

May 29, 1996

Application for Administrative Approval of  
Unorthodox Well Location - C. E. Lamunyon #61  
Lea County, New Mexico

William J. LeMay, Director  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Dear Mr. LeMay:

Arch Petroleum Inc. hereby seeks administrative approval pursuant to the provisions of Division Rule 104 F(2) adopted on January 18, 1996, of the unorthodox well located at 1216' FNL, 2620' FWL, Unit C, Sect. 28, T23S, R37E and shown on the attached Exhibit A.

Exhibit B is lease Base Map showing the proposed location. This location does encroach on an immediately adjacent existing spacing unit in the same pool. This adjacent spacing unit is in the same lease as the subject well and is also operated by Arch Petroleum. Therefore, there are no affected parties to whom notice is required pursuant to the NMOCD rules.

Exhibit B also shows the first seven infill wells drilled as Phase I wells pursuant to OCD Order #R-10453. The initial potential tests from the NMOCD Form C-105 are listed on Exhibit C. The results have been encouraging to date although it is too early to project an estimated ultimate recovery.

This unorthodox location in the Blinebry formation is necessary for geological reasons. Exhibit D is a porosity isopach map of the Blinebry. It shows the areal extent of the porosity development in the field. This development is made up of thin porosity stringers that are very discontinuous between wellbores. This discontinuity, coupled with the low average porosity of five to eight percent and low average permeability of 0.5 millidarcies causes low ultimate recoveries and inadequate drainage of the field based on current 40 acre locations.

Exhibit E is a Drainage Map showing the areas estimated to be drained by the existing wells in the Blinebry. The drainage areas shown were calculated and are listed on Exhibit F. The parameters used to make these calculations are also shown. On average, it is seen that the

existing wells are expected to drain a little over 13 acres per well. It is therefore necessary to drill the subject well to avoid waste and efficiently recover the available reserves.

Your attention to this request is appreciated.

Very truly yours,

A handwritten signature in black ink that reads "Chris N. Bezner". The signature is written in a cursive, flowing style.

Chris N. Bezner, P. E.

Engineer

CNB/

Attachments

cc: Mr. Jerry Sexton, District Supervisor

Oil Conservation Division

Mr. William F. Carr

Attorney for Arch Petroleum Inc.

## DISTRICT I

P.O. Box 1980, Hobbs, NM 58241-1980

## State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102

Revised February 10, 1994

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

## DISTRICT II

P.O. Drawer DD, Artesia, NM 88211-0719

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

## OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, New Mexico 87504-2088

## DISTRICT IV

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

☐ AMENDED REPORT

## WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number		Pool Code 58300	Pool Name TEAGUE BLINEBRY
Property Code 014898	Property Name C. E. LAMUNYON FEDERAL		Well Number 61
OGRID No. 000962	Operator Name ARCH PETROLEUM INC.		Elevation 3303

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	28	23 S	37 E		1216	NORTH	2620	WEST	LEA

