

DATE IN <u>11/25/09</u>	SUSPENSE	ENGINEER <u>Jones</u>	LOGGED IN <u>11/25</u>	TYPE <u>DHC</u>	PTG-W APP NO. <u>0932953891</u>
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NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau
1220 South St. Francis Drive, Santa Fe, NM 87505



Apache
State # 47

ADMINISTRATIVE APPLICATION CHECKLIST

30 025-37607

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.

Amber Cooke
Print or Type Name

Signature

Engineering Tech
Title

11/20/2009
Date

amber.cooke@apachecorp.com
e-mail Address



November 20, 2009

Will Jones
New Mexico Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Application for Downhole Commingle
New Mexico S State #47
Unit E, Sec 2, T-22S, R-37E
Penrose Skelly; Grayburg and Eunice; San Andres, South Pools
Lea County, New Mexico

Dear Mr. Jones,

Enclosed please find an administrative application form (C-107A) and attachments for downhole commingling the Grayburg and San Andres in the New Mexico S State #47. Apache intends to produce both zones together with an expected rate of 27 BOPD, 155 BWPD, and 209 MCFPD. The ownership (WI, NRI and ORRI) of these pools are identical in this wellbore. Downhole commingling in this manner will offer an economic method of production while protecting against reservoir damage, waste of reserves and violation of correlative rights. This is a State well. The State of New Mexico Commissioner of Public Lands has been sent a copy of this application.

This well was originally completed to the San Andres in 5/2006. Apache intends to recomplete to the Grayburg and commingle with the existing San Andres production. Actual tests were used in determining the attached allocation for the San Andres and offset well data was used for the Grayburg allocation. See attached curves and supporting data.

If you need additional information or have any questions, please give me a call at (918) 491-4968.

Sincerely,

A handwritten signature in black ink that reads "Amber Cooke".

Amber Cooke
Engineering Technician

District I
1625 N. French Drive, Hobbs, NM 88240

District II
1301 W. Grand Avenue, 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

Form C-107A
Revised June 10, 2003

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

APPLICATION TYPE
☒ Single Well
☐ Establish Pre-Approved Pools
EXISTING WELLBORE
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

Apache Corporation 6120 S Yale Ave, Suite 1500 Tulsa, OK 74136
Operator Address

New Mexico S State 47 E 2 22S 37E Lea
Lease Well No. Unit Letter-Section-Township-Range County

OGRID No. 873 Property Code 34816 API No. 30-025-37607 Lease Type: ☐ Federal ☒ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	Penrose Skelly; Grayburg		Eunice; San Andres, South
Pool Code	50350		24170
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	3629'-3782' (Est Perf)		3852'-4230' (Perf)
Method of Production (Flowing or 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)	N/A		N/A
Oil Gravity or Gas BTU (Degree API or Gas BTU)	35.9 API		34.6 API
Producing, Shut-In or 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: 25 BOPD Rates: 135 BWPD 100 MCFPD	Date: Rates:	Date: 10/15/2009 Rates: 3 BOPD 20 BWPD 109 MCFPD
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 89 % 48 %	Oil Gas % %	Oil Gas 11 % 52 %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐
Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐
Will commingling decrease the value of production? Yes ☐ No ☒
If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐
NMOCD Reference Case No. applicable to this well: _____

Attachments:
C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
Production curve for each zone for at least one year. (If not available, attach explanation.)
For zones with no production history, estimated production rates and supporting data.
Data to support allocation method or formula.
Notification list of working, royalty and overriding royalty interests for uncommon interest cases.
Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools
List of all operators within the proposed Pre-Approved Pools
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.
Bottomhole pressure data.

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

SIGNATURE Amber Cooke TITLE Engineering Tech DATE 11/20/2009

TYPE OR PRINT NAME Amber Cooke TELEPHONE NO. (918) 491-4968

E-MAIL ADDRESS amber.cooke@apachecorp.com

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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 30-025-37607		² Pool Code 50350	³ Pool Name Penrose Skelly, Grayburg
⁴ Property Code 34816	⁵ Property Name New Mexico S State		⁶ Well Number 47
⁷ OGRID No. 873	⁸ Operator Name Apache Corporation		⁹ Elevation 3372'

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
E	2	22S	37E		1830	North	440	West	Lea

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 40	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.

