DOYLE HARTMAN
Oil Operator
500 N. MAIN
P. O. BOX 10426
MIDLAND, TEXAS 79702

(915) 684-4011

May 16, 1984

New Mexico Oil Conservation Division
District I Office
Post Office Box 1980
Hobbs, New Mexico 88240

Attention: Mr. Jerry Sexton

Re: Emergency Hardship Gas
Well Classification
Gulf-Greer No. 1
1980 FSL and 990 FWL (L)
Section 21, T-22-S, R-36-E
Lea County, New Mexico

Gentlemen:

Please find enclosed one copy of our request before the New Mexico Oil Conservation Division in Santa Fe to administratively classify our Gulf-Greer No. 1 well, located 1980 FSL and 990 FWL (L) Section 21, T-22-S, R-36-E, Lea County, New Mexico as a hardship gas well.

We respectfully request emergency approval of our request for hardship gas well classification on a temporary basis not to exceed 90 days pending final action on our formal application by the OCD Director.

Thank you for your attention to this matter.

Very truly yours,

DOYLE HARTMAN

Michelle Hembree

Michelle Hembree
Administrative Assistant

/mh

cc: El Paso Natural Gas Company
Post Office Box 1492
El Paso, Texas 79978

Attention: Mr. Paul Burchell
Conservation Engineer

El Paso Natural Gas Company
Post Office Box 1492
El Paso, Texas 79978

Attention: Mr. Jim Minnick

State of New Mexico
Energy and Minerals Department
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Northern Natural Gas Company
2223 Dodge Street
Omaha, Nebraska 68102

DOYLE HARTMAN
Oil Operator
500 N. MAIN
P. O. BOX 10426
MIDLAND, TEXAS 79702

(915) 684-4011
May 16, 1984

Offset Jalmat (Gas) Operators
Doyle Hartman-
Gulf-Greer Lease
SW/4 Section 21
T-22-S, R-36-E
Lea County, New Mexico

Please be advised that Doyle Hartman, as operator of the Gulf-Greer No. 1 well located 1980 FSL and 990 FWL (L) Section 21, T-22-S, R-36-E, Lea County, New Mexico has filed with the New Mexico Oil Conservation Division for administrative approval of his Gulf-Greer No. 1 well for hardship gas well classification, pursuant to NMOCD Order R-7453.

If you have any questions as to the nature of the application, please do not hesitate to contact us.

Very truly yours,

DOYLE HARTMAN

Michelle Hembree

Michelle Hembree
Administrative Assistant

/mh

cc: All Operators Listed on Attached Table

PS Form 3811, Dec. 1980

● SENDER: Complete items 1, 2, 3, and
Add your address in the "RETURN TO" space
on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
☒ Show to whom and date delivered ..... 60 ¢
☐ Show to whom, date, and address of delivery.. ¢
2. ☐ RESTRICTED DELIVERY ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ 0.60

3. ARTICLE ADDRESSED TO:
NMOCD
Post Office Box 2088
Santa Fe, New Mexico 87501

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER
P 265 388 092

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☐ Authorized agent

5. DATE OF DELIVERY

POSTMARK
MAY 21 1984

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

Gulf-Greer Hardship/mh

P 265 338 092

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO	NMOCD
STREET AND NO.	Post Office Box 2088
P.O., STATE AND ZIP CODE	Santa Fe, NM 87501
POSTAGE	$ 2.07
CONSULT POSTMASTER FOR FEES — CERTIFIED FEE	75 ¢
OPTIONAL SERVICES — SPECIAL DELIVERY	¢
OPTIONAL SERVICES — RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED	60 ¢
RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 3 4 2
POSTMARK OR DATE	5-17-84

PS Form 3800, Apr. 1976

MIDLAND
MAY 17
PM

PS Form 3811, Dec. 1980

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space
on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
☒ Show to whom and date delivered ..... 60 ¢
☐ Show to whom, date, and address of delivery.. ¢
2. ☐ RESTRICTED DELIVERY ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $ 0.60

3. ARTICLE ADDRESSED TO:
Northern Natural Gas Company
2223 Dodge Street
Omaha, Nebraska 68102

4. TYPE OF SERVICE:
☐ REGISTERED ☐ INSURED
☒ CERTIFIED ☐ COD
☐ EXPRESS MAIL

ARTICLE NUMBER
P 265 338 094

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE ☐ Addressee ☒ Authorized agent

5. DATE OF DELIVERY
5-21

POSTMARK
MAY 21 1984

6. ADDRESSEE'S ADDRESS (*Only if requested*)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

Gulf-Greer Hardship/mh

P 265 338 094

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO	Northern Natural Gas Co.
STREET AND NO.	2223 Dodge Street
P.O., STATE AND ZIP CODE	Omaha, Nebraska 68102
POSTAGE	$ .88
CONSULT POSTMASTER FOR FEES — CERTIFIED FEE	75 ¢
OPTIONAL SERVICES — SPECIAL DELIVERY	¢
OPTIONAL SERVICES — RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED	60 ¢
RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY	¢
RETURN RECEIPT SERVICE — SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE — SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 2.23
POSTMARK OR DATE	5-17-84

PS Form 3800, Apr. 1976

Gulf-Greer Hardship/mh

PS Form 3811, Dec. 1980

● SENDER: Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- [X] Show to whom and date delivered ..... 60¢
- [ ] Show to whom, date, and address of delivery .. ¢
2. [ ] RESTRICTED DELIVERY ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $0.60

3. ARTICLE ADDRESSED TO:

El Paso Natural Gas Company
Post Office Box 1492
El Paso, TX 79978

4. TYPE OF SERVICE:
- [ ] REGISTERED [ ] INSURED
- [X] CERTIFIED [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER: P 265 338 028

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [ ] Addressee [ ] Authorized agent

5. DATE OF DELIVERY: MAY 21 1984

POSTMARK: EL PASO TEX 1984

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

Gulf Greer No. 1 Hardship/mh

P 265 338 028

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO	El Paso Natural Gas Co.
STREET AND NO.	Post Office Box 1492
P.O., STATE AND ZIP CODE	El Paso, Texas 79978
POSTAGE	$ .85
CERTIFIED FEE	75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 2.23
POSTMARK OR DATE	5-17-84

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

Gulf Greer Hardship/mh

P 265 338 017

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO	NMOCD
STREET AND NO.	Post Office Box 1980
P.O., STATE AND ZIP CODE	Hobbs, New Mexico 88240
POSTAGE	$ .88
CERTIFIED FEE	75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	60 ¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 2.23
POSTMARK OR DATE	5-17-84

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

Gulf-Greer Hardship/mh

PS Form 3811, Dec. 1980

on reverse.

(CONSULT POSTMASTER FOR FEES)

1. The following service is requested (check one).
- [X] Show to whom and date delivered ..... 60¢
- [ ] Show to whom, date, and address of delivery .. ¢
2. [ ] RESTRICTED DELIVERY ¢
(The restricted delivery fee is charged in addition to the return receipt fee.)

TOTAL $0.60

3. ARTICLE ADDRESSED TO:

NMOCD
Post Office Box 1980
Hobbs, New Mexico 88240

4. TYPE OF SERVICE:
- [ ] REGISTERED [ ] INSURED
- [X] CERTIFIED [ ] COD
- [ ] EXPRESS MAIL

ARTICLE NUMBER: P 265 338 017

(Always obtain signature of addressee or agent)

I have received the article described above.
SIGNATURE [ ] Addressee [ ] Authorized agent

5. DATE OF DELIVERY: MAY 21 1984

POSTMARK: HOBBS N.M. 1984

6. ADDRESSEE'S ADDRESS (Only if requested)

7. UNABLE TO DELIVER BECAUSE:

7a. EMPLOYEE'S INITIALS

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

Gulf-Greer Hardship/mh

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

May 23, 1984

TONEY ANAYA
GOVERNOR

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

Doyle Hartman
P. O. Box 10426
Midland, Texas 79702

Attention Ms. Michelle Hembree

Re: Hardship Gas Well Classification

Dear Ms. Hembree:

In accordance with Division Rule 411 and as requested by your letter of May 16, 1984, the well listed below is hereby granted emergency gas well classification for a period of 90 days pending final action by the OCD Director.

Gulf Greer No. 1 Unit L Section 21, T-22-S, R-36-E Jalmat

Yours very truly,

OIL CONSERVATION DIVISION

Jerry Sexton
Supervisor, District 1

mc

cc-Mr. Joe D. Ramey, Director
OCD, Santa Fe, New Mexico

Mr. Paul Burchell
El Paso Natural Gas Co.
El Paso, Texas

MAY 29 1984

DOYLE HARTMAN
Oil Operator
500 N. MAIN
P. O. BOX 10426
MIDLAND, TEXAS 79702

(915) 684-4011
May 29, 1984

Offset Operators
Doyle Hartman-
Gulf-Greer No. 1
SW/4 Section 21
T-22-S, R-36-E
Lea County, New Mexico

Gentlemen:

You were informed by our letter dated May 16, 1984 of our administrative application pending before the New Mexico Oil Conservation Division to classify our Gulf-Greer No. 1 as a hardship gas well to be produced at a minimum rate of 120 mcfpd.

Although our original application was applied for administratively, the Commission has routinely set all hardship applications for hearing, and the case for our Gulf-Greer No. 1 will appear on the NMOCD's docket in the very near future.

We will keep you as an offset operator informed of the status of our application insofar as it applies to you.

Very truly yours,

DOYLE HARTMAN

Michelle Hembree

Michelle Hembree
Administrative Assistant

/mh

cc: Mr. William F. Carr

Conoco, Inc.
Post Office Box 1959
Midland, Texas 79702

Dalport Oil Corporation
3471 First National Bank Building
Dallas, Texas 75202

Attention: Mr. W. L. Todd, Jr.

AN

702

Sun Exploration and Production Company
One Petroleum Center, Suite 204
North A at Wadley, Building 8
Midland, Texas 79705

IAN

9702

Dallas McCasland
Post Office Box 206
Eunice, New Mexico 88231

perator
OX 10426
TEXAS 79702

Dalport Oil Corporation
3471 First National Bank Building
Dallas, Texas 75202

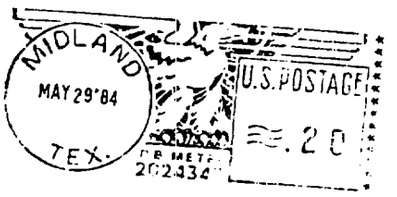
Attention: Mr. W. L. Todd, Jr.

HARTMAN
perator
OX 10426
TEXAS 79702

Conoco, Inc.
Post Office Box 1959
Midland, Texas 79702

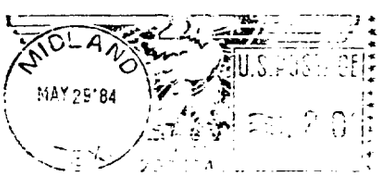
Gulf- Greer No. 1 - mailed 5-29-84

ator
10426
AS 79702



Dallas McCasland
Post Office Box 206
Eunice, New Mexico 88231

RTMAN
tor
0426
AS 79702



Sun Exploration and Production Company
One Petroleum Center, Suite 204
North A at Wadley, Building 8
Midland, Texas 79705

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

L CONSERVATION DIVISION
P. O. Box 2088
Santa Fe, New Mexico 87501

Side 1

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Operator Doyle Hartman Contact Party Michelle Hembree

Address Post Office Box 10426, Midland, Texas 79702 Phone No. (915) 684-401

Lease Gulf-Greer Well No. 1 UT L Sec. 21 TWP 22-South RGE 36-East

Pool Name Jalmat (Gas) Minimum Rate Requested 120 mcfpd

Transporter Name El Paso Natural Gas Company Purchaser (if different) Northern Natural Gas Co.

Are you seeking emergency "hardship" classification for this well? XXX 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.

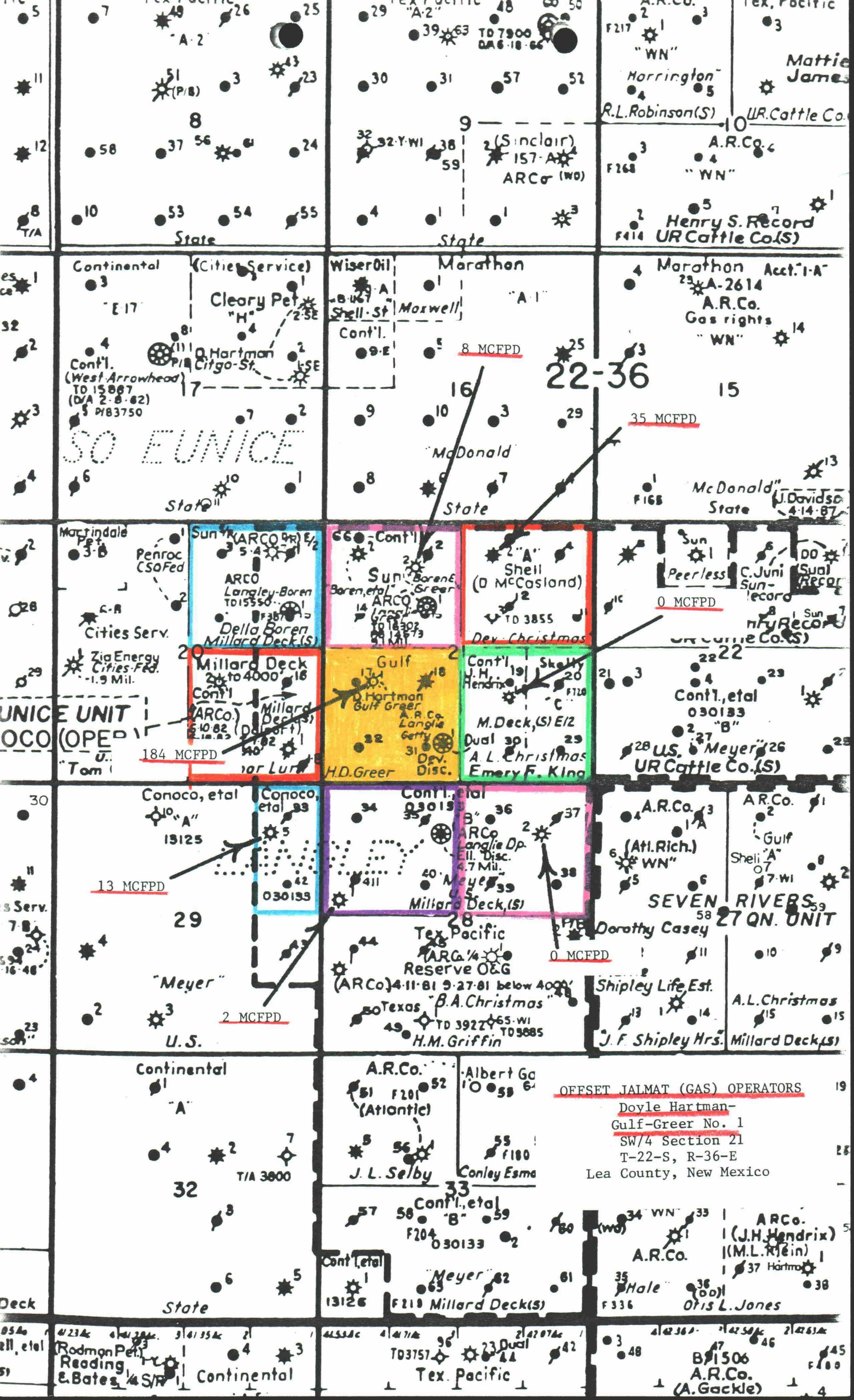
7) Should a protest be filed in writing, the applicant will be permitted to either withdraw the application, or request it to be set for hearing.

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.

