

08/12/13	SUSPENSE	ENGINEER PG	08/15/13	TYPE DHC	PRG 1322735552
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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 \_\_\_\_\_

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**[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

*Apache Corp*  
 36-025-38119  
 New Mexico State  
 # 54

**[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 HOLLAND FISHER  
 Print or Type Name

*Reesa Fisher*  
 Signature

SR STAFF REG TECH  
 Title

8/8/2013  
 Date

NEW MEXICO STATE #54

Reesa.Holland@apachecorp.com  
 e-mail Address

August 8, 2013

Phillip Goetze  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Re: Application for Downhole Commingle  
New Mexico S State #54 (30-025-38119)  
Unit M, Sec 2, T22S, R37E  
Penrose Skelly; Grayburg (50350) and Eunice; San Andres, South (24170) Pools  
Lea County, New Mexico


Dear Mr. Goetze:

Enclosed please find an administrative application form (C-107A) and attachments for downhole commingling the Penrose Skelly; Grayburg and Eunice; San Andres, South pools in the New Mexico S State #54. Apache intends to produce both zones together basing estimated production on the average of other wells on the Lease. Apache will allocate production using the subtraction method, since the well has been producing from the San Andres since September, 2006. 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, so the State of New Mexico Commissioner of Public Lands has been sent a copy of this application.

Apache intends to recomplete to the Grayburg and downhole commingle with the San Andres per the attached procedure. Offset data from the NM S State Lease was used in determining the attached allocation, which is the same allocation used for all other wells on the Lease. Well tests for these other wells are attached, along with current well tests of the #54 from the San Andres.

If you need additional information or have any questions, please give me a call at (432) 818-1062.

Sincerely,



Reesa Holland Fisher  
Sr. Staff Regulatory Tech

Attachments

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

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

Form C-107A  
Revised June 10, 2003

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

APPLICATION FOR DOWNHOLE COMMINGLING

Apache Corporation 303 Veterans Airpark Lane Suite 3000 Midland TX 79705  
Operator Address  
New Mexico S State 054 M 2 22S 37E Lea  
Lease Well No. Unit Letter-Section-Township-Range County  
OGRID No. 873 Property Code 34816 API No. 30-025-38119 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)	3636'-3829' (Est Perf) ✓		4183'-4229' (Act 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)	NA ✓		NA ✓
Oil Gravity or Gas BTU (Degree API or Gas BTU)	34.8 API		33.7 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: Calculate Using Rates: Subtraction Method Knowing SA Prod	Date: Rates:	Date: Various Rates: See Attached Tests
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 52 % ✓ 50 % ✓	Oil Gas % %	Oil Gas 48 % ✓ 50 % ✓

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 Reesa Fisher TITLE Sr Staff Reg Tech DATE 8/6/2013

TYPE OR PRINT NAME Reesa Holland Fisher TELEPHONE NO. ( 432 ) 818-1062

E-MAIL ADDRESS Reesa.Holland@apachecorp.com

DISTRICT I  
1625 N. FRENCH DR., HOBBS, NM 88240

State of New Mexico  
Energy, Minerals and Natural Resources Department

DISTRICT II  
1201 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

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-025-38119	Pool Code 24170	Pool Name Eunice; San Andres, South
Property Code 34816	Property Name NEW MEXICO STATE "S"	Well Number 54
OGRID No. 873	Operator Name APACHE CORPORATION	Elevation 3366'

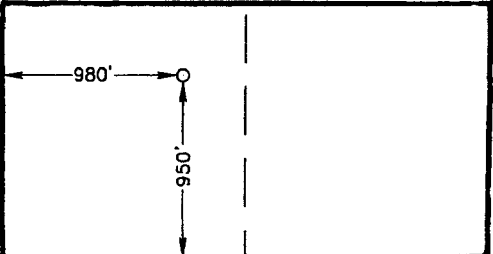
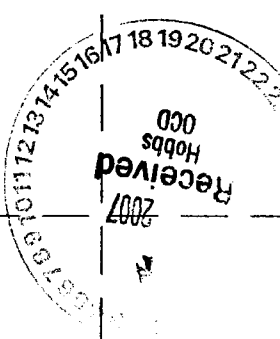
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	22-S	37-E		950	SOUTH	980	WEST	LEA

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 80	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 4	LOT 3	LOT 2	LOT 1
39.78 AC	39.76 AC	39.76 AC	39.74 AC
GEODETIC COORDINATES NAD 27 NME  Y=517168.3 N X=868638.2 E  LAT.=32.416146° N LONG.=103.138768° W  LAT.=32°24'58" N LONG.=103°08'20" W			
			
