



ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

GARREY CARRUTHERS  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

January 27, 1989

Arrowhead Oil Corporation  
P.O. Box 548  
Artesia, NM 88210

Attention: Shirley Loop,  
Secretary/Treasurer

Administrative Order NFL-176

Dear Ms. Loop:

Reference is made to your application for an Infill Well Finding and Well-Spacing Waiver made pursuant to Section 271.305(b) of the Federal Energy Regulatory Commission regulations, Natural Gas Policy Act of 1978, and the Oil Conservation Division Order No. R-6013 for the following described wells:

Wallingford Well No. 2 located 330 feet from the North line and 2310 feet from the West line and the Wallingford Well No. 3 located 990 feet from the North line and 2310 feet from the West line, both in Unit C of Section 32, Township 17 South, Range 32 East, NMPM, Lea County, New Mexico.

THE DIVISION FINDS THAT:

(1) Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling that subsequent wells are necessary to effectively and efficiently drain portions of the reservoir covered by the proration unit which cannot be so drained by any existing well-spacing requirements.

(2) By Division Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that infill wells are necessary.

(3) The wells for which findings are sought are to be completed in the Maljamar Grayburg San Andres Pool, and the standard spacing unit in said pool is 40 acres.

Administrative Order NFL-176  
January 27, 1989  
Page 2

(4) A standard 40-acre oil proration unit comprising the NE/4 NW/4 of said Section 32 is currently dedicated to the applicant's Wallingford Well No. 1 located 660 feet from the North line and 1980 feet from the West line of said Section 32.

(5) Said unit is not being effectively and efficiently drained by the existing wells on the unit.

(6) The drilling and completion of the wells for which a finding is sought should result in the production of an additional 108,609 MCF of gas from the proration unit which would not otherwise be recovered (96,493 MCF from the Wallingford Well No. 2 and an additional 12,116 MCF from the Wallingford Well No. 3).

(7) All the requirements of Division Order No. R-6013 have been compiled with, and the wells for which a finding is sought is necessary to effectively and efficiently drain portions of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.

(8) In order to permit effective and efficient drainage of said proration unit, the subject application should be approved as an exception to the standard well spacing requirements for the pool.

IT IS THEREFORE ORDERED THAT:

(1) The applicant is hereby authorized to drill both the Wallingford Well Nos. 2 and 3 as described above, as infill wells on the existing 40-acre oil proration unit comprising the NE/4 NW/4 (Unit C) of Section 32, Township 17 South, Range 32 East, NMPM, Maljamar Grayburg San Andres Pool, Lea County New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit drainage of portions of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

Administrative Order NFL-176  
January 27, 1989  
Page 3

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Sincerely,

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

Michael E. Stogner  
Examiner

MES/ag

cc: Oil Conservation Division - Hobbs  
NM Oil and Gas Engineering Committee - Hobbs  
Vic Lyon

10/10/10

Received Dec. 16, 1985  
Release 1/23/89

M.S.

Arrowhead Oil Corporation  
P.O. Box 548  
Artesia, NM 88210

Attention: Shirley Loop  
Secretary / Treasurer

RE: Administrative Order NFL- 176

Dear Ms. Loop:

Reference is made to your application for an Infill Well Finding and Well-Spacing Waiver made pursuant to Section 271.305(b) of the Federal Energy Regulatory Commission regulations, Natural Gas Policy Act of 1978, and the Oil Conservation Division Order No. R-6013 for the following described wells:

Wallingford Well No. 2 located 330 feet from the North line and 2310 feet from the West line of

~~Section 32, Township 17 South, Range 32 East, N.M.P.M.,~~

and the Wallingford Well No. 3 located 990 feet from the North line and 2310 feet from the West line, both in (Unit C) of Section 32, Township 17 South, Range 32 East, N.M.P.M., Lea County, New Mexico.

Section \_\_\_\_\_, Township \_\_\_\_\_, Range \_\_\_\_\_, NMPM,  
County, New Mexico.

THE DIVISION FINDS THAT:

(1) Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that <sup>subsequent wells are</sup> ~~the well is~~ necessary to effectively and efficiently drain ~~a~~ portions of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waiver of existing well-spacing requirements.

(2) By Division Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that ~~a~~ infill wells <sup>are</sup> necessary.

(3) The wells for which ~~a~~ findings <sup>are</sup> ~~is~~ sought <sup>are</sup> ~~is~~ to be completed in the Maljamar Grayburg San Andres Pool, and the standard spacing unit in said pool is 40 acres.



an exception to the standard well spacing requirements for the pool.

IT IS THEREFORE ORDERED THAT:

(1) The applicant is hereby authorized to drill <sup>both</sup> the Willingford Well 3 Well No. 2 and 2 as described above, as ~~an~~ infill wells on the existing 40-acre (oil) (gas) proration unit comprising the NE 1/4 NW 1/4 (Unit 6C) of Section 32, Township 17 South, Range 32 East, NMPM, Mahamir Bradley San Andrew Pool, San County, New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of ~~a~~ portions of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.

(2) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

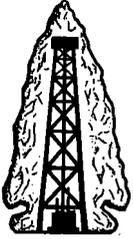
Sincerely,

Michael E. Stogner

Examiner

cc: Oil Conservation Division - 1/2/68

NMO + GEC



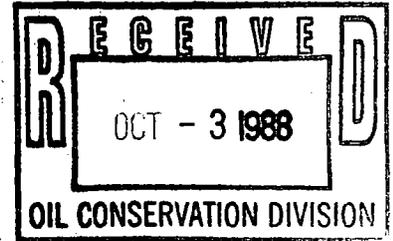
# ARROWHEAD

## OIL CORPORATION

September 29, 1988

(505) 748-3436

POST OFFICE BOX 548  
ARTESIA, NEW MEXICO 88210



Energy & Minerals Dept.  
P.O. Box 2088  
Santa Fe, New Mexico 87504

Attention; Michael E. Stogner

RE: NGPA Section 103 application  
Wallingford Well Nos. 2 & 3  
both located in Unit C,  
Sec. 32, Township 17South,  
Range 32 East, NMPM, Mal-  
jamar Grayburg San Andres  
Pool, Lea County, New Mexico.

Dear Mike:

Enclosed is information regarding the infill well findings for the Wallingford # 2C and 3C. I hope this additional information will satisfy the requirement.

If we need further documentation please contact me. Thank you for your patience.

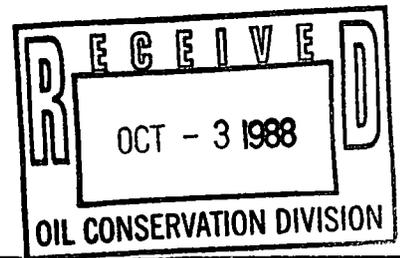
Sincerely,

Shirley Loop  
Secretary/Treasurer

s1



**marbob**  
energy corporation



September 28, 1988

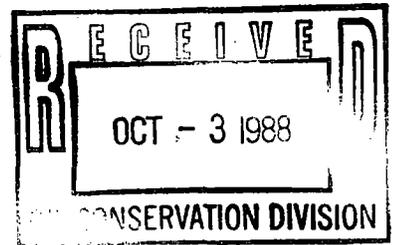
Arrowhead Oil Corporation  
P.O. Box 548  
Artesia, NM 88210

RE: Wallingford Lease  
NE/4 NW/4 Section 32  
T-17S, R-32E,  
Lea County, New Mexico

Gentlemen:

You have provided me with a copy of the letters from Michael Stogner dated September 2, 1988 and February 6, 1986, and a copy of Infill Well Findings for the Wallingford #2-C and #3-C including Paul White's report.

I have reviewed the information and arrived at the following conclusion. Mr. White reviewed the data on this forty acre tract and proposed a necessary drainage based on twenty acre spacing on two (2) wells. Yet, as Mr. Stogner pointed out there are three (3) wells on this tract. Mr. White failed to outline in his letter that the #1 Wallingford was drilled in 1943. It was plugged and abandoned in 1950 with some casing left in the hole. A re-entry was done in 1968 whereby 4 1/2" casing was set at 2525 feet or 25 feet inside the original 5 1/2" casing which had an original total depth of 3,700 feet. The well was then cleaned out to a depth of 4,025 feet, possible treated and returned to production. The well was originally completed open hole and reported "very little" gas in January, 1943. The open hole re-entry reported "not enough to measure" gas in May, 1968. There has been no true gas production ever recorded from this well. Also since 4 1/2" casing has been cemented into this well bore, additional work and/or treatment is nearly impossible to do. Our experience of trying to retreat 1940-1950 casing and cement and open holes that were shot in that time frame have yielded low to nil results.



As such, I feel Mr. White directed his review of the drainage to the two new wellbores in that it was his conclusion that the #1 well could not be utilized to drain any portion of the forty acretract. I'm sorry his report did not include this analysis at the time. If you have any further questions, please contact me.

Sincerely,

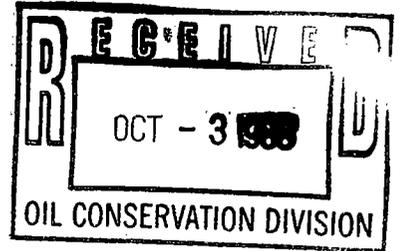
*Raye Miller*

Raye Miller  
Consultant

RM/dr

# Paul G. White Engineering

OIL AND NATURAL GAS



November 14, 1985

Arrowhead Oil Corporation  
P. O. Box 548  
Artesia, New Mexico 88210

Re: Pertinent Engineering Data  
Wallingford No. 3  
Maljamar Field  
Lea County, New Mexico

Gentlemen:

The subject well, located 990' FNL and 2310' FWL, Section 32-17S-R32E, Lea County, New Mexico was completed May 1, 1981.

I have estimated the oil and gas reserves for the subject well based on a 20 acre well density. From the electrical log, analagous well study, and rate time curve, I have estimated that the well will recover 38,341 barrels of oil and 12,116 MCF of gas.

A study of nearby producing well rates and initial potentials reveals that wells will have to be drilled on a 20 acre spacing to properly and adequately recover the oil and gas reserves in this field.

Therefore, it is my recommendation that in-fill wells be drilled and the well density be increased to at least 20 acre spacing.