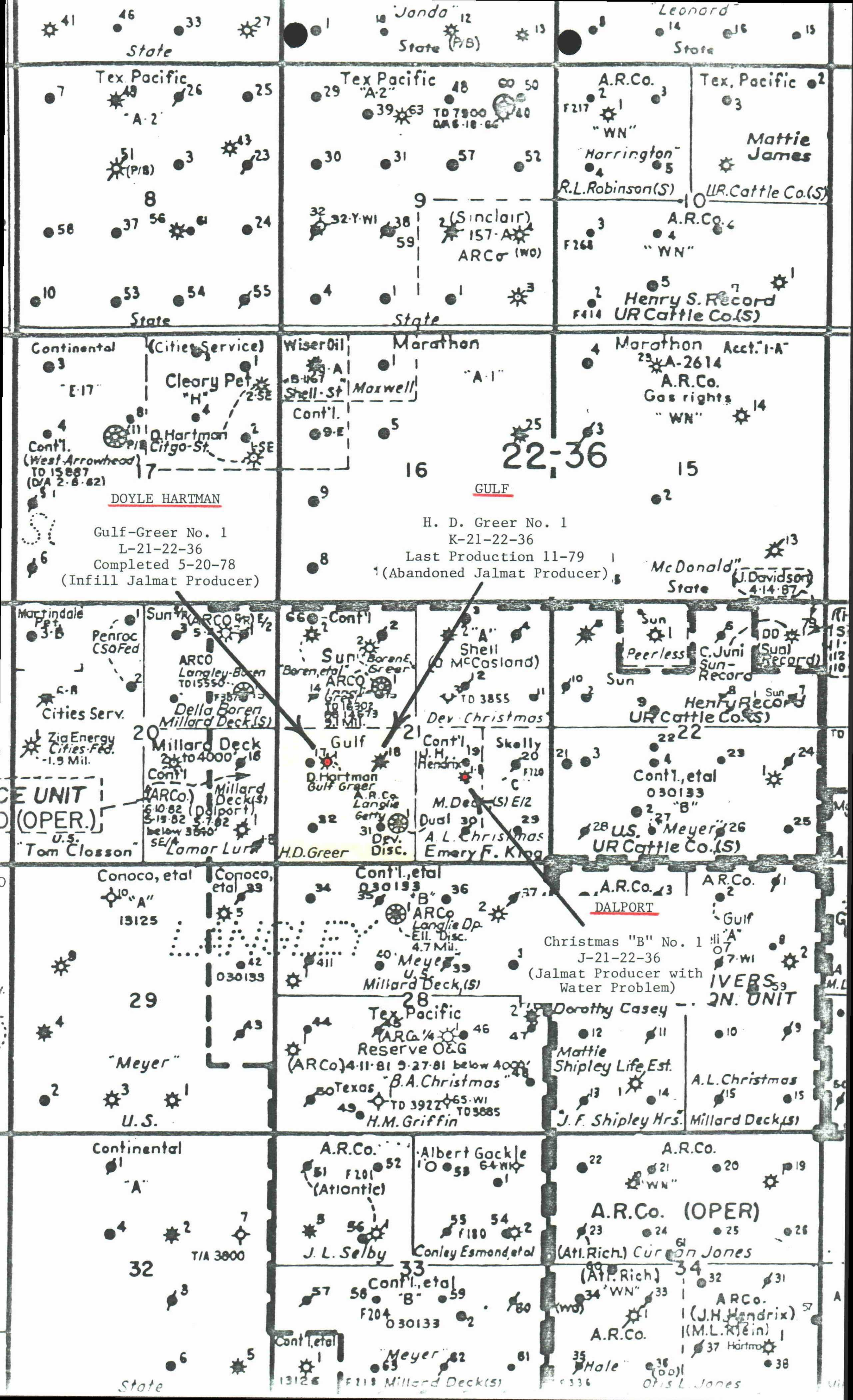
10) Nothing here withstanding, the Division may, on its own motion, require any and all operators to show cause why approval(s) should not be rescinded if abuse is suspected or market conditions substantially change in the State of New Mexico.

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.



OFFSET JALMAT (GAS) OPERATORS

Doyle Hartman-
Gulf-Greer No. 1
SW/4 Section 21
T-22-S, R-36-E
Lea County, New Mexico



State
Jonda
Leonard
Tex Pacific
"A-2"
A.R.Co.
"WN"
Harrington
Mattie James
R.L.Robinson(S)
UR Cattle Co.(S)
8
9
10
(Sinclair)
ARCo
State
Henry S. Record
UR Cattle Co.(S)
Continental
(Cities Service)
Wiser Oil
Marathon
Acct. 1-A
"E-17"
Cleary Pet
"H"
Shell-St
Maxwell
Cont'l.
D.Hartman
Citgo-St.
A.R.Co.
Gas rights
"WN"
Cont'l.
(West Arrowhead)
TD 15867
(D/A 2-6-62)
17
16
22-36
15
DOYLE HARTMAN
GULF
Gulf-Greer No. 1
L-21-22-36
Completed 5-20-78
(Infill Jalmat Producer)
H. D. Greer No. 1
K-21-22-36
Last Production 11-79
(Abandoned Jalmat Producer)
McDonald
State
J.Davidson
4-14-87
Martindale Pet.
Penroc CSO Fed
ARCO
Langley-Boren
Cities Serv.
Della Boren
Millard Deck(S)
Zia Energy
Cities Fed.
1.9 Mil.
20
Millard Deck
Sun
Boren etal
Greer
Shell
(J. McCasland)
Dev. Christmas
Peerless
C. Juni
Sun-Record
Henry Record
UR Cattle Co.(S)
21
22
Gulf
D.Hartman
Gulf Greer
A.R.Co.
Langlie
Getty
Dev. Disc.
H.D.Greer
Cont'l.
J.H. Hendrix
Skelly
M.Deck(S) E/2
A.L. Christmas
Emery F. King
Cont'l., etal
030133
"B"
U.S.
Meyer
UR Cattle Co.(S)
(ARCo.)
(Dalport)
Lamar Lura
U.S.
Tom Closson
CE UNIT
D (OPER.)
Conoco, etal
"A"
13125
Conoco, etal
030133
Cont'l., etal
ARCo
Langlie Dp.
Ell. Disc.
4.7 Mil.
Meyer
U.S.
Millard Deck(S)
A.R.Co.
DALPORT
Christmas "B" No. 1
J-21-22-36
(Jalmat Producer with
Water Problem)
A.R.Co.
Gulf
"A"
29
28
Tex Pacific
Reserve O&G
(ARCo) 4-11-81 9-27-81
B.A. Christmas
Texas
H.M. Griffin
Dorothy Casey
Mattie Shipley Life Est.
J.F. Shipley Hrs.
A.L. Christmas
Millard Deck(S)
"Meyer"
U.S.
Continental
"A"
32
T/A 3800
A.R.Co.
(Atlantic)
J.L. Selby
Albert Gackle
Conley Esmond, et al
A.R.Co.
A.R.Co. (OPER)
(Atl.Rich.) Curtan Jones
33
34
Cont'l., etal
"B"
030133
(Atl. Rich)
"WN"
A.R.Co.
ARCo.
(J.H.Hendrix)
(M.L.Klein)
Cont'l., etal
Meyer
Millard Deck(S)
Hale
Otis L. Jones
State

OFFSET JALMAT (GAS) OPERATORS
Doyle Hartman-
Gulf-Greer No. 1
SW/4 Section 21
T-22-S, R-36-E
Lea County, New Mexico
(160 acres)

OPERATOR	LEASE & WELL NAME(S)	GAS WELL LOCATION(S)	UNIT DESCRIPTION	NUMBER OF ACRES	JALMAT AVERAGE PRODUCTION RATE (MCFPD)
Sun Exploration & Production Co.	Boren Lease	No Active Well	E/2 NE/4 Section 20 T-22-S, R-36-E	160	0
Sun Exploration & Production Co.	Boren & Greer Gas Com No. 2	C-21-22S-36E	NW/4 Section 21 T-22-S, R-36-E	160	8
Dallas McCasland	Devonian Christmas No. 2	B-21-22S-36E	NE/4 Section 21 T-22-S, R-36-E	160	35
Dalport Oil Corporation	Annie L. Christmas B No. 1	J-21-22S-36E	SE/4 Section 21 T-22-S, R-36-E	160	0
Conoco	Myer B-28 Battery 2 Lease	No Active Well	NE/4 Section 28 T-22-S, R-36-E	160	0
Conoco	Myer B-28 Battery 2 No. 1	E-28-22S-36E	NW/4 Section 28 T-22-S, R-36-E	160	2
Conoco	Myer A-29 A/C 2 No. 5	A-29-22S-36E	E/2 NE/4 Section 29 T-22-S, R-36-E	80	13
Conoco	Lamar Lunt No. 2	J-20-22S-36E	SE/4 Section 20 T-22-S, R-36-E	160	9

NOTE: Average Production for Doyle Hartman Gulf-Greer No. 1 for 1983 was 184 MCFPD.

Tabulation of Overage/Underage
Doyle Hartman-
Gulf-Greer No. 1
SW/4 Section 21
T-22-S, R-36-E
Lea County, New Mexico
Jalmat (Gas)

For the period extending from January, 1983 through the March, 1984, the Gulf-Greer No. 1 has not accumulated any overage or underage in relation to the Jalmat (Gas) pool allowable.

APPLICATION FOR CLASSIFICATION AS
HARDSHIP GAS WELL
Doyle Hartman-
Gulf-Greer No. 1
SW/4 Section 21
T-22-S, R-36-E
Lea County, New Mexico
Jalmat (Gas) Pool

1. Applicant expects that restriction of gas production from this well below a minimum of 120 mcf per day will result in "underground waste" (as defined by 1) GENERAL INFORMATION APPLICABLE TO HARDSHIP GAS WELL CLASSIFICATION). This expectation is predicated upon the observation that this well has produced water at daily volumes of from 34 bbls/day to 45 bbls/day since December, 1979, when water production from this well was initially observed. Unless sufficient gas is produced so that water flowing into the wellbore is produced (and not allowed to accumulate and eventually flow from the largely water saturated volumes of reservoir rock to the substantially gas saturated volumes of reservoir rock), loss of reserves will probably occur due to both loss of relative permeability to gas and/or loss of absolute permeability to all fluids.

2. A) Water production cannot be eliminated or reduced by remedial completion practices, since the well is completed in the Seven Rivers portion of the Jalmat Pool interval between depths of 3479 feet and 3585 feet. Since no water was initially produced, none of the several Seven Rivers sands in which the well is completed had any indigenous water saturation. Any attempt to determine the source of water within the vertical formation section would require "killing" the well; the damage that this application is seeking to avoid would (or could) likely occur during the attempt to isolate the water bearing section. Even if the source of water were found to be a limited portion of the vertical section, there is a substantial risk that attempts to squeeze cement this section would also result in the reduction or elimination of gas production.

   B) This well has a 57-D rod-pumping unit installed with a 1¼" pump and 54" stroke pumping at 10 strokes per minute. Water is pumped from the tubing, while gas production flows from the casing-tubing annulus. Fluid cannot be effectively pumped from the well unless accompanied by sufficient gas production so that reduction of pump volumetric efficiency does not occur due to "gas locking" of the pump valves.

3. Initial production of this well occurred in May, 1978, but no water production was observed until December, 1979. Since December, 1979, water production has varied between about 35 bbls per day and

approximately 45 bbls per day (except for June, 1981, when water production averaged 67 bbls per day), while the observed water-gas ratio (as illustrated by the attached graph of the logarithm of water-gas ratio as a function of time) has increased irregularly. These facts serve to demonstrate that the water production is relatively invariant, while, as gas production rates decline because of depletion and pipeline proration, the water-gas ratio increases. Examination of the water-gas ratio trend for the period August, 1983 through March, 1984 reveals a water-gas ratio irregularly increasing from about 0.2 bbl/mcf to approximately 0.27 bbl/mcf. The water-gas ratio of 0.27 bbl/mcf occurred in December, 1983, and, during that month, gas production averaged 120 mcfpd; therefore, this experience indicates that restriction of the gas production rate below 120 mcf/d will result in accumulation of water inside the wellbore and, ultimately, in "underground waste". Further, at water production rates of 35 bbls/day and with the current southern Lea County rate of $1.31 per bbl, 16.5 mcf/day must be produced to pay for water hauling and disposal costs alone, without any consideration of other necessary costs of operation.

4. Failure to obtain a hardship well classification could result in loss of substantial gas reserves for this well; this loss can be documented as follows:

   Estimated Original Gas-in-Place (5-78):
   Between 1124 mmcf and 1319 mmcf

   Estimated Deliverability Projected Gas Recovery Factor, Fraction of Original Gas in Place:
   0.8974

   Estimated Ultimate Gas Recovery, mmcf:
   Decline curve projection: 1009.0
   Deliverability projection: 1003.00

   Cumulative Gas Recovery, mmcf at April 1, 1984:
   583.914

   Estimated Remaining Gas Recovery, mmcf:
   Decline curve projection: 425.1
   Deliverability projection: 419.1

5. Special daily tests were made for this well during the period April 17-22, 1983 with the following results:

DATE	Produced Volumes GAS,mcf/d	Water,bbl/d	Water-Gas Ratio bbl/mcf	Wellhead Pressure psi
17	28	36	1.29	90
18	72	19	0.26	88
19	94	36	0.38	86
20	134	24	0.18	81
21	143	48	0.34	76
22	175	42	0.24	70

These data substantiate that, in order to prevent the probable occurrence of "underground waste", the Doyle Hartman Gulf-Greer No. 1 must be produced at a minimum rate of 120 mcf per day.

DRILLING REPORT
GULF GREER # 1
SW/4 SECTION 21
T-22-S, R-36-E
Lea County, New Mexico

3-31-78 Moving in on Gulf Greer # 1 - will begin drilling late tonight.

4-01-78 Moved in and rigged up rotary rig. Spudded well at 3:30 A.M. C.S.T. 4-1-78. Now presently drilling a 12¼-inch hole at a total depth of 169 feet. Daily time breakdown: 21½ hrs moving in rotary rig, 2½ hrs. drilling.

4-02-78 Presently WOC at a total depth of 476 feet. Drilled a 12¼-inch hole to a total depth of 476 feet. Circulated hole two hours and then pulled and laid down drill collars. Ran 12 jts. (481.44 feet) 28 lb/ft, Grade-B, 8RD, ST&C casing and landed at 475 feet RKB. Cemented casing with 175 sx of API class-C cement contáing 4% gel and 2% CaC/2 followed by 125 sx of API Class-C cement containing 2% CaC/2. Plug down at 7:30 P.M. CST 4-1-78. Circulated 160 sx of excess cement to pit.

4-03-78 Drilling 7 7/8-inch hole at a total depth of 1120 feet. Progress previous 24 hrs was 640 feet. Mud properties are: WT= 9.5, Vis=28 WL=NC. Daily time breakdown: 8½ hrs. WOC, 4 hrs nippling up, 11½ hrs. drilling. Deviation survey was 1° @ 970 feet.

4-04-78 Drilling in Salado Salt section at a total depth of 1974'. Progress previous 24 hours was 674 feet. Mud properties are: WT = 10.1, Vis = 28, WL = NC. Deviation survey was 3/4 degrees at 1475. Daily time breakdown was 23¾ hrs. drilling, ¼ hrs rig service, ½ hr Totco.

4-05-78 Drilling in Salado Salt section at a total depth of 2485 feet. Progress previous 24 hrs. was 690 feet. Mud properties are: WT = 10.1, Vis = 28, WL = NC. Daily time breakdown: 23 3/4 hrs. drilling, 1/4 hrs rig service.

4-06-78 Drilling in Tansil formation at a total depth of 3031 feet. Progress previous 24 hours was 545 feet. Mud properties are: WT = 10.1 VIS = 28, WL = NC. Deviation survey was 1½ degrees at 2677'. Daily time breakdown: 14½ hrs. drilling, 3/4 hrs TOTCO , 5½ hrs. trip, ½ hrs. washing to bottom, 2 hrs. rig repair, 3/4 hrs. flowline change.

4-07-78 Drilling in Seven-Rivers Formation at total depth of 3313 feet. Progress previous 24 hours was 282 feet. Mud properties are: WT = 10.2 VIS = 35, WL = 11.8. Daily time breakdown: 23 hours drilling ¼ hour rig service, 3/4 hour rig repair.

4-08-78 Drilling in Seven Rivers formation at a total dpeth of 3600 feet. Progress previous 24 hrs. was 287 feet. Mud properties are: WT = 10.4 Vis = 35, WL = 6.8. Daily time breakdown: 23½ hrs drilling, ½ hrs. rig service.

4-09-78 Drilled well to a total depth of 3651 feet. Circulated hole two hours and pulled drill string. Rigged up Welex and logged well with CDL-Neutron-GR log and Forxo-Guard log. Found the following log tops:

Tansil - 2954 (+592)
Yates - 3113 (+433)
Seven Rivers - 3305 (+241)
Total Depth - 3651 (-105)

Went back into hole with drill string. Circulated hole one hour and then pulled and laid down drill string. Ran 89 jts (3660) of 4½ OD, 10.5 lb/ft, J-55, ST&C casing and landed at 3651 RKB.

4-10-78 Rigged up Halliburton and cemented 4½-inch casing in two stages with a total of 300 sx of 50-50 blend of API Class-C cement and Pozmix-"A" containing 18% salt and ¼ lb/sx Flocel, 550 sx of API class - C cement containing 3% Halliburton Econolite, and 100 sx of API Class - C neat cement. Final plug down at 12:10PM CST 4-9-78 . Circulated a total of 150 sx of excess cement to pit. Pressure tested casing to 2000 psi. Pressure held okay. Relaeasd pressure and DV - Tool held okay.

4-11-78 Waiting on well service unit. Propose perforating well with a total of 19 holes with one shot each at:

3286
3350
3362
3411
3420
3479
3483
3487
3495
3502
3515
3531
3535
3539
3560
3564
3578
3582
3586

4-12-78 Moved in and rigged up well service unit and reverse circulating unit. Went into hole with 3 7/8-inch bit, 6 drill collars, and 78 jts of 2 3/8 tubing. Tagged top of DV-Tool at approximately 2660 feet. Now ready to drill out DV-Tool and clean well out to a PBTD of 3630 feet.

4-13-78 Drilled out DV-Tool and cleaned well out to a PBTD of 3623 RKB. Pulled tubing and laid down drill collars and bit. Rigged up Apache Services and logged well with GRN-CCL log. Perforated well with select-fire casing gun with a total of 19 holes with on shot each at:

3286
3350
3362
3411
3419
3479
3483
3487
3495
3499
3503
3531
3535
3538
3560
3563
3578
3581
3585

Ran 112 jts of 2 3/8 tubing and landed at 3584 RKB. Circulated hole with 2200 gal of 2% KCL water. Spotted 230 gal of 15% MCA acid across perforations. Pulled bottom of tubing to 3232 feet. Shut down for

4-14-78 Rigged up Halliburton and acidized well with a total of 5200 gal of 15% MCA acid at an average treating rate of 4.6 BPM and average treating pressure of 1750 psi. Maximum treating pressure was 3500 psi. ISIP = 500 psi. 1-minuteSIP = 0 psi. Lowered tubing to a depth of 3491 RKB (108 jts @ avg jt. length = 32.25 feet/jt). Removed BOP and buttoned up wellhead. Installed lubricator and started swabbing well to pit. Swabbed well to pit for nine hours. At the end of the swab period, the swabbing fluid level was 3000' from surface and the casing pressure was 240 psi. Shut down for night.