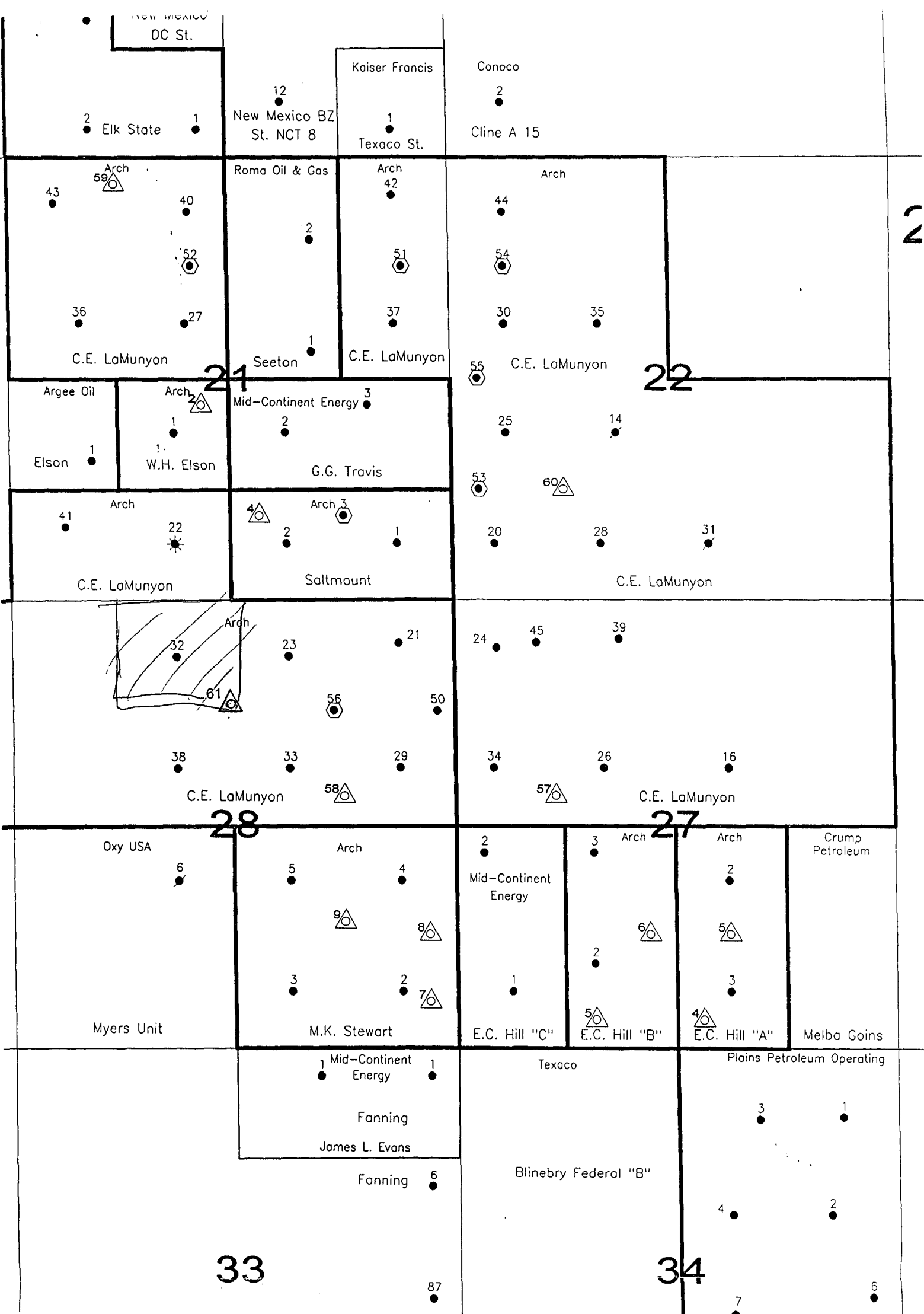
## Bottom Hole Location If Different From Surface

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 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

	<b>OPERATOR CERTIFICATION</b>  I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief.  <u>Bobbie Brooks</u> Signature Bobbie Brooks Printed Name Production Analyst Title 5-29-96 Date
	<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.  MAY 13, 1996 Date Surveyed Signature & Seal of Professional Surveyor JLP W.D. Num 96-11-0571
	Certificate No. JOHN W. WEST, 676 RONALD S. EIDSON, 3239 GARY G. EIDSON, 12641
	<b>EXHIBIT A</b>