From my study the in-fill wells will characteristically exhibit new reservoir conditions.

Signed



Paul G. White  
Petroleum Engineer

Date November 14, 1985

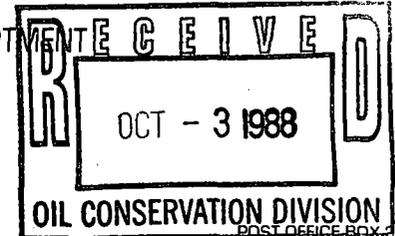


GARREY CARRUTHERS  
GOVERNOR

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

September 2, 1988

Arrowhead Oil Corp.  
Box 548  
Artesia, NM 88210

Attention: Shirley Loop

RE: NGPA Section 103 Application  
Wallingford Well Nos. 2 and 3  
both located in Unit C,  
Section 32, Township 17 South,  
Range 32 East, NMPM, Maljamar  
Grayburg San Andres Pool, Lea  
County, New Mexico.

Dear Ms. Loop:

To date I have not received a response to my letter dated February 6, 1988 requesting additional information on the "Infill Well Findings" submitted for the subject wells, see attached. So that we may properly process your NGPA application, please submit this information within 90 days, otherwise these filings will be dismissed.

Thank you for your cooperation.

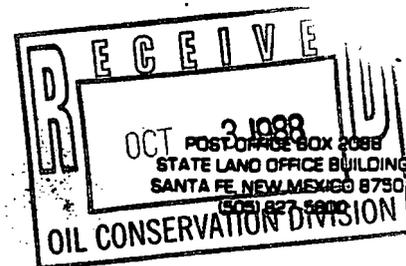
Sincerely,

Michael E. Stogner  
Petroleum Engineer

MES/ag



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
 OIL CONSERVATION DIVISION



TONEY ANAYA  
 GOVERNOR

ARROWHEAD OIL CORPORATION  
 BOX 548  
 Artesia, NEW Mexico 88210  
*Attention: Shirley Loop*

RE: Well head price ceiling  
 determination, NGPA of  
 1978

Gentlemen:

The New Mexico Oil Conservation Division has received your application for a wellhead price ceiling category determination under the sections(s) of the Natural Gas Policy Act of 1978 indicated below if your application is incomplete, forms are attached hereto, indicating the documents and further information which must be filed before your application can be considered. If your application is complete, it will be acted upon administratively unless written objection is received within 15 days of its filing.

WELL NAME AND LOCATION WALLINGFORD 32-17S-32E #3-C  
 SECTION(S) APPLIED FOR 103  
 DATE APPLICATION RECEIVED December 16, 1985

APPLICATION INCOMPLETE *Your effective and efficient funding is insufficient, pursuant to Rule 9 of R-6013-A, Mr. White's report indicates that 20 acre spacing is the optimal development spacing for this portion of the pool, but fails to prove why three wells are necessary to adequately drain the NE 1/4 NW 1/4 of Sec. 32.*

Sincerely, *Michael E. Rogers*

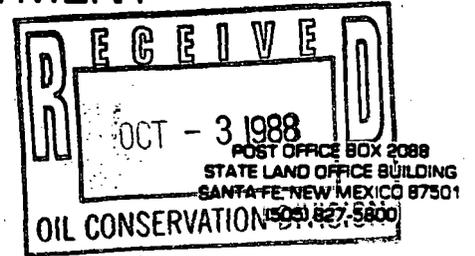
DATE: Feb. 6, 1986

NOTE:

THIS FORM LETTER MUST ACCOMPANY TWO COPIES OF THE SUPPLEMENTARY INFORMATION.



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
 OIL CONSERVATION DIVISION



TONY ANAYA  
 GOVERNOR

ARROWHEAD OIL CORP.  
 BOX 548  
 ARTESIA, NEW MEXICO 88210  
*Attention: Shirley Loop*

RE: Well head price ceiling  
 determination, NGPA of  
 1978

Gentlemen:

The New Mexico Oil Conservation Division has received your application for a wellhead price ceiling category determination under the sections(s) of the Natural Gas Policy Act of 1978 indicated below if your application is incomplete, forms are attached hereto, indicating the documents and further information which must be filed before your application can be considered. If your application is complete, it will be acted upon administratively unless written objection is received within 15 days of its filing.

WELL NAME AND LOCATION WALLINGFORD 32-17S-32E #2-C  
 SECTION(S) APPLIED FOR 103  
 DATE APPLICATION RECEIVED December 16, 1985

APPLICATION INCOMPLETE *Your Oil Well Drilling is insufficient pursuant to Rule 9 of R-6013-A, Mr. White's report indicates that 20-acre spacing is the optimal spacing for this portion of the pool. Why then are three wells needed to effectively and efficiently drain this 40-acre?*

Sincerely,

*Michael E. Sloggett*

DATE: February 6, 1986

NOTE:

THIS FORM LETTER MUST ACCOMPANY TWO COPIES OF THE SUPPLEMENTARY INFORMATION.

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



GARREY CARRUTHERS  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

September 2, 1988

Arrowhead Oil Corp.  
Box 548  
Artesia, NM 88210

Attention: Shirley Loop

RE: NGPA Section 103 Application  
Wallingford Well Nos. 2 and 3  
both located in Unit C,  
Section 32, Township 17 South,  
Range 32 East, NMPM, Maljamar  
Grayburg San Andres Pool, Lea  
County, New Mexico.

Dear Ms. Loop:

To date I have not received a response to my letter dated February 6, 1988 requesting additional information on the "Infill Well Findings" submitted for the subject wells, see attached. So that we may properly process your NGPA application, please submit this information within 90 days, otherwise these filings will be dismissed.

Thank you for your cooperation.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael E. Stogner".

Michael E. Stogner  
Petroleum Engineer

MES/ag

WITHDRAW THESE FILE 12/2/88



ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION

TONY ANAYA  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87501  
(505) 827-5800

ARROWHEAD OIL CORPORATION  
BOX 548  
Artesia, NEW Mexico 88210  
*Attention: Shirley Loop*

RE: Well head price ceiling  
determination, NGPA of  
1978

Gentlemen:

The New Mexico Oil Conservation Division has received your application for a wellhead price ceiling category determination under the sections(s) of the Natural Gas Policy Act of 1978 indicated below if your application is incomplete, forms are attached hereto, indicating the documents and further information which must be filed before your application can be considered. If your application is complete, it will be acted upon administratively unless written objection is received within 15 days of its filing.

WELL NAME AND LOCATION WALLINGFORD 32-17S-32E #3-C

SECTION(S) APPLIED FOR 103

DATE APPLICATION RECEIVED December 16, 1985

APPLICATION INCOMPLETE *Your effective and efficient finding is insufficient pursuant to Rule 9 of R-6013-R, Mr. White's report indicates that 20 acre spacing is the optimal development spacing for this portion of the pool, but fails to prove why these wells are necessary to adquire*  
Sincerely, *drain the NE 1/4, NW 1/4 of Sec. 32.*

DATE: Feb. 6, 1986

NOTE:

THIS FORM LETTER MUST ACCOMPANY TWO COPIES OF THE SUPPLEMENTARY INFORMATION.



STATE OF NEW MEXICO  
**ENERGY AND MINERALS DEPARTMENT**  
 OIL CONSERVATION DIVISION

TONY ANAYA  
 GOVERNOR

POST OFFICE BOX 2088  
 STATE LAND OFFICE BUILDING  
 SANTA FE, NEW MEXICO 87301  
 (505) 827-5800

ARROWHEAD OIL CORP.  
 BOX 548  
 ARTESIA, NEW MEXICO 88210  
*Attention: Shirley Loop*

RE: Well head price ceiling  
 determination, NGPA of  
 1978

Gentlemen:

The New Mexico Oil Conservation Division has received your application for a wellhead price ceiling category determination under the sections(s) of the Natural Gas Policy Act of 1978 indicated below if your application is incomplete, forms are attached hereto, indicating the documents and further information which must be filed before your application can be considered. If your application is complete, it will be acted upon administratively unless written objection is received within 15 days of its filing.

WELL NAME AND LOCATION WALLINGFORD 32-17S-32E #2-C  
 SECTION(S) APPLIED FOR 103  
 DATE APPLICATION RECEIVED December 16, 1985

APPLICATION INCOMPLETE *Your Oil Well Funding is insufficient pursuant to Rule 9 of R-6013-A, Mr. White's report indicates that 20-acre spacing is the optimal spacing for this portion of the pool. Why then are three wells needed to effectively and efficiently drain the 40-acre?*

Sincerely,

*Michael E. Sloger*

DATE: February 6, 1986

NOTE:

THIS FORM LETTER MUST ACCOMPANY TWO COPIES OF THE SUPPLEMENTARY INFORMATION.

Request for Infill Finding on  
Wallingford State # 2  
in accordance with Administrative  
Procedures amended February 8, 1980

30-025-26720

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.  
B-4109

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work  
 b. Type of Well DRILL  DEEPEN  PLUG BACK   
 OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

7. Unit Agreement Name

8. Firm or Lease Name  
Wallingford

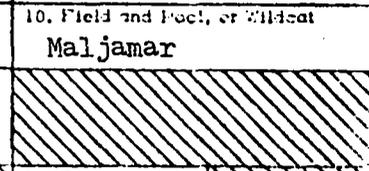
2. Name of Operator  
Arrowhead Oil Corporation

9. Well No.  
#2

3. Address of Operator  
P. O. Box 548, Artesia, New Mexico 88210

10. Field and Pool, or Wildcat  
Maljamar

1. Location of Well UNIT LETTER C LOCATED 330 FEET FROM THE North LINE  
 AND 2309.3 FEET FROM THE West LINE OF SEC. 32 TWP. 17-S RGE. 32-E NMPM



12. County  
Lea



19. Proposed Depth 4200' 19A. Formation Grayburg-S. Andres 20. Rotary or C.T.  
Rotary

21. Elevations (Show whether DT, RT, etc.) 3906' GL 21A. Kind & Status Plug. Bond Blanket 21B. Drilling Contractor Alta West 22. Approx. Date Work will start March 9, 1980

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	900'	200 Sacks	Circulate
7 7/8"	4 1/2"	10.5#	4200'	425 Sacks	2350'

We propose to drill to approximately 900' and run 8 5/8" casing. Circulate the cement and wait 18 hours.

