

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- 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

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners

- [B] ☐ Offset Operators, Leaseholders or Surface Owner

- [C] ☐ Application is One Which Requires Published Legal Notice

- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

- [F] ☐ Waivers are Attached

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **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.

REESA FISHER
Print or Type Name

Signature

SR STAFF REG ANALYST
Title

6/29/2015
Date

MAE F CURRY #003

Reesa.Fisher@apachecorp.com
e-mail Address

- DHL 4769
- Apache Corporation
873

RECEIVED OGD
JUL 14 10 33 50

WEL
- MAE F CURRY #3
30-025-35853
POD
- Paddock
49210
- Handy Blinckby
29710
- Handy T466-
Dunlap
29760

Apache Corporation

303 Veterans Airpark Lane Suite 1000 Midland TX 79705

Operator

Address

Mae F Curry

003

D

7

21S

37E

Lea

Lease

Well No.

Unit Letter-Section-Township-Range

County

OGRID No. 873 Property Code 309145 API No. 30-025-35853 Lease Type: ☐ Federal ☐ State ☒ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Paddock	Hardy; Blinebry	Hardy; Tubb-Drinkard
Pool Code	49210	29710	29760
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	5664'-5685'	5708'-5878'	6420'-6810'
Method of Production (Flowing or Artificial Lift)	Artificial Lift	Artificial Lift	Artificial Lift
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)			
Oil Gravity or Gas BTU (Degree API or Gas BTU)	35.0	38.0	38.0
Producing, Shut-In or New Zone	New Zone	New Zone	Producing
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: Rates: See Attached	Date: Rates: See Attached	Date: Rates: See Attached
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas 37 % 26 %	Oil Gas 50 % 34 %	Oil Gas 13 % 40 %

Downhole Commingle Request



Date: June 1, 2015
From: Bret Shapot
Subject: Downhole Commingle Request
Mae F Curry #3 (API: 30-025-35853)
Lea County, New Mexico
(APA: 100% WI, 87.53% NRI)

Summary

The Mae F. Curry #3 is located at 660' FNL & 660' FWL of Section 7, Township 21S & Range 37E, Lea County, NM. The well was drilled in April 2002, and completed and placed on production from the Hardy Tubb-Drinkard in May 2002. An off-set well to the east, Mae F. Curry #5, was completed in the Hardy Blinebry pool in October 2014. The original plan was to complete the Mae F. Curry #3 in the Hardy Blinebry pool similar to the Mae F. Curry #5. However, after review of the downhole logs for Mae F. Curry #3, the best course of action is to also complete the lower Hardy Paddock zone. We request approval to downhole commingle the Hardy Tubb-Drinkard with the Hardy Blinebry pool and Hardy Paddock pool in this well.

Discussion

The Hardy-Tubb Drinkard has been producing in the Mae F. Curry #3 since May 2002 and is currently producing at a rate of approximately 3 BOPD, 84 MCFD, and 15 BWPD based on recent well tests. Estimated remaining recoverable reserves from the Hardy-Tubb Drinkard are 6.3 MBO, 200.0 MMCF, along with 35.4 MBW (see attachments). Remaining oil reserves were determined using decline curve analysis. Remaining gas reserves were forecasted using a gas-oil ratio of 31.7 MMCF/MBO (average over the last 12-months) and water production forecasted at a water-oil ratio of 5.6 MBW/MBO (average over the last 12-months).

Neither the Hardy Blinebry nor the Hardy Paddock has been completed in the Mae F. Curry #3; however, similar zones have been completed and produced commercially from several offset wells, with the average ultimate reserve recovery from the Hardy Blinebry for six of these offset wells estimated to be 46 MBO, 281.5 MMCF, along with 224.2 MBW. These offsets were chosen for evaluation due to their proximity to the Mae F. Curry #3 and availability of quality production data for the Hardy Blinebry.

