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jamesbruc@aol.com

RECEIVED

AUG 26 2004

OIL CONSERVATION  
DIVISION

August 25, 2004

Michael E. Stogner  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Pending application of Arch Petroleum Inc. for a 160 acre non-standard gas spacing and proration unit, and an unorthodox gas well location, in the Jalmat Gas Pool:

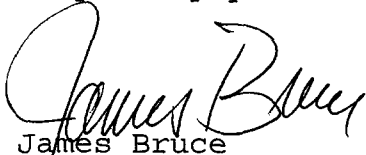
Well: Kelly State Well No. 5  
Well Unit: SW¼ §16, Township 24 South, Range 37 East, NMPM, Lea County, New Mexico

Dear Mr. Stogner:

The above application (copy enclosed) requested a location 1310 feet FSL and FWL of Section 16. Subsequent to filing the application, the location was moved to 910 feet FSL and 1230 feet FWL of Section 16. A Form C-102 is enclosed with this letter. Therefore, Arch Petroleum Inc. amends the application accordingly.

The well is moving toward a more orthodox location, and thus applicant does not believe that additional notice to offsets is required. However, if the Division believes otherwise please let us know and we will comply.

Very truly yours,



James Bruce

Attorney for Arch Petroleum Inc.

DISTRICT I  
P.O. Box 1880, Santa Fe, NM 87501-1880

DISTRICT II  
P.O. Drawer 80, Artec, NM 88211-0719

DISTRICT III  
1000 El Estero Rd., Artec, NM 87410

DISTRICT IV  
P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

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	Pool Code 37240	Pool Name Langlie Mattix 7 Rvrs Queen
Property Code 33464	Property Name KELLY STATE	Well Number 5
OGRID No. 000962	Operator Name ARCH PETROLEUM, INC.	Elevation 3315'

Surface Location

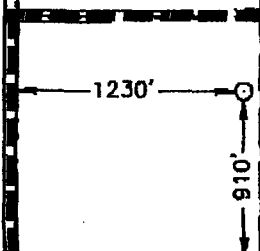
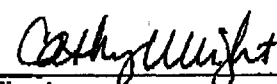
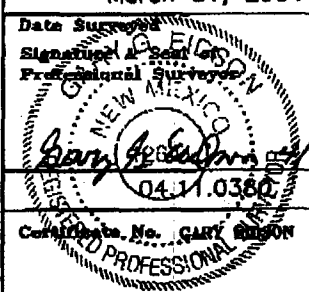
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	16	23-S	37-E		910	SOUTH	1230	WEST	LEA

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 40	Joint or Infill	Consolidation Code	Order No.
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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

	<p><b>GEODETIC COORDINATES</b> NAD 27 NME Y = 474649.4 N X = 858834.1 E LAT. 32°17'58.51"N LONG. 103°10'19.30"W</p>
	<p><b>OPERATOR CERTIFICATION</b> I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.   Signature Cathy Wright Printed Name Sr. Operation Tech Title 08/09/04 Date</p>
	<p><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.  March 31, 2004 Date Surveyed Signature of Surveyor Professional Surveyor  04/11/0380 Certified Professional 12641</p>

COPY

July 30, 2004

Hand Delivered

Michael E. Stogner  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Dear Mr. Stogner:

Pursuant to Division Order No. R-8170-P, Arch Petroleum Inc. applies for a 160 acre non-standard gas spacing and proration unit, and an unorthodox gas well location, in the Jalmat Gas Pool for the following acreage:

<u>Well:</u>	Kelly State Well No. 5
<u>Location:</u>	1310 feet FSL & 1310 feet FWL
<u>Well Unit:</u>	SW¼ §16, Township 23 South, Range 37 East, N.M.P.M., Lea County, New Mexico

The special rules for the Jalmat Gas Pool establish 640 acre spacing, with a provision for 160 acre units, and wells to be no closer than 660 feet to the outer boundary of the well unit nor closer than 330 feet to a quarter-quarter section line.

