

NSL 4/15/97



## Arch Petroleum Inc.

March 21, 1997

Application for Administrative Approval of  
Five Unorthodox Well Locations  
C. E. Lamunyon & M. K. Stewart Leases  
Lea County, New Mexico

RECEIVED

MAR 26 1997

Oil Conservation Division

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 locations listed on attached Exhibit A.

Exhibit B is lease Base Map showing the proposed locations. These locations do encroach on immediately adjacent existing spacing units in the same pool. These adjacent spacing units are in the same lease as the subject wells and are also operated by Arch in all cases. Therefore, there are no affected parties to whom notice is required pursuant to the NMOC rules.

Exhibit B also shows the 9 wells drilled under Phase 2 wells pursuant to various OCD NSL order numbers. The results of the production on these wells are encouraging and we are currently monitoring the results for the ultimate recovery per well.

These unorthodox locations in the Blinbry formation are necessary for geological reasons. Exhibit C is a porosity isopach map of the Blinbry. 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 D is a Drainage Map showing the areas estimated to be drained by the existing wells in the Blinbry. The drainage areas shown were calculated and are listed on Exhibit E. The parameters used to make these

calculations are also shown. On Average, it is seen that the existing wells are expected to drain approximately 13 acres per well. It is therefore necessary to drill the subject wells to avoid waste and efficiently recover the available reserves.

Your attention to this request is appreciated.

Sincerely,

A handwritten signature in cursive script that reads "Bobbie Brooks".

Bobbie Brooks  
Production Analyst

BB/

Attachments

cc: Mr. Jerry Sexton, District Supervisor  
Oil Conservation Division - Hobbs

Mr. William F. Carr  
Attorney for Arch Petroleum Inc.

PROPOSED INFILL WELLS-TEAGUE Paddock-BLINEBRY POOL

ARCH PETROLEUM INC.

5 UNORTHODOX LOCATIONS

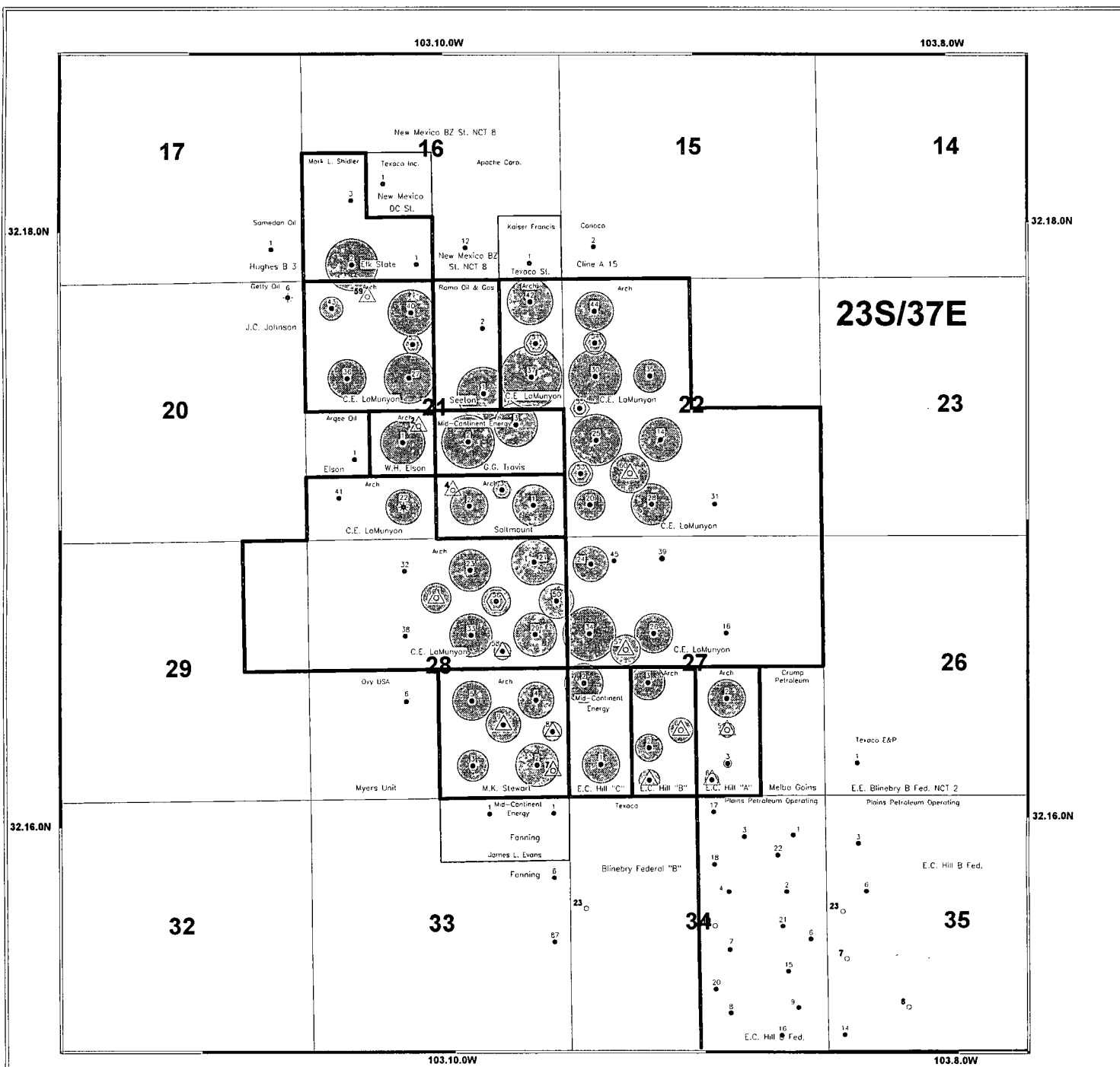
Proposed Well #	Acreage	Footages	Unit	Section	Township	Range
C. E. Lamunyon #62	Federal	1350' FNL, 1300' FWL	E	21	23S	37E
C. E. Lamunyon #63	Federal	1400' FNL, 1340' FWL	F	27	23S	37E
C. E. Lamunyon #64	Federal	50' FNL, 1340' FWL	C	27	23S	37E
C. E. Lamunyon #65	Federal	2310' FNL, 125' FEL	H	28	23S	37E
M. K. Stewart #10	Federal	330' FSL, 1340' FEL	O	28	23S	37E