Drill on to approximately 4200' and run 4 1/2" casing. Cement with 425 sacks Class C 50/50 poz cement, up to the base of the salt.

A 10" 900 Series Cameron SS 3000# blowout preventer will be used in drilling this well.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Shirley A. Loyd Title Secretary Date March 4, 1980

(This Space for State Use)

APPROVED BY [Signature] TITLE SUPERVISOR DISTRICT DATE MAR 7 1980

CONDITIONS OF APPROVAL (IF ANY)

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-127  
Supersedes C-128  
Effective 1-1-65

All distances must be from the outer boundaries of the Section

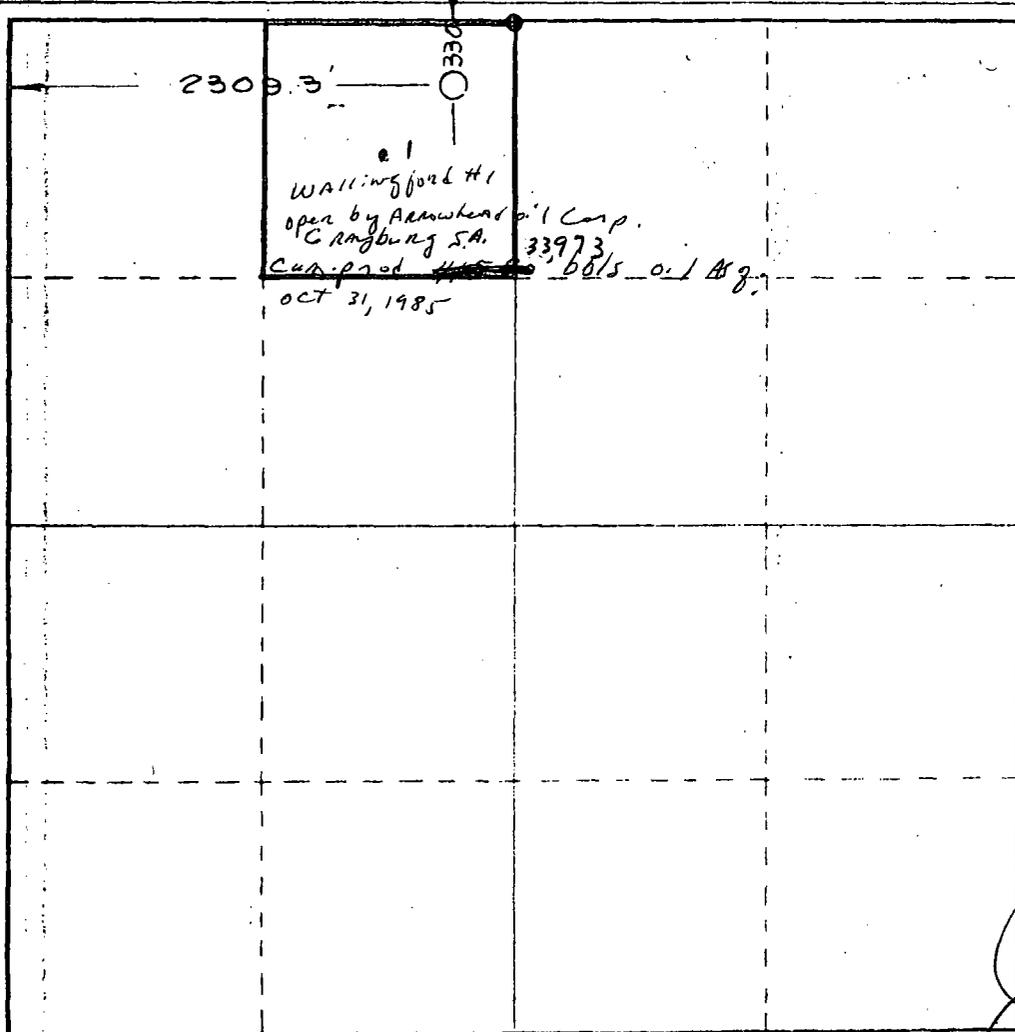
Operator <b>ARROWHEAD OIL CORPORATION</b>		Lease <b>WALLINGFORD STATE</b>			Well No. <b>2</b>
Unit Letter <b>C</b>	Section <b>32</b>	Township <b>17 South</b>	Range <b>32 East</b>	County <b>Lea</b>	
Actual Footage Location of Well: <b>330</b> feet from the <b>North</b> line and <b>2309.3</b> feet from the <b>West</b> line					
Ground Level Elev. <b>3906</b>	Producing Formation <b>Grayburg-San Andres</b>		Pool <b>Maljamar</b>	Dedicated Acreage <b>40</b> Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

*Georgia A. Loyd*  
Name

Georgia A. Loyd

Position

Secretary

Company

Arrowhead Oil Corporation

Date

March 4, 1980

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 knowledge and belief.

Date Surveyed

February 27, 1980

Registered Professional Engineer  
in Oil and Surveyor

*John W. Deam*  
Certificate No. 1559



RULE 6:

Wallingford State # 2

Maljamar Grayburg San Andres

Standard spacing unit: 40 acres

RULE 7:

N/A

RULE 8:

- a. Wallingford State # 1/660'FNL 1980'FWL Sec.32T17SR32E  
Wallingford State # 2/330'FNL 2309.3'FWL Sec32T17SR32E
- b. #1-10/01/42, re-entry 3/30/68  
#2-3/11/80
- c. #1-1/15/43, re-entry 5/13/68  
#2-4/08/80
- d. None
- e. #1-40 bbl oil, gas TSM/day  
#2-76 bbl oil, 100 mcf gas/day
- f. N/A
- g. The Wallingford # 2 was drilled because the low permeability and low quality solution gas recovery mechanism require reduced spacing to efficiently drain the reservoir.  
The Wallingford # 1 was completed openhole in January 1943, re-entered in May 1968 and returned to production. It did not produce a commercial quantity of gas and additional workover could not be justified because of downhole conditions.  
Since the Wallingford # 2 experienced new reservoir type conditions we feel the additional drilling was justified.

# Paul G. White Engineering

OIL AND NATURAL GAS

November 14, 1985

Arrowhead Oil Corporation  
P. O. Box 548  
Artesia, New Mexico 88210

Re: Pertinent Engineering Data  
Wallingford No. 2  
Maljamar Field  
Lea County, New Mexico

Gentlemen:

The subject well, located 330' FNL and 2309.3' FWL, Section 32-17S-R32E, Lea County, New Mexico was completed April 10, 1980.

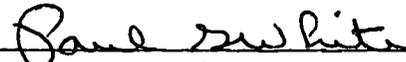
I have estimated the oil and gas reserves for the subject well based on a 20 acre well density. From the electrical log, analagous well study and rate time curve, I have estimated that the well will recover 83,000 barrels of oil and 96,493 MCF of gas.

A study of nearby producing well rates and initial potentials reveals that wells will have to be drilled on a 20 acre spacing to properly and adequately recover the oil and gas reserves in this field.

Therefore, it is my recommendation that in-fill wells be drilled and the well density be increased to at least 20 acre spacing.

From my study the in-fill wells will characteristically exhibit new reservoir conditions.

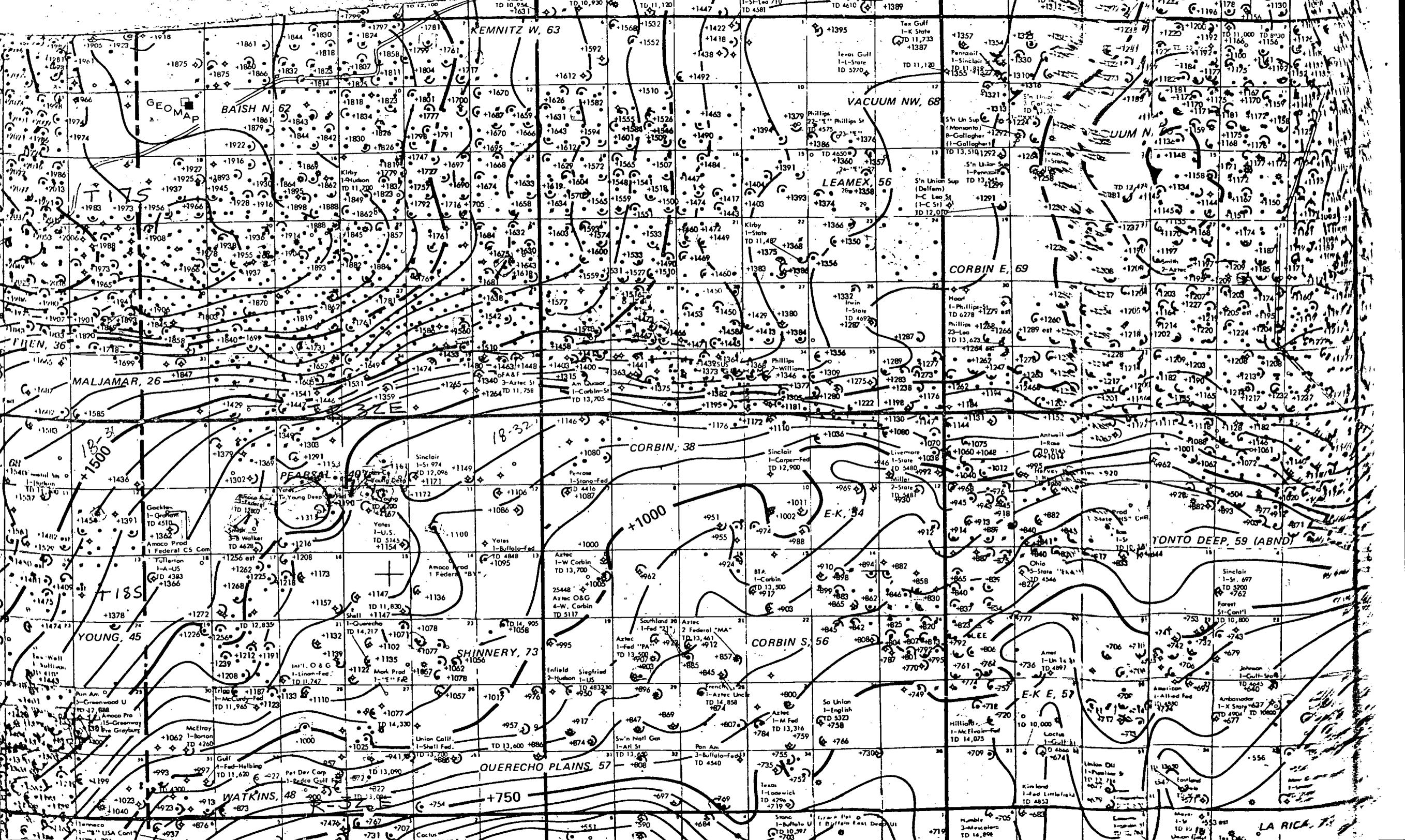
Signed



Petroleum Engineer

Date

November 14, 1985



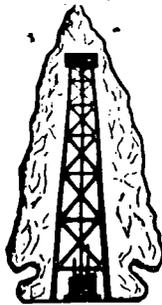
Rule 11:

Notice of this infill request has been sent to:

1. Conoco, Inc.  
P.O. Box 2197  
Houston, Texas 77252

2. Gulf Oil Corporation  
P.O. Box 1150  
Midland, Texas 79702

Both are offset operators.



