

Amoco Production Company

Post Office Box 68  
Hobbs, New Mexico 88240

L. R. Smith  
District Manager

June 23, 1986

File: SGH-989-WF

*Case 8958*

Re: Hardship Gas Well Classification  
State "FQ" Gas Com No. 1  
Section 26, T-23-S, R-34-E  
Lea County, New Mexico

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 2088  
Santa Fe, NM 87501

Attention: R. L. Stamets  
Division Director

As operator of the State "FQ" Gas Com No. 1, Amoco Production Company is submitting the attached Application for Classification as Hardship Gas Well. Included with the application are the following: Report of most current work performed in June, 1986; Ownership Plat for the Antelope Ridge Area; Wellbore Sketch; Cumulative Production Graph; an Industry Production Chart; Well Location and Acreage Dedication Plat; and Statement of Certification that all data submitted is true and correct to the best of my knowledge.

If you have any questions, please contact F. A. Seidel at 393-1781, Extension 305.

*F. A. Seidel*

CMH/sh  
APRD04-0

Attachments

cc: El Paso Natural Gas Company  
P. O. Box 1492  
El Paso, TX 79978  
Attention: Ray McClure

State of New Mexico  
Energy and Minerals Department  
Oil Conservation Division  
P. O. Box 1980  
Hobbs, NM 88240

Case 8958

LIST OF OFFSET OPERATORS  
STATE "FQ" GAS COM NO. 1  
APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Meridian Oil Company  
21 Desta Drive  
Midland, TX 79701

Shell Oil Company  
P. O. Box 2463  
Houston, TX 77001

Superior Oil Company  
204 W. Illinois  
Midland, TX 79702

Yates Petroleum Corporation  
207 S. Fourth Street  
Artesia, NM 88210

Case 8958

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Operator Amoco Production Company Contact Party Frank A. Seidel  
Address P. O. Box 68, Hobbs, NM 88240 Phone No. (505) 393-1781  
Lease State "FQ" Gas Com Well No. 1 UT N Sec. 26 TWP 23-S RGE 34-E  
Pool Name Antelope Ridge Morrow Minimum Rate Requested 410 MCFD  
Transporter Name El Paso Natural Gas Company Purchaser (if different) \_\_\_\_\_  
Are you seeking emergency "hardship" classification for this well? X yes \_\_\_\_\_ no

Applicant must provide the following information to support his contention that the subject well qualifies as a hardship gas well.

- 1) Provide a statement of the problem that leads the applicant to believe that "underground waste" will occur if the subject well is shut-in or is curtailed below its ability to produce. (The definition of underground waste is shown on the reverse side of this form)
- 2) Document that you as applicant have done all you reasonably and economically can do to eliminate or prevent the problem(s) leading to this application.
  - a) Well history. Explain fully all attempts made to rectify the problem. If no attempts have been made, explain reasons for failure to do so.
  - b) Mechanical condition of the well (provide wellbore sketch). Explain fully mechanical attempts to rectify the problem, including but not limited to:
    - i) the use of "smallbore" tubing; ii) other de-watering devices, such as plunger lift, rod pumping units, etc.
- 3) Present historical data which demonstrates conditions that can lead to waste. Such data should include:
  - a) Permanent loss of productivity after shut-in periods (i.e., formation damage).
  - b) Frequency of swabbing required after the well is shut-in or curtailed.
  - c) Length of time swabbing is required to return well to production after being shut-in.
  - d) Actual cost figures showing inability to continue operations without special relief
- 4) If failure to obtain a hardship gas well classification would result in premature abandonment, calculate the quantity of gas reserves which would be lost
- 5) Show the minimum sustainable producing rate of the subject well. This rate can be determined by:
  - a) Minimum flow or "log off" test; and/or
  - b) Documentation of well production history (producing rates and pressures, as well as gas/water ratio, both before and after shut-in periods due to the well dying, and other appropriate production data).
- 6) Attach a plat and/or map showing the proration unit dedicated to the well and the ownership of all offsetting acreage.
- 7) Submit any other appropriate data which will support the need for a hardship classification.
- 8) If the well is in a prorated pool, please show its current under- or over-produced status.
- 9) Attach a signed statement certifying that all information submitted with this application is true and correct to the best of your knowledge; that one copy of the application has been submitted to the appropriate Division district office (give the name) and that notice of the application has been given to the transporter/purchaser and all offset operators.