			
<b>OPERATOR CERTIFICATION</b> <i>I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i>  Signature: <u>S. Mackay</u> Date: <u>12/29/2006</u> Printed Name: <u>Sophie Mackay</u>			
<b>SURVEYOR CERTIFICATION</b> <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>  JUNE 22, 2006 Date Surveyed: _____ JR Signature & Seal: <u>[Signature]</u> Professional Surveyor NEW MEXICO 32201 36.11.1057 Certification No. GARY EIDSON 12841 RONALD V. EIDSON 3239			

DISTRICT I  
1825 N. FRENCH DR., HOBBS, NM 80240

DISTRICT II  
1301 W. GRAND AVENUE, ARTESIA, NM 80210

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 and Natural Resources Department

OIL CONSERVATION DIVISION  
1220 SOUTH ST. FRANCIS DR.  
Santa Fe, New Mexico 87505

Form C-102  
Revised October 12, 2005  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-025-3819</b>	Pool Code <b>50350</b>	Pool Name <b>Penrose Skelly Grayburg</b>
Property Code <b>34816</b>	Property Name <b>NEW MEXICO STATE "S"</b>	Well Number <b>54</b>
OGRID No. <b>873</b>	Operator Name <b>APACHE CORPORATION</b>	Elevation <b>3366'</b>

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	22-S	37-E		950	SOUTH	980	WEST	LEA

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 <b>40</b>	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 4 39.78 AC	LOT 3 39.76 AC	LOT 2 39.76 AC	LOT 1 39.74 AC
GEODETIC COORDINATES NAD 27 NME  Y=517168.3 N X=868638.2 E  LAT.=32.416146° N LONG.=103.138768° W  LAT.=32°24'58" N LONG.=103°08'20" W			
<b>OPERATOR CERTIFICATION</b>  I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.  <i>Lam Williams</i> Signature Date <b>9/2/06</b> <i>Lam Williams</i> Printed Name			
<b>SURVEYOR CERTIFICATION</b>  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.  JUNE 22, 2006 Date Surveyed JR Signature & Seal of Professional Surveyor <i>Ronald A. Edson</i> 6/30/06 06-1110575 Certificate No. GARY EDSON 12841 RONALD A. EDSON 3239 REGISTERED PROFESSIONAL			

Well Test History Report

Select By: Field  
Display: All well tests between 01/01/2013 - 08/03/2013

Test Date	Effective Date	Measured Hours	Type	24 Hour Volumes					Ratios					Fluid Level
				Gr Liquid	OIL	GAS	WAT	LIFT	GOR	GLR	IGOR	IGLR	TGLR	
Field: <b>PENROSE-SKELLY</b>														
<b>NEW MEXICO STATE /S/ #54</b>														
3/21/2013	3/21/2013	24	A	168	9	7	159	0	778	42	0	0	42	
4/5/2013	4/5/2013	24	A	185	10	1	175	0	100	5	0	0	5	
5/10/2013	5/10/2013	24	A	186	9	3	177	0	333	16	0	0	16	
6/8/2013	6/8/2013	24	A	181	10	3	171	0	300	17	0	0	17	
7/23/2013	7/23/2013	24	A	177	9	3	168	0	333	17	0	0	17	
Averages by Completion				179	9	3	170	0						

\* Other Lease Wells w/ same allocations.

## Well Test History Report

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Select By: Field

Display: All well tests between 01/01/2013 - 08/06/2013

Test Date	Effective Date	Measured Hours	Type	24 Hour Volumes					Ratios					Fluid Level
				Gr Liquid	OIL	GAS	WAT	LIFT	GOR	GLR	IGOR	IGLR	TGLR	
Field: PENROSE-SKELLY														
NEW MEXICO STATE /S/ #42														
1/1/2013	1/1/2013	24	A	547	32	110	515	0	3,438	201	0	0	201	
3/1/2013	3/1/2013	24	A	527	25	85	502	0	3,400	161	0	0	161	
4/18/2013	4/18/2013	24	A	429	42	93	387	0	2,214	217	0	0	217	
5/19/2013	5/19/2013	24	A	418	40	91	378	0	2,275	218	0	0	218	
6/4/2013	6/4/2013	24	A	494	49	105	445	0	2,143	213	0	0	213	
7/6/2013	7/6/2013	24	A	475	39	102	436	0	2,615	215	0	0	215	
Averages by Completion				482	38	98	444	0						
NEW MEXICO STATE /S/ #43 (GRAYBURG)														
3/3/2013	3/3/2013	24	A	164	4	180	160	0	45,000	1,098	0	0	1,098	
4/11/2013	4/11/2013	24	A	194	9	148	185	0	16,444	763	0	0	763	
5/21/2013	5/21/2013	24	A	181	8	152	173	0	19,000	840	0	0	840	
6/19/2013	6/19/2013	24	A	173	8	152	165	0	19,000	879	0	0	879	
7/8/2013	7/8/2013	24	A	1,169	8	61	1,161	0	7,625	52	0	0	52	
Averages by Completion				376	7	139	369	0						
NEW MEXICO STATE /S/ #44														
3/6/2013	3/6/2013	24	A	1,649	5	119	1,644	0	23,800	72	0	0	72	
4/1/2013	4/1/2013	24	A	1,303	4	32	1,299	0	8,000	25	0	0	25	
4/2/2013	4/2/2013	24	A	1,201	8	62	1,193	0	7,750	52	0	0	52	
5/17/2013	5/17/2013	24	A	1,210	8	63	1,202	0	7,875	52	0	0	52	
6/22/2013	6/22/2013	24	A	1,196	10	65	1,186	0	6,500	54	0	0	54	
7/10/2013	7/10/2013	24	A	1,169	8	61	1,161	0	7,625	52	0	0	52	
Averages by Completion				1,288	7	67	1,281	0						
NEW MEXICO STATE /S/ #45														
3/4/2013	3/4/2013	24	A	24	3	40	21	0	13,333	1,667	0	0	1,667	
4/21/2013	4/21/2013	24	A	44	11	40	33	0	3,636	909	0	0	909	
5/20/2013	5/20/2013	24	A	39	10	38	29	0	3,800	974	0	0	974	
6/23/2013	6/23/2013	24	A	20	5	39	15	0	7,800	1,950	0	0	1,950	
7/24/2013	7/24/2013	24	A	17	3	36	14	0	12,000	2,118	0	0	2,118	
Averages by Completion				29	6	39	22	0						
NEW MEXICO STATE /S/ #46 (SAN ANDRES)														