# ARROWHEAD

## OIL CORPORATION

P.O. BOX 548 ARTESIA, NEW MEXICO 88210

1-505-748-6801 December 10, 1985

Conoco, Inc.  
P.O. Box 2197  
Houston, Texas 77252

RE: Notice to offset operators

Gentlemen:

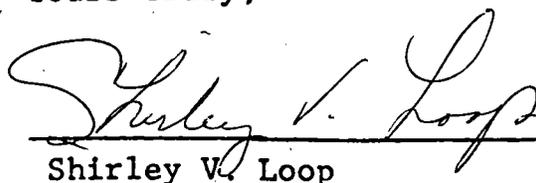
Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

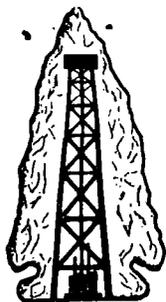
Wallingford # 2  
330'FNL 2309.3'FWL Sec. 32-T17S-R32E  
Lea County, New Mexico

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,

  
Shirley V. Loop



# ARROWHEAD

## OIL CORPORATION

**P.O. BOX 548 ARTESIA, NEW MEXICO 88210**

**1-505-746-6601** December 10, 1985

Gulf Oil Corporation  
P.O. Box 1150  
Midland, Texas 79702

RE: Notice to offset operators

Gentlemen:

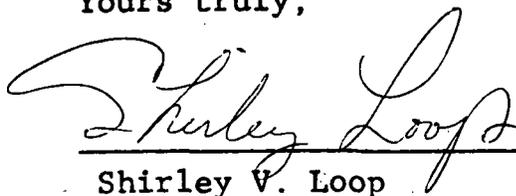
Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

Wallingford # 2  
330'FNL 2309.3'FWL Sec. 32-T17S-R32E  
Lea County, New Mexico

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,



---

Shirley V. Loop

Request for Infill Finding on  
Wallingford State # 2  
in accordance with Administrative  
Procedures amended February 8, 1980

NEW MEXICO OIL CONSERVATION COMMISSION

30-025-26720

Form C-101  
Revised 1-1-85

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

5A. Indicate Type of Lease  
STATE  FCC

5. State Oil & Gas Lease No.  
B-4109

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work				7. Unit Agreement Name	
b. Type of Well DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/> OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input type="checkbox"/>				8. Firm or Lease Name Wallingford	
2. Name of Operator Arrowhead Oil Corporation				9. Well No. #2	
3. Address of Operator P. O. Box 548, Artesia, New Mexico 88210				10. Field and Pool, or Fieldcat Maljamar	
1. Location of Well UNIT LETTER <u>C</u> LOCATED <u>330</u> FEET FROM THE <u>North</u> LINE AND <u>2309.3</u> FEET FROM THE <u>West</u> LINE OF SEC. <u>32</u> TWP. <u>17-S</u> RGE. <u>32-E</u> N.M.P.M.				12. County Lea	
19. Proposed Depth 4200'		19A. Formation Grayburg-S. Andres		20. Rotary or C.T. Rotary	
21. Elevations (Show whether DF, RT, etc.) 3906' GL		21A. Kind & Status Plug. Bond Blanket		22. Approx. Date Work will start March 9, 1980	
23. PROPOSED CASING AND CEMENT PROGRAM					

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	900'	200 Sacks	Circulate
7 7/8"	4 1/2"	10.5#	4200'	425 Sacks	2350'

We propose to drill to approximately 900' and run 8 5/8" casing. Circulate the cement and wait 18 hours.

Drill on to approximately 4200' and run 4 1/2" casing. Cement with 425 sacks Class C 50/50 poz cement, up to the base of the salt.

A 10" 900 Series Cameron SS 3000# blowout preventer will be used in drilling this well.

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Harvey A. Loyd Title Secretary Date March 4, 1980

(This space for State Use)

APPROVED BY [Signature] TITLE SUPERVISOR DATE [Stamp]

CONDITIONS OF APPROVAL, IF ANY:

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form No. 1  
Supersedes 1-128  
Effective 1-1-77

All distances must be from the outer boundaries of the Section

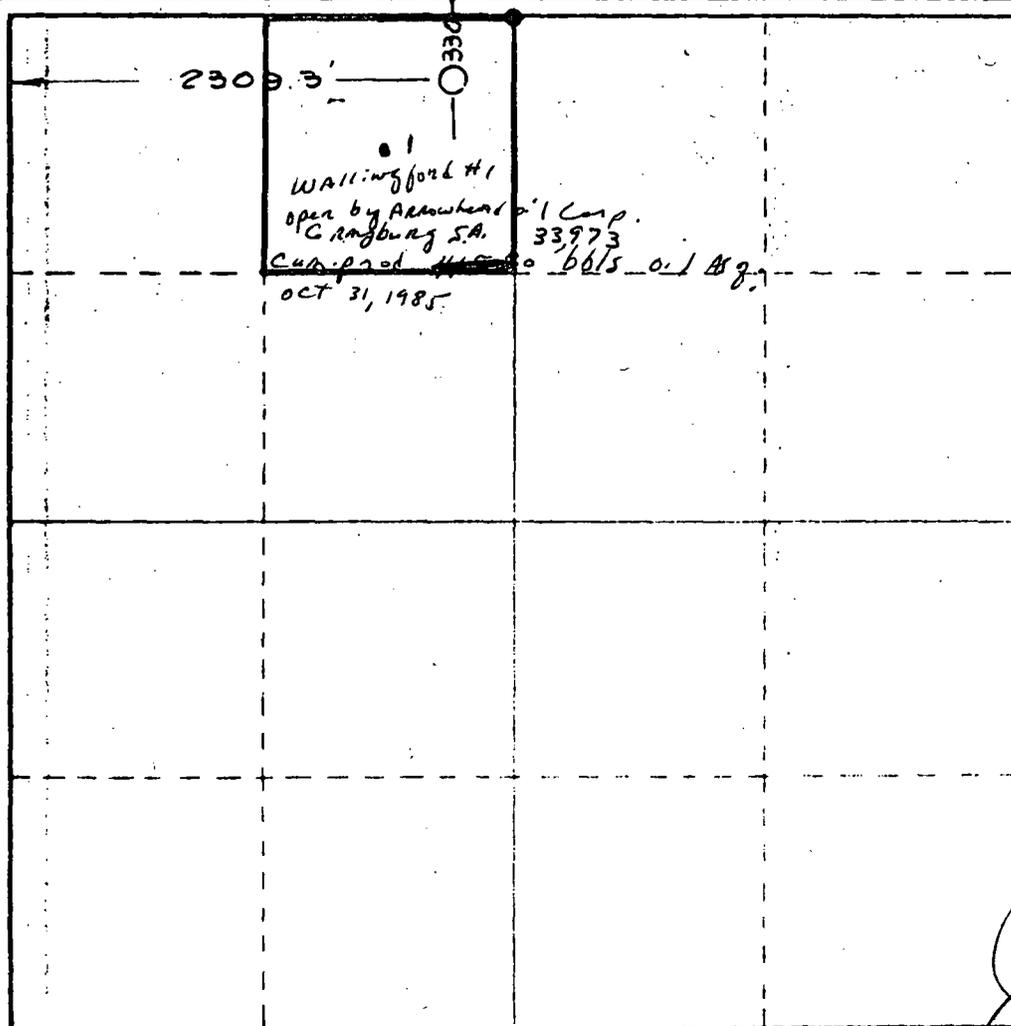
Operator <b>ARROWHEAD OIL CORPORATION</b>		Lease <b>WALLINGFORD STATE</b>			Well No. <b>2</b>
Unit Letter <b>C</b>	Section <b>32</b>	Township <b>17 South</b>	Range <b>32 East</b>	County <b>Lea</b>	
Actual Footage Location of Well: <b>330</b> feet from the <b>North</b> line and <b>2309.3</b> feet from the <b>West</b> line.					
Ground Level Elev. <b>3906</b>	Producing Formation <b>Grayburg-San Andres</b>		Pool <b>Maljamar</b>	Lease Area Acres <b>40</b>	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

*Georgia A. Loyd*  
Name

Georgia A. Loyd

Position

Secretary

Company

Arrowhead Oil Corporation

Date

March 4, 1980

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 knowledge and belief.

Date Surveyed

February 27, 1980

Registered Professional Engineer and Surveyor

*John W. Deam*

Plate No.