Based on well logs, the performance of the Hardy Blinebry in the Mae F. Curry #3 is expected to be comparable to these offsets; however, there is a decent pay zone approximately 90 feet above the Blinebry top marker that appears to be productive. This bottom most Paddock pay zone is comparable to the upper Blinebry in off-set wells. For this reason it is recommended to include the lower Paddock in the downhole comingle. The combined EUR will still be the same as the Blinebry only off-sets since the producing zone is similar, but the Paddock allocation will be estimated based on percent net pay in the completed section.

An incremental rate and reserve profile for completing the Blinebry/Paddock in this well was generated by fitting a production profile for both oil and gas to wells that have been completed in the Blinebry with allocations.

The results predict a differential production increase from the Blinebry/Paddock to be 26.2 BOPD and 75.0 MCF with an EUR of 37.5 MBO and 268 MCF. Using the estimated remaining reserve recovery for the Hardy Tubb-Drinkard and the expected reserve recovery for completing the Hardy Blinebry and Hardy Paddock, a fixed allocation percentage allocation is recommended for the Mae F. Curry #3 as shown in Table 1 below:

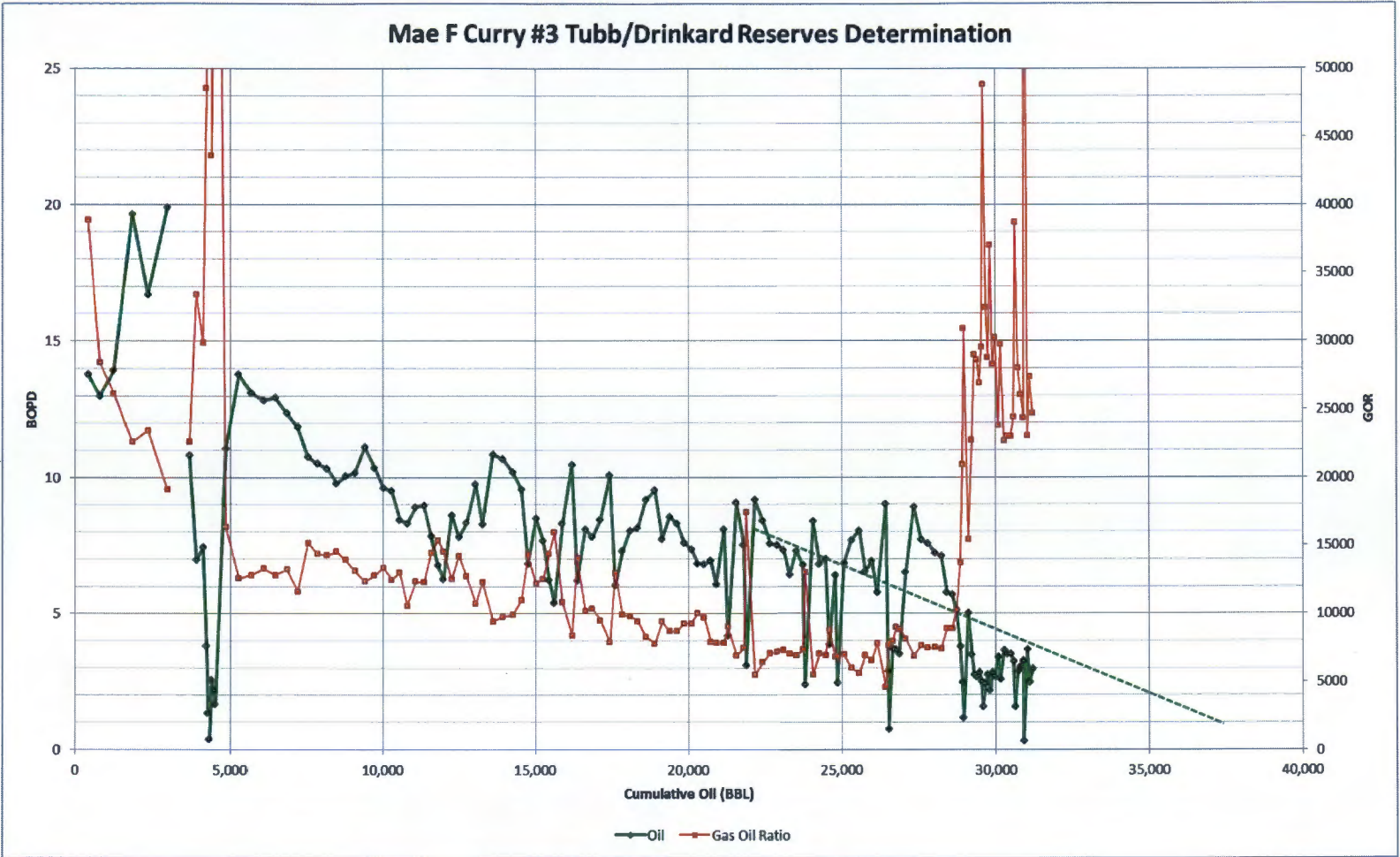
Table 1: Mae F Curry #3 Allocations

Pool	Fluid	Expected Recovery	Percent Allocation
Hardy Paddock	Oil (MBO)	16.1	37.3%
	Gas (MMCF)	115.0	25.6%
	Water (MBW)	66.4	35.6%
Hardy Blinebry	Oil (MBO)	21.4	49.5%
	Gas (MMCF)	152.5	34.0%
	Water (MBW)	88.2	47.2%
Hardy Tubb-Drinkard	Oil (MBO)	5.7	13.2%
	Gas (MMCF)	180.9	40.3%
	Water (MBW)	32.0	17.2%
Cumulative	Oil (MBO)	43.2	100%
	Gas (MMCF)	448.4	100%
	Water (MBW)	186.7	100%

List of Attachments

- A1. Mae F. Curry #3 Production Plot and Remaining Reserve Determination
- A2. Hardy Blinebry Reserve Determination for Offset Wells
- A3. Mae F. Curry #3 Area Map
- A4. Proposed Wellbore Diagram
- A5. Proposed Procedure

A1. Mae F. Curry #3 Production Plot and Remaining Reserve Determination



	Oil (BBL)	Gas (MCF)	Water (BBL)
Cumulative Production	31,797	448,426	60,241
Estimated EUR	37,500	636,369	93,418
Remaining Recoverable	5,703	187,943	33,177