\*\* All values are recorded using imperial units.

## Well Test History Report

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8/8/2013 9:59:23 am

Select By: Field

Display: All well tests between 01/01/2013 - 08/06/2013

Test Date	Effective Date	Measured Hours	Type	24 Hour Volumes					Ratios					Fluid Level
				Gr Liquid	OIL	GAS	WAT	LIFT	GOR	GLR	IGOR	IGLR	TGLR	
Field: PENROSE-SKELLY														
3/12/2013	3/12/2013	24	A	13	3	41	10	0	13,667	3,154	0	0	3,154	
4/24/2013	4/24/2013	24	A	17	5	41	12	0	8,200	2,412	0	0	2,412	
5/10/2013	5/10/2013	24	A	14	4	39	10	0	9,750	2,786	0	0	2,786	
6/17/2013	6/17/2013	24	A	19	5	40	14	0	8,000	2,105	0	0	2,105	
7/14/2013	7/14/2013	24	A	15	3	34	12	0	11,333	2,267	0	0	2,267	
Averages by Completion				16	4	39	12	0						
NEW MEXICO STATE /S/ #47 (SAN ANDRES)														
3/5/2013	3/5/2013	24	A	74	5	118	69	0	23,600	1,595	0	0	1,595	
4/29/2013	4/29/2013	24	A	20	6	123	14	0	20,500	6,150	0	0	6,150	
5/1/2013	5/1/2013	24	A	22	6	134	16	0	22,333	6,091	0	0	6,091	
5/7/2013	5/7/2013	24	A	16	4	135	12	0	33,750	8,438	0	0	8,438	
5/9/2013	5/9/2013	24	A	18	4	125	14	0	31,250	6,944	0	0	6,944	
6/28/2013	6/28/2013	24	A	16	4	40	12	0	10,000	2,500	0	0	2,500	
7/16/2013	7/16/2013	24	A	13	3	38	10	0	12,667	2,923	0	0	2,923	
Averages by Completion				26	5	102	21	0						
NEW MEXICO STATE /S/ #48 SAN ANDRES														
3/7/2013	3/7/2013	24	A	12	6	90	6	0	15,000	7,500	0	0	7,500	
4/28/2013	4/28/2013	24	A	12	5	92	7	0	18,400	7,667	0	0	7,667	
5/28/2013	5/28/2013	24	A	12	3	71	9	0	23,667	5,917	0	0	5,917	
6/26/2013	6/26/2013	24	A	22	16	68	6	0	4,250	3,091	0	0	3,091	
7/18/2013	7/18/2013	24	A	19	14	66	5	0	4,714	3,474	0	0	3,474	
Averages by Completion				15	9	77	7	0						
NEW MEXICO STATE /S/ #49 (GRAYBURG)														
3/10/2013	3/10/2013	24	A	354	8	69	346	0	8,625	195	0	0	195	
4/22/2013	4/22/2013	24	A	362	10	45	352	0	4,500	124	0	0	124	
4/23/2013	4/23/2013	24	A	339	11	47	328	0	4,273	139	0	0	139	
5/16/2013	5/16/2013	24	A	329	17	39	312	0	2,294	119	0	0	119	
6/13/2013	6/13/2013	24	A	323	9	44	314	0	4,889	136	0	0	136	
7/20/2013	7/20/2013	24	A	312	8	41	304	0	5,125	131	0	0	131	
Averages by Completion				337	11	48	326	0						
NEW MEXICO STATE /S/ #50														

\*\* All values are recorded using imperial units.