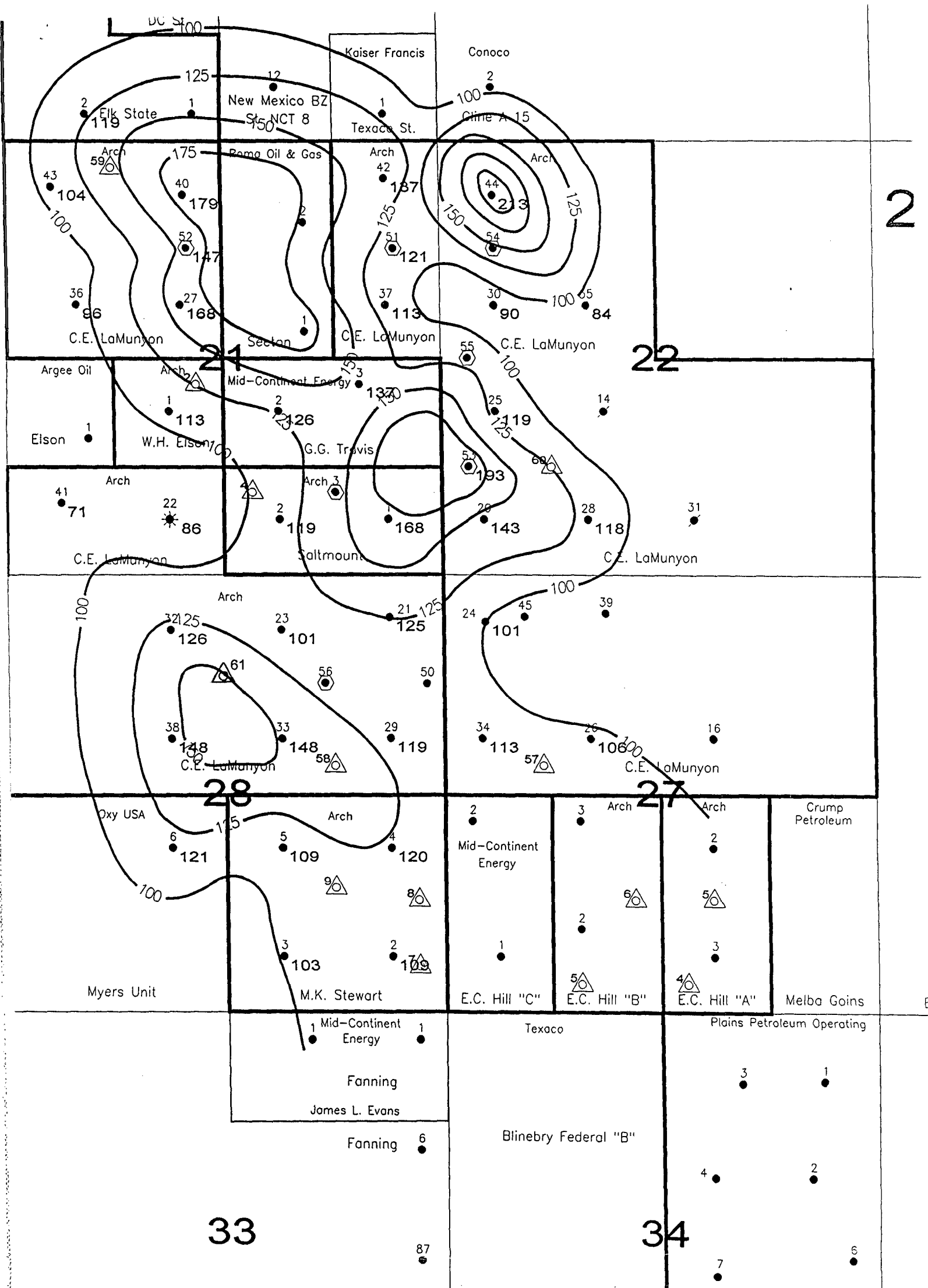
## LEGEND

- Phase 1 Infill Wells
- Proposed Phase 2 Infill Wells
- Blinebry Producer

## EXHIBIT B




**TEAGUE BLINEBRY - INFILL WELLS**

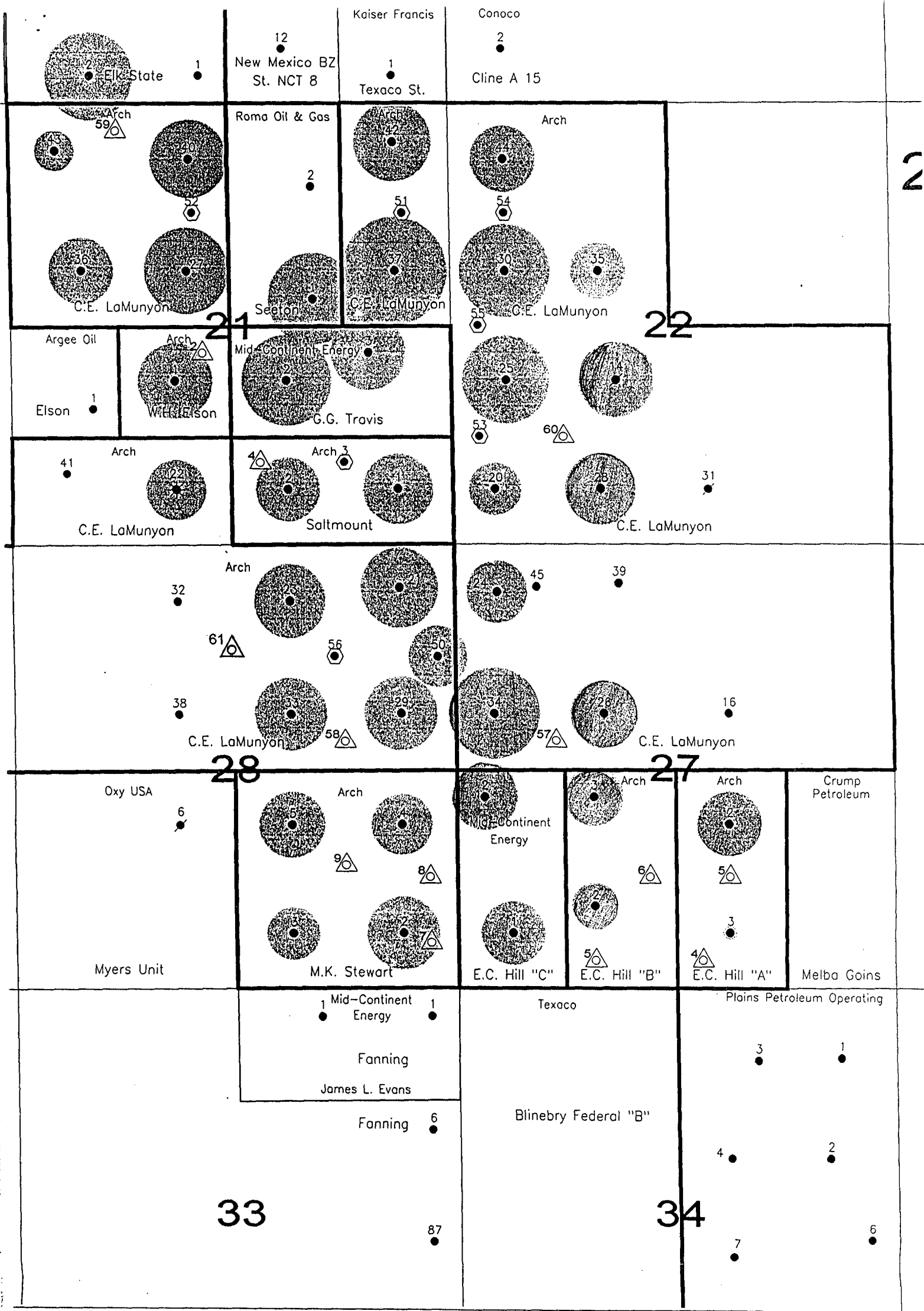
WELL NAME	INITIAL POTENTIAL TEST (C-105)			
	DATE	BOPD	BWPD	MCFPD
C. E. LAMUNYON #51	10/22/95	115	102	706
C. E. LAMUNYON #52	11/09/95	127	10	222
C. E. LAMUNYON #53	11/19/95	180	142	802
C. E. LAMUNYON #54	03/05/96	56	118	181
C. E. LAMUNYON #55	02/13/96	162	93	709
C. E. LAMUNYON #56	03/10/96	250	341	467
SALTMOUNT #3	02/02/96	105	413	200