GENERAL INFORMATION APPLICABLE TO HARDSHIP GAS WELL CLASSIFICATION

## 1) Definition of Underground Waste.

"Underground Waste as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper use or dissipation of the reservoir energy, including gas energy and water drive, of any pool, and the locating, spacing, drilling, equipping, operating, or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool, and the use of inefficient underground storage of natural gas."

- 2) The only acceptable basis for obtaining a "hardship" classification is prevention of waste with the burden of proof solely on the applicant. The applicant must not only prove waste will occur without the "hardship" classification, but also that he has acted in a responsible and prudent manner to minimize or eliminate the problem prior to requesting this special consideration. If the subject well is classified as a "hardship" well, it will be permitted to produce at a specified minimum sustainable rate without being subject to shut-in by the purchaser due to low demand. The Division can rescind approval at any time without notice and require the operator to show cause why the classification should not be permanently rescinded if abuse of this special classification becomes apparent.
- 3) The minimum rate will be the minimum sustainable rate at which the well will flow. If data from historical production is insufficient to support this rate (in the opinion of the Director), or if an offset operator or purchaser objects to the requested rate, a minimum flow ("log off") test may be required. The operator may, if he desires, conduct the minimum flow test, and submit this information with his application.
- 4) If a minimum flow test is to be run, either at the operator's option or at the request of the Division, the offset operators, any protesting party, the purchaser and OCD will be notified of the date of the test and given the opportunity to witness, if they so desire.
- 5) Any interested party may review the data submitted at either the Santa Fe office or the appropriate OCD District Office.
- 6) The Director can approve uncontested applications administratively if, in his opinion, sufficient justification is furnished. Notice shall be given of intent to approve by attaching such notice to the regular examiner's hearing docket. Within 20 days following the date of such hearing, the affected parties will be permitted to file an objection. If no objection has been filed, the application may be approved.
- 7) Should a protest be filed in writing, the applicant will be permitted to either withdraw the application, or request it to be set for hearing.
- 8) An emergency approval, on a temporary bases for a period not to exceed 90 days, may be granted by the District Supervisor, pending filing of formal application and final action of the OCD Director. This temporary approval may be granted only if the District Supervisor is convinced waste will occur without immediate relief. If granted, the District Supervisor will notify the purchaser.
- 9) After a well receives a "hardship" classification, it will be retained for a period of one year unless rescinded sooner by the Division. The applicant will be required to certify annually that conditions have not changed substantially in order to continue to retain this classification.
- 10) Nothing here withstanding, the Division may, on its own motion, require any and all operators to show cause why approval(s) should not be rescinded if abuse is suspected or market conditions substantially change in the State of New Mexico.
- 11) A well classified as a "hardship well" will continue to accumulate over and under production (prorated pools). Should allowables exceed the hardship allowable assigned, the well will be permitted to produce at the higher rate, if capable of doing so, and would be treated as any other non-hardship well. Any cumulative overproduction accrued either before or after being classified "hardship" must, however, be balanced before the well can be allowed to produce at the higher rate.

STATE "FQ" GAS COM NO. 1

The subject well was recompleted 1/30/83 to the Morrow following an unsuccessful recompletion to the Atoka. The well had been initially completed in the Morrow 9/23/75. Since its recompletion to the Morrow, the well has produced 1.1 BCF.

Repair work was authorized 5/22/86 on the subject well when it failed to pass a packer leakage test as required by the NMOCD. A tubing leak was found and was subsequently repaired 6/5/86. Prior to this work, the well was producing 0 BO x 0 BW x 410 MCFD from the Morrow based upon a well test taken 4/26/86. Since the work was completed, the well has failed to produce. A tapered tubing string configuration has hampered attempts to return the well to production by swabbing. We feel that the well can be returned to its previous production level by stimulating and flowing the well. However, gas production curtailment by El Paso will only allow us to flow the well a few days a month, limiting our chances of successfully returning the well to previous production levels.