The well will be drilled to a depth sufficient to test the Langlie-Mattix Pool, which is spaced on 40 acres under regulations of the Division, with wells to be no closer than 330 feet to a quarter-quarter section line. A Form C-102 will be submitted separately.

The well's location is based on drainage factors in the Langlie-Mattix Pool. The Kelly State Well Nos. 1-4 were drilled in the late 1950s and completed in the Langlie-Mattix Pool. Those wells are located in the center of each quarter-quarter section in the SW¼ of Section 16. Applicant believes that the proposed location in the center of the four existing wells will allow it to recover remaining Langlie-Mattix reserves.

There is also Jalmat potential in the well, and applicant requests approval of the non-standard unit. The Yates-Seven Rivers reservoir grades from a porous dolomitic sand downdip to a dolomite updip on the Teague Anticline. Wells 2-3 miles to the west have much thick dolomitic sand with 15-20% porosity, while porosity ranges from 8-12% in the area of the proposed well. There is a direct relationship between porosity and permeability in the reservoir. As a result, Jalmat wells on the Teague structure will not effectively drain 160 acres.

Attached as supporting data are the following:

- Exhibit A: Production map, showing that virtually all Jalmat production is west of the proposed well.
- Exhibit B: Yates structure map.
- Exhibit C: Scout ticket for the Johnson Well No. 3 in the SE $\frac{1}{4}$ NE $\frac{1}{4}$  of Section 20, reflecting a high initial rate.
- Exhibit D: Well test reports from the C.E. Lamunyon Fed. Well Nos. 23, 32, and 78 in Section 28, located to the south of the proposed well, which also show good rates from wells close to each other.

Pursuant to Order No. R-8170-P, all offsets operators, working interest owners, and/or royalty owners have been notified of this application. A listing of offset leases is attached as Exhibit E. A copy of the notice letter is attached as Exhibit F.

Please call me if you need anything further regarding this matter.

Very truly yours,

James Bruce

Attorney for Arch Petroleum Inc.

**JAMES BRUCE**  
ATTORNEY AT LAW

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SANTA FE, NEW MEXICO 87504

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2004 AUG 27 PM 1 20

August 25, 2004

Michael E. Stogner  
Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

Re: Request to amend Administrative Order NSL-5099:

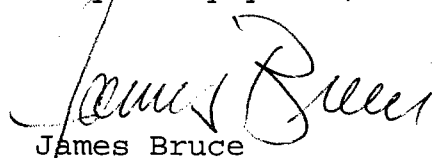
<u>Operator:</u>	Arch Petroleum Inc.
<u>Well:</u>	Kelly State Well No. 5
<u>Well Unit:</u>	SW $\frac{1}{4}$ SW $\frac{1}{4}$ §16, Township 24 South, Range 37 East, NMPM, Lea County, New Mexico

Dear Mr. Stogner:

The location applied for and approved by the above order was 1310 feet FSL and FWL of Section 16. Subsequent to filing the application, the location was moved to 910 feet FSL and 1230 feet FWL of Section 16. A Form C-102 is enclosed with this letter. Therefore, Arch Petroleum Inc. requests the order be amended to reflect the new location.

Notice is not required because the SW $\frac{1}{4}$  of section 16 has common ownership above 3800 feet subsurface.

Very truly yours,



James Bruce

Attorney for Arch Petroleum Inc.

DISTRICT I  
P.O. Box 1280, Santa Fe, NM 87504-1280

DISTRICT II  
P.O. Drawer 80, Aramita, NM 86211-0710

DISTRICT III  
1000 Elv. Brandes Rd., Artec, NM 87410

DISTRICT IV  
P.O. Box 2088, Santa Fe, N.M. 87504-2088

State of New Mexico  
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

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

Form C-102  
Revised February 10, 1994  
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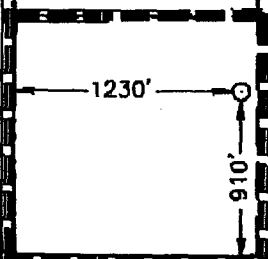
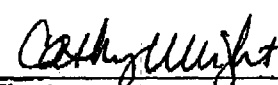
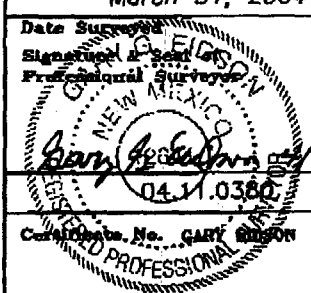
UL or lot No.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
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Bottom Hole Location If Different From Surface