## LEGEND

## EXHIBIT D

-  Phase 1 Infill Wells
-  Proposed Phase 2 Infill Wells
-  Blinebry Producer



## LEGEND

## EXHIBIT E



Phase 1 Infill Wells



Proposed Phase 2 Infill Wells



Drainage Area

TEAGUE BLINEBRY FIELD - INFILL WELLS					
Estimated Ultimate Recovery-Drainage Radius					
	Current Well	Net Pay, h net, ft.	Est. Ult. Prim. Rec., MSTB	Drainage Acres	Drainage Radius, ft.
1	GG Travis 2	126	151.3	21.4	545
2	GG Travis 3	137	112.7	14.7	451
3	Lamunyon 14	90	73.8	14.6	450
4	Lamunyon 20	143	58.9	7.3	319
5	Lamunyon 21	125	111.7	15.9	470
6	Lamunyon 22	86	46.8	9.7	367
7	Lamunyon 23	101	76.5	13.5	433
8	Lamunyon 24	101	55.0	9.7	367
9	Lamunyon 25	119	134.0	20.1	528
10	Lamunyon 26	106	69.1	11.6	402
11	Lamunyon 27	168	177.2	18.8	511
12	Lamunyon 28	118	86.6	13.1	426
13	Lamunyon 29	119	95.1	14.3	445
14	Lamunyon 30	90	109.7	21.7	549
15	Lamunyon 33	148	114.9	13.9	438
16	Lamunyon 34	113	137.7	21.7	549
17	Lamunyon 35	84	37.7	8.0	333
18	Lamunyon 36	96	59.9	11.1	393
19	Lamunyon 37	113	184.6	29.1	636
20	Lamunyon 39	110	1.6	0.3	60
21	Lamunyon 40	179	158.9	15.8	469
22	Lamunyon 42	137	124.3	16.2	474
23	Lamunyon 43	104	24.8	4.3	243
24	Lamunyon 44	213	135.7	11.4	397
25	Lamunyon 50*	123	64.6	9.4	360
26	Elk State 2	119	138.4	20.8	536
27	W H Elson 1	113	94.8	15.0	456
28	E C Hill A 2	110	67.7	11.0	390
29	E C Hill A 3	115	3.4	0.5	86
30	E C Hill B 2	120	39.0	5.8	284
31	E C Hill B 3	115	59.0	9.2	356
32	E C Hill C 1	120	73.1	10.9	388
33	E C Hill C 2	120	78.1	11.6	401
34	M K Stewart 2	109	87.2	14.3	445
35	M K Stewart 3	103	42.9	7.4	321
36	M K Stewart 4	120	66.7	9.9	371
37	M K Stewart 5	109	70.7	11.6	401
38	Saltmount 1	168	124.7	13.2	429
39	Saltmount 2	119	73.2	11.0	390
40	Seeton 1	187	221.9	21.2	542
<b>Total/Average</b>		<b>4,896</b>	<b>3,643.9</b>	<b>13.3</b>	<b>429</b>
Assumes: Swi=18%, Avg. Porosity=7.4%, Boi=1.26 RB/STB					
Recovery Factor=15%					
* First 20-Acre Infill Drilled					



**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. 11344  
Order No. R-10453**

**APPLICATION OF ARCH PETROLEUM  
INC. FOR SEVEN UNORTHODOX INFILL  
OIL WELL LOCATIONS, LEA COUNTY,  
NEW MEXICO.**

**ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a.m. on August 24, 1995, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 1st day of September, 1995, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