Based upon a 72-hour BHP dip-in taken 6/16/86, the well has a current bottomhole pressure of 1101 psi. At a 500 psi abandonment pressure, remaining reserves are estimated at 0.4583 BCF. Cumulative production from the Morrow as of 6/1/86 is 4.56 BCF. Under NMOCD field rules, the well must be returned to a producing status by 7/18/86 in order to hold the lease.

State "FQ" Gas Com No. 1  
660's x 1980/w (N-26-23-34) in Lea County, NM

Well History

- 02-19-75: Originally spudded with cable tools.
- 02-24-75: Set 24" conductor pipe at 38'. Cemented with 150 sacks. Cement circulated.
- 05-23-75: Set 16"-65#, H-40 casing at 792' in 20" hole. Cemented with 440 sacks. Cement circulated.
- 06-11-75: Set 10-3/4"-40.5#, N-80 and S-95 casing at 5160' in 14-3/4" hole. Cemented in two stages with DV tool set at 3428'. First stage w/650 sacks TLW and 300 sacks Class "C". Second stage w/3400 sacks TLW with 15% salt per sack and 1/4# Flocele and 150 sacks Class "C". TCMT - 550'.
- 07-09-75: Set 7-5/8"-29.7# to 33.7#, S-95 casing at 12,085' in 9-1/2" hole. Cemented in two stages. First stage w/800 sacks Trinity Lite-Weight and 300 sacks Class "H". Second stage w/1200 sacks TLW and 150 sacks Class "H". TCMT - 4725'.
- 09-02-75: Set 5"-17.9# liner at 13,890' in 6-1/2" hole. Top of liner at 11,759'. Cemented w/205 sacks Class "H" and .8% HACHP 22 plus .4% CFR-2 and 6# KCL. TCMT - 12,045'. TD at 13,910' and PBD at 13,681'.
- 09-17-75: Cleaned out and ran logs. Ran Model "FA" packer to 12,280'. Perforated interval 13,380'-13,391' w/2 JSPF.
- 09-23-75: Well complete in Morrow formation. On 24 hour IPT, well flowed 0 BCPD x 0 BWPD x 7250 MCFD thru 21/64" choke at a ftp of 2220 psi.
- 09-29-75: AOF calculated at 8218 MCFD.
- 12-23-76: AOF calculated at 5086 MCFD.
- 04-07-81: Misu x perf Morrow 13,380-13,392' x 13,473-13,479' w/2 spf.
- 04-14-81: Well flowed zero bf x 110 mcf in 24 hrs. TPF 525#.
- 04-28-82: Acidized Morrow perfs 13,380' - 392' x 13,473' - 479' w/4000 gals 7 1/2% MS acid x additives x nitrogen. Max. 6500 psi, Min. 5200 psi, ISIP 5200 psi. Flowed 0 BF x 84 MCF in 24 hours. FTP 465 psi.
- 09-12-82: Milled out Baker Model "FA" permanent pkr. Ran CIBP and set @ 13,320' and capped w/35' cmt. Perfed Atoka interval 13,096'-13,103' w/Vann gun system. Gas to surface in 1-1/2 hr. Only a slight show of gas.

- 09-20-82: Acidized Atoka interval 13,096'-13,103' w/2000 gals. 7-1/2% MS acid and additives and 1000 SCF N<sub>2</sub> per bbl. Max 7900 psi, Min. 7600 psi, ISIP 6600 psi, AIR 3.3 BPM. Swabbed. Only a slight show of gas.
- 10-18-82: Ran BHP bomb to 13,000'. BHP 3692 psi.
- 10-19-82: Opened well. No flow.
- 11-09-82: Opened well. No flow.
- 01-27-83: Final Report. Attempted recompletion in Atoka was a failure.
- 01-30-83: Drill out CIBP at 13,320'. Rtg x pkr with PSA 13,234'. Acid w/2000 gal 7-1/2% HCl w/additives and w/1000 SCF nitrogen per bbl and w/48 ball sealers. Opened well. Pressure decreased to point of no flow.
- 03-06-83: On 24 hour test, well flowed 0 x 0 x 100.
- 04-21-83: Well successfully returned to Morrow formation by fracturing with 3500 gal Polaris 40# gel and with 3000 gal Apollo 40# gel and with 8600 gal carbon dioxide and with 16,500 lb 20/40 propant. On 24 hour test well flowed 0 x 15 x 3971 thru 48/64 inch choke at a ftp of 700 psi. The cost of this job is estimated at \$54,796 gross and \$41,097 net.
- 10-22-83: On 24 hour test, well flowed 0 x 3 x 1856.