1559

RULE 6:

Wallingford State # 2

Maljamar Grayburg San Andres

Standard spacing unit: 40 acres

RULE 7:

N/A

RULE 8:

a. Wallingford State # 1/660'FNL 1980'FWL Sec.32T17SR32E  
Wallingford State # 2/330'FNL 2309.3'FWL Sec32T17SR32E

b. #1-10/01/42, re-entry 3/30/68  
#2-3/11/80

c. #1-1/15/43, re-entry 5/13/68  
#2-4/08/80

d. None

e. #1-40 bbl oil, gas TSM/day  
#2-76 bbl oil, 100 mcf gas/day

f. N/A

g. The Wallingford # 2 was drilled because the low permeability and low quality solution gas recovery mechanism require reduced spacing to efficiently drain the reservoir.  
The Wallingford # 1 was completed openhole in January 1943, re-entered in May 1968 and returned to production. It did not produce a commercial quantity of gas and additional workover could not be justified because of downhole conditions.  
Since the Wallingford # 2 experienced new reservoir type conditions we feel the additional drilling was justified.

# Paul G. White Engineering

OIL AND NATURAL GAS

November 14, 1985

Arrowhead Oil Corporation  
P. O. Box 548  
Artesia, New Mexico 88210

Re: Pertinent Engineering Data  
Wallingford No. 2  
Maljamar Field  
Lea County, New Mexico

Gentlemen:

The subject well, located 330' FNL and 2309.3' FWL, Section 32-17S-R32E, Lea County, New Mexico was completed April 10, 1980.

I have estimated the oil and gas reserves for the subject well based on a 20 acre well density. From the electrical log, analagous well study and rate time curve, I have estimated that the well will recover 83,000 barrels of oil and 96,493 MCF of gas.

A study of nearby producing well rates and initial potentials reveals that wells will have to be drilled on a 20 acre spacing to properly and adequately recover the oil and gas reserves in this field.

Therefore, it is my recommendation that in-fill wells be drilled and the well density be increased to at least 20 acre spacing.

From my study the in-fill wells will characteristically exhibit new reservoir conditions.

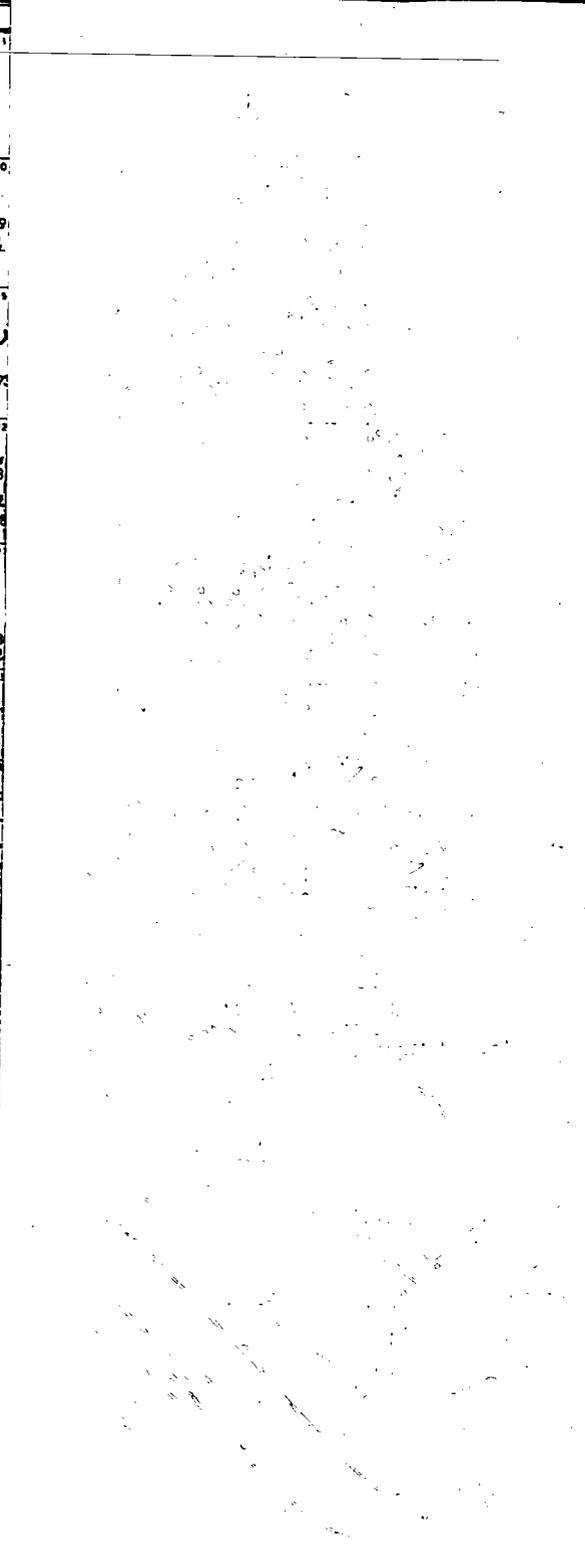
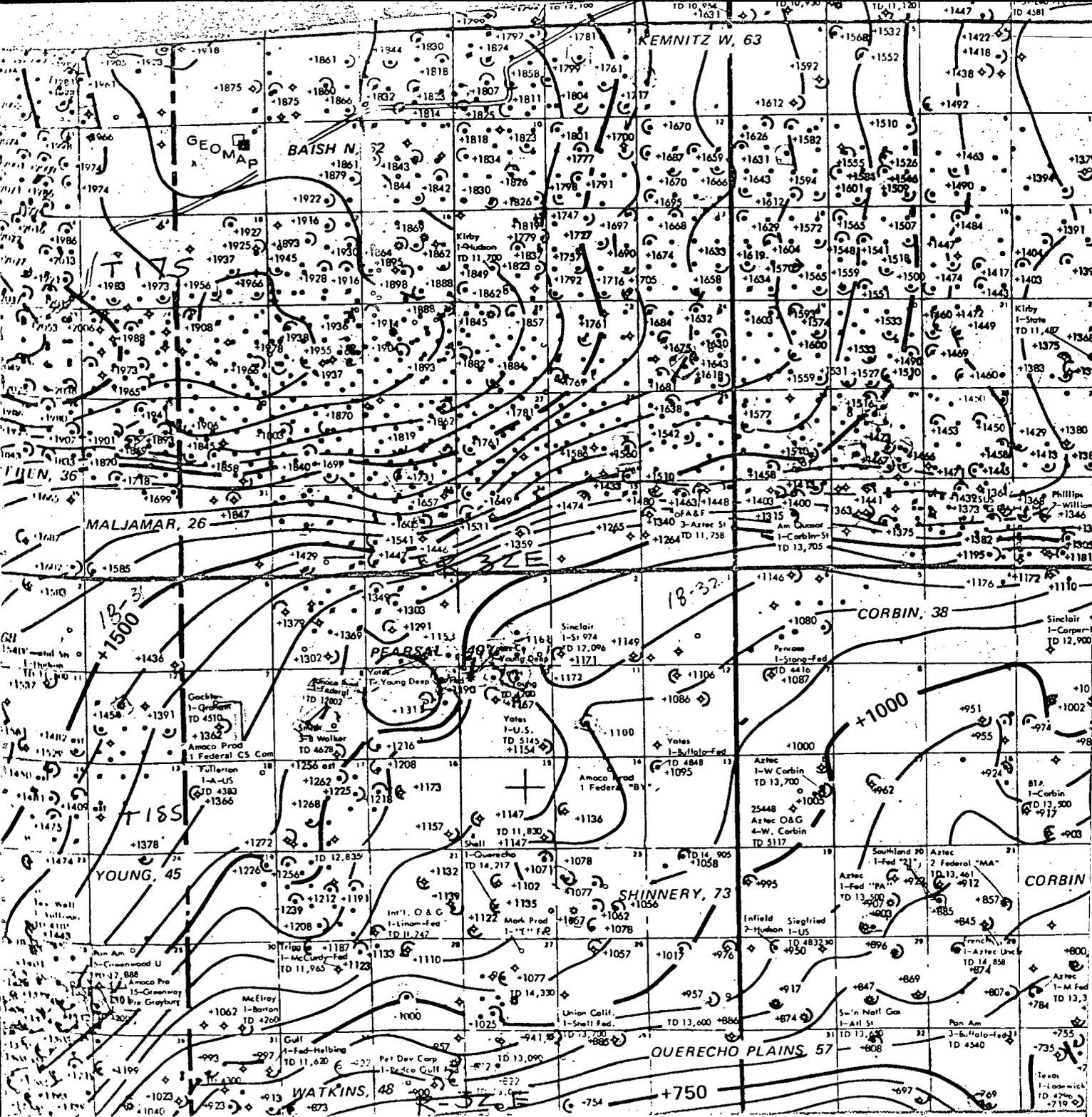
Signed