(1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) The applicant, Arch Petroleum Inc., seeks authority to drill its C. E. Lamunyon Well Nos. 51, 52, 53, 54, 55 and 56 and its Saltmount Well No. 3 at the following described unorthodox oil well locations within Sections 21, 22 and 28, Township 23 South, Range 37 East, NMPM, Teague-Blinebry Pool, Lea County, New Mexico:

**WELL NAME & NUMBER**

**WELL LOCATION**

C. E. Lamunyon Well No. 51	1300' FNL & 560' FEL (Unit A) Section 21
C. E. Lamunyon Well No. 52	1300' FNL & 2210' FWL (Unit C) Section 21
C. E. Lamunyon Well No. 53	1300' FSL & 330' FWL (Unit M) Section 22
C. E. Lamunyon Well No. 54	1300' FNL & 660' FWL (Unit D) Section 22
C. E. Lamunyon Well No. 55	2620' FNL & 330' FWL (Unit E) Section 22
C. E. Lamunyon Well No. 56	1300' FNL & 1300' FEL (Unit A) Section 28
Saltmount Well No. 3	990' FSL & 1300' FEL (Unit P) Section 21

(3) The applicant further proposes to simultaneously dedicate the above-described wells to existing 40-acre oil spacing and proration units in the Teague-Blinbry Pool as follows:

- a) the proposed C. E. Lamunyon Well No. 51 and the existing Well No. 42 are to be dedicated to the NE/4 NE/4 of Section 21;
- b) the proposed C. E. Lamunyon Well No. 52 and the existing Well No. 40 are to be dedicated to the NE/4 NW/4 of Section 21;
- c) the proposed C. E. Lamunyon Well No. 53 and the existing Well No. 20 are to be dedicated to the SW/4 SW/4 of Section 22;
- d) the proposed C. E. Lamunyon Well No. 54 and the existing Well No. 44 are to be dedicated to the NW/4 NW/4 of Section 22;
- e) the proposed C. E. Lamunyon Well No. 55 and the existing Well No. 30 are to be dedicated to the SW/4 NW/4 of Section 22;
- f) the proposed C. E. Lamunyon Well No. 56 and the existing Well Nos. 21 and 50 are to be dedicated to the NE/4 NE/4 of Section 28;
- g) the proposed Saltmount Well No. 3 and the existing Well No. 1 are to be dedicated to the SE/4 SE/4 of Section 21;

(4) The evidence and testimony indicates that the purpose of drilling the subject infill wells within the Teague-Blinbry Pool is to increase recovery of oil which may not otherwise be recovered by the existing wells.

(5) The applicant presented as evidence in this case the results of an engineering study designed to determine the feasibility and effectiveness of infill drilling within the Teague-Blinbry Pool. The data utilized in this study was obtained from the drilling of the C. E. Lamunyon Well No. 50, which was drilled by Chevron in 1989 as a pilot infill well. The results of the study indicate that:

- a) the average estimated ultimate recovery from the four wells directly offsetting the C. E. Lamunyon Well No. 50 is approximately 85,000 stock tank barrels of oil;

- b) the C. E. Lamunyon Well No. 50 is projected to ultimately recover approximately 55,000 stock tank barrels of incremental oil, or approximately 65% of the recovery from the original 40-acre offset wells;
- c) the drainage areas of the four wells offsetting the C. E. Lamunyon Well No. 50 are all less than 20 acres.

(6) According to applicant's geologic and engineering evidence and testimony, the proposed wells are situated in areas not previously drained by offset wells, as determined from drainage calculations, and in areas that are structurally high in the reservoir.

(7) Applicant testified that the existing wells within the Teague-Blinbry Pool are nearing depletion.

(8) Applicant estimates that each of the subject wells, if drilled as proposed, may recover an additional 50,000-150,000 barrels of oil which would otherwise not be recovered by the existing wells.

(9) The applicant is the operator of all affected offset acreage.

(10) None of the proposed wells encroach upon offset acreage which is not operated by the applicant.

(11) No offset operator and/or interest owner appeared at the hearing in opposition to the application.