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Dedicated Acres 40	Joint or Infill	Consolidation Code	Order No.
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OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

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# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON**

Governor

**Joanna Prukop**

Cabinet Secretary

**August 20, 2004**

**Mark E. Fesmire, P.E.**

Director

**Oil Conservation Division**

**Arch Petroleum, Inc.  
c/o James Bruce  
P. O. Box 1056  
Santa Fe, New Mexico 87504**

***Administrative Order NSL-5099***

Dear Mr. Bruce:

Reference is made to the following: (i) your application (*administrative application reference No. pSEM0-419427505*) dated July 6, 2004 on behalf of the operator Arch Petroleum, Inc. ("Arch"); and (ii) the records of the New Mexico Oil Conservation Division ("Division") in Santa Fe, including the file on Division Administrative Order SWD-338: all concerning Arch's request for an unorthodox replacement oil well location within a former standard 40-acre oil spacing and proration unit in the Langlie-Mattix (Seven Rivers-Queen-Grayburg) Pool (37240) comprising the SW/4 SW/4 (Unit M) of Section 16, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico.

This application has been duly filed under the provisions of Division Rule 104.F, revised by Division Order No. R-11231, issued by the New Mexico Oil Conservation Commission in Case No. 12119 on August 12, 1999.

It is the Division's understanding that initial development of Langlie-Mattix oil production within this 40-acre unit commenced in August, 1956 when Resler & Sheldon recompleted the Kelly State Well No. 3 (API No. 30-025-10742), located at a standard oil well location 660 feet from the South and West lines (Unit M) of Section 16, into the Queen-Grayburg formations. Langlie-Mattix production ceased from this well in June, 1987, and in 1988 Penroc Oil Corporation converted this well into a saltwater disposal well (see Division Administrative Order SWD-338, dated May 9, 1988).

It is further understood that the SW/4 of Section 16 is a single state lease issued by the New Mexico State Land Office (State Lease No. E-04958) in which all leasehold ownership is common as to all depths above 3,800 feet.

It is further understood that such unorthodox location is necessitated for geologic and engineering reasons. This replacement well at the proposed unorthodox oil well location will enable Arch to further develop and deplete the Langlie-Mattix reserves within this state lease that might not otherwise be recovered.

Arch Petroleum, Inc.  
August 20, 2004  
Page 2

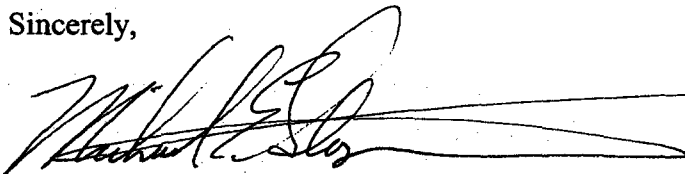
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Division Administrative Order NSL-5099

By the authority granted me under the provisions of Division Rule 104.F (2), the following described well to be drilled at an unorthodox oil well location within this former 40-acre Langlie-Mattix oil spacing and proration unit comprising the SW/4 SW/4 (Unit M) of Section 16, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, is hereby approved:

**Kelly State Well No. 5  
1310' FS & WL.**

Sincerely,

A handwritten signature in black ink, appearing to read "Michael E. Stogner", with a long horizontal line extending to the right.

Michael E. Stogner  
Engineer/Hearing Officer

MES/ms

cc: New Mexico Oil Conservation Division – Hobbs  
New Mexico State Land Office – Santa Fe