# Well Test History Report

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8/8/2013 9:59:23 am

Select By: Field

Display: All well tests between 01/01/2013 - 08/06/2013

Test Date	Effective Date	Measured Hours	Type	24 Hour Volumes					Ratios					Fluid Level
				Gr Liquid	OIL	GAS	WAT	LIFT	GOR	GLR	IGOR	IGLR	TGLR	
Field: <u>PENROSE-SKELLY</u>														
NEW MEXICO STATE /S/ #50														
3/13/2013	3/13/2013	24	A	354	25	15	329	0	600	42	0	0	42	
4/19/2013	4/19/2013	24	A	294	35	4	259	0	114	14	0	0	14	
5/22/2013	5/22/2013	24	A	287	36	7	251	0	194	24	0	0	24	
6/14/2013	6/14/2013	24	A	298	34	5	264	0	147	17	0	0	17	
7/4/2013	7/4/2013	24	A	287	30	4	257	0	133	14	0	0	14	
Averages by Completion				304	32	7	272	0						
NEW MEXICO STATE /S/ #51 (GRAYBURG)														
3/15/2013	3/15/2013	24	A	44	9	75	35	0	8,333	1,705	0	0	1,705	
4/28/2013	4/28/2013	24	A	30	3	94	27	0	31,333	3,133	0	0	3,133	
5/1/2013	5/1/2013	24	A	434	4	98	430	0	24,500	226	0	0	226	
5/31/2013	5/31/2013	24	A	36	5	78	31	0	15,600	2,167	0	0	2,167	
6/16/2013	6/16/2013	24	A	30	3	90	27	0	30,000	3,000	0	0	3,000	
7/5/2013	7/5/2013	24	A	28	3	87	25	0	29,000	3,107	0	0	3,107	
Averages by Completion				100	5	87	96	0						
NEW MEXICO STATE /S/ #52														
3/16/2013	3/16/2013	24	A	12	2	6	10	0	3,000	500	0	0	500	
4/25/2013	4/25/2013	24	A	20	8	9	12	0	1,125	450	0	0	450	
5/13/2013	5/13/2013	24	A	16	3	9	13	0	3,000	563	0	0	563	
6/11/2013	6/11/2013	24	A	19	6	9	13	0	1,500	474	0	0	474	
7/9/2013	7/9/2013	24	A	15	5	8	10	0	1,600	533	0	0	533	
Averages by Completion				16	5	8	12	0						
NEW MEXICO STATE /S/ #53														
3/18/2013	3/18/2013	24	A	115	16	7	99	0	438	61	0	0	61	
4/28/2013	4/28/2013	24	A	104	15	9	89	0	600	87	0	0	87	
5/27/2013	5/27/2013	24	A	105	14	9	91	0	643	86	0	0	86	
6/4/2013	6/4/2013	24	A	116	15	4	101	0	267	34	0	0	34	
6/5/2013	6/5/2013	24	A	102	14	6	88	0	429	59	0	0	59	
7/7/2013	7/7/2013	24	A	98	12	5	86	0	417	51	0	0	51	
Averages by Completion				107	14	7	92	0						
NEW MEXICO STATE /S/ #55 SAN ANDRES														

\*\* All values are recorded using imperial units.