Paul G. White

Petroleum Engineer

Date

November 14, 1985



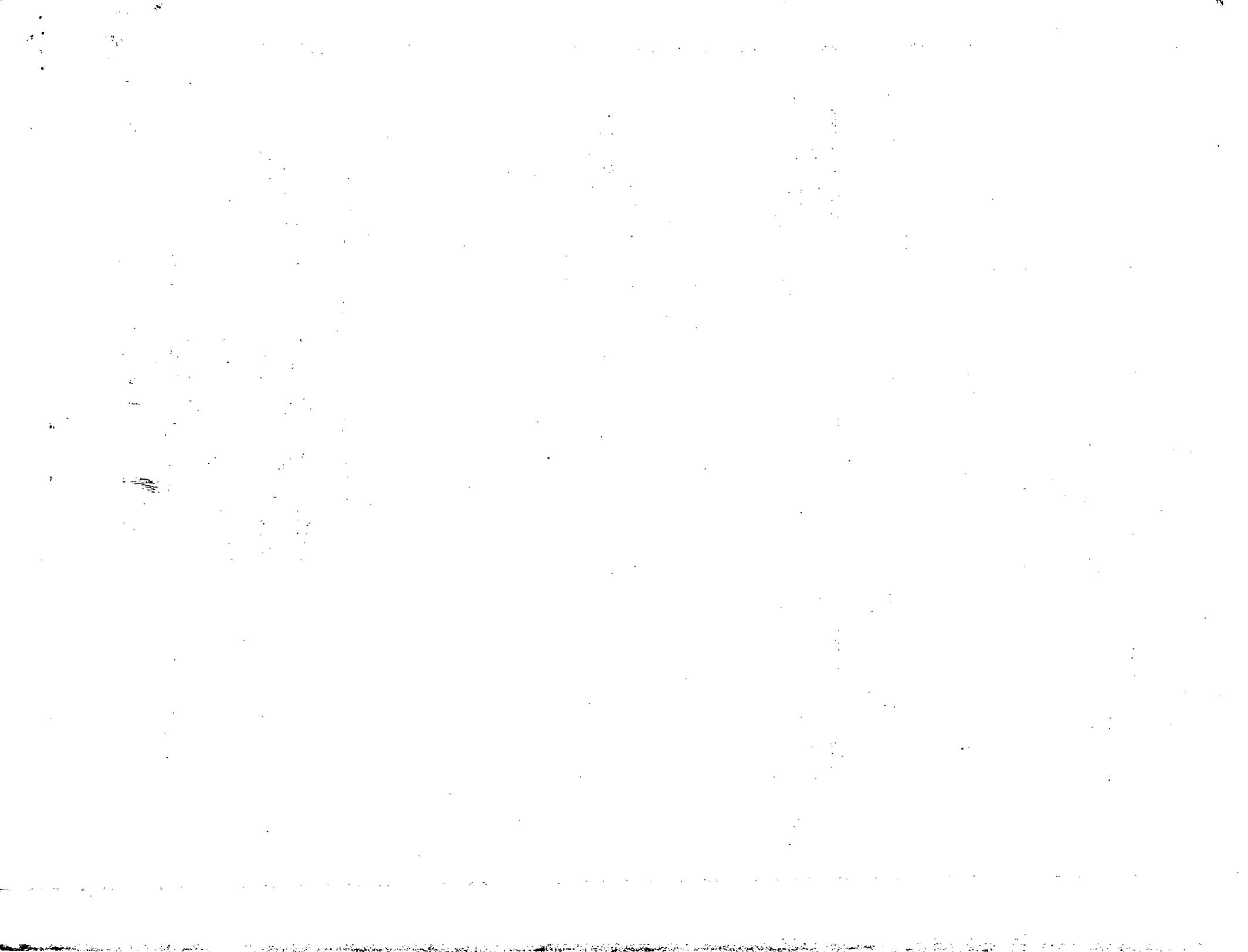
Rule 11:

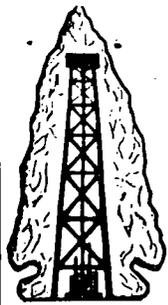
Notice of this infill request has been sent to:

1. Conoco, Inc.  
P.O. Box 2197  
Houston, Texas 77252

2. Gulf Oil Corporation  
P.O. Box 1150  
Midland, Texas 79702

Both are offset operators.





# ARROWHEAD

## OIL CORPORATION

**P.O. BOX 548 ARTESIA, NEW MEXICO 88210**  
**1-505-748-8601**

December 10, 1985

Conoco, Inc.  
P.O. Box 2197  
Houston, Texas 77252

**RE: Notice to offset operators**

**Gentlemen:**

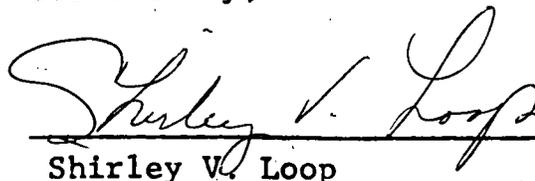
Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

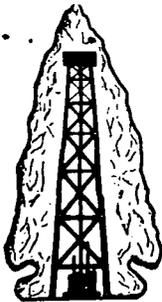
Wallingford # 2  
330'FNL 2309.3'FWL Sec. 32-T17S-R32E  
Lea County, New Mexico

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,

  
Shirley V. Loop



# ARROWHEAD

## OIL CORPORATION

**P.O. BOX 548 ARTESIA, NEW MEXICO 88210**  
**1-505-746-6601**

December 10, 1985

Gulf Oil Corporation  
P.O. Box 1150  
Midland, Texas 79702

RE: Notice to offset operators

Gentlemen:

Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

Wallingford # 2  
330'FNL 2309.3'FWL Sec. 32-T17S-R32E  
Lea County, New Mexico

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,

Shirley V. Loop

Request for Infill Finding on the  
Wallingford State # 3  
in accordance with Administrative  
Procedures amended February 8, 1980

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.  
B-4109

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work  
b. Type of Well DRILL  DEEPEN  PLUG BACK   
OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. Name of Operator  
Arrowhead Oil Corporation

3. Address of Operator  
P. O. Box 548, Artesia, New Mexico 88210

4. Location of Well  
UNIT LETTER C LOCATED 990 FEET FROM THE North LINE  
AND 2310 FEET FROM THE West LINE OF SEC. 32 TWP. 17-S RGE. 32-E NMPM

7. Unit Agreement Name

8. Farm or Lease Name  
Wallingford State

9. Well No.  
#3

10. Field and Pool, or Wildcat  
Maljamar

12. County  
Lea

19. Proposed Depth  
4250'

19A. Formation  
Grayburg-S. Andres

20. Rotary or C.T.  
Rotary

21. Elevations (Show whether DF, RT, etc.)  
3901' GL

21A. Kind & Status Plug. Bond  
Blanket

21B. Drilling Contractor  
WEK Drilling Company

22. Approx. Date Work will start  
Approx. March 12, 1981

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	900'	200 Sks.	Circulate
7 7/8"	4 1/2"	11.5#	4250'	425 Sks.	2350'

We propose to drill to approximately 900' and run 8 5/8" casing. Circulate the cement and wait 18 hours.

Drill on to approximately 4250' and run 4 1/2" casing. Cement with 425 sacks Class C 50/50 poz cement, up to the base of the salt.

A 10" 900 Series Shaffer Type F 3000# blowout preventer will be used in drilling this well.

Cement on the production casing must be brought from the top the salt or anhydrite to the surface casing by either circulating with cement or a DV tool at the top of the salt.

APPROVAL VALID FOR 180 DAYS  
PERMIT EXPIRES 9/9/81  
UNLESS DRILLING UNDERWAY

DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Gregory A. Taylor Title Secretary Date March 6, 1981

(This space for State Use)

APPROVED BY Jessie A. Clement TITLE OIL & GAS INSPECTOR DATE MAR 9 1981

CONDITIONS OF APPROVAL, IF ANY:

\*\*\*SEE ABOVE

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

102  
Form  
Supersedes 4-128  
Effective 1-1-81

All distances must be from the outer boundaries of the Section

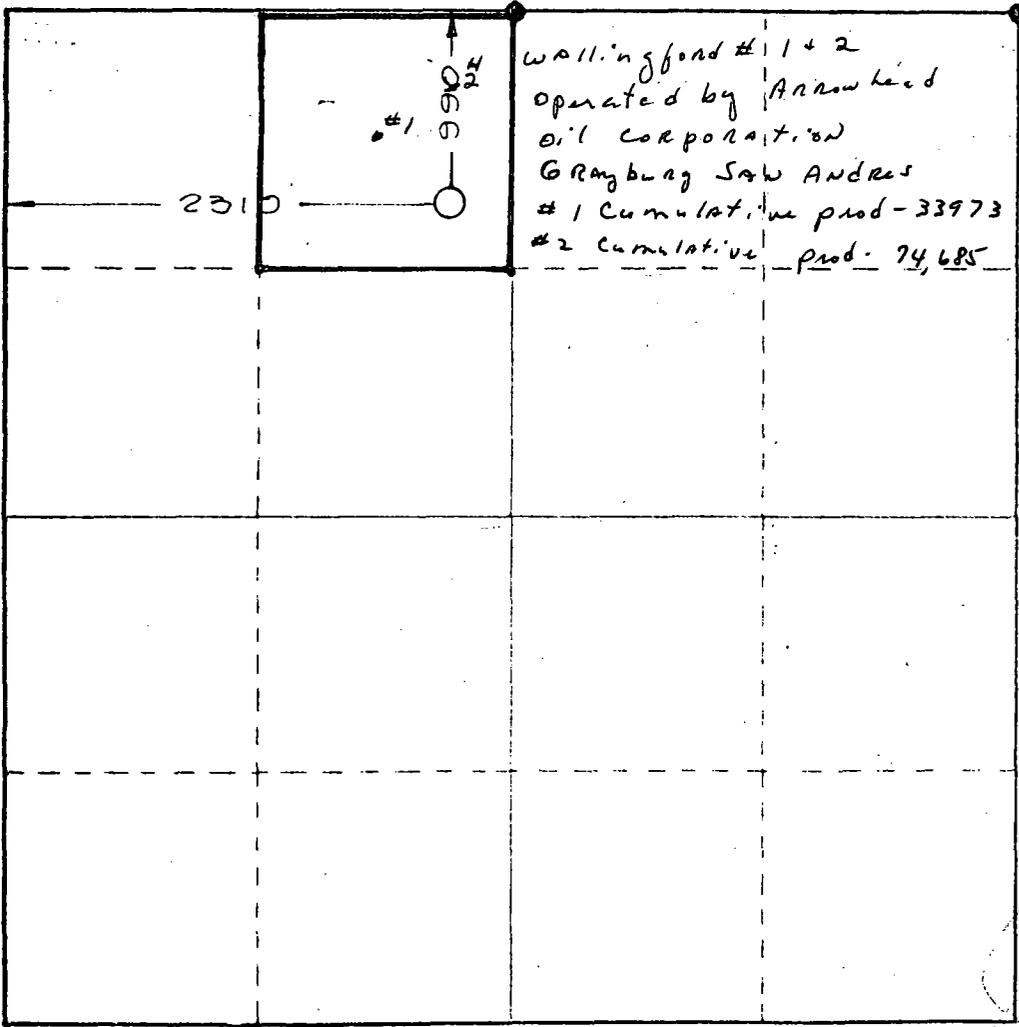
Operator <b>ARROWHEAD OIL CORPORATION</b>		Lease <b>WALLINGFORD STATE</b>		Well No. <b>3</b>
Unit Letter <b>C</b>	Section <b>32</b>	Township <b>17 South</b>	Range <b>32 East</b>	County <b>LEA</b>
Actual Footage Location of Well: <b>990</b> feet from the <b>North</b> line and <b>2310</b> feet from the <b>West</b> line				
Ground Level Elev. <b>3905</b>	Producing Formation <b>Grayburg-San Andres</b>		Foot <b>Maljamar</b>	Estimated Acreage <b>40 Acres</b>

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

*Georgia A. Loyd*  
Name

Georgia A. Loyd  
Position

Secretary  
Company

Arrowhead Oil Corporation  
Date

March 6, 1981

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 knowledge and belief.