4-15-78 Overnight SITP = 218 psi and SICP = 260 psi. Placed well on a 20/64 choke, but well would not flow. Installed lubricator and resumed swabbing well to pit. Swabbed well to pit for 10 hours. By the end of the day, fluid level had been lowered to 3100 feet from surface. The appearance of the water recovered during the swab period indicated that it was a mixture of load water and South Eunice Unit (SEU) injection water.

4-16-78 Overnight SITP = 120 psi and SICP = 338 psi. Went into hole with swab and resumed swabbing well to pit. Swabbed well to pit for a total of 11 hours. Fluid level at the beginning of the day was 2400 feet from surface. By the end of the swab period, the fluid level had been lowered to 3000 feet. Fluid from well appeared to be a mixture of acid (load) water and injection water from Conoco's SEU waterflood. Obtained both swab samples and samples from SEU injection system for analysis. At the end of the swab period, rigged up John West bottom - hole pressure equipment and went into hole with pressure bomb. Landed bomb at 3450 feet. At 7:00PM 4-15-78, SITP = 7 psi, SICP = 173 psi.

4-17-78 Shut down for Sunday. SITP = 47 psi and SICP = 322 psi. Pulled bottom hole pressure bomb. Pressure reading at start of buildup was 253 psi and 22 hours later was 417 psi. Final build-up pressure is abnormally high for this area thus indicating possible water breakthrough in one of the Jalmat porosity units.

4-18-78 Shut down due to high winds.

4-19-78 Pulled tubing, went back into hole with tubing equipped with packer and retreivable bridge plug. Isolated single perforation at 3286. Found fluid level 2800 feet from surface. After four swab runs, lowered fluid level to 3200 feet from surface. Fluid level remained at 3200 feet from surface for three additional runs. Zoned at 3286 yielded up water with no show of gas.

Lowered packer and bridge plug to isolated perforations at 3350' and 3361'. Found fluid level at 2800 feet from surface. After five swab runs, fluid level was still standing at 2800 feet from surface. Zone from 3350' - 3361' yielded up water with a good show of gas.

Lowered packer and bidge plug to isolate zone from 3560' to 3585'. Found fluid level at 2800 feet from surface. After first swab run, lowered fluid level to 3100 feet from surface. Fluid level to 3100 feet form surface. Fluid level remained at 3100 feet from surface until rig shut down for night. Zone form 3560' - 3585' yielded up water with slight show of gas.

4-20-78 With use of packer and Bridge Plug, continued swabbing well to pit. After swabbing and adjusting packer and bridge plug for 10 hours. Confirmed that South Eunice Unit injection water was entering well bore between 3250 feet and 3419 feet. Prior to shutting down for night, set packer at 3450 feet and bridge plug at 3610 feet. Rigged up John West bottom hole pressure unit and placed pressure bomb in tubing at 3450 feet for overnight build up.

4-21-78 Pulled bottom hole pressure bomb and found an initial build up pressure of 126 psi and final build up pressure 237 psi, thus confirming crossflow of South Eunice Unit injection water from upper Jalmat perfs into lower Jalmat perfs. Pulled tubing packer and bridge plug. Went into hole with tubing equipped with a drillable bridge plug and set at 3450 feet. Pulled tubing. Reran tubing equipped with cement retainer and landed at 3250 feet. Now ready to set retainer and squeeze cement perforations from 3286 feet to 3419 feet. Shut down for night.

4-22-78 Set cement retainer at 3227 feet. Rigged up Halliburton and squeezed perforations from 3286 to 3419 (total of five holes) with 100 sx of API Class-C cement containing 1% Holad-3 followed by 50 sx of API Class-C cement containing 5 lbs of sand per sack. Final squeeze pressure was 3000 psi with no drop in pressure. Reversed out 3 sx of excess cement. Pulled tubing. Shut down for remainder of day.

4-23-78 Shut down for weekend.

4-24-78 Shut down for weekend.

4-25-78 Rigged up reverse drilling unit. Went into hole with tubing, drill collars, and bit. Drilled out cement retainer and cement inside of casing to a depth of 3379 RKB. Pressure tested perforations between 3286 - 3362 (three holes) to 1500 psi. Pressure held okay. Now prepared to finish drilling out cement to top of drillable bridge plug at 3448 and 3419.

4-26-78 Finished drilling out cement inside of 4½ O.D. casing to the top of the drillable bridge plug at 3448 RKB. Pressure tested perforations between 3286 - 3419 to 1500 psi. All five perforations held with no drop in pressure. Drilled slips on drillable bridge plug and then pushed remainder of plug to bottom of hole at 3623 RKB. Pulled tubing and laid down drill collars and bit. Ran tubing equipped with a RTTS packer and set packer at 3448 RKB. Rigged up Halliburton and acidized well with 3000 gal of MOD - 202 acid at an average treating rate of 6.7 BPM and average treating pressure of 2300 psi. ISIP = 0 psi. Pulled tubing and removed packer. Ran 109 jts of 2 3/8 tubing and landed at 3523 RKB. Installed lubricator and started swabbing load to pit. Made a total of 9 swab runs before shuting down for night. At the end of the swab period fluid level was 3300 feet from surface and casing pressure was 70 psi. After overnight shut in fluid level in tubing was 3150 from surface and casing pressure was 100 psi. SITP = 50 psi. Now ready to rig up Halliburton and frac well down tbg and casing-tubing annulus with gelled water and CO2.

4-27-78 Rigged up Halliburton and fraced well down tubing and casing-tubing annulus with 40,000 gallons of gelled water and CO2 plus 80,000 pounds of 20-40 and 10-20 frac sand at rate of 18 BPM and treating pressure of 2200 psi. ISIP = 900 psi. After leaving well shut in for 1 hour, opened well up to pit. Well flowed CO2 and load water to pit for 2 hours before dieing. Installed lubricator and swabbed and flowed well to pit for 3 1/2 hrous before shutting down for night. Fifteen minutes after shuting well in for night, SICP = 270 psi and SITP = 220 psi.

4-28-78 Overnight SITP=280 psi and SICP = 280 psi. Rigged up John West Engineering Co. BHP Unit and ran static BHP at 3513 feet with gradient stops between 3300 feet and surface. Found the following results:

Depth (FT)	Pressure (PSI)	Gradient (PSI/FT)
0	283	
1000	300	.017
2300	325	.019
2500	329	.020
2700	332	.015
2900	336	.020
3100	341	.025
3300	344	.015
3513	350	.028

Bled pressure off tubing and installed swab lubricator. Made one swab run and well kicked off flowing. Six hours after kicking well off, well flowing to the pit on a 64/64 choke at the rate of 702 MCFPD plus an undertimined amount of load water. FTP = 13 psi FCP = 218 psi.

5-1-78 Flowing gas and frac fluid to pit on a 64/64 choke. FTP = 18psi. FCP = 173 psi.

5-2-78 Cleaning well up to pit on a 64/64 choke. FTP = 24 psi. FCP = 165 psi.

5-3-78 Cleaning well up to pit on a 64/64 choke. FTP = 24. FCP = 155.

5-4-78 Cleaning well up to pit on a 64/64 choke. FTP = 23 psi FCP = 149 psi

5-5-78 Cleaning well up to pit on a 32/64 choke. FTP = 53 psi FCP = 180 psi

5-8-78 Cleaning well up to pit on a 64/64 choke. FTP = 24 psi FCP = 138 psi

5-9-78 Cleaning well up to pit on a 64/64 choke. FTP = 22 psi FCP = 138 psi

5-10-78 Cleaning well up to pit on a 64/64 choke. FTP = 8 psi FCP = 165 psi

5-11-78 Preparing to run four point test

5-12-78 Cleaning well up to pit on a 64/64 choke. FTP = 10 psi FCP = 165 psi

5-15-78 Ran 24 hour potential test. Well produced 488 MCFPD plus 5 BWPD on a 32/64 choke. FTP = 65 psi FCP = 170 psi.

OFFICE		
ATOR		

MEXICO OIL CONSERVATION COMMISSION

Effective 1-1-65

5a. Indicate Type of Lease: State ☐ Fee ☒

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

7. Unit Agreement Name

OIL WELL ☐ GAS WELL ☒ OTHER-

8. Farm or Lease Name

Name of Operator: le Hartman — Gulf - Greer

9. Well No.

Address of Operator: C & K Petroleum Bldg; Midland, Texas 79701 — 1

10. Field and Pool, or Wildcat

Location of Well: UNIT LETTER L, 1980 FEET FROM THE South LINE AND 990 FEET FROM — Jalmat Gas Pool

West LINE, SECTION 21 TOWNSHIP 22-S RANGE 36-E NMPM.

15. Elevation (Show whether DF, RT, GR, etc.): 3546 G.L.

12. County: Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
M REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
ARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
R ALTER CASING ☐	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☐	
ER ☐		OTHER Squeeze Job (3286 - 3419) ☒	

Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

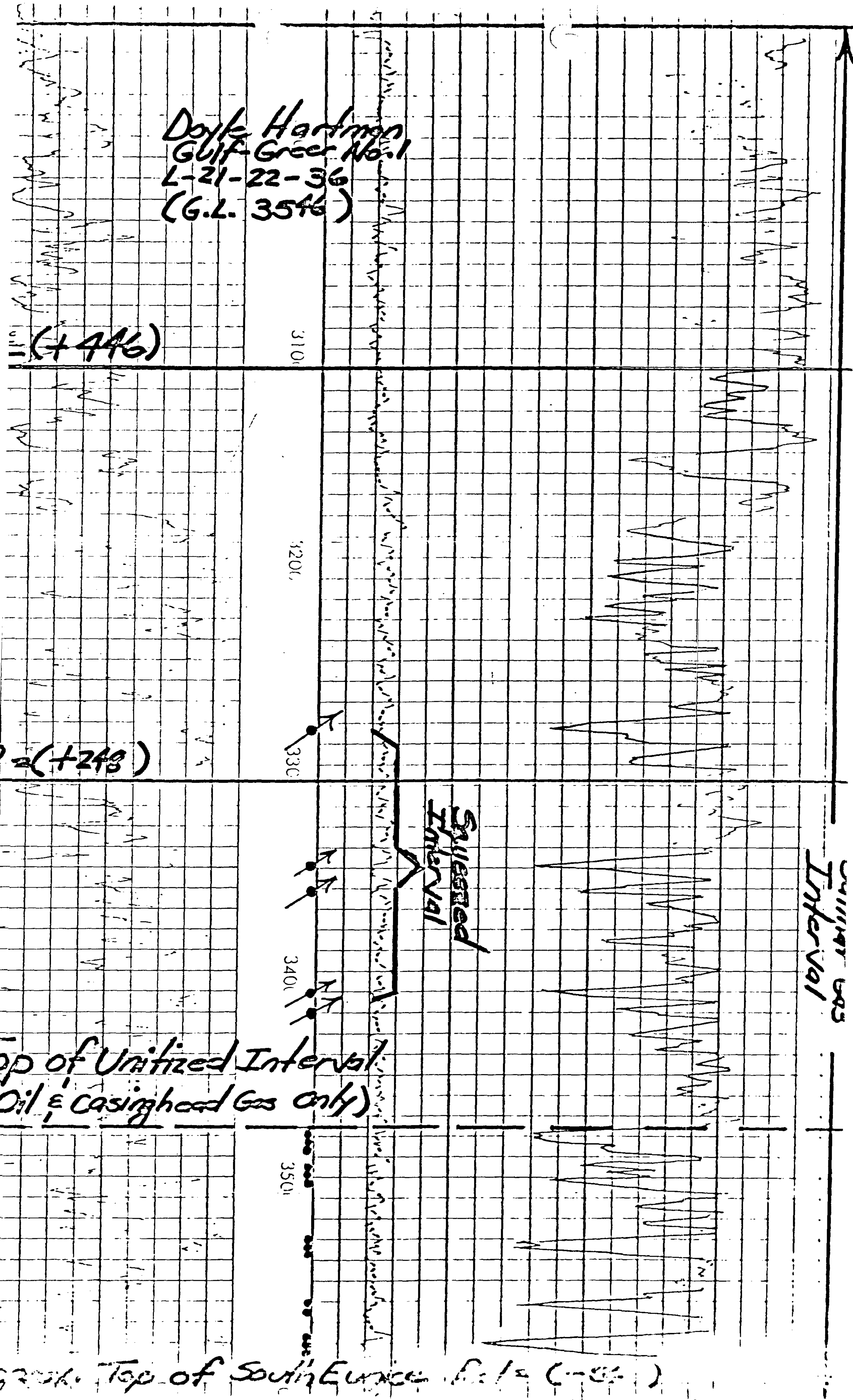
illed out DV-Tool at a total depth of 2660 feet and then cleaned well out to a total depth 3630 RKB. Perforated Jalmat Gas interval from 3286-3585 w/19 shots and then acidized rforated section with a total of 5200 gal. of 15% MCA acid. Upon recovering load water, termined well was producing South Eunice Unit injection water plus a small quantity of gas. ter swabbing well for two additional days with the use of a RTTS packer and retrievable idge plug, verified that injection water was being produced out of upper Jalmat Gas erforations between 3286 - 3419 (above the South Eunice Unit unitized interval). Ran illable bridge plug and set at 3448 RKB and set cement retainer at 3227 RKB. Squeezed erforations 3286-3419 (total of five holes) with 100 sx of API Class-C cement containing Halad-3 followed by 50 sx of API Class-C cement containing 5 lbs of sand per sack. nal squeeze pressure was 3000 psi with no drop in pressure . Now ready to drill out ment to the top of the drillable bridge plug and pressure test perforations 3286 - 3419.

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

Doyle Hartman — TITLE Operator - Part Owner — DATE 4-24-78

APPROVED BY Orig. Signed by. Jerry Sexton Dist I, Supv. — TITLE — DATE APR 26 1978

CONDITIONS OF APPROVAL, IF ANY:


Doyle Hartman
Gulf-Greer No. 1
L-21-22-36
(G.L. 3546)
(+446)
3100
3200
3300
(+243)
Suggested Interval
3400
Top of Unitized Interval
(Oil & Casinghead Gas only)
3500
Interval

4. 7-78 to 4-16-78

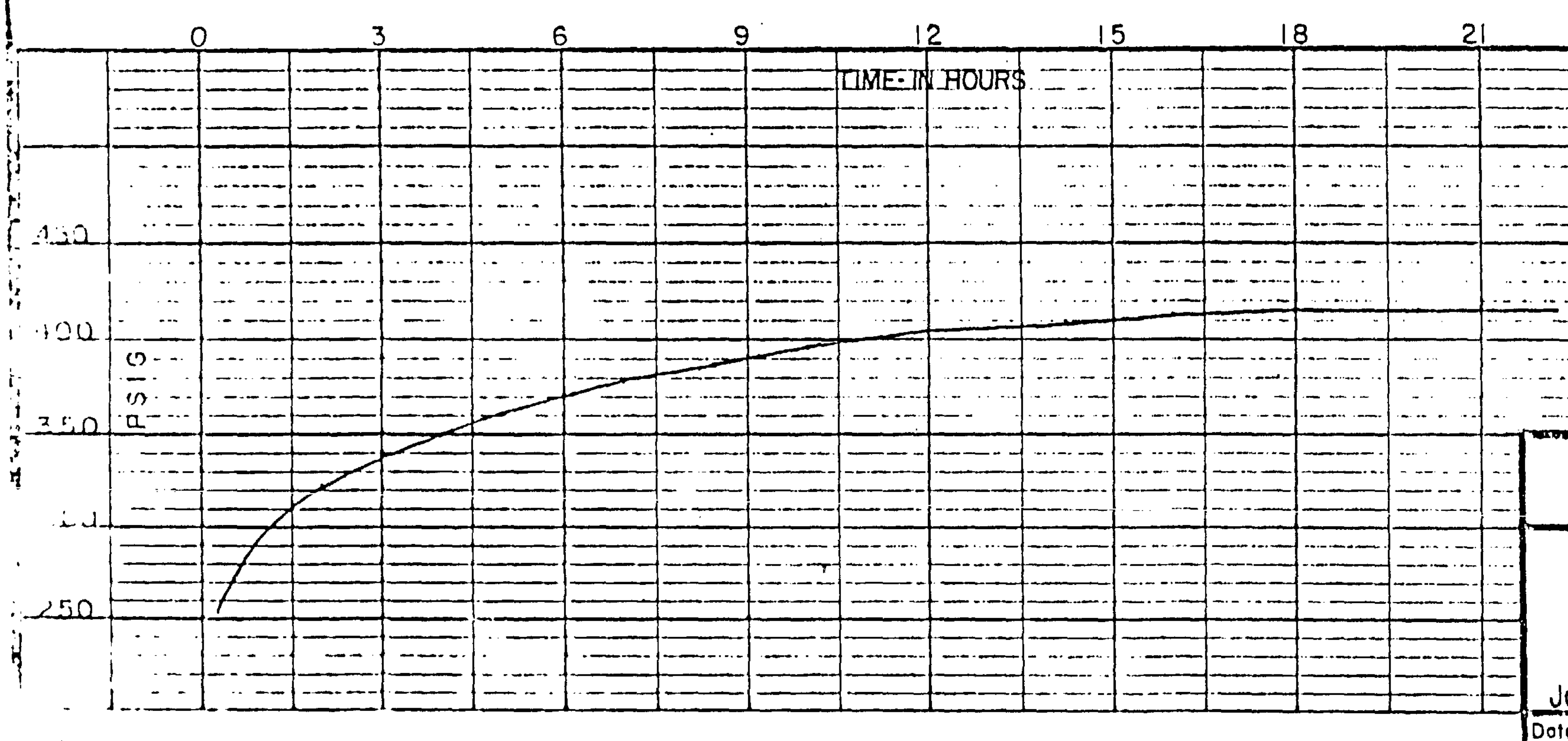
Interval: 3286 - 3585 (Entire Perf. Interval)

Remarks: Crossflow Occurring between upper Jalmat perfs and lower Jalmat perfs.