# Well Test History Report

Page 4 of 5  
8/8/2013 9:59:23 am

Select By: Field

Display: All well tests between 01/01/2013 - 08/06/2013

Test Date	Effective Date	Measured Hours	Type	24 Hour Volumes					Ratios					Fluid Level
				Gr Liquid	OIL	GAS	WAT	LIFT	GOR	GLR	IGOR	IGLR	TGLR	
Field: PENROSE-SKELLY														
3/23/2013	3/23/2013	24	A	97	12	95	85	0	7,917	979	0	0	979	
4/1/2013	4/1/2013	24	A	122	11	27	111	0	2,455	221	0	0	221	
4/2/2013	4/2/2013	24	A	117	9	28	108	0	3,111	239	0	0	239	
4/3/2013	4/3/2013	24	A	114	13	33	101	0	2,538	289	0	0	289	
5/12/2013	5/12/2013	24	A	116	10	30	106	0	3,000	259	0	0	259	
6/9/2013	6/9/2013	24	A	124	13	33	111	0	2,538	266	0	0	266	
7/22/2013	7/22/2013	24	A	119	11	31	108	0	2,818	261	0	0	261	
Averages by Completion				116	11	40	104	0						
NEW MEXICO STATE /S/ #56 (SAN ANDRES)														
3/26/2013	3/26/2013	24	A	936	11	50	925	0	4,545	53	0	0	53	
4/24/2013	4/24/2013	24	A	1,060	12	106	1,048	0	8,833	100	0	0	100	
5/7/2013	5/7/2013	24	A	1,045	16	90	1,029	0	5,625	86	0	0	86	
5/9/2013	5/9/2013	24	A	1,076	14	103	1,062	0	7,357	96	0	0	96	
6/7/2013	6/7/2013	24	A	998	11	116	987	0	10,545	116	0	0	116	
7/24/2013	7/24/2013	24	A	983	9	114	974	0	12,667	116	0	0	116	
Averages by Completion				1,016	12	97	1,004	0						
NEW MEXICO STATE /S/ #57 (SAN ANDRES)														
3/27/2013	3/27/2013	24	A	38	5	180	33	0	36,000	4,737	0	0	4,737	
4/30/2013	4/30/2013	24	A	35	5	179	30	0	35,800	5,114	0	0	5,114	
5/29/2013	5/29/2013	24	A	38	5	181	33	0	36,200	4,763	0	0	4,763	
6/12/2013	6/12/2013	24	A	32	4	174	28	0	43,500	5,438	0	0	5,438	
7/19/2013	7/19/2013	24	A	31	4	169	27	0	42,250	5,452	0	0	5,452	
Averages by Completion				35	5	177	30	0						
NEW MEXICO STATE /S/ #58 (GRAYBURG)														
3/29/2013	3/29/2013	24	A	16	4	88	12	0	22,000	5,500	0	0	5,500	
4/17/2013	4/17/2013	24	A	14	4	85	10	0	21,250	6,071	0	0	6,071	
5/26/2013	5/26/2013	24	A	11	3	81	8	0	27,000	7,364	0	0	7,364	
6/19/2013	6/19/2013	24	A	12	3	83	9	0	27,667	6,917	0	0	6,917	
7/11/2013	7/11/2013	24	A	11	3	81	8	0	27,000	7,364	0	0	7,364	
Averages by Completion				13	3	84	9	0						
NEW MEXICO STATE /S/ #59 (SAN ANDRES)														

\*\* All values are recorded using imperial units.

Well Test History Report

Select By: Field  
Display: All well tests between 01/01/2013 - 08/06/2013

Test Date	Effective Date	Measured Hours	Type	24 Hour Volumes					Ratios					Fluid Level
				Gr Liquid	OIL	GAS	WAT	LIFT	GOR	GLR	IGOR	IGLR	TGLR	
Field: <u>PENROSE-SKELLY</u>														
NEW MEXICO STATE /S/ #59 (SAN ANDRES)														
3/30/2013	3/30/2013	24	A	224	13	82	211	0	6,308	366	0	0	366	
4/30/2013	4/30/2013	24	A	230	15	85	215	0	5,667	370	0	0	370	
5/18/2013	5/18/2013	24	A	221	14	83	207	0	5,929	376	0	0	376	
6/26/2013	6/26/2013	24	A	228	15	84	213	0	5,600	368	0	0	368	
7/17/2013	7/17/2013	24	A	224	14	82	210	0	5,857	366	0	0	366	
Averages by Completion				225	14	83	211	0						

\*\* All values are recorded using imperial units.



August 7, 2013

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)  
New Mexico S State #54 (API: 30-025-38119)  
Township 22 South, Range 37 East  
Section 2: All  
Lea County, NM

Ladies and Gentlemen:

Identical ownership (working, royalty and overriding royalty owners) exists as to the Grayburg and San Andres formations, in the following described lands:

Township 22 South, Range 37 East  
Section 2: All  
Lea County, NM

If you have any question regarding the aforementioned, please do not hesitate contacting the undersigned at (432) 818-1097.

Sincerely,  
**APACHE CORPORATION**

A handwritten signature in black ink, appearing to read "Dylan C. Park", is written over the company name.

Dylan C. Park  
Landman  
(432) 818-1190 Fax  
[dylan.park@apachecorp.com](mailto:dylan.park@apachecorp.com)

Submit 1 Copy To Appropriate District  
Office  
District I – (575) 393-6161  
1625 N. French Dr., Hobbs, NM 88240  
District II – (575) 748-1283  
811 S. First St., Artesia, NM 88210  
District III – (505) 334-6178  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV – (505) 476-3460  
1220 S. St. Francis Dr., Santa Fe, NM  
87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
Revised August 1, 2011

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

WELL API NO. 30-025-38119
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. B0-0934-0021
7. Lease Name or Unit Agreement Name New Mexico S State (34816)
8. Well Number 054
9. OGRID Number 873
10. Pool name or Wildcat Eunice; San Andres, South (24170)
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3366' GL

SUNDRY NOTICES AND REPORTS ON WELLS  
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A  
DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH  
PROPOSALS.)

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

2. Name of Operator  
Apache Corporation

3. Address of Operator  
303 Veterans Airpark Lane, Suite 3000 Midland, TX 79705

4. Well Location  
Unit Letter M : 950 feet from the South line and 980 feet from the West line  
Section 2 Township 22S Range 37E NMPM County Lea

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
OTHER: RECOMPLETE <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Apache requests approval to recomplete this well in the Grayburg and then commingle with the existing San Andres production, per the attached procedure. (NOI requesting DHC to follow.)