Exhibit No. A








# Exhibit No. D



## LEGEND

-  **Phase 1 Infill Wells**  
 **Phase 2 Infill Wells**  
 **Drainage Area**



0.1 0. 0.1 0.2 0.3 0.4 0.5 miles

Arch Petroleum Inc.

Teague Field  
Lea Co., New Mexico  
Drainage Area

Scale : 1" = 3000'	Sw = 18.00%	Por = 7.40%
3/19/97	Boi = 1.26	RF = 15.00%

**Teague Blinebry Field - Estimated Ultimate Recovery - Drainage Radius**

<u>Lease - well</u>	<u>Ultimate Recovery</u> <u>STB</u>	<u>Net Pay</u> <u>Ft.</u>	<u>Drainage</u> <u>Acres</u>	<u>Drainag</u> <u>Radius Ft.</u>
C. E. Lamunyon No. 51	27831	121	4.10	239
C. E. Lamunyon No. 52	21347	147	2.59	190
C. E. Lamunyon No. 53	49449	193	4.57	252
C. E. Lamunyon No. 54	34252	155	3.94	234
C. E. Lamunyon No. 55	13093	193	1.21	130
C. E. Lamunyon No. 56	40639	112	6.47	300
C. E. Lamunyon No. 57	53325	139	6.85	308
C. E. Lamunyon No. 58	9624	77	2.23	176
C. E. Lamunyon No. 60	67062	100	11.97	407
C. E. Lamunyon No. 61	27187	72	6.74	306
E. C. Hill A No. 5	9349	99	1.69	153
E. C. Hill A No. 6	10000	127	1.41	140
E. C. Hill B No. 5	22870	120	3.40	217
E. C. Hill B. No. 6	28464	107	4.75	257
M. K. Stewart No. 8	23184	147	2.81	198
M. K. Stewart No. 9	61270	115	9.51	363
Saltmount No. 3	22736	195	2.08	170