DATE	TIME	CUM. HRS./MIN.		PSIG @ 3,450 FEET
4-15-78	5:45 PM	00 Hrs.	00 Min.	Last swabb out
4-15-78	6:00 PM	00	15	253 Gauge reached 3,450'
		00	30	272
		00	45	285
		01	00	296
		01	30	312
		02	00	322
		03	00	337
		04	00	349
		05	00	360
4-15-78	11:45 PM	06	00	370
4-16-78	12:45 AM	07	00	378
		08	00	387
		10	00	396
		12	00	403
		14	00	408
4-16-78	9:45 AM	16	00	412

DATE	TIME	CUM. HRS./MIN.		PSIG @ 3,450 FEET
4-16-78	11:45 AM	18 Hrs.	00 Min.	415
	1:45 PM	20	00	416
4-16-78	4:00 PM	22 Hrs.	15 Min.	417 Gauge off bottom

Test Date:	April 15-16, 1978
Test Depth:	3,450 feet
Element No.:	9749
Range:	0-1400 psi
Clock No.:	C-4020
Range:	0-24 hour



DOYLE HARTMAN

GULF GREER WELL No. 1
BOTTOM HOLE PRESSURE BUILD-UP TEST

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 4-17-78 | Drawn by: MCT | Scale: AS SHOWN

JOHN W. WEST ENGINEERING COMPANY
412 NORTH DAL PASO, HOBBS, NEW MEXICO

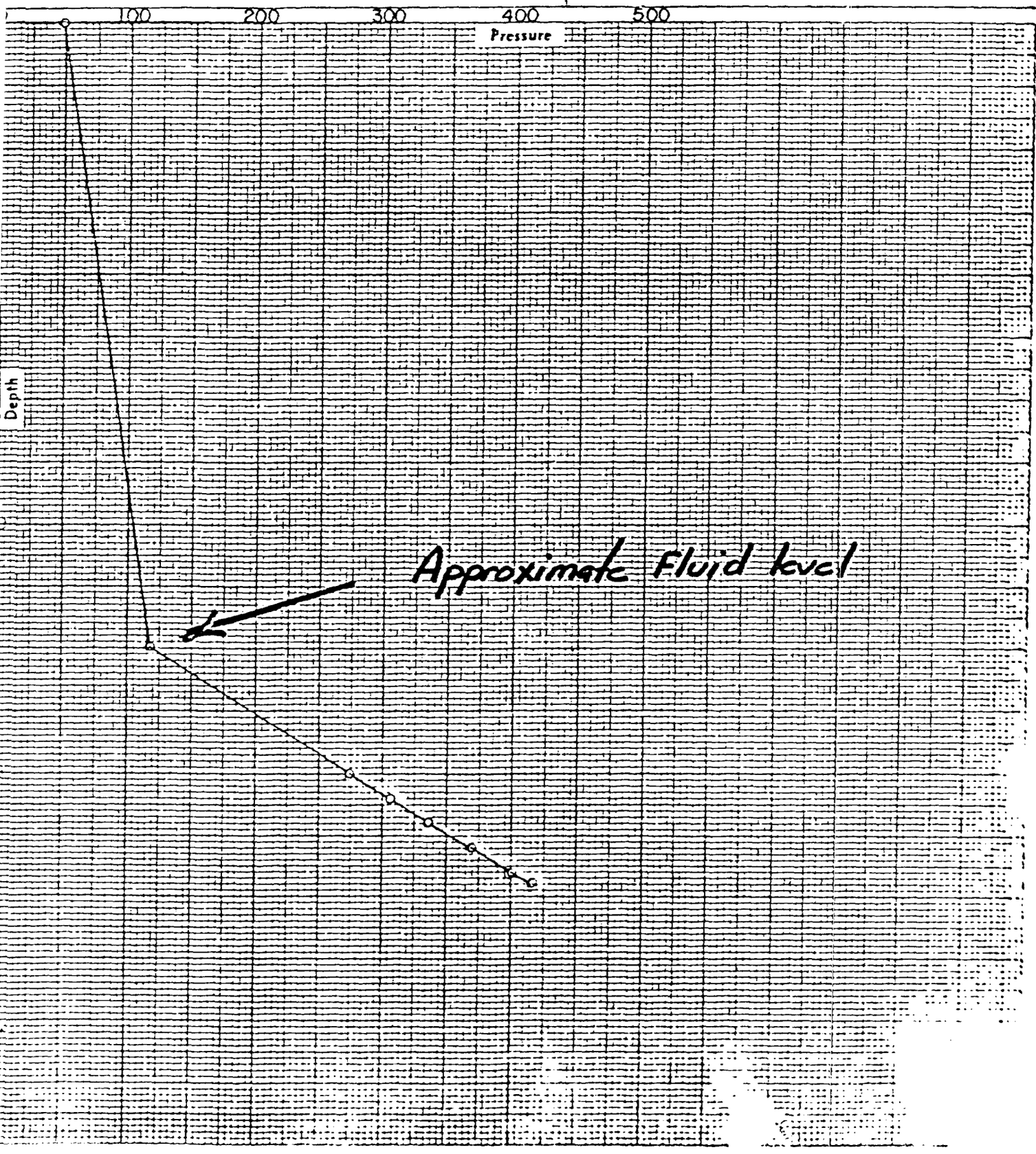
TELEPHONES

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR Doyle Hartman
LEASE Gulf Greer
WELL NO. 1
FIELD
DATE 4-16-78 TIME 4:00 P.M.

STATUS Shut-in TEST DEPTH 3,450'
TIME S.I. 22 Hrs. LAST TEST DATE
CAS. PRES. BHP LAST TEST
TUB. PRES. 49 PSIG BHP CHANGE
ELEV. FLUID TOP
DATUM WATER TOP
TEMP RUN BY B.D.
CLOCK NO. C-4020 GAUGE NO. 19389
ELEMENT NO. 9749 (0-1400 PSI)

DEPTH	PRESSURE	GRADIENT
000	49	
2500	118	.028
3000	274	.312
3100	306	.320
3200	337	.310
3300	371	.340
3400	401	.300
3450	417	.320



DATE	TIME	CUM. HRS.	/ MIN.	PSIG @ 3,450 FEET
4-19-78	6:00 PM	00 Hrs	00 Min	Last Swabb Out
4-19-78	6:15 PM	00	15	126 Gauge Reached 3450'
		00	30	148
		00	45	160
		01	00	170
		01	30	180
		02	00	190
		03	00	202
		04	00	212
4-19-78	11:00 PM	05	00	217
4-20-78	12:00 MN	06	00	222
	1:00 AM	07	00	226
		08	00	229
		09	00	231
		10	00	233
		11	00	234
		12	00	236
4-20-78	7:00 AM	13	00	237 Gauge Off Bottom

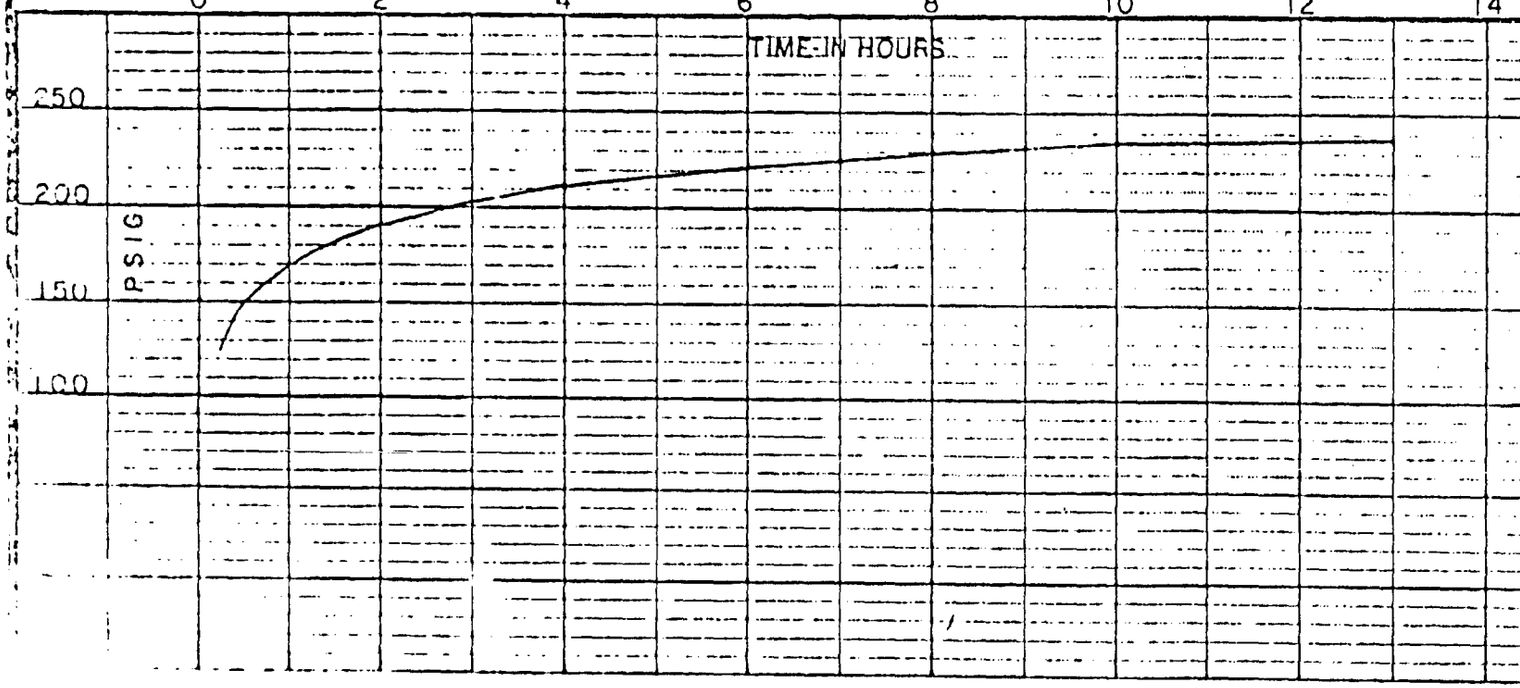
TEST DATE: April 19-20, 1978
TEST DEPTH: 3,450 Feet

ELEMENT NO: 9749
RANGE: 0-1400 Psi
CLOCK NO: C-4020
RANGE: 0-24 Hour

4-19-78 to 4-20-78
Interval: 3479-3585 (Lower Upper Interval)

Remarks: Lower Upper perfs are isolated from upper Upper perfs and no cross-flow occurring.

Note: Final buildup pressure on second test is less than starting buildup pressure on first pressure test.



DOYLE HARTMAN No. 1

GULF GREER WELL No. 1
BOTTOM HOLE PRESSURE BUILD-UP TEST

JOHN W. WEST ENGINEERING CO. HOBBS, NEW MEXICO

Date: 4-20-78 | Drawn by: MCT | Scale: AS SHOWN

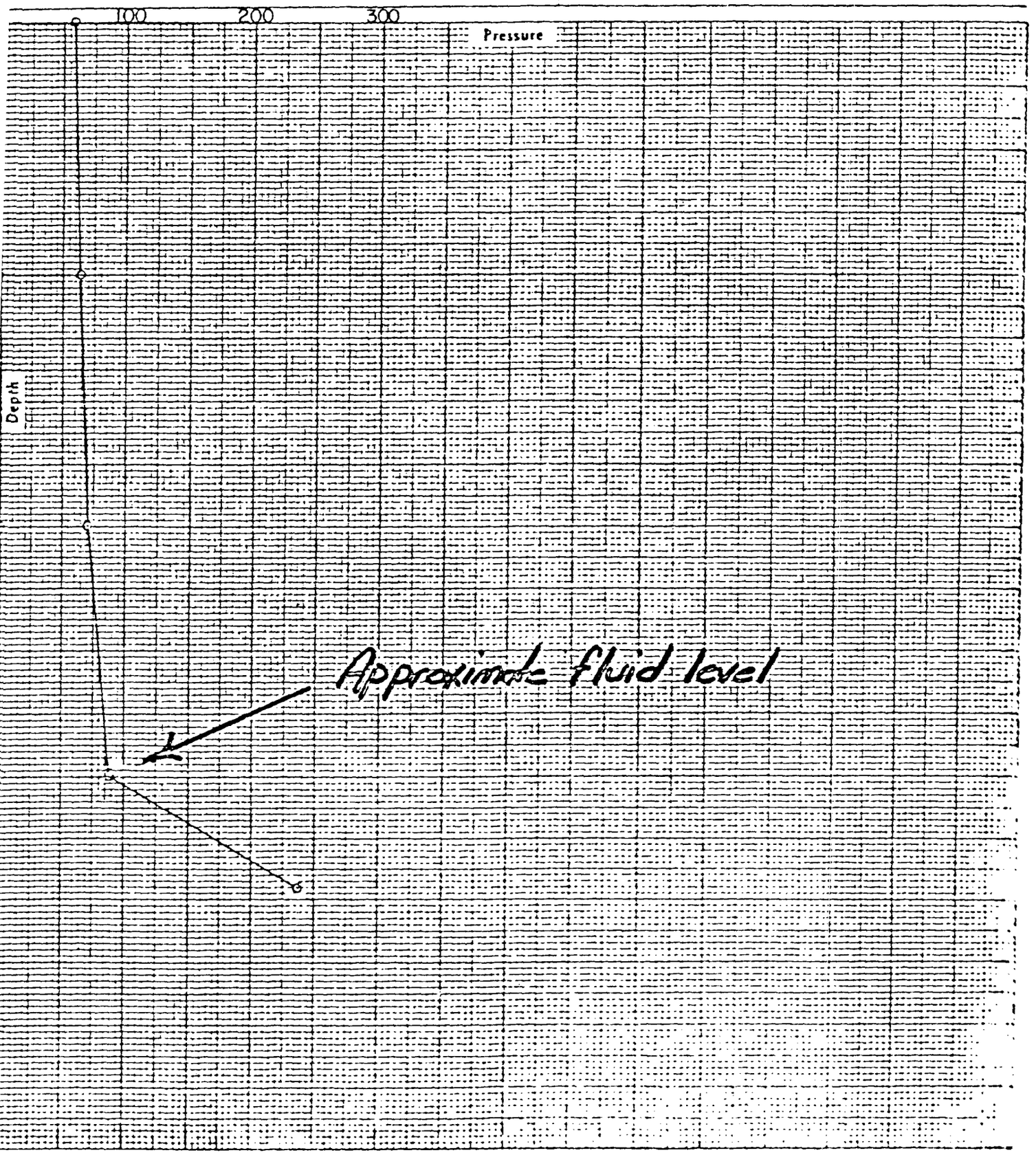
JOHN W. WEST ENGINEERING COMPANY
412 NORTH DAL PASO, HOBBS, NEW MEXICO
TELEPHONE 393-3445
393-3117

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR DOYLE HARTMAN
LEASE GULF GREER
WELL NO. 1
FIELD
DATE 4-20-78 TIME 7:00 AM

STATUS SHUT IN TEST DEPTH 3,450'
TIME S.I. 13.0 HRS LAST TEST DATE
CAS. PRES. BHP LAST TEST
TUB. PRES. 59 PSIG BHP CHANGE
ELEV. FLUID TOP
DATUM WATER TOP
TEMP RUN BY J.A.B.
CLOCK NO. C-4020 GAUGE NO. 19389
ELEMENT NO. 9749 (0-1400 PSI)

DEPTH	PRESSURE	GRADIENT
000	59	
1000	64	.005
2000	71	.007
3000	88	.017
3450	237	.331



Gulf Greer No. 1
Well Service Jobs

10-17-80	Change pump
11-21-80	Hole in tubing--24 joints down
12-11-80	Hole in tubing--35 joints down
2-11-81	Hole in tubing--103 joints down
6-09-81	Hole in tubing--13 joints down
8-19-81	Hole in tubing--76 joints down
12-16-81	Change pump--pump stuck in SN
12-19-81	Change pump--pump stuck
2-01-82	Tubing leak--62 joints down
12-03-83	Change pump