# Amoco Production Company

## ENGINEERING CHART

SHEET NO.

OF

FILE

APPN

SUBJECT

State "FG" Well COM No. 1

Antelope Ridge Field

DATE

3/4/83

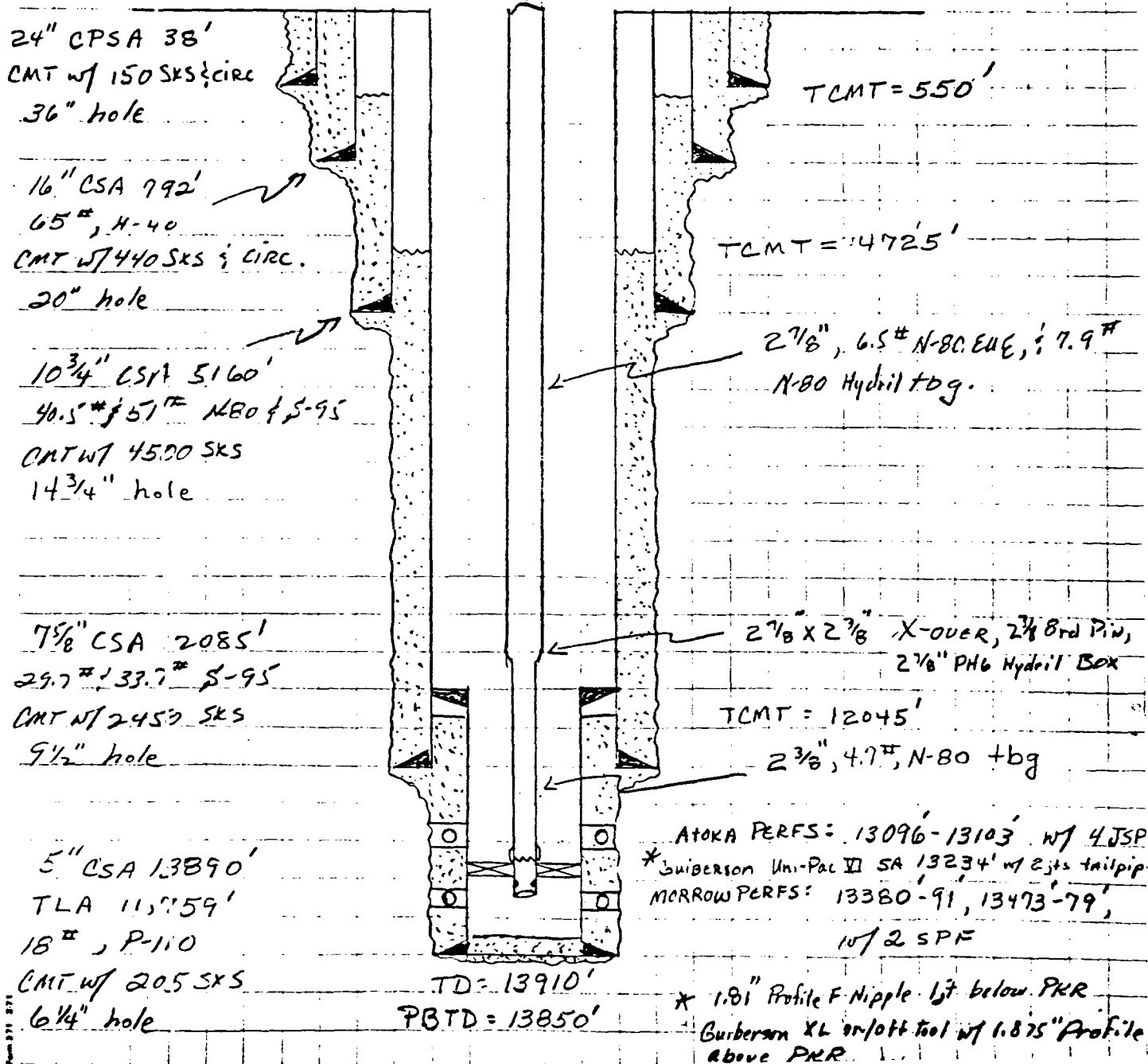
BY

cga

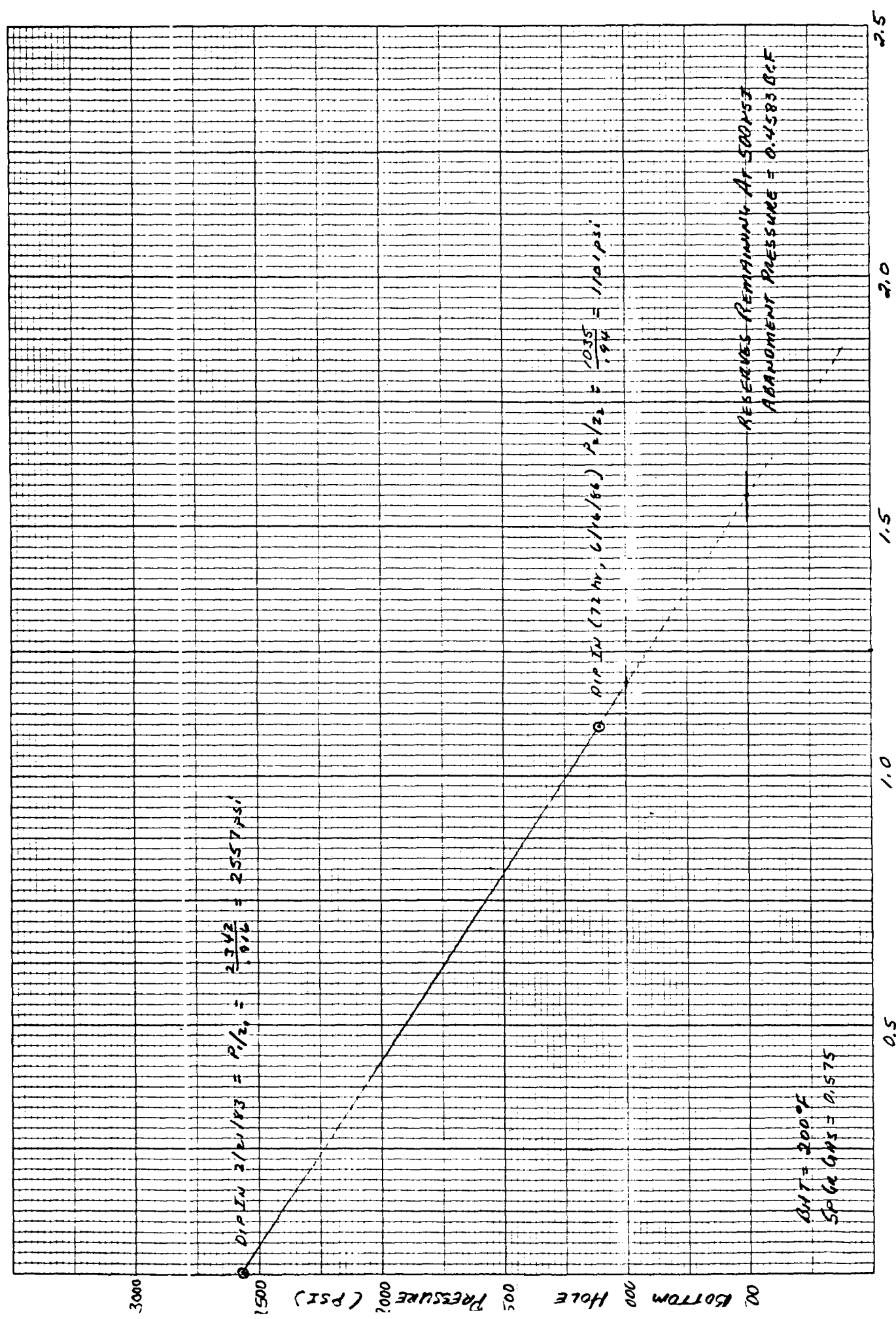
LOCATION: 660' FSL, 1980' FHL, Sec 26, T-23-S, R-34-E  
LEA COUNTY, NEW MEXICO