Date Surveyed

March 4, 1981

Registered Professional Engineer  
in Oil and Gas Engineering

*John W. Dearn*  
Plat No. 1559



RULE 6:

Wallingford State # 3

Maljamar Grayburg San Andres

Standard spacing unit: 40 Acres

RULE 7:

N/A

RULE 8:

- a. Wallingford St #1-660'FNL 1980'FWL Sec32-T17S-R32E  
Wallingford St #2-330'FNL 2309.3'FWL Sec32-T17S-R32E  
Wallingford St #3-990'FNL 2310FWL Sec32-T17S-R32E
- b. #1-1-10/01/42, re-entry 3/30/68  
#2-3/11/80  
#3-3/21/81
- c. #1-1/15/43, re-entry 5/13/68  
#2-4/08/80  
#3-4/28/81
- d. NONE
- e. #1-40 bbl oil, TSM gas/day  
#2-76 bbl oil, 100 MCF gas/day  
#3-30 bbl oil, 54000 MCF gas/day
- f. N/A
- g. The Wallingford # 3 was drilled because the low permeability and low quality solution gas recovery mechanism require reduced spacing to efficiently drain the reservoir.  
Since both the Wallingford # 2 and # 3 experienced new reservoir type conditions we feel the additional drilling was justified.

# Paul G. White Engineering

OIL AND NATURAL GAS

November 14, 1985

Arrowhead Oil Corporation  
P. O. Box 548  
Artesia, New Mexico 88210

Re: Pertinent Engineering Data  
Wallingford No. 3  
Maljamar Field  
Lea County, New Mexico

Gentlemen:

The subject well, located 990' FNL and 2310' FWL, Section 32-17S-R32E, Lea County, New Mexico was completed May 1, 1981.

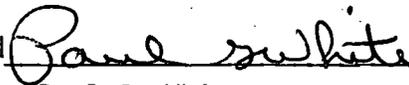
I have estimated the oil and gas reserves for the subject well based on a 20 acre well density. From the electrical log, analagous well study, and rate time curve, I have estimated that the well will recover 38,341 barrels of oil and 12,116 MCF of gas.

A study of nearby producing well rates and initial potentials reveals that wells will have to be drilled on a 20 acre spacing to properly and adequately recover the oil and gas reserves in this field.

Therefore, it is my recommendation that in-fill wells be drilled and the well density be increased to at least 20 acre spacing.

From my study the in-fill wells will characteristically exhibit new reservoir conditions.

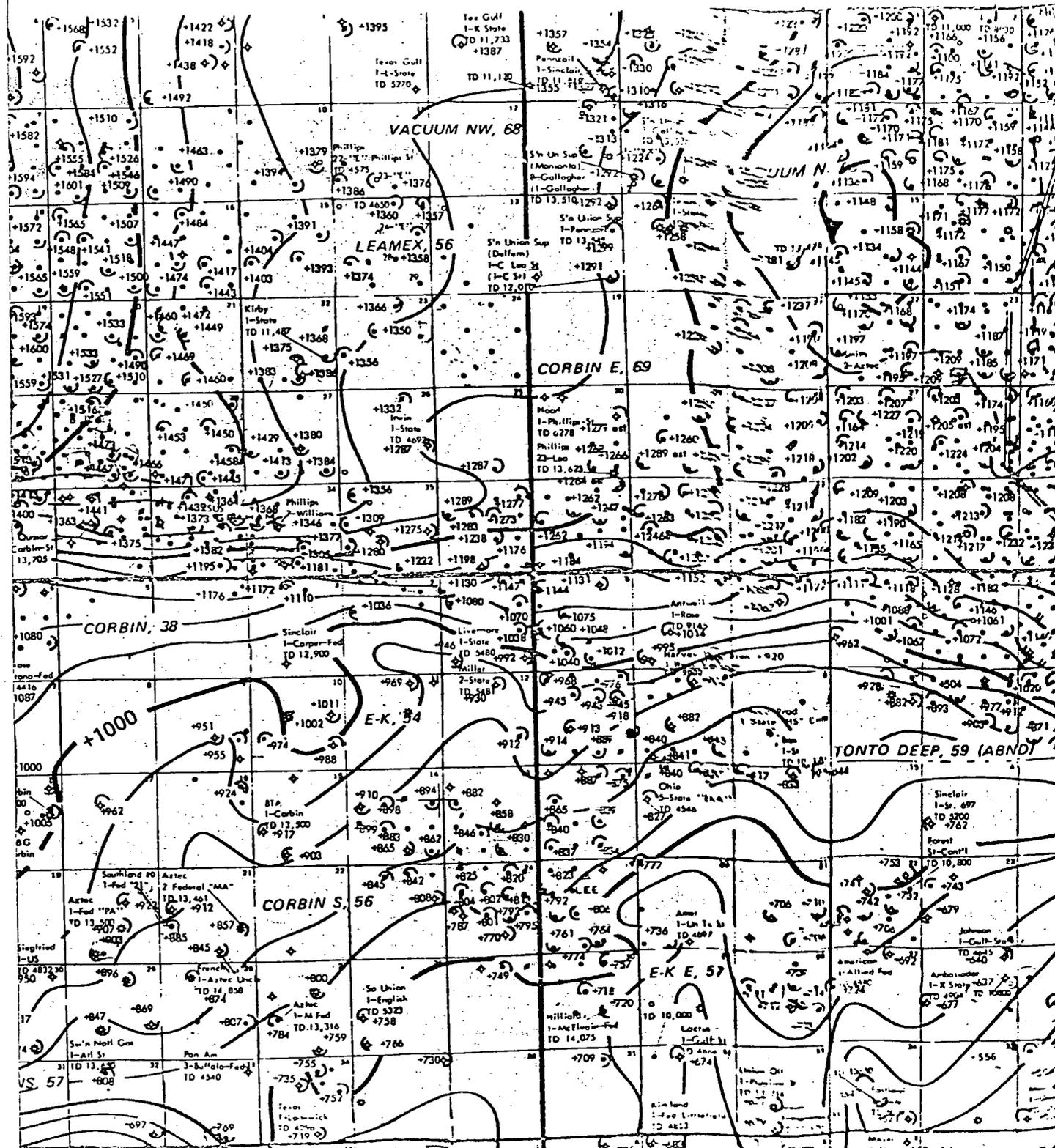
Signed



Paul G. White  
Petroleum Engineer

Date

November 14, 1985

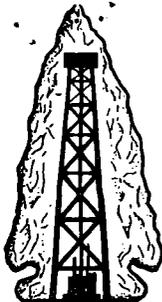


RULE 11:

Notice of this infill request has been sent to  
offset operators:

CONOCO, INC.  
P.O. BOX 2197  
HOUSTON, TEXAS 77252

GULF OIL CORPORATION  
P.O. BOX 1150  
MIDLAND, TEXAS 79702



# ARROWHEAD

## OIL CORPORATION

**P.O. BOX 548 ARTESIA, NEW MEXICO 88210**  
**1-505-746-6601**

Conoco, Inc.  
Box 2197  
Houston, Tx 77252

RE: Notice to offset operators

Gentlemen:

Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

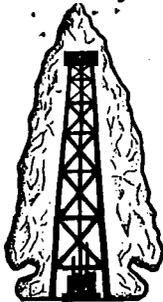
WALLINGFORD # 3  
990' FNL 2310 FWL Sec 32 T17S R32E  
LEA COUNTY

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,

Shirley V. Loop



# ARROWHEAD

## OIL CORPORATION

**P.O. BOX 548 ARTESIA, NEW MEXICO 88210**  
**1-505-746-8601**

Gulf Oil Corporation  
Box 1150  
Midland, Tx 79702

RE: Notice to offset operators

Gentlemen:

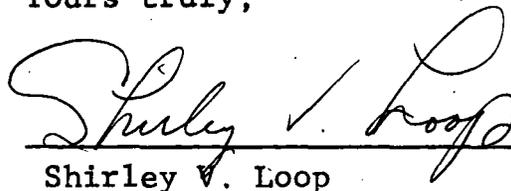
Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

WALLINGFORD # 3  
990' FNL 2310' FWL Sec 32 T17S R32E  
LEA COUNTY

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,

  
Shirley V. Loop

Request for Infill Finding on the  
Wallingford State # 3  
in accordance with Administrative  
Procedures amended February 8, 1980

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-101  
Revised 1-1-65

5A. Indicate Type of Lease  
STATE  FEE

5. State Oil & Gas Lease No.  
B-4109

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work DRILL <input checked="" type="checkbox"/> DEEPEN <input type="checkbox"/> PLUG BACK <input type="checkbox"/>		7. Unit Agreement Name	
b. Type of Well OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER <input type="checkbox"/>		8. Farm or Lease Name Wallingford State	
2. Name of Operator Arrowhead Oil Corporation		9. Well No. #3	
3. Address of Operator P. O. Box 548, Artesia, New Mexico 88210		10. Field and Pool, or Wildcat Maljamar	
4. Location of Well UNIT LETTER <u>C</u> LOCATED <u>990</u> FEET FROM THE <u>North</u> LINE AND <u>2310</u> FEET FROM THE <u>West</u> LINE OF SEC. <u>32</u> TWP. <u>17-S</u> RGE. <u>32-E</u> NMPM		12. County Lea	
21. Elevations (Show whether DF, RT, etc.) 3901' GL		19. Proposed Depth 4250'	19A. Formation Grayburg-S. Andres
21A. Kind & Status Plug. Bond Blanket	21B. Drilling Contractor WEK Drilling Company	20. Rotary or C.T. Rotary	
		22. Approx. Date Work will start Approx. March 12, 1981	

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12 1/4"	8 5/8"	24#	900'	200 Sks.	Circulate
7 7/8"	4 1/2"	11.5#	4250'	425 Sks.	2350'

We propose to drill to approximately 900' and run 8 5/8" casing. Circulate the cement and wait 18 hours.

Drill on to approximately 4250' and run 4 1/2" casing. Cement with 425 sacks Class C 50/50 poz cement, up to the base of the salt.