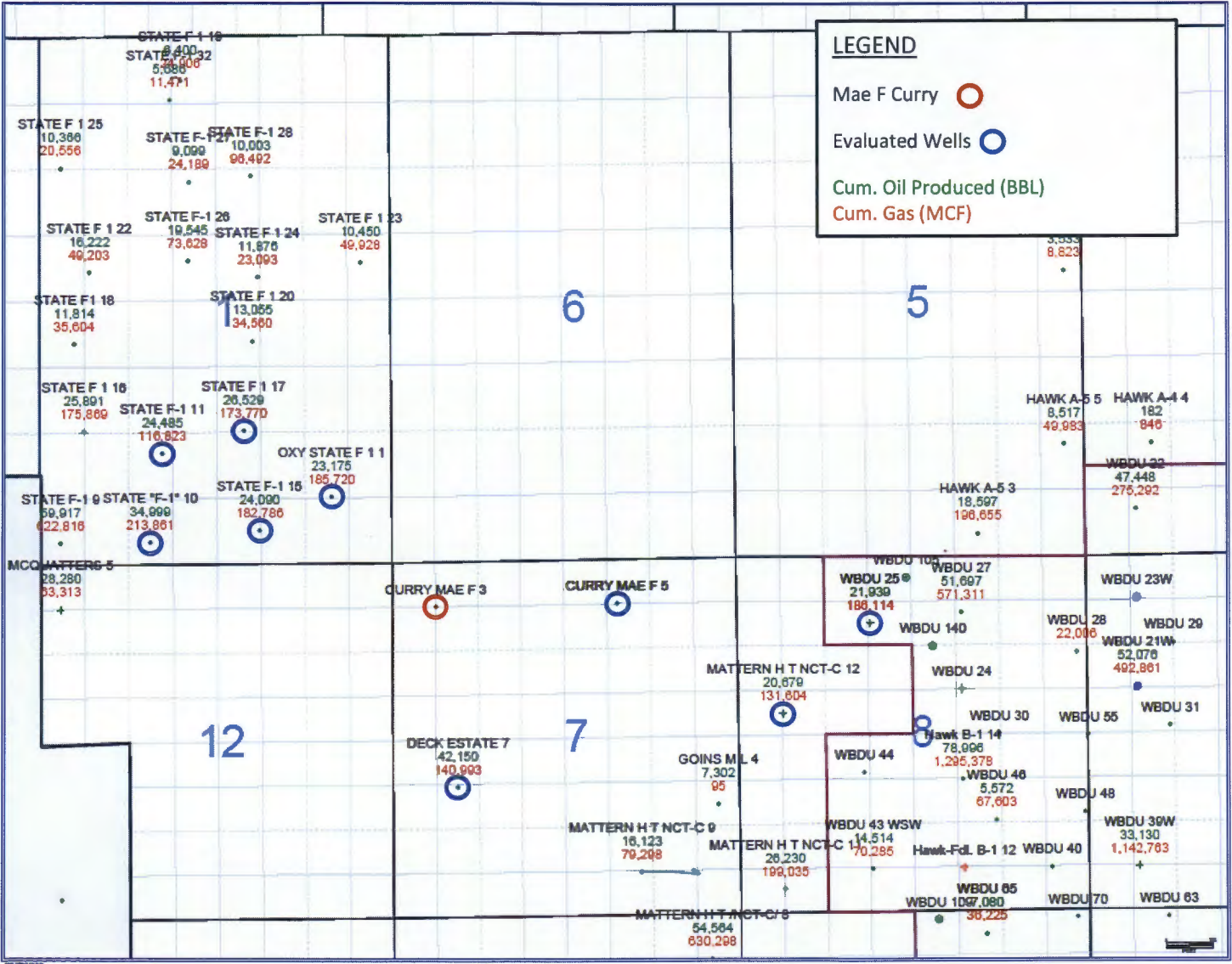
A2. Hardy Blinebry Reserve Determination for Offset Wells

Lease	Well No.	API	Hardy Blinebry Production Dates		Hardy Blinebry Cumulative Production to Date			Hardy Blinebry Estimated EUR*			Hardy Blinebry Peak IP30	
			Start	End	Oil (BBL)	Gas (MCF)	Water (BBL)	Oil (BBL)	Gas (MCF)	Water (BBL)	(BOPD)	(MCFD)
Deck Estate 7	1	30-025-33677	Apr-05	Dec-14	43,280	145,307	37,295	135,000	275,000	106,977	23.6	67.5
H.T. Mattern NCT-C	12	30-025-25547	Mar-78	Sep-87	20,679	131,604	194,812	22,500	152,000	264,588	24.9	179.3
Oxy State F 1	1	30-025-35176	May-03	Dec-14	23,831	194,629	265,505	37,500	340,000	567,538	21.2	105.6
State F-1	10	30-025-27034	Sep-86	Aug-08	34,999	213,861	32,583	40,500	570,000	36,154	32.2	151.5
State F-1	11	30-025-35466	Jan-04	Dec-14	25,054	119,878	173,773	38,000	160,000	202,254	18.4	44.2
State F-1	17	30-025-38429	Sep-07	Dec-14	27,077	178,965	315,745	37,500	220,000	532,207	55.6	249.9
State F-1	15	30-025-35771	Jan-04	Dec-14	24,550	187,793	59,219	32,500	260,000	75,602	13.5	74.6
WBDU	25	30-025-26265	Jul-80	Feb-07	21,939	186,114	24,738	25,000	275,000	30,518	19.9	79.7
				Mean	27,676	169,769	137,959	46,063	281,500	226,980	26.2	119.1
				P50	24,802	182,540	116,496	37,500	267,500	154,615	22.4	92.7