COMPLETION DATE: 9-23-75

ELEVATION: 3441' GL, 3462' KB



# RESERVE ESTIMATION STATE FQ GAS Com. No. 1



RESERVE REMAINING AT 500 PSI  
 ADJACENT PRESSURE = 0.4583 BCF

$Q_{HT} = 200 \text{ °F}$   
 $5000 \text{ GAS} = 0.575$

# INDUSTRY PRODUCTION DATA RATE-TIME PLOTS

GAS

WELL: STATE FQ GAS COM

000001

LOCATION: 26N023S034E

FIELD: ANTELOPE RIDGE MORROW (GAS)

PM

008001905 RESEFVOIR: PIA

OPERATOR: AMOCO PRODUCTION CO

019923

COMP DATE

STATE: NM 30 COUNTY: LEA

02:5

TOT. GAS CUM:

881,876

FIRST PROD 83 05 LAST PROD 83 09

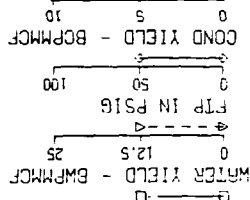
TOT. OIL CUM:

74

REQUESTOR: BROWNLEE-HOB-29

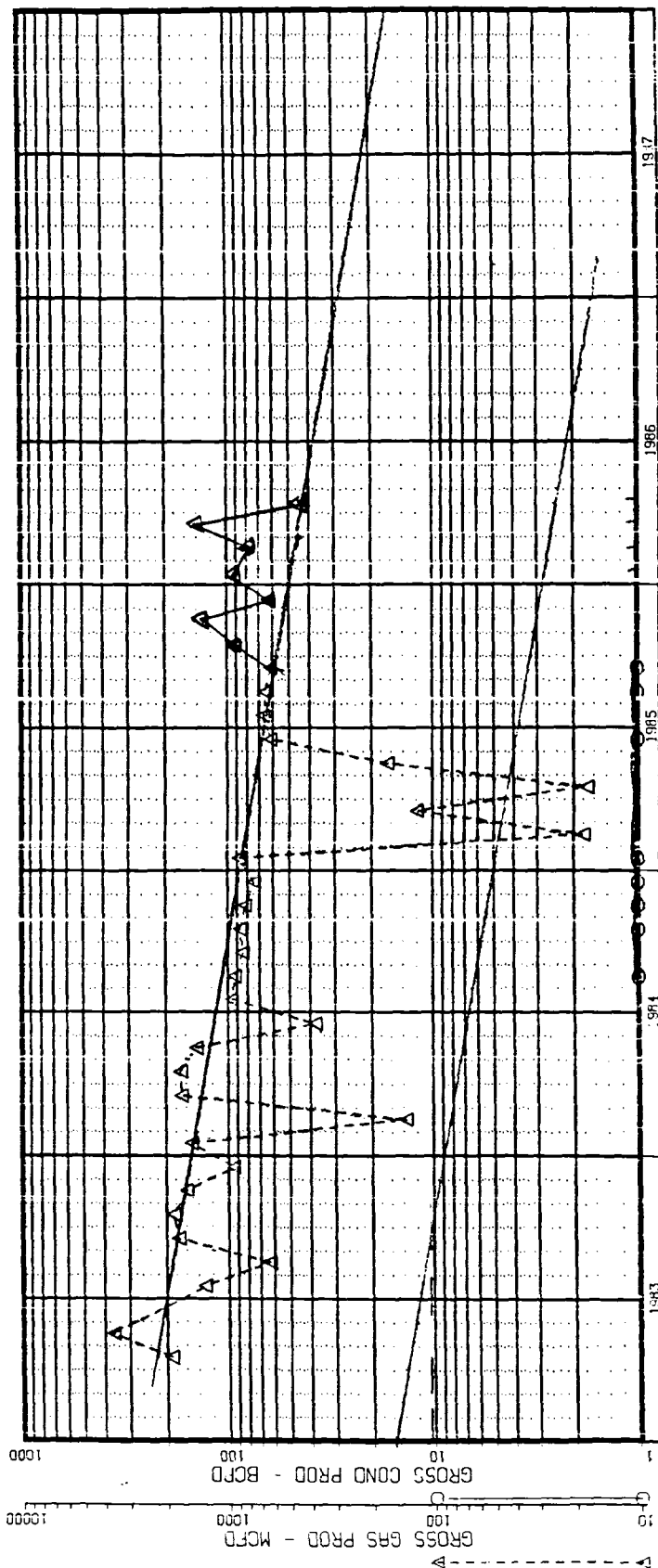
LOCATION: HOBBS

PERF:



MAJOR PRODUCT

10000  
1000  
100  
10  
1



1986-04-21

TIME

REPORT NUMBER 321