A 10" 900 Series Shaffer Type F 3000# blowout preventer will be used in drilling this well.

\*\*\*Cement on the production casing must be brought from the top the salt or anhydrite to the surface casing by either circulating with cement or a DV tool at the top of the salt.

APPROVAL VALID FOR 180 DAYS  
PERMIT EXPIRES 9/9/81  
UNLESS DRILLING UNDERWAY

IF ABOVE IS TO BE DEEPENED OR PLUG BACK, DESCRIBE PROPOSED PROGRAM; IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed Gregory L. Gault Title Secretary Date March 6, 1981

(This space for State Use)

APPROVED BY Jessie A. Clement TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
CONDITIONS OF APPROVAL, IF ANY:

OIL & GAS INSPECTOR

MAR 9 1981

\*\*\*SEE ABOVE

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL LOCATION AND ACREAGE DEDICATION PLAT

102  
Supervisor's Office  
Albuquerque, N.M.

All distances must be from the outer boundaries of the Section

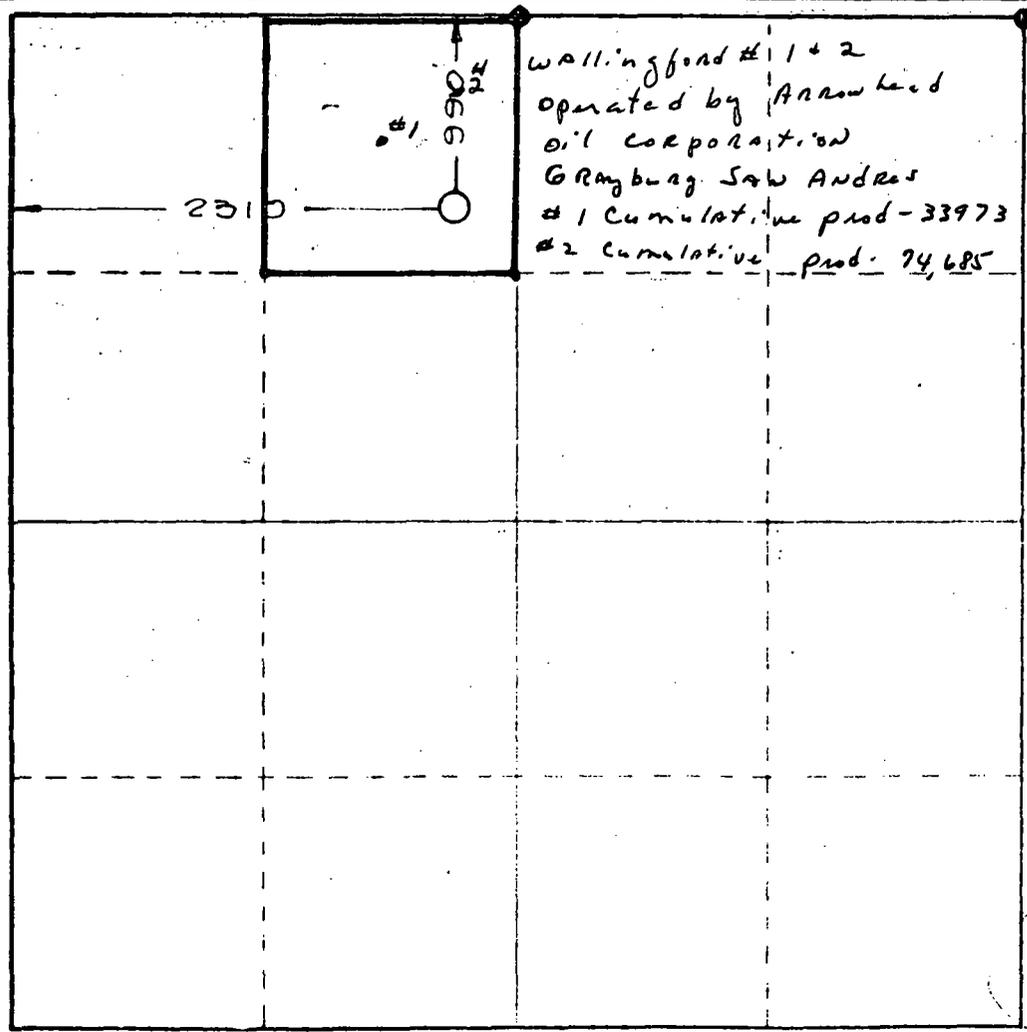
Operator <b>ARROWHEAD OIL CORPORATION</b>		Lease <b>WALLINGFORD STATE</b>		Ac. <b>3</b>
Tract Letter <b>C</b>	Section <b>32</b>	Township <b>17 South</b>	Range <b>32 East</b>	County <b>LEA</b>
Actual Prostate Location of Well:				
<b>990</b>	feet from the	<b>North</b>	<b>2310</b>	feet from the
				<b>West</b>
Ground Level Elev. <b>3905</b>	Producing Formation <b>Grayburg-San Andres</b>		Foot <b>Maljamar</b>	Feet from the <b>40</b>

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

Yes  No If answer is "yes," type of consolidation \_\_\_\_\_

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) \_\_\_\_\_

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

*Georgia A. Loyd*  
Name

Georgia A. Loyd

Location

Secretary

Company

Arrowhead Oil Corporation

Date

March 6, 1981

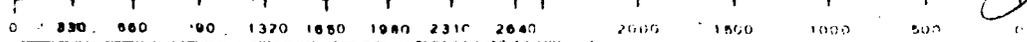
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

March 4, 1981

Surveyor's Name

*John W. Dearn*  
Surveyor's Name



RULE 6:

Wallingford State # 3

Maljamar Grayburg San Andres

Standard spacing unit: 40 Acres

RULE 7:

N/A

RULE 8:

- a. Wallingford St #1-660'FNL 1980'FWL Sec32-T17S-R32E  
Wallingford St #2-330'FNL 2309.3'FWL Sec32-T17S-R32E  
Wallingford St #3-990'FNL 2310FWL Sec32-T17S-R32E
  
- b. #1-1-10/01/42, re-entry 3/30/68  
#2-3/11/80  
#3-3/21/81
  
- c. #1-1/15/43, re-entry 5/13/68  
#2-4/08/80  
#3-4/28/81
  
- d. NONE
  
- e. #1-40 bbl oil, TSM gas/day  
#2-76 bbl oil, 100 MCF gas/day  
#3-30 bbl oil, 54000 MCF gas/day
  
- f. N/A
  
- g. The Wallingford # 3 was drilled because the low permeability and low quality solution gas recovery mechanism require reduced spacing to efficiently drain the reservoir.  
Since both the Wallingford # 2 and # 3 experienced new reservoir type conditions we feel the additional drilling was justified.

# Paul G. White Engineering

OIL AND NATURAL GAS

November 14, 1985

Arrowhead Oil Corporation  
P. O. Box 548  
Artesia, New Mexico 88210

Re: Pertinent Engineering Data  
Wallingford No. 3  
Maljamar Field  
Lea County, New Mexico

Gentlemen:

The subject well, located 990' FNL and 2310' FWL, Section 32-17S-R32E, Lea County, New Mexico was completed May 1, 1981.

I have estimated the oil and gas reserves for the subject well based on a 20 acre well density. From the electrical log, analagous well study, and rate time curve, I have estimated that the well will recover 38,341 barrels of oil and 12,116 MCF of gas.

A study of nearby producing well rates and initial potentials reveals that wells will have to be drilled on a 20 acre spacing to properly and adequately recover the oil and gas reserves in this field.

Therefore, it is my recommendation that in-fill wells be drilled and the well density be increased to at least 20 acre spacing.

From my study the in-fill wells will characteristically exhibit new reservoir conditions.

Signed



Paul G. White  
Petroleum Engineer

Date November 14, 1985

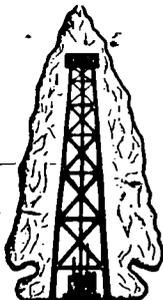


RULE 11:

Notice of this infill request has been sent to  
offset operators:

CONOCO, INC.  
P.O. BOX 2197  
HOUSTON, TEXAS 77252

GULF OIL CORPORATION  
P.O. BOX 1150  
MIDLAND, TEXAS 79702



# ARROWHEAD

## OIL CORPORATION

**P.O. BOX 548 ARTESIA, NEW MEXICO 88210**  
**1-505-746-6601**

Conoco, Inc.  
Box 2197  
Houston, Tx 77252

RE: Notice to offset operators

Gentlemen:

Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

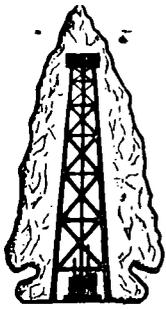
WALLINGFORD # 3  
990' FNL 2310 FWL Sec 32 T17S R32E  
LEA COUNTY

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,

Shirley V. Loop



# ARROWHEAD

## OIL CORPORATION

**P.O. BOX 548 ARTESIA, NEW MEXICO 88210**  
**1-505-746-6801**

Gulf Oil Corporation  
Box 1150  
Midland, Tx 79702

RE: Notice to offset operators

Gentlemen:

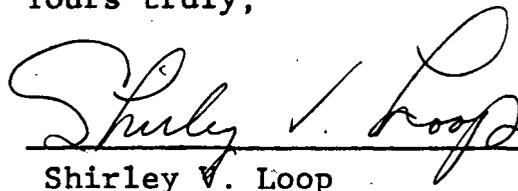
Notice is hereby given to you as an offset operator to the request of Arrowhead Oil Corporation to the New Mexico Oil Conservation Division for an infill finding on the following well:

WALLINGFORD # 3  
990' FNL 2310' FWL Sec 32 T17S R32E  
LEA COUNTY

This notice is given pursuant to the Special Rules and Regulations Natural Gas Policy Act Infill Finding Administrative Procedure (amended February 8, 1980). These special rules and regulations shall apply to effective and efficient drainage findings for completed infill wells pursuant to Section 271.305 of the final Rules and Regulations of the Federal Energy Regulatory Commission relating to Section 103 of the Natural Gas Policy Act of 1978.

If there are any questions please contact our office.

Yours truly,

  
Shirley V. Loop