(12) Approval of the subject application will afford the applicant the opportunity to recover additional oil and gas reserves from the Teague-Blinbry Pool underlying each of the respective proration units which will not be recovered by existing wells, thereby preventing waste, will prevent the economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and will otherwise prevent waste and protect correlative rights.

**IT IS THEREFORE ORDERED THAT:**

(1) The applicant, Arch Petroleum Inc., is hereby authorized to drill its C. E. Lamunyon Well Nos. 51, 52, 53, 54, 55 and 56 and its Saltmount Well No. 3 at the following described unorthodox oil well locations within Sections 21, 22 and 28, Township 23 South, Range 37 East, NMPM, Teague-Blinbry Pool, Lea County, New Mexico:

**WELL NAME & NUMBER**

**WELL LOCATION**

C. E. Lamunyon Well No. 51	1300' FNL & 560' FEL (Unit A) Section 21
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C. E. Lamunyon Well No. 53	1300' FSL & 330' FWL (Unit M) Section 22
C. E. Lamunyon Well No. 54	1300' FNL & 660' FWL (Unit D) Section 22
C. E. Lamunyon Well No. 55	2620' FNL & 330' FWL (Unit E) Section 22
C. E. Lamunyon Well No. 56	1300' FNL & 1300' FEL (Unit A) Section 28

Saltmount Well No. 3	990' FSL & 1300' FEL (Unit P) Section 21
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(2) The above-described wells shall be dedicated to existing 40-acre oil spacing and proration units in the Teague-Blinbry Pool as follows:

- a) the proposed C. E. Lamunyon Well No. 51 and the existing Well No. 42 shall be dedicated to the NE/4 NE/4 of Section 21;
- b) the proposed C. E. Lamunyon Well No. 52 and the existing Well No. 40 shall be dedicated to the NE/4 NW/4 of Section 21;
- c) the proposed C. E. Lamunyon Well No. 53 and the existing Well No. 20 shall be dedicated to the SW/4 SW/4 of Section 22;
- d) the proposed C. E. Lamunyon Well No. 54 and the existing Well No. 44 shall be dedicated to the NW/4 NW/4 of Section 22;
- e) the proposed C. E. Lamunyon Well No. 55 and the existing Well No. 30 shall be dedicated to the SW/4 NW/4 of Section 22;
- f) the proposed C. E. Lamunyon Well No. 56 and the existing Well Nos. 21 and 50 shall be dedicated to the NE/4 NE/4 of Section 28;
- g) the proposed Saltmount Well No. 3 and the existing Well No. 1 shall be dedicated to the SE/4 SE/4 of Section 21;

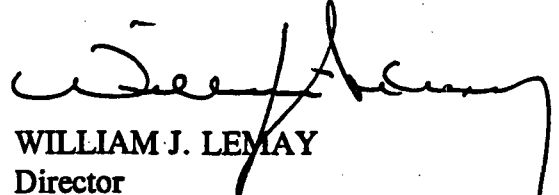
(3) Jurisdiction is hereby retained for the entry of such further orders as the Division may deem necessary.

**CASE NO. 11344**  
**ORDER NO. R-10453**  
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DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION



WILLIAM J. LEMAY  
Director

S E A L

NSL-3674(SD)



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION  
HOBBS DISTRICT OFFICE

5/31/96

GOVERNOR

POST OFFICE BOX 1980  
HOBBS, NEW MEXICO 88241-1980  
(505) 393-6161

OIL CONSERVATION DIVISION  
P. O. BOX 2088  
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC \_\_\_\_\_  
DHC \_\_\_\_\_  
NSL X \_\_\_\_\_  
NSP \_\_\_\_\_  
SWD \_\_\_\_\_  
WFX \_\_\_\_\_  
PMX \_\_\_\_\_

Gentlemen:

I have examined the application for the:

Arch Petroleum Inc CE Lamunyan Fed # bl-C 28-23s-37e  
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

OK

Yours very truly,

Jerry Sexton  
Supervisor, District 1

/ed