Spud Date:

9/25/2006

Rig Release Date:

10/03/2006

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

SIGNATURE

Reesa Fisher

TITLE Sr. Staff Reg Tech

DATE 8/5/2013

Type or print name Reesa Holland Fisher

E-mail address: Reesa.Holland@apachecorp.com

PHONE: 432/818-1062

For State Use Only

APPROVED BY:

TITLE

DATE

Conditions of Approval (if any):

**NM State S #54**  
**Sec 2, T-22-S, R-37-E**  
**Lea County, New Mexico**

**GRAYBURG RECOMPLETION – 1 STAGE**

2-7/8" Tbg

2-7/8", 6.5#, J-55, 8rd EUE

Capacity: 0.0058 bbl/ft = 0.2432 gal/ft

Burst: 7,260 psig; 80% = 5,808 psig;

Collapse: 7,680 psig; 80% = 6,144 psig;

Yield: 99,960 lbs; 80% = 79,728 lbs

5-1/2" Csg

5-1/2", 17#, L-80

Capacity: 0.0232 bbl/ft = 0.974 gal/ft

Burst: 7,740 psig; 80% = 6,192 psig;

Collapse: 6,390 psig; 80% = 5,112 psig;

Yield: 397,000 lbs; 80% = 317,600 lbs;

Days 1-2

1. **POOH and Clean out:** MIRU PU. POOH rods and pump. NDWH. Unset TAC. NUBOP. Tag for fill. POOH 2-7/8" tbg. RIH w/ scraper to PBTD. POOH tbg and scraper. (Note: If drilling out fill is required, wait to do after frac.)
2. **Perf Grayburg:** MIRU WL. Perf Grayburg w/ 3-3/8" SDP-3375-411NT3 csg gun w/ 2 JSPF at 3636, 49, 60, 81-83, 3706-08, 12-14, 22-24, 31, 48-52, 63, 72, 78-82, 94, 99-01, 3814-16, 23-25, 27-29 (41 ft, 82 holes, 120 deg phasing)

Day 3

3. **Acidize Grayburg:** RIH w/ tbg, packer, and RBP (note: use a CBP if fill is required to be drilled out). Set RBP at 3,910'. Spot 7 bbls 15% HCl across perfs. PUH to 3,580'. Rev circulate 5 bbls 2% KCl and set packer. BD perfs and EIR w/ 2% KCl wtr. Acidize w/ 3,000 gal 15% HCl @ 7 bpm w/ 125 BS. Max pressure 5,500 psig. Flush w/ 32 bbls 2% KCl wtr (5 bbl overflush). Record ISIP and 5/10/15" SIP's. Run packer through perfs to knock off BS. POOH tbg and packer. Prep for frac.

Day 4

4. **Frac Grayburg:** Frac Grayburg from 3,636' – 3,829' @ ~40 bpm w/ 77,000 gal 30#, XL, 2% KCl wtr carrying 132,000 lbs 16/30 Ottawa RC sand w/ a 1-6 ppg stair step. Max pressure 6,000 psig. Flush w/ 81 bbls 2% KCl wtr (3 bbl underflush). Record ISIP and 5/10/15" SIP's.

**TENTATIVE GRAYBURG SCHEDULE**

Volume (Gals)	Rate (BPM)	Sd Conc (ppg)	Total Sand (lbs)	Sd Mesh Size
28,000	40	0	0	Pad
15,000	40	1.0	15,000	16/30 Ottawa RCS
11,000	40	2.0	22,000	16/30 Ottawa RCS
9,000	40	3.0	27,000	16/30 Ottawa RCS
6,000	40	4.0	24,000	16/30 Ottawa RCS
4,000	40	5.0	20,000	16/30 Ottawa RCS

4,000	40	6.0	24,000	16/30 Ottawa RCS
3,402	40	0	0	Flush

**Note: Do not overflush.**

Day 5 (and 6, if necessary)

5. **Clean out sand w/ AFU:** SWL. RDMO frac equipment. MIRU AFU. OWU and blow down. TIH w/ tbg and retrieving head and clean out sand to RBP. Circulate hole clean. POOH w/ tbg and RBP. (Note: TIH w/ mill, SN, and tbg if CBP in hole.)
6. **Put on Production:** TIH w/ 2-7/8" prod string, pump, rods, and SN. Hang on, load and test, space out, put on production. Put into test separator.