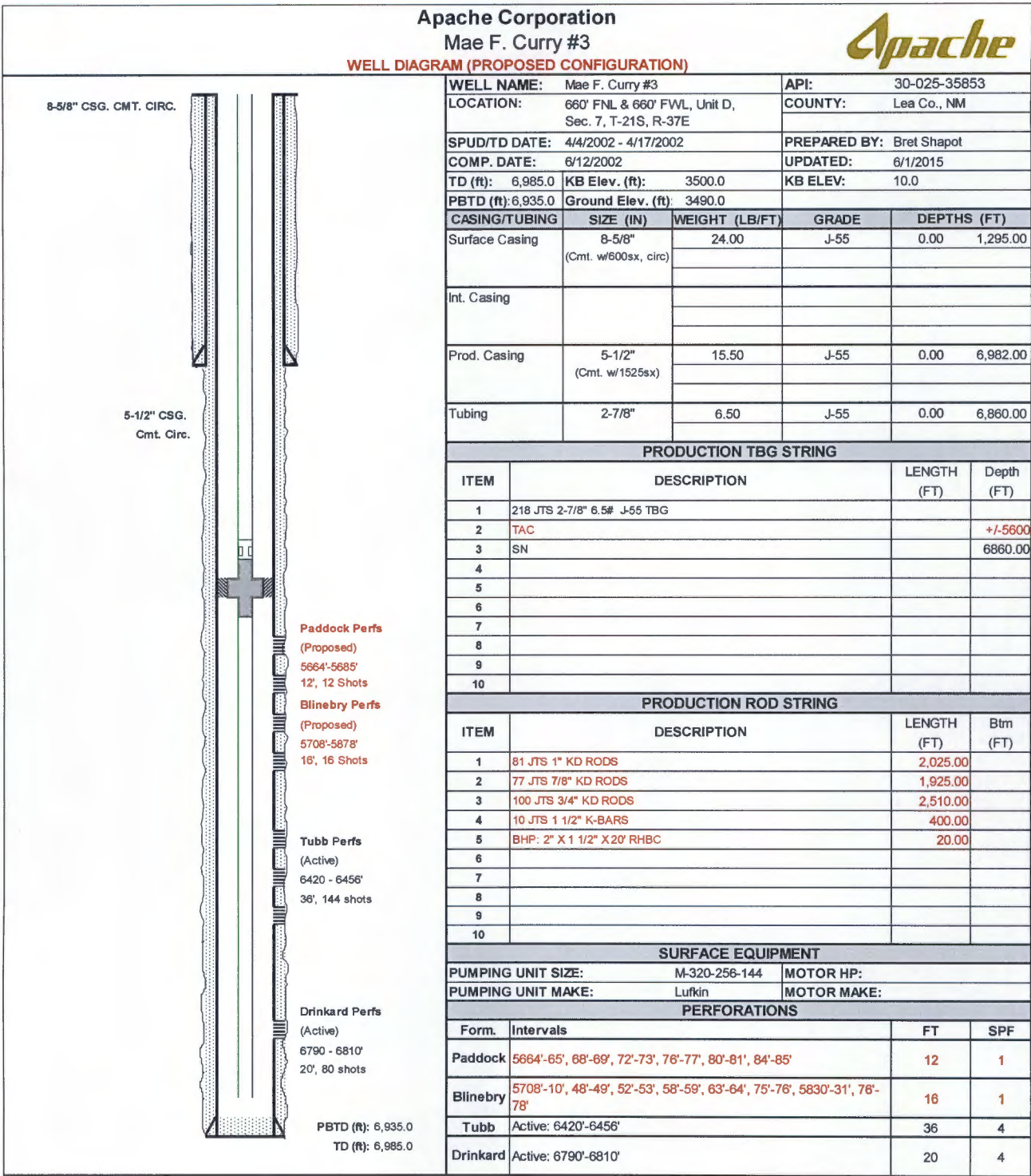
*Oil and gas EUR forecast using decline curve analysis. Water forecast using last 12 months average WOR