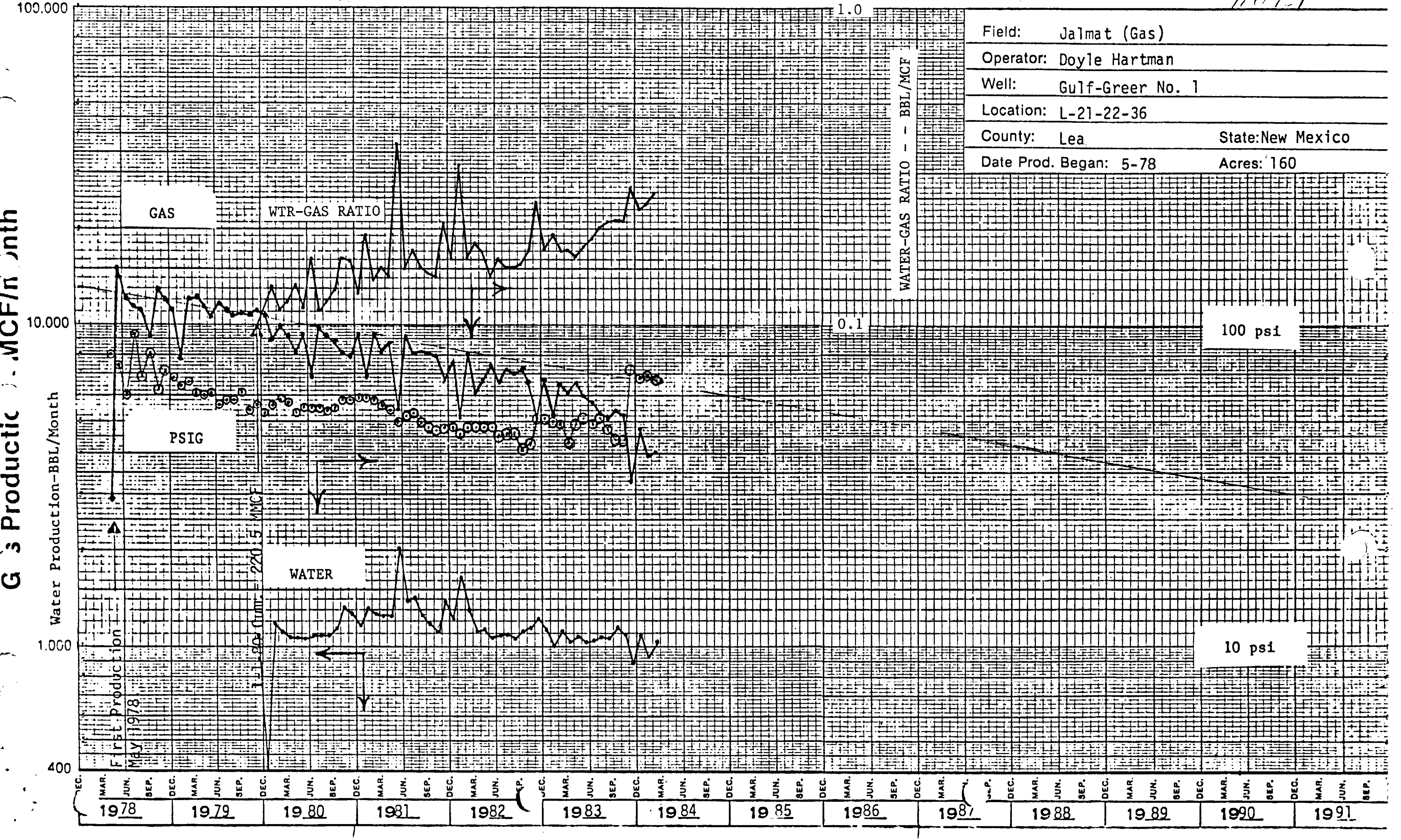
Treat with chemical weekly

Each treatment:

3 gal Cor Act 722 (Corrosion Inhibitor)
3 gal Surf Act 106 (Scale Inhibitor)

7/04-1

Field:	Jalmat (Gas)
Operator:	Doyle Hartman
Well:	Gulf-Greer No. 1
Location:	L-21-22-36
County: Lea	State: New Mexico
Date Prod. Began: 5-78	Acres: 160



LE HARTMAN, OIL OPERATOR
R-TO-DATE PRODUCTION FOR 1984
UMES CALCULATED AT 15.025 PSIA

RPT# 000003

RUN ON 6/12/84

SE#	METER#		DATE ON STREAM	NRI %	
401	61963	GULF-GREER #1	5/26/78	.42740900	OPERATOR - DOYLE HARTMAN

	MCF GAS PRODUCED	BBLS OIL PRODUCED	BBLS H2O PRODUCED	DAYS PRODN	LP PSIG	AVG TEMP	BTU FACTOR	BTU	ITD CUME GAS	ITD CUME OIL	AVG TP	AVG CP	DAYS SHUTIN
UARY	4766		1085.00	30.9	43.25	44	.9974	1190	575936			68	
RUARY	3934		933.00	29.0	41.25	49	.9967	1190	579870			69	
CH	4044		1038.00	31.0	43.75	55	.9962	1190	583914			67	
IL	3957		897.00	30.0	46.75	62	.9953	1194	587871			70	
	4311		997.00	31.0	45.75	72	.9933	1194	592182			69	
E													
Y													
UST													
TEMBER													
TOBER													
EMBER													
CEMBER													
	21012		4950.00	151.9									
1984	592182		61414.00	2169.5									

DYLE HARTMAN, OIL OPERATOR
EAR-TO-DATE PRODUCTION FOR 1983
OLUMES CALCULATED AT 15.025 PSIA

RPT# 000003

RUN ON 6/13/84

LEASE#	METER#		DATE ON STREAM	NRI %	
80401	61963	GULF-GREER #1	5/26/78	.42740900	OPERATOR - DOYLE HARTMAN

	MCF GAS PRODUCED	BBLS OIL PRODUCED	BBLS H2O PRODUCED	DAYS PRODN	LP PSIG	AVG TEMP	BTU FACTOR	BTU	ITD CUME GAS	ITD CUME OIL	AVG TP	AVG CP	DAYS SHUTIN
ANUARY	6704		1135.00	29.1	39.75	49	.9967	1183	510827			51	
EBRUARY	5196		1004.00	23.9	41.00	52	.9964	1183	516023			50	
ARCH	6553		1119.00	31.0	40.75		.9953	1192	522576			49	
PRIL	6119		1046.00	30.0	37.50	63	.9943	1192	528695			43	
AY	6578		1079.00	31.0	38.00	68	.9932	1192	535273			48	
UNE	5935		1040.00	30.0	39.50	74	.9920	1192	541208			51	1
ULY	5675		1046.00	30.6	40.75	81	.9901	1192	546883			49	
UGUST	5291		1073.00	31.0	42.50	81	.9905	1192	552174			51	
EPTEMBER	5096		1069.00	29.9	35.75	75	.9911	1190	557270			47	
CTOBER	5403		1143.00	30.2	32.25	70	.9918	1190	562673			44	
OVEMBER	5192		1097.00	29.8	36.75	57	.9953	1190	567865			44	
ECEMBER	3305		890.00	27.6	45.50	44	.9975	1190	571170			72	
TD 1983	67047		12741.00	354.1									1
TD	571170		56464.00	2017.6									1

'YLE HARTMAN, OIL OPERATOR
AR-TO-DATE PRODUCTION FOR 1982
LUMES CALCULATED AT 15.025 PSIA

RPT# 000003

RUN ON 6/13/84

ASE# METER#

			DATE ON STREAM	NRI %
30401	61963	GULF-GREER #1	5/26/78	.42740900

OPERATOR - DOYLE HARTMAN

	MCF GAS PRODUCED	BBLS OIL PRODUCED	BBLS H2O PRODUCED	DAYS PRODN	LP PSIG	AVG TEMP	BTU FACTOR	BTU	ITD CUME GAS	ITD CUME OIL	AVG TP	AVG CP	DAYS SHUTIN
NUARY	7537		1218.00	30.5					430843			48	
EBRUARY	5148		1640.00	22.6					435991			46	
RCH	8066		1300.00	31.0					444057			48	
PRIL	6153		1116.00	29.5					450210			48	
AY	6739		1137.00	31.5					456949			47	
NE	7449		1067.00	30.4					464398			48	
ULY	6664		1083.00	31.5					471062			45	
UGUST	7207		1092.00	30.8					478269			46	
PTEMBER	7010		1060.00	29.7					485279			46	
TOBER	7217		1115.00	31.0					492496			41	
OVEMBER	6572		1130.00	30.0					499068			43	
ECEMBER	5057		1218.00	30.9					504125			51	
TD 1982	80819		14176.00	359.4									
TD	504125		43723.00	1663.5									

DOYLE HARTMAN, OIL OPERATOR
YEAR-TO-DATE PRODUCTION FOR 1981
VOLUMES CALCULATED AT 15.025 PSIA

RPT# 000003

RUN ON 6/13/84

LEASE# METER#

780401 61963 GULF-GREER #1

DATE ON STREAM 5/26/78

NRI % .42740900

OPERATOR - DOYLE HARTMAN

	MCF GAS PRODUCED	BBLS OIL PRODUCED	BBLS H2O PRODUCED	DAYS PRODN	LP PSIG	AVG TEMP	BTU FACTOR	BTU	ITD CUME GAS	ITD CUME OIL	AVG TP	AVG CP	DAYS SHUTIN
JANUARY	9388		1160.00	31.0					336602			59	
FEBRUARY	6880		1311.00	28.0					343482			59	
MARCH	9234		1272.00	31.0					352716			58	
APRIL	8161		1239.00	29.8					360877			57	
MAY	8667		1238.00	27.3					369544			54	
JUNE	5424		2025.00	30.1					374968			50	
JULY	9268		1382.00	31.0					384236			52	
AUGUST	8077		1406.00	31.1					392313			53	
SEPTEMBER	8252		1254.00	30.1					400565			50	
OCTOBER	8149		1184.00	31.0					408714			48	
NOVEMBER	7948		1118.00	30.0					416662			47	
DECEMBER	6645		1376.00	30.6					423307			48	
YTD 1981	96093		15965.00	361.0									
ITD	423307		29547.00	1304.1									

TLE HARTMAN, OIL OPERATOR
AR-TO-DATE PRODUCTION FOR
LUMES CALCULATED AT 15.025 PSIA 1980

RPT# 000003

RUN ON 6/13/84

ASE# METER#

0401 61963 GULF-GREER #1

DATE ON STREAM 5/26/78

NRI % .42740900

OPERATOR - DOYLE HARTMAN

	MCF GAS PRODUCED	BBLS OIL PRODUCED	BBLS H2O PRODUCED	DAYS PRODN	LP PSIG	AVG TEMP	BTU FACTOR	BTU	ITD CUME GAS	ITD CUME OIL	AVG TP	AVG CP	DAYS SHUTIN
JARY	10773			30.9					231274			53	
RUARY	8940		1184.00	29.0					240214			56	
RCH	9920		1110.00	31.0					250134			58	
RIL	.9055		1076.00	29.9					259189			57	
Y	8062		1076.00	26.7					267251			53	
NE	9358		1058.00	29.1					276609			55	
LY	6893		1096.00	31.0					283502			55	
GUST	9662		1094.00	31.0					293164			55	
PTEMBER	9139		1097.00	30.0					302303			54	
TOBER	8849		1130.00	29.7					311152			55	
VEMBER	8127		1315.00	29.8					319279			58	
CEMBER	7934		1255.00	30.9					327213			58	
D 1980	106712		12491.00	359.0									
D	327213		13582.00	943.1									

'OYLE HARTMAN, OIL OPERATOR
'AR-TO-DATE PRODUCTION FOR 1979
OLUMES CALCULATED AT 15.025 PSIA

RPT# 000003

RUN ON 6/13/84

LEASE#	METER#		DATE ON STREAM	NRI %
80401	61963	GULF-GREER #1	5/26/78	.42740900

OPERATOR - DOYLE HARTMAN

	MCF GAS PRODUCED	BBLS OIL PRODUCED	BBLS H2O PRODUCED	DAYS PRODN	LP PSIG	AVG TEMP	BTU FACTOR	BTU	ITD CUME GAS	ITD CUME OIL	AVG TP	AVG CP	DAYS SHUTIN
ANUARY	11357			31.1					99062			68	
EBRUARY	7919			28.4					106981			64	
ARCH	12097			31.0					119078			66	
PRIL	12158			29.9					131236			61	
AY	11780			31.3					143016			60	
UNE	10722			29.9					153738			61	
ULY	11925			31.0					165663			56	
UGUST	11121			31.0					176784			58	
EPTEMBER	10813			30.0					187597			58	
CTOBER	10941			31.0					198538			61	
OVEMBER	10824			30.0					209362			54	
ECEMBER	11139		1091.00	31.0					220501			56	
TD 1979	132796		1091.00	365.6									
TD	220501		1091.00	584.1									

HLE HARTMAN, OIL OPERATOR
AR-TO-DATE PRODUCTION FOR
OLUMES CALCULATED AT 15.025 PSIA **1978**

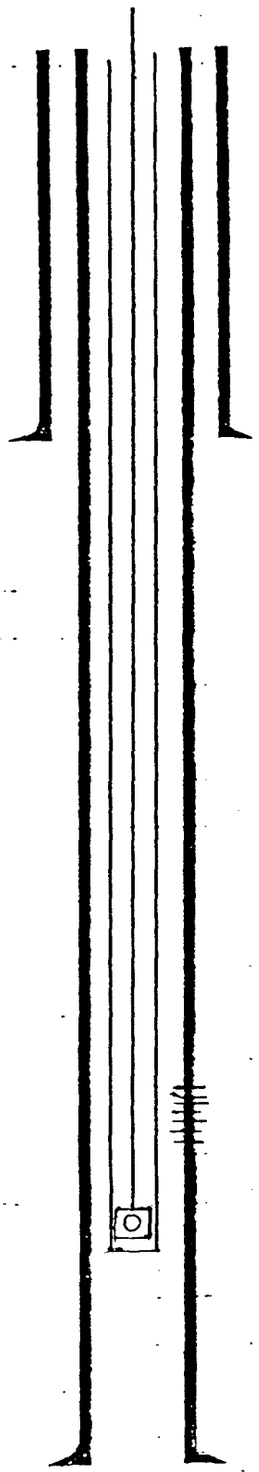
RPT# 000003

RUN ON 6/13/84

CASE# METER#		DATE ON STREAM	NRI %	
P0401	61963 GULF-GREER #1	5/26/78	.42740900	OPERATOR - DOYLE HARTMAN

	MCF GAS PRODUCED	BBLS OIL PRODUCED	BBLS H2O PRODUCED	DAYS PRODN	LP PSIG	AVG TEMP	BTU FACTOR	BTU	ITD CUME GAS	ITD CUME OIL	AVG TP	AVG CP	DAYS SHUTIN
ANUARY													
EBRUARY													
RCH													
RIL													
AY	2910			4.9					2910		541	559	
UNE	15329			30.0					18239		436	463	
ULY	12207			30.5					30446			80	
UGUST	11679			31.0					42125			93	
EPTEMBER	11162			30.0					53287			68	
CTOBER	9296			31.5					62583			80	
OVEMBER	13010			30.0					75593			62	
ECEMBER	12112			30.6					87705			71	
TD 1978	87705			218.5									
TD	87705			218.5									

WELLBORE SKETCH
GULF GREER WELL NO. 1

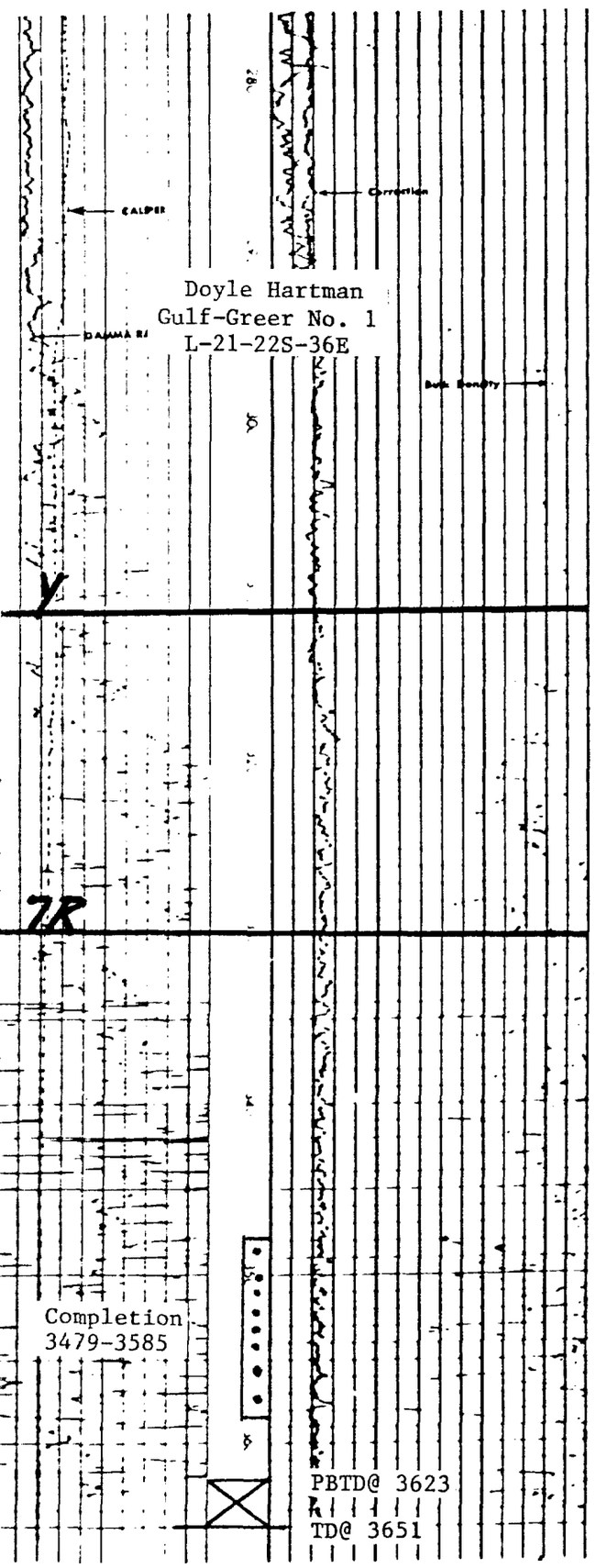


8-5/8" set at 475'
cement 325 sacks

Perforations: 1 hole each at: 3479, 3483, 3487, 3495, 3499, 3503, 3531, 3535, 3538, 3560, 3563, 3578, 3581, 3585.