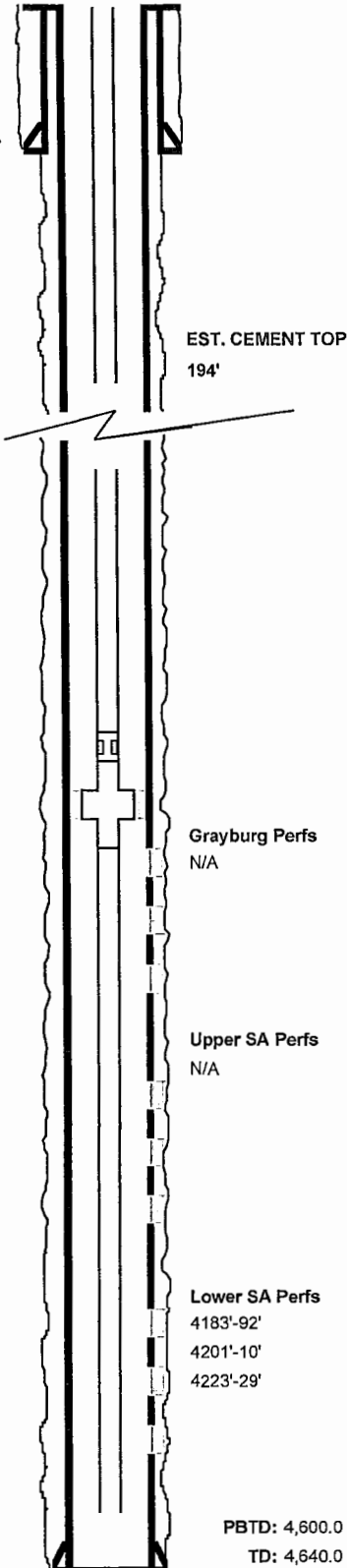
# Apache Corporation

NM State S #54

## WELL DIAGRAM (CURRENT CONFIGURATION)



SURF. CSG.  
393'



EST. CEMENT TOP  
194'

Grayburg Perfs  
N/A

Upper SA Perfs  
N/A

Lower SA Perfs  
4183'-92'  
4201'-10'  
4223'-29'

PBTD: 4,600.0  
TD: 4,640.0

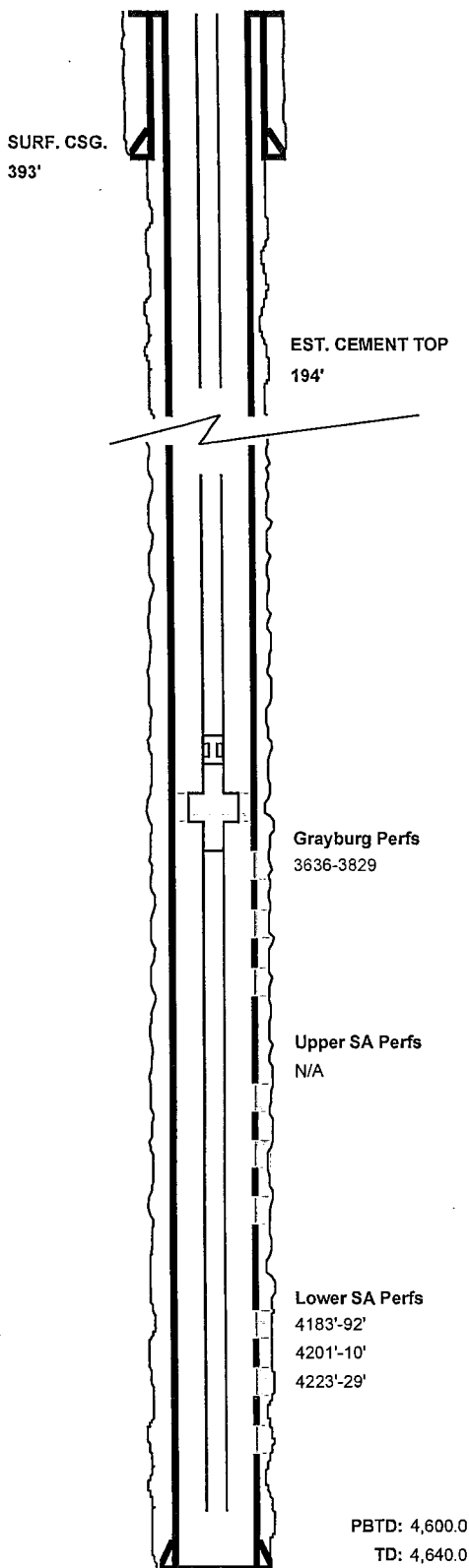
WELL NAME: NM State S #54		API: 30-025-38119			
LOCATION: 990' FSL & 990' FWL, Unit E, Sec. 2, T-22S, R-37E		COUNTY: Lea Co., NM			
SPUD/TD DATE: 9/25/2006-10/2/2006		COMP. DATE: 11/15/2006			
PREPARED BY: Matthew Mechtly		DATE: 6/10/2013			
TD: 4,640.0	KB Elev. 3377.00	KB Dist. H			
PBTD: 4,600.0	Ground Elev. 3366.00	KB to Ground			
CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)	
Surface Casing	8-5/8"	24.00	J-55	0.00	393.00
Prod. Casing	5-1/2"	17.00	J-55	0.00	4,640.00
Open Hole					
Tubing	2-7/8"	6.50	J-55	0.00	4,318.50
PRODUCTION TBG STRING					
ITEM	DESCRIPTION			LENGTH (FT)	Depth (FT)
1	KB			11.00	11
2	(132) JTS 2-7/8" 6.5# J-55 TBG			4,287.13	4,298.13
3	(1) 2-7/8" BLAST JOINT			31.5	4,329.63
4	(1) 2-3/8" SEATED NIPPLE			1.10	4,330.73
5					4,330.73
6					4,330.73
7					4,330.73
8					4,330.73
9					4,330.73
10	EOT				4,330.73
PRODUCTION ROD STRING					
ITEM	DESCRIPTION			LENGTH (FT)	Btm (FT)
1	(1) 7/8" X 1-1/2" X 26' POLISH ROD			26.00	26.0
2	(1) 7/8 X 4' SUB			4.00	30.0
3	(1) 7/8 X 4' SUB			6.00	36.0
4	(60) 7/8" KD RODS			1,500.00	1,536.0
5	(110) 3/4" KD RODS			2,750.00	4,286.0
6					4,286.0
7					4,286.0
8					4,286.0
9	(1) RHR YES.				4,286.0
10	(PUMP) S-A 425 2 X 1-1/2 X 24 RHBC			24.00	4,310.0
SURFACE EQUIPMENT					
PUMPING UNIT SIZE: S-A 425 2 X 1-1/2 X 24 RHBC			MOTOR HP: 30.00		
PUMPING UNIT MAKE:			MOTOR MAKE:		
PERFORATIONS					
Form.	Intervals				Density
Grayburg					
Upper SA					
Lower SA	4183'-92', 4201'-10', 4223'-29'				2JSPF