Lease	Well No.	API	Notes
Deck Estate 7	1	30-025-33677	Blinebry completed and zone tested to determine allocation. Placed on production DHC with Drinkard April 2005
H.T. Mattern NCT-C	12	30-025-25547	Blinebry completed and zone tested to determine allocation. Placed on production DHC with Drinkard January 1979. No digital log
Oxy State F 1	1	30-025-35176	Well produced from the Blinebry only from May 2003 to Current
State F-1	10	30-025-27034	Well produced from the Blinebry only from September 1986 to November 1996. No digital log
State F-1	11	30-025-35466	Blinebry completed and zone tested to determine allocation. Placed on production DHC with Tubb/Drinkard January 2004
State F-1	17	30-025-38429	Blinebry completed and zone tested to determine allocation. Placed on production DHC with Tubb/Drinkard September 2007. No digital log
State F-1	15	30-025-35771	Blinebry completed and zone tested to determine allocation. Placed on production DHC with Tubb/Drinkard January 2004. No digital log
WBDU	25	30-025-26265	Blinebry completed and zone tested to determine allocation. Placed on production DHC with Drinkard February 1981

A3. Mae F. Curry #3 Area Map



A4. Proposed Wellbore Diagram



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 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-35853		² Pool Code 49210	³ Pool Name Paddock	
⁴ Property Code 309145	⁵ Property Name Mae F Curry			⁶ Well Number 003
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 1000 Midland, TX 79705			⁹ Elevation 3490' GL

¹⁰ Surface Location

UL or lot no. D	Section 7	Township 21S	Range 37E	Lot Idn	Feet from the 660	North/South line North	Feet from the 660	East/West line West	County Lea
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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
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¹² Dedicated Acres 40	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No. DHC-HOB-533
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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.

<div><div><div>16</div><div><div><div></div><div><div>660'</div><div>660'</div></div></div></div></div></div>				<div><div><div><div><div>¹⁷ OPERATOR CERTIFICATION</div><div>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</div><div>hereby entered by the division</div><div><div>Reesa Fisher</div><div>06/04/2015</div></div><div>SignatureDate</div><div>Reesa Fisher</div><div>Printed Name</div></div></div><div><div><div><div><div>¹⁸ SURVEYOR CERTIFICATION</div><div>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.</div><div>Date of Survey</div><div>Signature and Seal of Professional Surveyor:</div><div>Certificate Number</div></div></div></div></div></div></div>	

JUN 09 2015

pm

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 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

HOBBS OCD
MAR 30 2015

RECEIVED ☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-35853	² Pool Code 29710	³ Pool Name Hardy; Blinebry
⁴ Property Code 309145	⁵ Property Name Mae F Curry	⁶ Well Number 003
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation: 303 Veterans Airpark Lane, Suite 1000 Midland, TX 79705	⁹ Elevation 3490' GL

¹⁰ Surface Location

UL or lot no. D	Section 7	Township 21S	Range 37E	Lot Idn	Feet from the 660	North/South line North	Feet from the 660	East/West line West	County Lea
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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
¹² Dedicated Acres 48 36.63	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.

