approved to protect correlative rights and prevent waste

(17) Off-lease storage, measurement, and sales should be approved for all leases not located on measurement or sales points

(18) This application should be approved

IT IS THEREFORE ORDERED THAT:

(1) The applicant, OXY USA, Inc ("OXY"), is hereby authorized to surface commingle oil and gas production from all current and future wells producing from the Pierce Crossing, Bone Spring, East Pool (96473) underlying the following acreage

Township 24 South, Range 29 East, NMPM, Eddy County, New Mexico
Section 22 S/2 N/2 and N/2 S/2
Section 23 All
Section 24 W/2

(2) The production facilities for well testing and measurement shall be the Cedar Canyon 23-3H satellite facility, located at the well pad of the Cedar Canyon 23 Federal Well No 3H in Unit I of Section 22, and the Cedar Canyon 22 Satellite located in Unit L The sales point for oil is located within Unit L The sales point for gas is located off-lease approximately two miles north of this commingle Off-lease storage, measurement, and sales is approved for all leases not located on these measurement or sales locations

(3) The requested exception to the metering requirements of Rule 19.15 12 10 C (1) NMAC is hereby approved The use of periodic well tests for diversely owned wells prior to commingling for oil and gas production and sales is approved The operator shall use more frequent well tests, as proposed in this application, during the earlier stages of each well's oil production to ensure accuracy of allocation

(4) Henceforth the Division, upon receiving administrative requests for commingling of oil and associated gas from diversely owned leases, shall have the option of considering approval of the Well Testing Method if the operator supplies evidence in the application acceptable to the Division of proper test facility design, proposes a well testing frequency which is acceptable, which varies based on the stages of oil production decline, and which follows guidance provided in the American Petroleum Institute Manual of Petroleum Measurement Standards, Chapter 20 (API MPMS 20 1)

(5) Expansion of this permitted area as specified in ordering Paragraph (1) or the addition of any pool other than the pool specified in ordering Paragraph (1) shall entail an amended permit application Amendments shall be permitted administratively, after proper notice, unless deemed necessary for Division hearing by the Division Director

(6) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

David R Catanach

DAVID R CATANACH
Director

SEAL