<div style="text-align: center;"> ¹⁶ </div>				<div> ¹⁷ OPERATOR CERTIFICATION <i>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.</i> <div style="display: flex; justify-content: space-between;"> <div> </div> <div>11/20/2009</div> </div> <div style="display: flex; justify-content: space-between;"> <div>Signature</div> <div>Date</div> </div> <div>Amber Cooke</div> <div>Printed Name</div> </div>	
				<div> ¹⁸ SURVEYOR CERTIFICATION <i>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.</i> </div> <div style="border-top: 1px solid black; padding-top: 5px;"> Date of Survey Signature and Seal of Professional Surveyor: </div> <div style="border-top: 1px solid black; padding-top: 5px;"> Certificate Number </div>	

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☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-025-37607		2 Pool Code 24170		3 Pool Name Eunice; San Andres, South	
4 Property Code 34816		5 Property Name New Mexico S State			6 Well Number 47
7 OGRID No. 873		8 Operator Name Apache Corporation			9 Elevation 3372'

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
E	2	22S	37E		1830	North	440	West	Lea

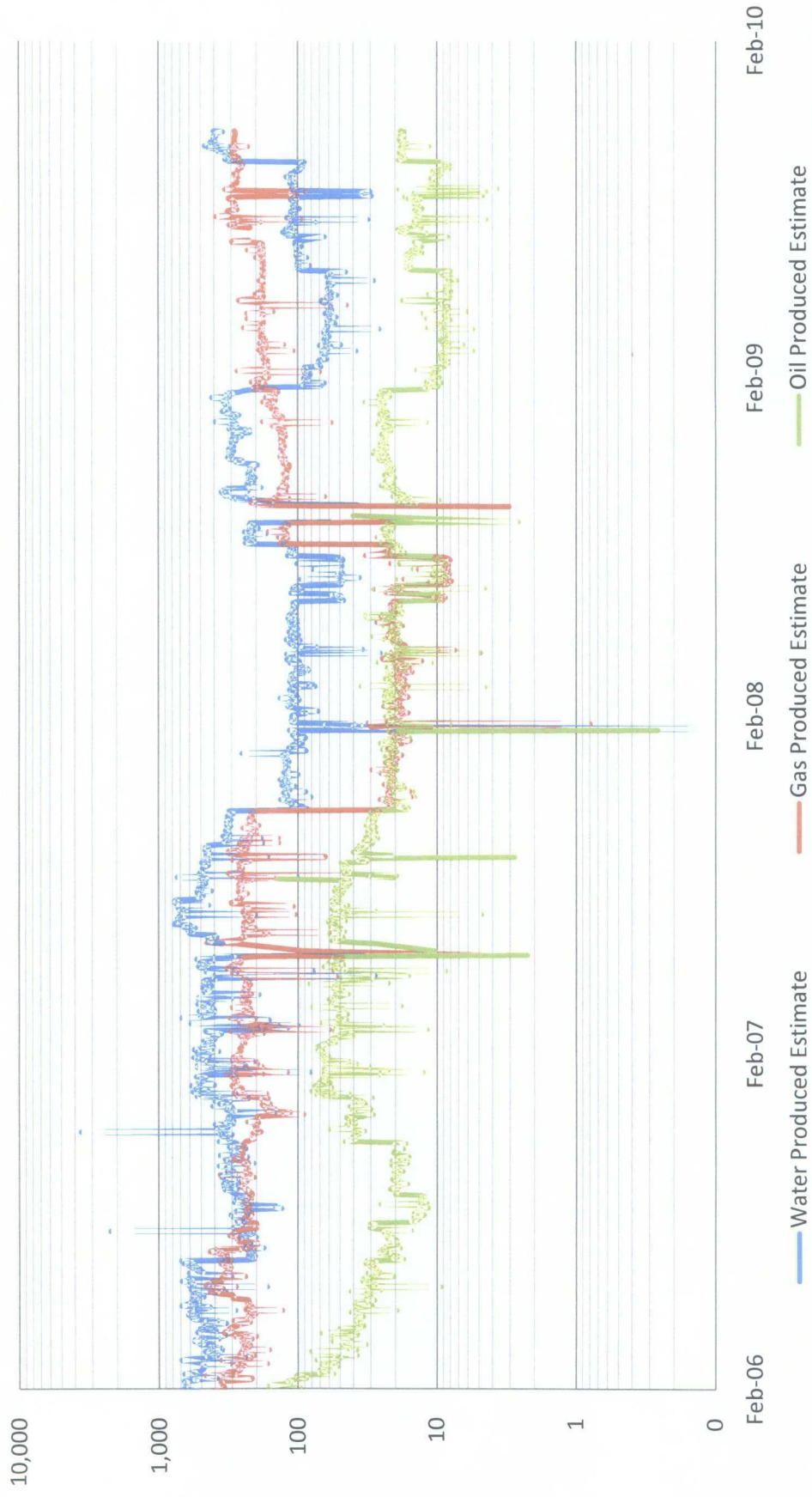
11 Bottom Hole Location If Different From Surface

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 80		13 Joint or Infill		14 Consolidation Code		15 Order No.			