	<p>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.</p> <p>Reesa Fisher 03/18/2015 Signature Date Reesa Fisher Printed Name</p>
	<p>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.</p> <p>Date of Survey Signature and Seal of Professional Surveyor:</p>
	<p>Certificate Number</p>

APR 08 2015

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0710

DISTRICT III
1000 Rio Brazos Rd., Artesia, NM 87410

DISTRICT IV
P.O. Box 2088, SANTA FE, N.M. 87504-2088

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-35853	Pool Code 29760	Pool Name Hardy (Tubb - Drinkard)
Property Code 25451309145	Property Name MITE F CURRY	Well Number 3
OGRID No. 000278 873	Operator Name Apache Corp 3P America Production Company	Elevation 3490'

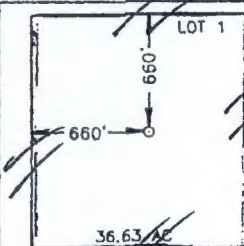
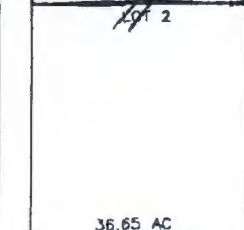
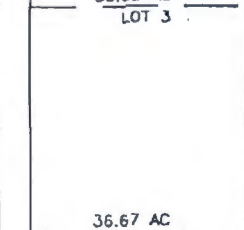
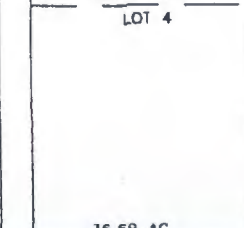
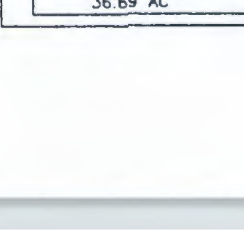
Surface Location

UL or lot No. D/1	Section 7	Township 21-S	Range 37-E	Lot Idn	Feet from the 660	North/South line NORTH	Feet from the 660	East/West line WEST	County LEA
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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
Dedicated Acres 4.0363	Joint or Infill	Consolidation Code	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

	LOT 1								
	LOT 2	GEOGRAPHIC LOCATION NAD 27 Y= 547002.8 X= 846999.5 LAT. 32°29'55.63"N LONG 104°12'28.29"W							
	LOT 3								
	LOT 4								
									

OPERATOR CERTIFICATION

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

Sandra J. Moore
Signature
Sandra J. Moore
Printed Name
Regulatory Assistant
Title
5-14-2002
Date

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 20, 2002

Date Surveyed
Signature & Seal of Professional Surveyor
Ronald J. Eidson
02.11.0145
Certificate No. RONALD J. EIDSON 3239
GARY EIDSON 12641

6/9/2015 1:18:37 PM

Clock %	Valid Test	Volumes						Fluids		Ratios					
		Ttl Liq.	Oil	Ttl Gas	Frm Gas	Water	Lift	Level	Pump	GOR	WOR	GLR	IGLR	WGR	TG
Superintendent: NW DISTRICT (CARNES)								Foreman: EUNICE [HUNTER]							
	True	23.00	3.00	83.00	83.00	20.00				27.67	6.67	3.61		0.24	
	True	18.00	3.00	80.00	80.00	15.00				26.67	5.00	4.44		0.19	
	True	18.00	3.00	77.00	77.00	15.00				25.67	5.00	4.28		0.20	
	True	18.00	3.00	84.00	84.00	15.00				28.00	5.00	4.67		0.18	
		19.25	3.00	81.00	81.00	16.25									



June 24, 2015

State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Application for Down Hole Commingling (Identical Ownership)
Mae Curry #3
Section 7, Township 21 South, Range 37 East
Lea County, NM

Ladies and Gentlemen:

Identical ownership (working interest, royalty, and overriding royalty owners) exists as to all formations below 3,885 feet underlying the Mae Curry #3 in the following described lands:

Township 21 South, Range 37 East
Section 7: Lot 1 (NW/4NW/4)
Lea County, NM

If you have any question regarding the aforementioned, please do not hesitate contacting the undersigned at (432) 818-1846.

Sincerely,
APACHE CORPORATION

Laci Lawrence
Landman
laci.lawrence@apachecorp.com