<b>Sw</b>	18.00%
<b>Por</b>	7.40%
<b>Bol</b>	1.26
<b>RF</b>	15.00%

**Exhibit No. E**

COUNTY Lea

POOL

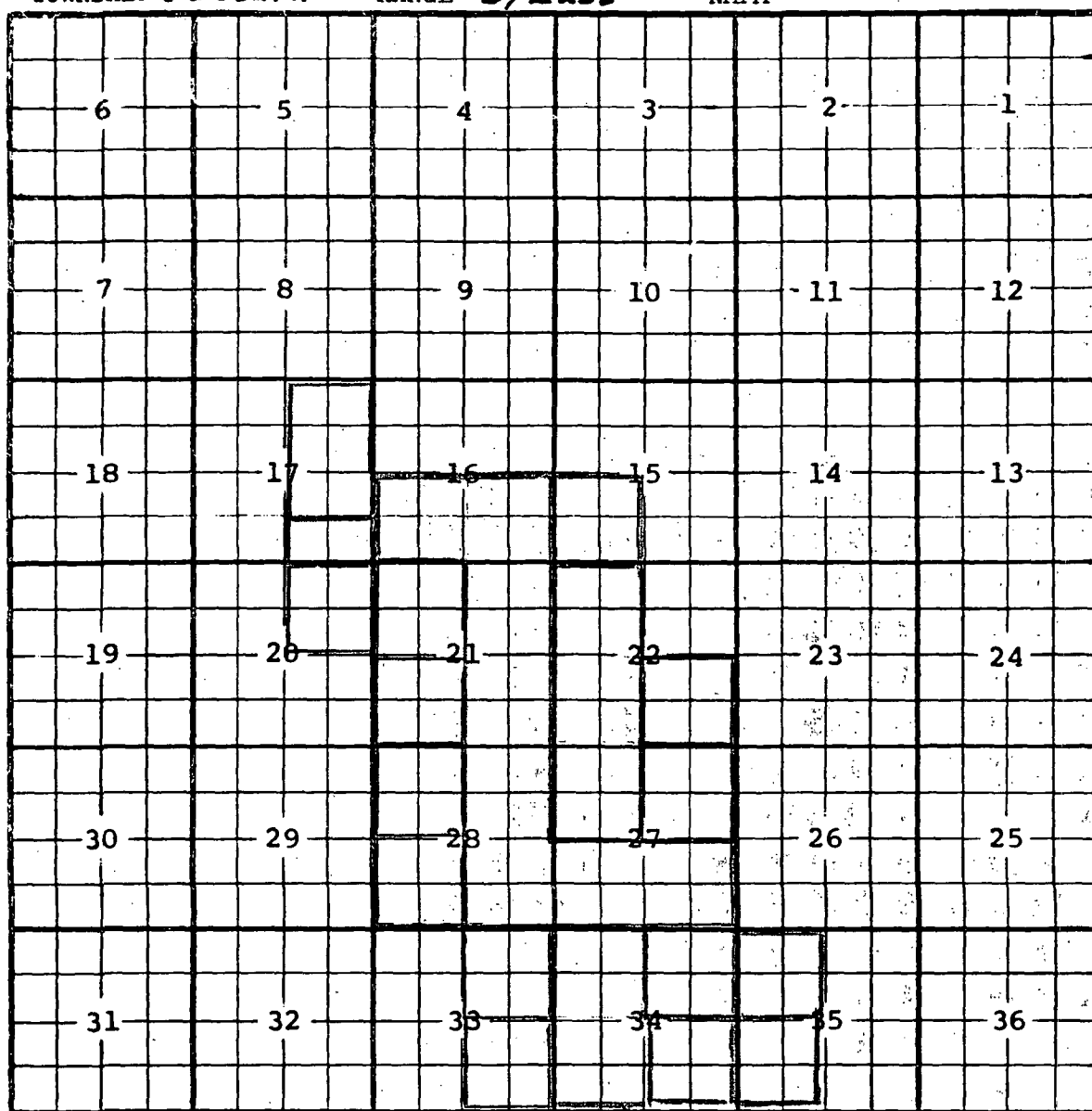
Teague - Blinbry

TOWNSHIP *23 South*

RANGE

37 East

NMPPM



Description:  $\frac{S}{4}$  Sec. 16;  $\frac{E}{4}$  Sec. 21;  $\frac{S}{4}$  Sec. 27;  $\frac{E}{4}$  Sec. 28 (R-3280, 8-1-67)  
 $-\frac{SW}{4}$  Sec. 21 (R-3355, 1-1-68) -  $\frac{W}{4}$  Sec. 22;  $\frac{NW}{4}$  Sec. 27 (R-3389, 4-1-68)  
 $-\frac{NE}{4}$  Sec. 33 (R-3402, 6-1-68) -  $\frac{NW}{4}$  Sec. 21;  $\frac{SE}{4}$  Sec. 22;  $\frac{NW}{4}$  Sec. 28 (R-3438, 7-1-68)  
 $-\frac{SW}{4}$  Sec. 28 (R-3530, 11-1-68) -  $\frac{NE}{4}$  Sec. 20 (R-3662, 2-1-69) -  $\frac{SW}{4}$  Sec. 15;  $\frac{SE}{4}$  Sec. 33 (R-3781, 5-1-69)  
 $-\frac{S}{2}$   $\frac{SE}{4}$  Sec. 17;  $\frac{NE}{4}$  Sec. 27 (R-3895, 1-1-70) -  $\frac{NE}{4}$  Sec. 34 (R-4329, 7-1-72)

Ext: NE/4 and N/2 SE/4 Sec. 17 (A-7131, 11-30-82) EXT: NW/4 sec 35 (R-9741, 9-1-89)

Ext: SE/4 Sec. 34 (R-9723, 9-25-92) Ext: W/2 Sec. 34 (R-9937, 8-12-93).

Extend vertical limits to include Paddock formation and redesignate as Teague-Paddock-Blincy Pool (R-10776, 2-28-97)

Ext: 6W/4 Sec. 35 (R-10776, 2-28-97)