2" Insert Pump
2-3/8" EUE Tubing
set at 3588'

4-1/2" set at 365'
cement 950 sacks



COMPANY	Doyle Hartman
WELL	Gulf-Greer No. 1
FIELD	Jalmat
LOCATION	1980 FSL & 990 FWL (L)
	Section 21, T-22-S, R-36-E
	(22-36-21-L)
COUNTY	Lea
STATE	New Mexico
ELEVATIONS:	KB
	DF
	GL 3536

COMPLETION RECORD

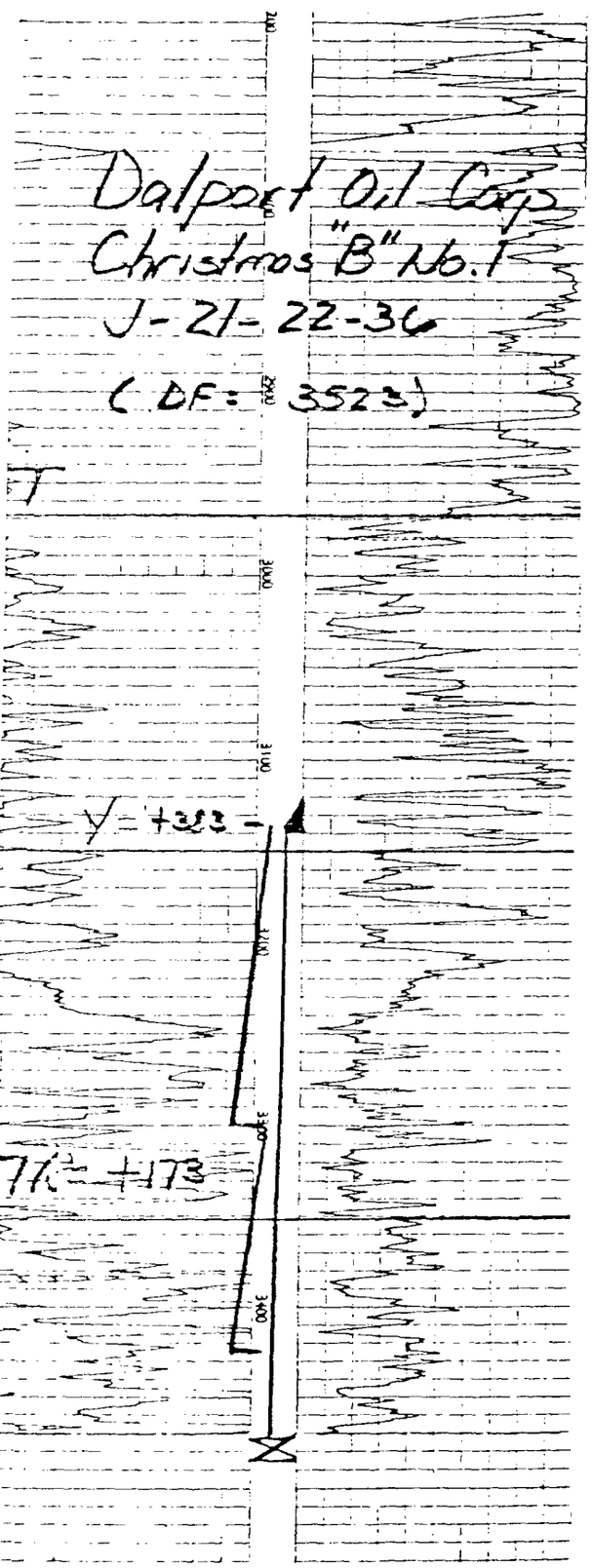
SPUD DATE	4-1-78 COMP. DATE 5-20-78
TD	3651 PBTD 3623
CASING RECORD	8 5/8 @ 475 w/325
	4 1/2 @ 3651 w/950
PERFORATING RECORD	Perf: 3479-3585 w/14
STIMULATION	A/8200
	SWF/40,000 + 80,000
IP	IPF = 652 MCFPD + 36 BWPD
GOR	GR
TP	91 CP 91
CHOKE	32/64 TUBING 2 3/8 @ 3594'
REMARKS	Well Test (4-20-83)
	Gas: 234 MCFPD
	Water: 35 BWPD
	Choke: 52/64
	TP: 41

Current Pump Arrangement

(10 x 54 x 1-1/4)

Current Tubing Depth: 3588'

L-21-22S-36E



COMPANY	Dalport Oil Corp.
WELL	A. L. Christmas "B" No. 1
FIELD	Jalmat Gas
LOCATION	1650 FSL & 1650 FEL (J)
	Sec. 21, T-22-S, R-36E
	(22-36-21-J)
COUNTY	Lea
STATE	New Mexico
ELEVATIONS:	KB
	DF 3523
7-03-84	GL

COMPLETION RECORD

SPUD DATE	12-01-52	COMP. DATE	12-18-52
TD	3473	PBTD	3473
CASING RECORD	9-5/8 @ 320 w/ 150		
	5-1/2 @ 3140 w/200		
PERFORATING RECORD	OH: 3140-3473		
STIMULATION	SF/3000 gal		
IP	IPF= 4547 MCFPD		
GOR		GR	
TP	800	CP	
CHOKE	5/8	TUBING	2-3/8 @ 3197

REMARKS

DST 3134-3300: Op 1:30. GTS 27 min @ 150 MCFPD. FP= 510. 25-min SIP= 810.

DST 3300-3425: Op 1:25. GTS 3 min @ 4125 MCFPD. Rec. 140 GCM.

Abnormally high SIP caused by water production.

GAS PRODUCTION HISTORY

Date 6-25-84

Operator: Dalport

Well: Annie L. Christmas "B" No. 1

Location: J-21-22S-36E

Pool: Jalmat (Gas)

Spud Date: _____ Original Completion Date: _____

Completion Interval (Gas): _____

Completion Date (Gas): _____ First Production (Gas): _____

Remarks: _____

Year	No. of Mos.	Annual Gas Production (MCF)	Avg. Gas Rate (MCF/Mo.)	Cum. Gas Production (MMCF)	Annual SIP (psia)	P/Z	
1965	12	144044	12004	2965.4	N/A	N/A	
1966	12	146188	12182	3111.6	421	475	
1967	12	178617	14885	3290.2	415.2	450	
1968	12	52065	4339	3342.3	378.2	405	
1969	12	32405	2700	3374.7	370.2	395	
1970	12	34693	2891	3409.4	375.2	400	
1971	11	25372	2307	3434.7	377.2	400	
1972	12	24751	2063	3459.5	381.2	405	
1973	12	19754	1646	3479.2	377.2	400	
1974	12	15148	1262	3494.4	383.2	410	
1975	12	16100	1342	3510.5	395.2	425	
1976	12	13803	1150	3524.3	N/A	N/A	
1977	12	12797	1066	3537.1	364.2	390	
1978	12	6048	504	3543.1	433.2	465	
1979	10	4098	410	3547.2	449.2	485	
1980	10	2925	293	3550.1	449.2	485	
1981	12	1703	142	3551.9	449.2	485	
1982	12	647	54	3552.5	39.2	40	
1983	1	10	10	3552.5	N/A	N/A	
1984	3	-0-	--	3552.5	N/A	N/A	

19 84 Detail Summary

Jan.	-0-	July	
Feb.	-0-	Aug.	
March	-0-	Sept.	
April		Oct.	
May		Nov.	
June		Dec.	

Production (Y-T-D) 0 MCF

Days or Months (Y-T-D) 3 mos.

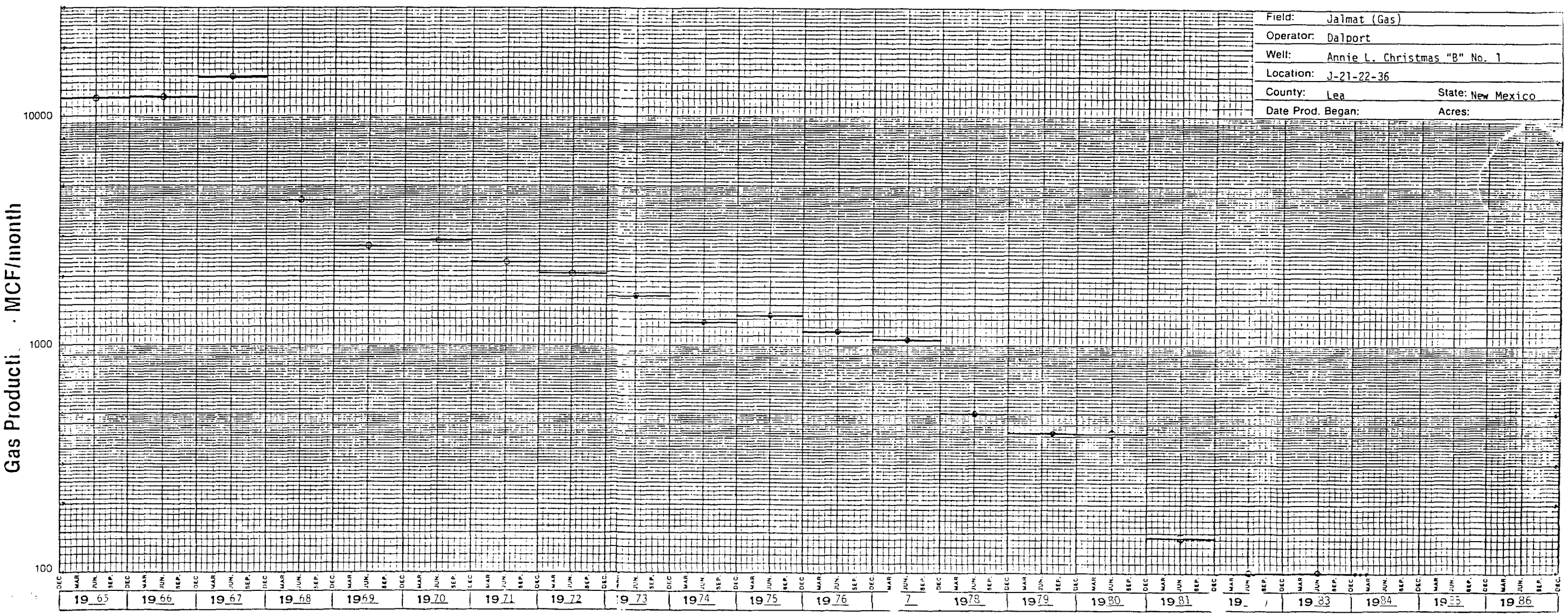
19 _____ Detail Summary

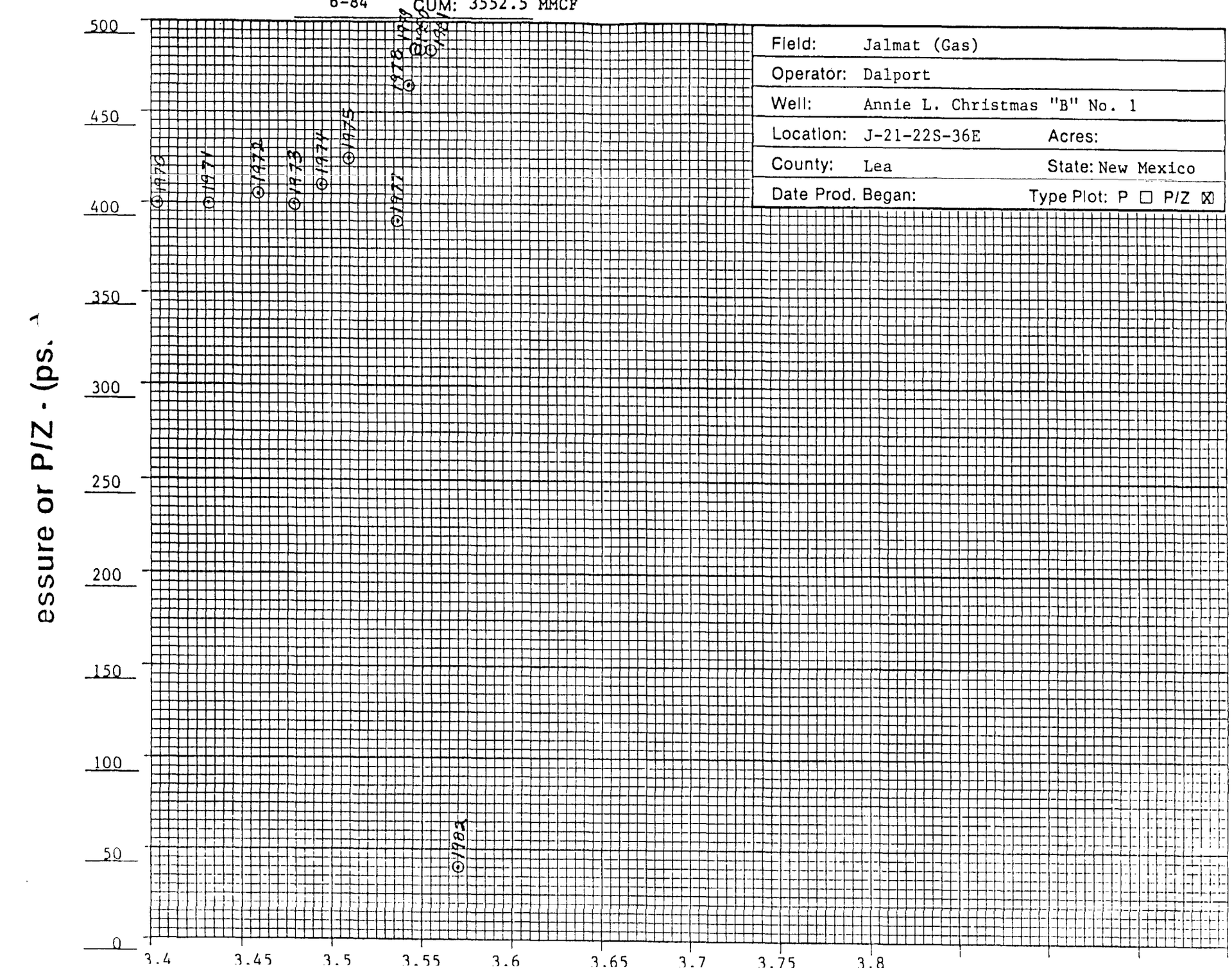
Jan.		July	
Feb		Aug	
March		Sept	
April		Oct	
May		Nov	
June		Dec	

Avg. Rate (Y-T-D) 0 MCF/Mo

0 MCFPD

5-84 Cum: _____ Cum: _____


Gas Producti · MCF/month
10000
1000
100
Field: Jalmat (Gas)
Operator: Dalport
Well: Annie L. Christmas "B" No. 1
Location: J-21-22-36
County: Lea
State: New Mexico
Date Prod. Began:
Acres:
DEC MAR JUN SEP
19 65
19 66
19 67
19 68
19 69
19 70
19 71
19 72
19 73
19 74
19 75
19 76
19 78
19 79
19 80
19 81
19 83
19 84
19 86


6-84
CUM: 3552.5 MMCF
Field: Jalmat (Gas)
Operator: Dalport
Well: Annie L. Christmas "B" No. 1
Location: J-21-22S-36E
Acres:
County: Lea
State: New Mexico
Date Prod. Began:
Type Plot: P ☐ P/Z ☒
essure or P/Z - (ps
500
450
400
350
300
250
200
150
100
50
0
3.4
3.45
3.5
3.55
3.6
3.65
3.7
3.75
3.8

NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103
(Rev 3-55)

MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

ne of Company	Address
Dalport Oil Corporation	3471 First Natl Bank Bldg. Dallas, Texas

ase	Well No.	Unit Letter	Section	Township	Range
A.L.Christmas B	1	J	21	22S	36E

ate Work Performed	Pool	County
12/5/68-12/18/68	Jalmat Gas Pool	Lea

THIS IS A REPORT OF: *(Check appropriate block)*

☐ Beginning Drilling Operations ☐ Casing Test and Cement Job ☐ Other *(Explain)*:

☐ Plugging ☒ Remedial Work

etailed account of work done, nature and quantity of materials used, and results obtained.

11-1-68 Ran Worth Well temperature survey and determined that water was entering above shoe joint of the casing.

12-5-to 12/18 moved in, pulled tubing, set Murphy bridging basket at 3169. Perforated W/2 shots at 3020', set EZ drill packer at 3100', squeezed 50 sacks around casing, maximum pressure 2500#s, SIP 700#s. Drilled out w/reverse circulation and cleaned out to 3417'. Could not clean out to bottom because of lost circulation. Ran tubing with R-4 packer set at 3063'. Swabbed well 4 days and put into line.

1/21/69 Treated with 500 gals. 7½% Dolo-Wash with 3 gals. AC-2 and 1 gal. Foamex - swabbed in and put on line.

Witnessed by	Position	Company
John Yuronka	Engineer	Dalport Oil Corporation

FILL IN BELOW FOR REMEDIAL WORK REPORTS *ONLY*

ORIGINAL WELL DATA

D F Elev.	T D	P B T D	Producing Interval	Completion Date
3533'	3473'	-	3140 - 3473	12/16/52

Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth
2" EUE	3275	5½"	3140'

Perforated Interval(s)

None

Open Hole Interval	Producing Formation(s)
3140 - 3473	Yates & 7 Rivers

RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover	1-27-69	-	120	0	-	120

OIL CONSERVATION COMMISSION

Approved by

Title

Date

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

Name W. L. Polk

Position President

Company Dalport Oil Corporation

May 5, 1978

C

O

P

Y

Continental Oil Co.
1001 N. Turner
Hobbs, New Mexico 88240

Re: S/2 Section 21,
22-S, 36-E

Gentlemen:

In checking with Mr. Doyle Hartman as to the outcome of his Gulf-Greer No. 1 well in the SW/4 Section 21, we find that his well and our Christmas B-1 well are producing considerable water from the Yates and Upper Seven Rivers zones.