PRODUCTION SINCE WELL WAS RECOMPLETED TO MORROW 1/30/83

**XICO OIL CONSERVATION COMM' PT  
WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
Supersedes C-128  
Effective 1-4-65

All distances must be from the outer boundaries of the Section

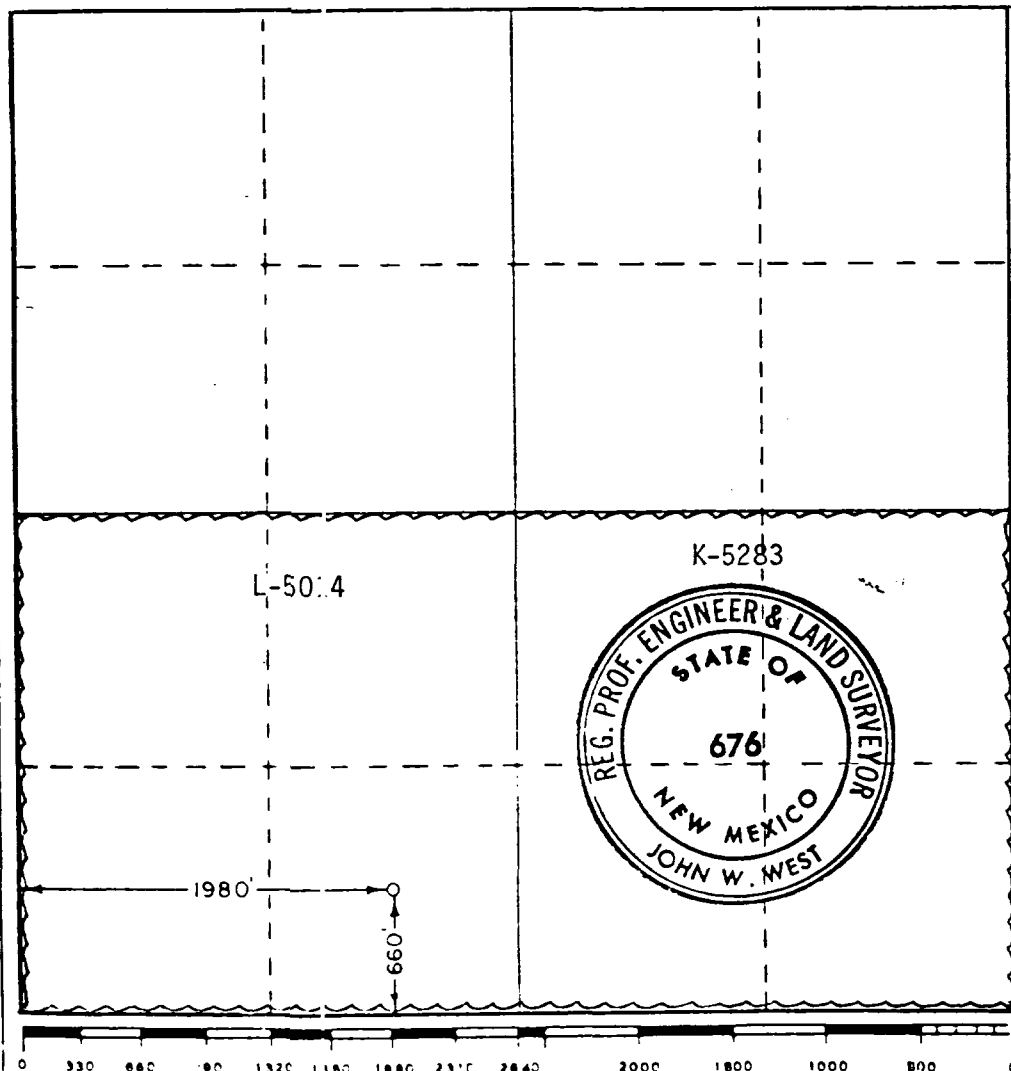
Operator <b>Amoco Production Company</b>			Lease <b>State F Q Gas Com</b>		Well No. <b>1</b>
Init Letter <b>N</b>	Section <b>26</b>	Township <b>23 South</b>	Range <b>34 East</b>	County <b>Lea</b>	
Actual Footage Location of Well: <b>660</b> feet from the <b>South</b> line and <b>1980</b> feet from the <b>West</b> line					
Ground Level Elev. <b>3441.3</b>	Producing Formation <b>Morrow</b>		Pool <b>Antelope Ridge Morrow</b>		Dedicated Acreage: <b>3.20</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 communitization