# Apache Corporation

NM State S #54

## WELL DIAGRAM (PROPOSED CONFIGURATION)



WELL NAME:		NM State S #54		API:		30-025-38119	
LOCATION:		990' FSL & 990' FWL, Unit E, Sec. 2, T-22S, R-37E		COUNTY:		Lea Co., NM	
SPUD/TD DATE:		9/25/2006-10/2/2006		COMP. DATE:		11/15/2006	
PREPARED BY:		Matthew Mechtly		DATE:		6/10/2013	
TD:		4,640.0		KB Elev.		3377.00	
PBTD:		4,600.0		Ground Elev.		3366.00	
				KB Dist. H			
				KB to Ground			
CASING/TUBING	SIZE (IN)	WEIGHT (LB/FT)	GRADE	DEPTHS (FT)			
Surface Casing	8-5/8"	24.00	J-55	0.00	393.00		
Prod. Casing	5-1/2"	17.00	J-55	0.00	4,640.00		
Open Hole							
Tubing	2-7/8"	6.50	J-55	0.00	4,287.13		
PRODUCTION TBG STRING							
ITEM	DESCRIPTION			LENGTH (FT)	Depth (FT)		
1	KB			11.00	11		
2	(132) JTS 2-7/8" 6.5# J-55 TBG			4,287.13	4,298.13		
3	(1) 2-7/8" BLAST JOINT			31.5	4,329.63		
4	(1) 2-3/8" SEATED NIPPLE			1.10	4,330.73		
5					4,330.73		
6					4,330.73		
7					4,330.73		
8					4,330.73		
9					4,330.73		
10	EOT				4,330.73		
PRODUCTION ROD STRING							
ITEM	DESCRIPTION			LENGTH (FT)	Btm (FT)		
1	(1) 7/8" X 1-1/2" X 26' POLISH ROD			26.00	26.0		
2	(1) 7/8 X 4' SUB			4.00	30.0		
3	(57) 1-1/4" FIBERGLASS RODS			2,080.50	2,110.5		
4	(40) 1" KD RODS			1,000.00	3,110.5		
5	(39) 7/8" KD RODS			975.00	4,085.5		
6	(8) 1-1/2" K-BARS (NO NECK)			200.00	4,285.5		
7					4,285.5		
8					4,285.5		
9	(1) RHR YES.				4,285.5		
10	(PUMP) S-A 425 2 X 1-1/2 X 24 RHBC			24.00	4,309.5		
SURFACE EQUIPMENT							
PUMPING UNIT SIZE:		S-A 425 2 X 1-1/2 X 24 RHBC		MOTOR HP:		30.00	
PUMPING UNIT MAKE:				MOTOR MAKE:			
PERFORATIONS							
Form.	Intervals						Density
Grayburg	3636, 49, 60, 81-83, 3706-08, 12-14, 22-24, 31, 48-52, 63, 72, 78-82,						2JSPF
	94, 99-3801, 3814-16, 23-25, 27-29						
Upper SA							
Lower SA	4183'-92', 4201'-10', 4223'-29'						2JSPF