We feel that there is a possibility of injected water escaping into these zones from your No. 18 well in the NE/SW of Section 21 or perhaps from another injection well in the close proximity. We enclose a copy of a letter dated May 2, 1978 giving Mr Hartman's views.

We would appreciate your checking into the problem and advise us at an early date of your findings.

Yours very truly,

DALPORT OIL CORPORATION

W. L. Todd, Jr., President

WLTJr/fm

Enclosure

cc: Mr. Doyle Hartman

RECEIVED MAY 0 8 1978

HALLIBURTON SERVICES
MIDLAND DIVISION
LOVINGTON, NEW MEXICO 88260

LABORATORY WATER ANALYSIS

No. W66-631

To Mr. John Yuronka

Petroleum Building

Midland, Texas 79701

Date 7-30-77

Submitted by for Dalport Oil Corp. Date Rec. 7-30-77

Well No. Christmas B #1 Depth Formation

County Field Source

	7-28-77			
Resistivity	0.312 @ 74°F.			
Specific Gravity	1.023			
pH	7.7			
Calcium (Ca)	2,700			*MPL
Magnesium (Mg)	210			
Chlorides (Cl)	15,000			
Sulfates (SO_4)	2,650			
Bicarbonates (HCO_3)	560			
Soluble Iron (Fe)	Nil			

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

By W. L. Brewer
CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

E NO.

WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Operator	Dalport Oil Corp.	Date Sampled	12-16-68 (9:00 AM)
Well	Christman B #1	Date Received	12-16-68
Field	Jalmat Gas	Submitted by	Hobbs District
Formation	Yates	Worked by	Jones
Depth		Other Description	Swab Sample
County	Lea, New Mexico		

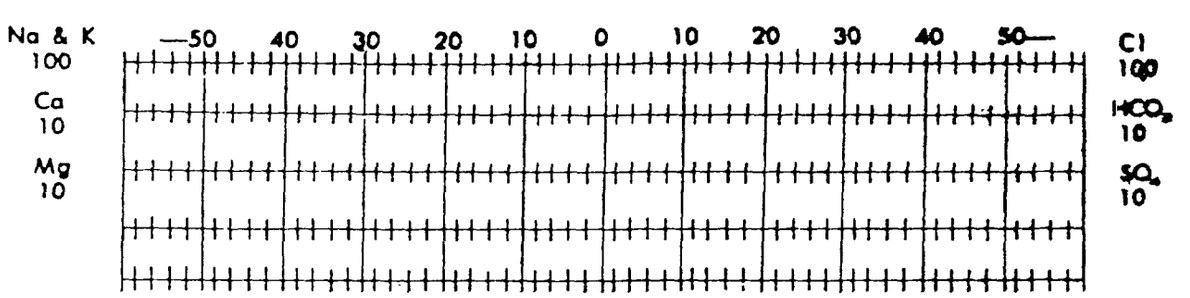
CHEMICAL DETERMINATIONS

Density	1.120 @ 76 °F		pH	7.3	
Iron	Faint Trace		Hydrogen Sulfide	None	
Sodium and Potassium	68,300	ppm	Bicarbonate	598	ppm
Calcium	1,640	ppm	Sulfate	7,400	ppm
Magnesium	1,600	ppm	Phosphate		ppm
Chloride	107,000	ppm	as Sodium Chloride		ppm

Remarks:

Sample as received contained iron compounds (mainly iron sulfide) in suspension.

for Stiff type plot (in meq./l.)



Per _____

Office No. _____

WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

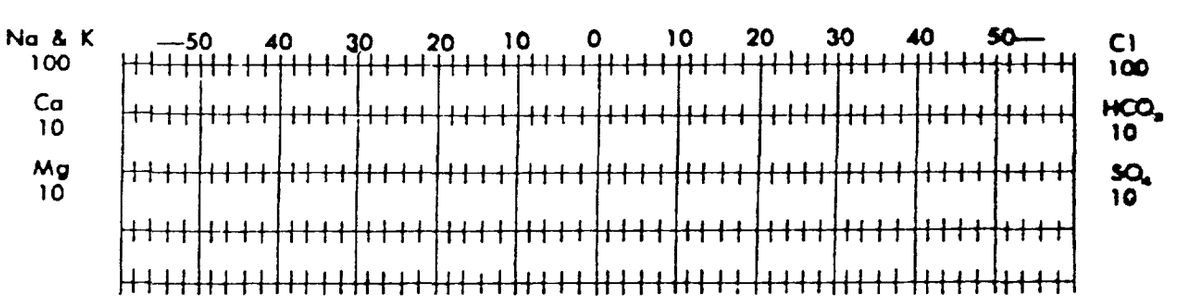
Operator	Dalport Oil Corporation	Date Sampled	8/16/68
Well	Christmas B #1	Date Received	8/19/68
Field	Jalmat Gas	Submitted by	Hobbs District
Formation	Yates	Worked by	Capps
Depth		Other Description	
County	Lea, New Mexico		

CHEMICAL DETERMINATIONS

Density	1.035 @ 76° F	pH	8.0
Iron	Very Faint Trace	Hydrogen Sulfide	None
Sodium and Potassium	12,730 ppm	Bicarbonate	732 ppm
Calcium	1,400 ppm	Sulfate	2,720 ppm
Magnesium	1,215 ppm	Phosphate	ppm
Chloride	23,200 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./l.)



Per _____

LE NO.

WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

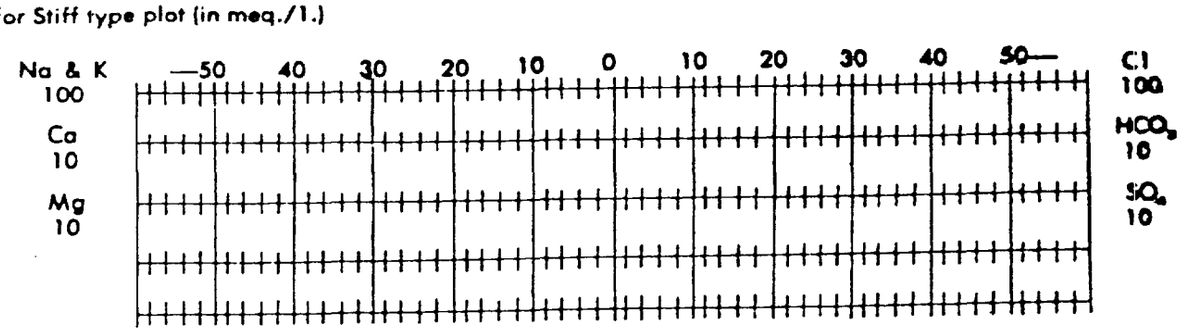
Operator	Dalport Oil Corporation	Date Sampled	8/15/68
Well	Christmas B #1	Date Received	8/19/68
Field	Jalmat Gas	Submitted by	Hobbs District
Formation	Yates	Worked by	Capps
Depth		Other Description	
County	Lea, New Mexico		

CHEMICAL DETERMINATIONS

Density	1.035 @ 77° F	pH	7.6
Iron	Very Faint Trace	Hydrogen Sulfide	None
Sodium and Potassium	10,420 ppm	Bicarbonate	696 ppm
Calcium	1,320 ppm	Sulfate	2,840 ppm
Magnesium	1,263 ppm	Phosphate	ppm
Chloride	19,600 ppm	as Sodium Chloride	ppm

Remarks:

for Stiff type plot (in meq./l.)



Per

PLE NO.

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

Operator	Dalport Oil Corporation	Date Sampled	8/14/68
Well	Christmas B #1	Date Received	8/19/68
Field	Jalmat Gas	Submitted by	Hobbs District
Formation	Yates	Worked by	Capps
Depth		Other Description	
County	Lea, New Mexico		

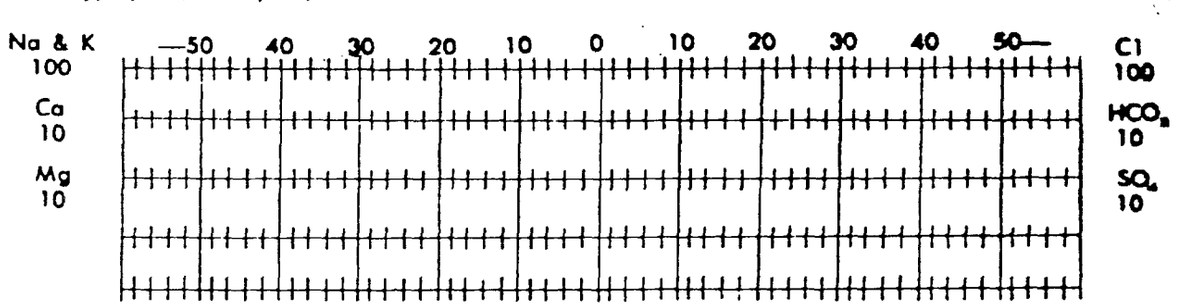
CHEMICAL DETERMINATIONS

Density	1.035 @ 78° F	pH	7.5
Iron	No Trace	Hydrogen Sulfide	None
Sodium and Potassium	11,720 ppm	Bicarbonate	671 ppm
Calcium	1,280 ppm	Sulfate	2,400 ppm
Magnesium	1,458 ppm	Phosphate	ppm
Chloride	22,400 ppm	as Sodium Chloride	ppm

Remarks:

This water is either a mixture of Yates and Queen formation waters, or it could be mainly 7 Rivers formation water. Our card file would indicate it to be the latter.

for Stiff type plot (in meq./1.)



Per

vm----------293 MISC 596----------

CONTINENTAL OIL COMPANY	INSTR:	UNIT AGREEMENT
TO	DATED:	JUNE 15, 1970
	FILED:	DECEMBER 1, 1970 @ 1:00 p.m.
EX PARTE	RCDED:	BOOK 293 PAGE 596, MISC RECORDS LEA COUNTY, NEW MEXICO

293 MISC 596

15921

UNIT AGREEMENT

SOUTH EUNICE UNIT

LEA COUNTY, NEW MEXICO

UNIT AGREEMENT

FOR THE DEVELOPMENT AND OPERATION

OF THE SOUTH EUNICE UNIT

LEA COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 15th day of June, 1970, by and between the parties subscribing, ratifying or consenting hereto, and herein referred to as "parties hereto".

WITNESSETH: That,

WHEREAS, the parties hereto are the owners of working, royalty, or other oil or gas interests in the Unit Area subject to this Agreement; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico is authorized by law (Chap. 72, Laws of 1935, as amended by Chap. 193, Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949, Chap. 65, Art. 3, Sec. 14, N.M.S., 1953 anno) to approve this Agreement, and the conservation provisions hereof, and

WHEREAS, the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Sections 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the South Eunice Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to enable institution and consummation of secondary recovery operations, conserve natural resources, prevent waste and secure the other benefits obtainable through development and operation of the area subject to this Agreement under the terms, conditions, and limitations herein set forth;

WHEREAS, the Mineral Leasing Act of February 25, 1920, 41 Stat. 437, as amended, 30 U.S.C. Sections 181 et seq., authorizes Federal lessees and their representatives to unite with each other, or jointly or separately with others, in collectively adopting and operating a cooperative or unit plan of development or operation of any oil or gas pool, field or like area, or any part thereof for the purpose of more properly conserving the natural resources thereof whenever determined and certified by the Secretary of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the South Eunice Unit Area covering the land hereinafter described to give reasonably effective control of operations therein; and

WHEREAS, it is the purpose of the parties hereto to enable institution and consummation of secondary recovery operations, conserve natural resources, prevent waste and secure the other benefits obtainable through development and operation of the area subject to this Agreement under the terms, conditions, and limitations herein set forth;

NOW, THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their respective interests in the Unitized Formation of the below-defined Unit Area, and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS. The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder and valid pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this Agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this Agreement; and, as to Non-Federal lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State in which the Non-Federal land is located, are hereby accepted and made a part of this Agreement.

SECTION 2. UNIT AREA AND DEFINITIONS. The area described in Exhibit B and depicted on Exhibit A attached hereto is hereby designated and recognized as constituting the Unit Area, containing 2720.00 acres, more or less, in Lea County, New Mexico. Said land is described as follows:

T-22S R-36E

Section 20:	E/2 E/2	160.00 acres
Section 21:	All	640.00
Section 22:	S/2, S/2 N/2, NW/4 NW/4, NW/4 NE/4	560.00
Section 28:	All	640.00
Section 29:	E/2 NE/4, NE/4 SE/4	120.00
Section 33:	N/2, SE/4, N/2 SW/4, SE/4 SW/4	600.00
		2720.00 acres

For the purpose of this agreement, the following terms and expressions as used herein shall mean:

(a "Commission" is defined as the Oil Conservation Commission of the State of New Mexico.

(b "Director" is defined as the Director of the United States Geological Survey.

(c) "Secretary" is defined as the Secretary of the Interior of the United States of America, or his duly authorized delegate.

(d) "Department" is defined as the Department of the Interior of the United States of America.

(e) "Supervisor" is defined as the Oil and Gas Supervisor of the United States Geological Survey.

(f) "Unitized Formation" is defined as the interval between the base of the Queen formation to a point 232 feet above the top of the Queen formation; provided, that in no event shall the Unitized formation extend below a depth of 4000 feet from the surface of the ground. The top and the base of the Queen formation are shown at the depths of 3821' and 4023' respectively, on the Gamma-Ray-Sonic log run in the Continental Oil Company West Arrowhead Deep Unit Well No. 1, located 1980 feet from the North line and 1980 feet from the West line of Section 17, Township 22 South, Range 36 East, N. M. P. M.

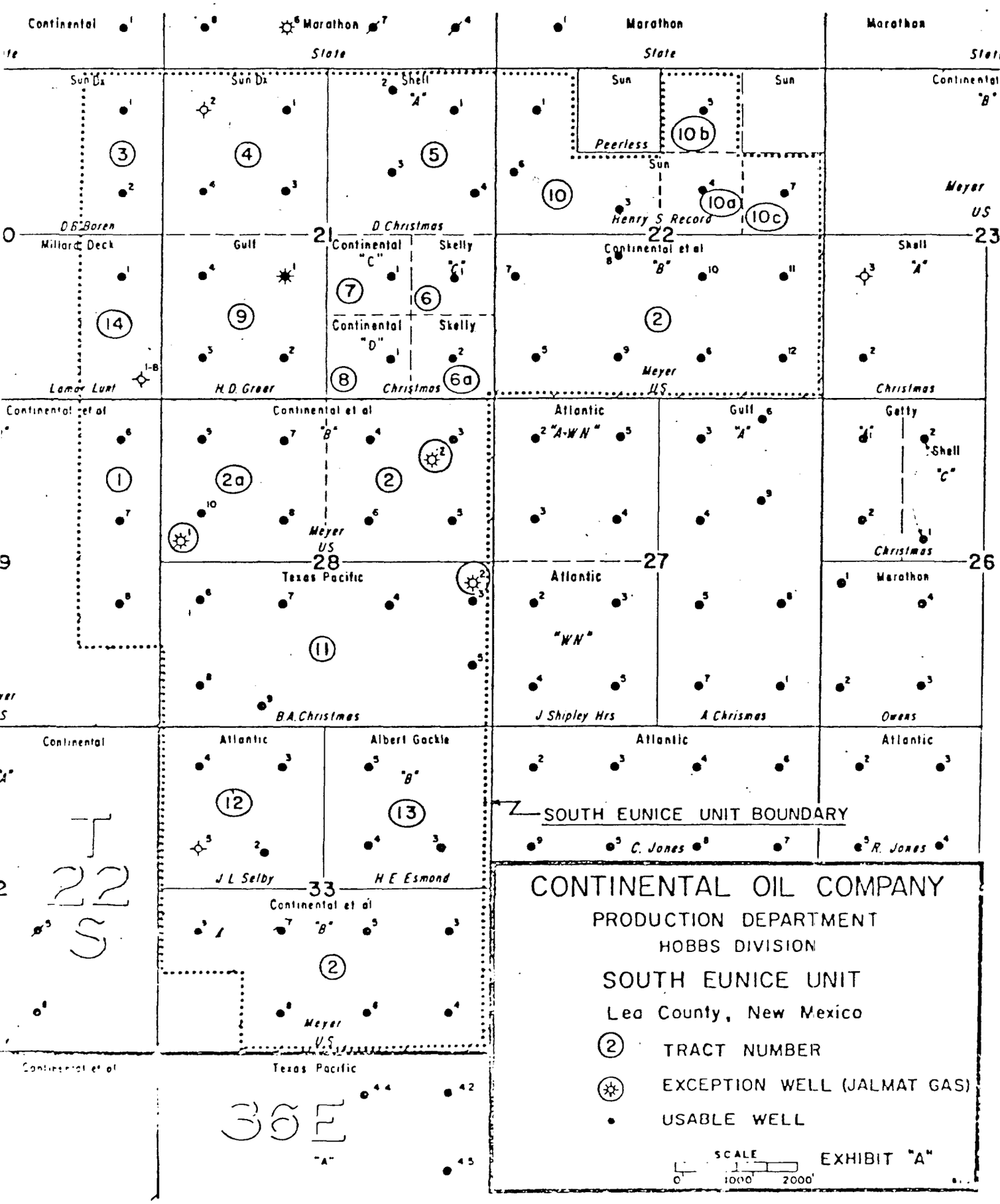
(g) "Unitized Substances" is defined as and shall mean all oil, gas, gaseous substances, sulphur contained in gas, condensate, and all associated and constituent liquid or liquefiable hydrocarbons produced from the Unitized Formation of the Unitized Land. However, it shall not include the dry gas and associated hydrocarbons produced from gas wells within the Unit Area which are completed in and produce from the vertical limits of the Jalmat gas pool, as defined by Commission Order No. R-1670.