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.



<b>CERTIFICATION</b>	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
Name	<i>Charles M. Loring</i>
Position	Assist. Admin. Analyst
Company	Amoco Production Company
Date	January 19, 1983
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	January 20, 1975
Registered Professional Engineer and/or Land Surveyor	
<i>John W. West</i>	
Certificate No.	<b>676</b>

ATTACHMENT TO  
APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

LEASE AND WELL NUMBER State "FQ" Gas Com No. 1

LOCATION 660' FSL X 1980' FWL, Section 26, T-23-S, R-34-E, Lea County, New Mexico

I hereby certify that I, or persons under my direct supervision, have prepared the data submitted with the enclosed Application for Classification as Hardship Gas Well for the State "FQ" Gas Com No. 1 and that I am familiar with the conditions which currently exist; that the statements made in this application are true and correct to the best of my knowledge; that one copy of the application has been submitted to the New Mexico Oil Conservation Division District Office at Hobbs, New Mexico; and, further that El Paso Natural Gas Company as the transporter/purchaser, and all offset operators have been furnished copies of the Application form.

6-23-76  
(Date)

J.R. Amick  
SIGNATURE AND TITLE

DISTRICT MANAGER  
AMOCO PRODUCTION COMPANY  
P. O. BOX 68  
HOBBS, NM 88240

P 169 573 575

## RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1984-448-014

Sent to <i>Meridian Oil Company</i>	
Street and No. <i>2100 Santa Drive</i>	
P.O., State and ZIP Code <i>Midland, TX 79701</i>	
Postage	\$ .22
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	.70
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 1.67
Postmark or Date <i>JUN 24 1986</i>	

P 169 573 576

## RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1984-448-014

Sent to <i>Shell Oil Company</i>	
Street and No. <i>P.O. Box 2462</i>	
P.O., State and ZIP Code <i>Houston, TX 77001</i>	
Postage	\$ .22
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	.70
TOTAL Postage and Fees	\$ 1.67
Postmark or Date <i>JUN 24 1986</i>	

P 169 573 578

## RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1984-448-014

Sent to <i>Gates Petroleum Corp.</i>	
Street and No. <i>209 S. Fourth Street</i>	
P.O., State and ZIP Code <i>Artesia, NM 88210</i>	
Postage	\$ .22
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	.70
Return receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$ 1.67
Postmark or Date	

P 169 573 577

## RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED  
NOT FOR INTERNATIONAL MAIL

(See Reverse)

PS Form 3800, Feb. 1982

★ U.S.G.P.O. 1984-448-014

Sent to <i>Superior Oil Company</i>	
Street and No. <i>204 W. Illinois</i>	
P.O., State and ZIP Code <i>Midland, TX 79702</i>	
Postage	\$ .22
Certified Fee	.75
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt Showing to whom and Date Delivered	
Return receipt showing to whom, Date, and Address of Delivery	.70
TOTAL Postage and Fees	\$ 1.67
Postmark or Date	