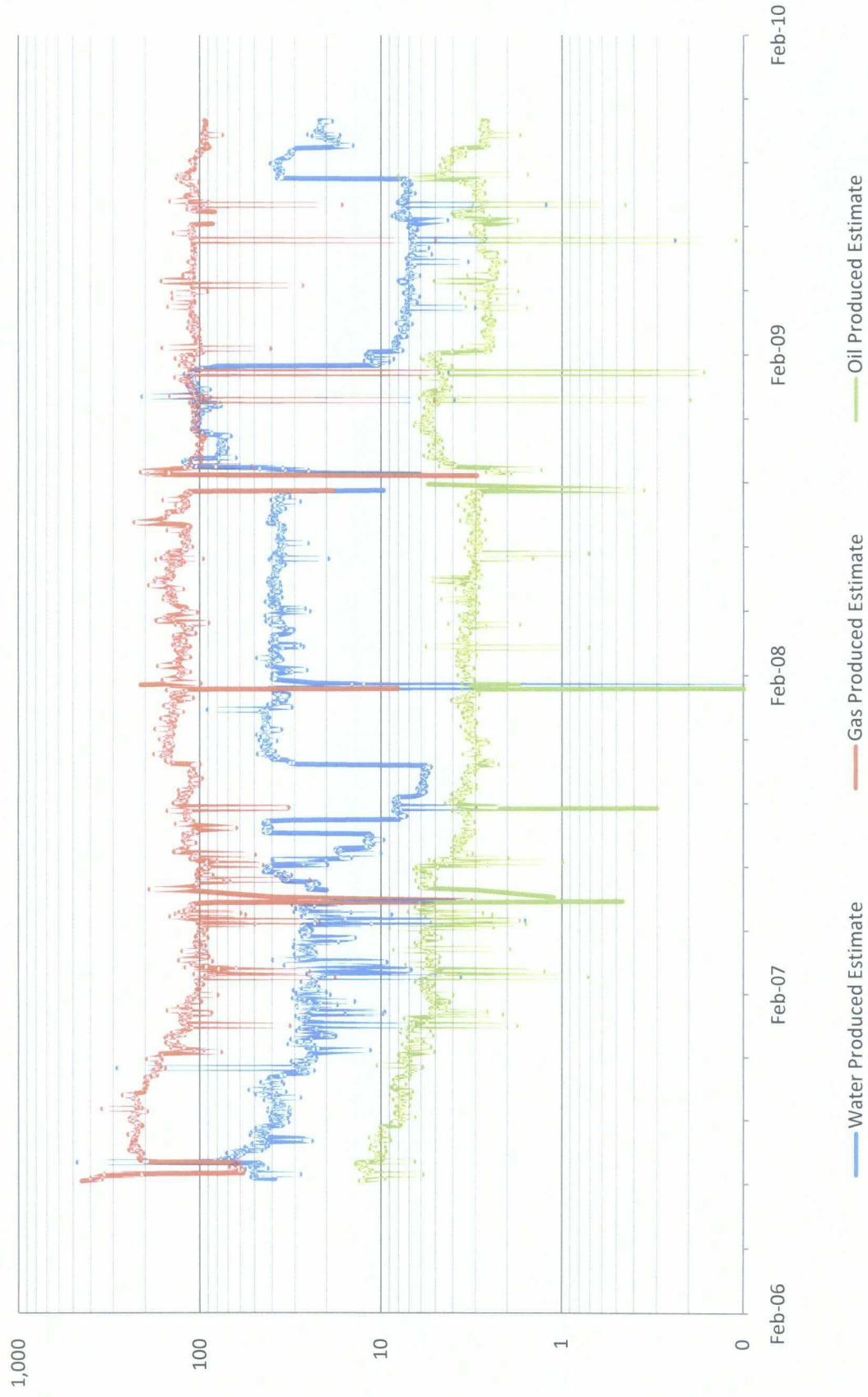
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

16 				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. Signature _____ Date 11/20/2009 Printed Name Amber Cooke	
					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. Date of Survey _____ Signature and Seal of Professional Surveyor: _____ Certificate Number _____

NM State S #43 - San Andres & Grayburg



NM State S #47 - San Andres



NM State #47 Production Allocation Calculation

Analogous Wells	Name	Producing Formation	Grayburg Initial Production		
			BOPD	MCFPD	BWPD
	NM State S #43	SA/GB	45	118	267
	NM State S #44	SA/GB	16	55	118
	NM State S #46	SA/GB	51	138	81
	NM State S #51	SA/GB	22	104	72
		average	33.5	103.75	134.5
	NM State S #47	Expected Grayburg	25	100	135
		(lower end average)			
		Current San Andres	3	109	20

	Oil	Gas	Water
Grayburg	89%	48%	87%
San Andres	11%	52%	13%