(h) "Tract" is defined as each parcel of land described as such and given a Tract number in Exhibit B.

(i) "Tract Participation" is defined as that percentage of Unitized Substances produced from the Unitized Formation which is allocated to a Tract under this Agreement.

(j) "Unit Participation," of each Working Interest Owner, is defined as the sum of the percentages obtained by multiplying such Working Interest Owner's fractional Working Interest in each tract by the Tract Participation of such Tract.

(k) "Working Interest" is defined as the right to search for, produce and acquire Unitized Substances whether held as an incident of ownership of mineral fee simple title, under an oil and gas lease, or otherwise held.



CONTINENTAL OIL COMPANY

PRODUCTION DEPARTMENT

HOBBS DIVISION

SOUTH EUNICE UNIT

Lea County, New Mexico

(2) TRACT NUMBER

EXCEPTION WELL (JALMAT GAS)

• USABLE WELL

SCALE 0 1000' 2000'

EXHIBIT "A"

Note No. 8 (Continued)	Apparent Mineral Interest	Revenue Interest
E. B. McKean	3.1250	0.39062
Mrs. Clyde W. Miller	1.0417	0.13021
Elizabeth H. Penn, Tr U/W of Robert Lee Penn	6.1112	0.76391
Nancy E. Penson	18.3378	2.29222
Estate of George Pfouts	0.0090	0.00112
Royalty Roundup, Inc.	0.0180	0.00225
Harry Smith	0.0015	0.00018
Georgia Ann Stieren, ind. exe U/W of Jack Stieren	0.2603	0.03254
H. R. Stroube	5.0000	0.62500
W. C. Stroube	5.0000	0.62500
E. L. Vance	0.0050	0.00063
Mrs. Nora Walker	0.0090	0.00112
Myrtis Dean Watkins	1.0417	0.13021
R. L. Wheelock, Jr., & Betty W. Kennaugh, co-exe. of the estate of Maude C. Wheelock	5.0000	0.62500
Elizabeth Woolworth	4.1666	0.52084
May Woolworth	5.2082	0.65103
	100.0000	12.50000
NOTE NO. 9 - Tract No. 9, Basic Royalty and Percentage		
Jacques Peter Adoue, Thomas J. Reilly, W. W. Bland, and the National Bank of Commerce of Houston, Tr. U/W of F. D. Jones	0.2500	0.0312
Charles F. Bedford	0.5000	0.0625
Edwin M. Bedford	0.5000	0.0625
Henry DeGraffenreid Bedford	0.5000	0.0625
Rachel Bedford Bowen	0.5000	0.0625
Hugh Corrigan III	1.5625	0.1953
J. Patrick Corrigan	1.5625	0.1953
Fannie B. Dore	1.2500	0.1563
Felmont Oil Corporation	1.1228	0.1404
First Wisconsin Trust Co., exe/est. Lillian Blanchard Jones	0.2500	0.0313
Fluor Corporation	6.2500	0.7812
Julian W. Glass, Jr., Tr. U/W J. Wood Glass	0.1466	0.0183
Etta Greer	3.1250	0.3906
Clarence E. Hinkle	1.5625	0.1953
J. M. Richardson Lyeth, Jr., and Munro Longyear Lyeth, First National Bank of Denver Trustees	11.2500	1.4062
The Pennsylvania Bank and Trust Co., Tr/Est. Albert Walter Goal, deceased	0.1466	0.0183
Petroleum Corporation of Texas	6.6666	0.8333
Phillips Investment Corporation	0.1466	0.0183
W. A. Pruett	0.6250	0.0781
Onez Norman Rooney	11.2500	1.4063
Agnes C. Smith	6.2500	0.7813
June D. Speight	6.2500	0.7813
Southern Minerals Corporation	13.3333	1.6667
Southern Petroleum Exploration, Inc.	15.6250	1.9531
Sparks Healy Company	5.0000	0.6250
The Superior Oil Company	3.8750	0.4844
Ellen Anne W. Williams	0.5000	0.0625
	100.0000	12.5000

SOUTH EUNICE UNIT
EXHIBIT "B" TO UNIT AGREEMENT

Tract No.	Description of Land (All in T-22S, R-36E)	No. of Acres	Serial Number and Exp. Date	Basic Royalty & Percentage	Record Lessee and Percentage		Overriding Royalty and Percentage	Working Interest Owner and Percentage	
1	Sec. 29: E/2 NE/4, NE/4 SE/4	120.00	LC 030133(a)	USA 100% Schedule C	Continental Oil Co. Atlantic Richfield Co. Chevron Oil Co. Pan American Pet. Corp.	25% 25% 25% 25%	(See Appendix, Note No. 1)	Continental Oil Co. Atlantic Richfield Chevron Oil Co. Pan American Pet. Corp.	25% 25% 25% 25%
2	Sec. 22: S/2 Sec. 28: NE/4 Sec. 33: SE/4, E/2 SW/4, NW/4 SW/4	760.00	LC 030133(b)	USA 100%	Continental Oil Co. Atlantic Richfield Co. Chevron Oil Co. Pan American Pet. Corp.	25% 25% 25% 25%	None	Continental Oil Co. Atlantic Richfield Chevron Oil Co. Pan American Pet. Corp.	25% 25% 25% 25%
2(a)	Sec. 28: NW/4	160.00	LC 030133(b)	USA 100% Schedule D	Continental Oil Co. Atlantic Richfield Co. Chevron Oil Co. Pan American Pet. Corp.	25% 25% 25% 25%	None	Continental Oil Co. Atlantic Richfield Chevron Oil Co. Pan American Pet. Corp.	25% 25% 25% 25%
THREE FEDERAL TRACTS CONTAINING 1040.00 ACRES, OR 38.24% OF THE UNIT AREA									
3	Sec. 20: E/2 NE/4	80.00	HBP	(See Appendix, Note No. 2)	Sun Oil Co. - DX Div.		None	Sun Oil Co. - DX Div.	
4	Sec. 21: NW/4	160.00	HBP	(See Appendix, Note No. 3)	Sun Oil Co. - DX Div.		None	Sun Oil Co. - DX Div.	
5	Sec. 21: NE/4	160.00	HBP	(See Appendix, Note No. 4)	Wesley McCallister		None	Shell Oil Co. Gulf Oil Corp.	50% 50%
6	Sec. 21: NE/4 SE/4	40.00	HBP	(See Appendix, Note No. 5)	Skelly Oil Company		None	Skelly Oil Co.	
6(a)	Sec. 21: SE/4 SE/4	40.00	HBP	(See Appendix, Note No. 6)	Skelly Oil Company		None	Skelly Oil Co.	

10-15-70

South Eunice Unit
Exhibit "B" to Unit Agreement
Page 2

Tract No.	Description of Land (All in T-22S, R-36E)	No. of Acres	Serial Number and Exp. Date	Basic Royalty & Percentage	Record Lessee	Overriding Royalty and Percentage	Working Interest Owner and Percentage
7	Sec. 21: NW/4 SE/4	40.00	HBP	See Appendix Note No. 7	J. M. Hendrix M. L. Klein	Shell Companies Foundation, Inc. 1.822922%/	Continental Oil Co.
8	Sec. 21: SW/4 SE/4	40.00	HBP	See Appendix Note No. 8	J. M. Hendrix M. L. Klein	Shell Companies Foundation, Inc. 6.25%/	Continental Oil Co.
9	Sec. 21: SW/4	160.00	HBP	See Appendix Note No. 9	Gulf Oil Corp.	None	Gulf Oil Corp.
10	Sec. 22: S/2 NW/4, NW/4 NW/4	120.00	HBP	See Appendix Note No. 10	Sun Oil Company	None	Sun Oil Company
10(a)	Sec. 22: SW/4 NE/4	40.00	HBP	See Appendix Note No. 11	Sun Oil Company	None	Sun Oil Company
10(b)	Sec. 22: NW/4 NE/4	40.00	HBP	See Appendix Note No. 12	Sun Oil Company	None	Sun Oil Company
10(c)	Sec. 22: SE/4 NE/4	40.00	HBP	See Appendix Note No. 13	Sun Oil Company	None	Sun Oil Company
11	Sec. 28: S/2	320.00	HBP	See Appendix Note No. 14	Texas Pacific Oil Company, Inc.	Emma L. Coleman & Levi Cole, Anc. Ex. Est. 0.04883* D. L. Coleman, deceased 0.04883* Mary Vern Ransom 0.04883*	G. F. Bauerdorf Est. 24.316% Gordon M. Cone 2.734% E. A. Culbertson 6.079% W. W. Irwin 6.079% Reserve Oil & Gas 12.159% Texas Pacific Oil 48.633%

** Until balance of Production Payment in the original sum of $687.50 is paid, after which this interest reverts to Texas Pacific.

1/ This rate applies when daily average production per well is less than 35 barrels. When daily average production per well is over 35 barrels the royalty rate is double that shown.

10-15-70

EXHIBIT "C" TO UNIT AGREEMENT
SOUTH EUNICE UNIT
LEA COUNTY, NEW MEXICO

Tract No.	Description	Phase I Participation	Phase II Participation
1	Sec. 29: E/2 NE/4, NE/4 SE/4	6.24388	3.43588
2	Sec. 22: S/2 Sec. 28: NE/4 Sec. 33: SE/4, E/2 SW/4, NW/4 SW/4	21.89638	26.70781
2(a)	Sec. 28: NW/4	3.69285	4.72238
3	Sec. 20: E/2 NE/4	1.84119	3.67033
4	Sec. 21: NW/4	2.40259	12.63001
5	Sec. 21: NE/4	1.77839	6.48196
6	Sec. 21: NE/4 SE/4	1.00671	1.58512
6(a)	Sec. 21: SE/4 SE/4	0.62515	1.35154
7	Sec. 21: NW/4 SE/4	0.49384	1.10147
8	Sec. 21: SW/4 SE/4	4.53494	2.39248
9	Sec. 21: SW/4	7.25439	5.94656
10	Sec. 22: S/2 NW/4, NW/4 NW/4	7.23821	5.46449
10(a)	Sec. 22: SW/4 NE/4	2.10381	1.51564
10(b)	Sec. 22: NW/4 NE/4	1.83548	1.42864
10(c)	Sec. 22: SE/4 NE/4	7.51701	1.84416
11	Sec. 28: S/2	6.39231	7.85107
12	Sec. 33: NW/4	7.97659	4.95584
13	Sec. 33: NE/4	13.94358	6.03375
14	Sec. 20: E/2 SE/4	1.22270	0.88087

Abstracter's Note: Omitting other land descriptions immaterial to this abstract. Complete copy will be furnished upon request-Abstracter.

STATE OF NEW MEXICO
COUNTY OF LEA
FILED

DEC 1 1970

at 1:00 o'clock P M
and recorded in Book P-273
Page 596
[illegible] County Clerk
By [illegible] Deputy

vm----------293 MISC 639----------

FERN CONE	)	INSTR: RATIFICATION OF UNIT AGREEMENT
	)	DATED: JUNE 23, 1970
TO	)	FILED: DECEMBER 1, 1970 @ 1:00 p.m.
	)	RCDED: BOOK 293 PAGE 639, MISC RECORDS
CONTINENTAL OIL COMPANY	)	LEA COUNTY, NEW MEXICO

45922 Misc BOOK 293 PAGE 639

RATIFICATION OF UNIT AGREEMENT
SOUTH EUNICE UNIT
LEA COUNTY, NEW MEXICO

The undersigned (whether one or more) is a Royalty Owner, as that term is defined therein, in one or more of the Tracts comprising the Unit Area, as that term is defined therein, under the certain Unit Agreement for the development and operation of the South Eunice Unit, Lea County, New Mexico, dated the 15th day of June, 1970; wherein and whereunder 2880 acres, more or less, of land in Sections 20, 21, 22, 28, 29, and 33, T-22-S, R-36-E, Lea County, New Mexico, were unitized as to the Seven Rivers and Queen formations, as those formations were more fully defined in said Agreement; and the undersigned acknowledges receipt of a true copy of said Unit Agreement and ratifies and adopts the same and commits all of its interest in the unit area insofar as the Unitized Formation, defined therein, is concerned under said Unit agreement as fully for every purpose as if the undersigned had executed the original Agreement or counterpart thereof.

WITNESS the execution hereof this 23rd day of June, 1970.

Date: _____ Fern Cone

Date: _____ _____

STATE OF Texas I
COUNTY OF Lubbock I

(INDIVIDUAL)

The foregoing instrument was acknowledged before me this 23rd day of June, 1970, by Fern Cone, a Married Woman.

My Commission Expires:

June 1, 1971

Madeline Parker
Notary Public
Lubbock County, Texas

vm----------294 MISC 442----------

UNITED STATES OF AMERICA	)	INSTR: CERTIFICATION-DETERMINATION
	)	
	)	DATED: DECEMBER 31, 1970
TO	)	FILED: JANUARY 8, 1971 @ 2:25 p.m.
	)	
	)	RCDED: BOOK 294 PAGE 442, MISC RECORDS
CONTINENTAL OIL COMPANY	)	LEA COUNTY, NEW MEXICO

226

CERTIFICATION--DETERMINATION

Pursuant to the authority vested in the Secretary of Interior, under the act approved February 25, 1920, 41 Stat. 437, as amended, 30 U. S. C. secs. 181, et seq., and delegated to the Oil and Gas Supervisors of the Geological Survey (33 F.R. 5812), I do hereby:

A. Approve the attached agreement for the development and operation of the South Eunice Unit Area, State of New Mexico.

B. Certify and determine that the unit plan of development and operation contemplated in the attached agreement is necessary and advisable in the public interest for the purpose of more properly conserving the natural resources.

C. Certify and determine that the drilling, producing, rental, minimum royalty, and royalty requirements of all Federal leases committed to said agreement are hereby established, altered, changed, or revoked to conform with the terms and conditions of this agreement.

Dated December 31, 1970

Oil and Gas Supervisor, United States
Geological Survey

Contract Number 14-08-0001-11586

vm----------294 MISC 443----------

CONTINENTAL OIL COMPANY	)	INSTR: CERTIFICATE OF EFFECTIVENESS
	)	DATED: JANUARY 4, 1971
TO	)	FILED: JANUARY 8, 1971 @ 2:25 p.m.
	)	RCDED: BOOK 294 PAGE 443, MISC RECORDS
EX PARTE	)	LEA COUNTY, NEW MEXICO

Misc BOOK 294 PAGE 44

227

CERTIFICATE OF EFFECTIVENESS
SOUTH EUNICE UNIT
LEA COUNTY, NEW MEXICO

Reference is hereby made to that certain Unit Agreement for the Development and Operation of the South Eunice Unit, Lea County, New Mexico, recorded in Book 292, page 596 of the Miscellaneous Records of Lea County, New Mexico.

In accordance with Paragraph 24(d) of said Unit Agreement, Continental Oil Company, Unit Operator, hereby certifies that said Unit Agreement became effective according to its terms as of 7:00 A.M. January 1, 1971.

EXECUTED this 4th day of January, 1971.

CONTINENTAL OIL COMPANY,
Operator of the South Eunice Unit

By _____
Attorney in Fact

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

The foregoing instrument was acknowledged before me this 4th day of January, 1971, by V. C. Eissler, Attorney in Fact for CONTINENTAL OIL COMPANY, a Delaware corporation, on behalf of said corporation.

Patricia Hornsby
Notary Public, Harris County, Texas

PATRICIA HORNSBY

My Commission expires:
June 1, 1971

STATE OF NEW MEXICO
COUNTY OF LEA
FILED

JAN 8 1971

at 2:25 o'clock P M
and Recorded in Book 294
Page 443
JANE RICE [illegible], County Clerk
By [illegible] Deputy

STATEMENT OF CERTIFICATION
HARDSHIP GAS WELL CLASSIFICATION
Doyle Hartman-
Gulf-Greer No. 1
1980 FSL and 990 FWL (L)
Section 21, T-22-S, R-36-E
Lea County, New Mexico
Jalmat (Gas) Pool

DOYLE HARTMAN, OPERATOR, as required by the State of New Mexico Energy and Minerals Department, Oil Conservation Division, certifies that:

1. All information submitted with this application is true and correct to the best of his knowledge;

2. One copy of this application has been submitted to the Hobbs District I Office of the Oil Conservation Division;

3. Notice of this application has been given to El Paso Natural Gas Company, the transporter and Northern Natural Gas Company, the purchaser; and

4. Notice of this application has been given to all offset Jalmat (Gas) operators.

Michelle Hembree
Michelle Hembree
Administrative Assistant

THE STATE OF TEXAS §
§
COUNTY OF MIDLAND §

BEFORE ME, Notary Public, on this day personally appeared Michelle Hembree, known to me to be the person whose name is subscribed to the foregoing instrument and acknowledged to me that she executed the same for the purposes and consideration therein expressed.

GIVEN under my hand and seal of office this 17th day of MAY, 1984.

NOTARY PUBLIC COUNTY OF MIDLAND, TEXAS

Cindy Sue Harrison
Notary Public

My Commission Expires:
CINDY SUE HARRISON
My Commission Expires Aug. 11, 1987