BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO FOR THE PURPOSE OF CONSIDERING:

CASE No. 249
ORDER No. R-69

IN THE MATTER OF THE APPLICATION OF AMERADA PETROLEUM CORPORATION FOR AN ORDER ESTABLISHING PRORATION UNITS AND UNIFORM SPACING OF WELLS FOR THE BAGLEY SILURO-DEVONIAN POOL, LEA COUNTY, NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION

This matter came on for hearing at Santa Fe, New Mexico, on April 24, 1951, on the application of Amerada Petroleum Corporation to establish proration units and uniform spacing of wells for the Bagley Siluro-Devonian pool, in Lea County, New Mexico.

The Commission having heard the evidence presented and being fully advised,

FINDS:

1. That due public notice having been given as required by law, the Commission has jurisdiction of the subject matter and of the parties.

2. That the information now available indicates that one well will effectively drain an area of 80 acres and considering the shortage of casing and other tubular materials the Bagley Siluro-Devonian pool should be developed on 80-acre proration units for a period of one year.

3. That the probable productive limits of the Bagley Siluro-Devonian pool ascertainable from the information available at the time of the hearing in this case comprise the following land in Lea County, New Mexico.

All of section 34, T. 11 S, R. 33 E
NW/4 and S/2 section 35, T. 11 S, R. 33 E
N/2 and SE/4 section 3, T. 12 S, R. 33 E
All of section 2, T. 12 S, R. 33 E
E/2 NW/4 and N/2 NE/4 section 11, T. 12 S, R. 33 E

IT IS THEREFORE ORDERED:

1. That 80-acre proration units are hereby established for the Bagley Siluro-Devonian pool as delineated above, which shall comprise the west half and east half of each Governmental quarter section, except the following units, to-wit:

N/2 NW/4 section 35, T. 11 S, R. 33 E
S/2 NW/4 section 35, T. 11 S, R. 33 E
N/2 NW/4 section 3, T. 12 S, R. 33 E
S/2 NW/4 section 3, T. 12 S, R. 33 E
N/2 NE/4 section 2, T. 12 S, R. 33 E
SW/4 NE/4 and NW/4 SE/4 section 2, T. 12 S, R. 33 E
SE/4 NE/4 and NE/4 SE/4 section 2, T. 12 S, R. 33 E
S/2 SE/4 section 2, T. 12 S, R. 33 E
N/2 NE/4 section 11, T. 12 S, R. 33 E

2. All wells drilled into the Bagley Siluro-Devonian pool shall be located in the center of the northwest and the southeast quarters of each governmental quarter section, with a tolerance of 150 feet in any direction to avoid surface obstructions.

3. That no well shall be drilled or produced in said pool except in conformity with the spacing pattern set forth above without special order of the Commission after notice and hearing.

4. That all wells producing or hereafter completed in the Bagley Siluro-Devonian pool are hereby given an allowable equivalent to one and one-half times the top allowable for a 40-acre proration unit with the deep pool adaptation, as provided for in the rules and regulations of the Commission.

5. If any well is drilled as an exception to the well spacing pattern set forth above under special order of the Commission, the allowable for such well shall be the top allowable for a 40-acre proration unit with the deep pool adaptation, as provided by the rules and regulations of the Commission.

6. This order shall cover all of the Bagley Siluro-Devonian common source of supply and any extension thereof as may be determined by further development, and shall continue in force for a period of one year from the first day of May, 1951.

Done this 1st day of May 1951.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

Guy Shepard

GUY SHEPARD, Member

R. R. Spurrier

R. R. SPURRIER, Secretary

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF THE COMMISSION UPON ITS OWN MOTION FOR AN ORDER DIRECTING OPERATORS IN THE BAGLEY-SILURO-DEVONIAN POOL TO SHOW CAUSE WHY THE POOL SHALL NOT BE PLACED ON A FORTY-ACRE SPACING PATTERN WITH ALLOWABLE ADJUSTMENT

CASE NO. 249

Preliminary Statement

This case was continued from the regular hearing of the Commission in April by interlocatory order R-69-B. In December, 1950, Amerada filed an application for a temporary order to establish 80-acre proration units and uniform spacing of wells for the Bagley-Siluro-Devonian Pool in Lea County, New Mexico. This application was docketed as Case No. 249 and was heard in April, 1951. On May 1, 1951, the Commission entered its Order R-69 establishing 80-acre proration units for the pool for a period of one year.

On its own motion, the Commission directed Amerada, Texas Pacific Coal and Oil Company and other interested operators to show cause why Order R-69 should be extended. The hearing on this motion was consolidated with Amerada's application for an extension of Order R-69 in April, 1952. On April 29, the Commission entered its Order R-69-A extending Order R-69 for a period of one year and in addition, requiring monthly production reports, ordering certain pressure maintenance tests be made in the pool, and directing the operators to show cause at the regular meeting of the Commission in April, 1953 why the pool should not be placed on a 40-acre spacing pattern with allowable adjustment.

The present hearing is on the Commission's motion directing operators in the field to show cause as provided by Order R-69-A. Notice of this hearing has been properly given.

Statement of Amerada's Position

At this hearing it is Amerada's contention that Order R-69-A in all its particulars should be extended for a period of one year from this date.

For cause it would show the following:

1. The Commission has twice found the evidence justified a temporary order for one year.

indicate a need for smaller spacing units and have been set by Order R-69-A.

6. No additional geological information has been developed since April, 1952 which should prevent an extension of Order R-69-A.

The next witness in support of Amerada's position is Mr. R. S. Christie. Mr. R. S. Christie is a Petroleum Engineer for Amerada Petroleum Corporation and is qualified to testify as an expert witness. The substance of his testimony is as follows:

1. One well in the Devonian at Bagley will efficiently drain at least 80 acres.

2. One well in the Devonian at Bagley will economically drain 80 acres.

3. An extension of Order R-69-A will not cause waste and will tend to reduce the risk of creating waste.

4. An extension of Order R-69-A will not prejudice correlative right in the field.

5. A 40-acre spacing of the Devonian at Bagley would result in the drilling of unnecessary wells.

6. An extension of Order R-69-A will tend to promote efficient use of critical materials.

7. Studies of the field including its production history during the past year fully support an extension of Order R-69-A in all its particulars.

Conclusion

The question before the Commission is not a matter of first impression. R-69-A is a workable order. It has the great merit of having worked for the last two years. Operations in the pool to date fully confirm predictions made at previous hearings in this case by Amerada's witnesses with respect to pressure maintenance, efficient and economic drainage area, and reservoir behavior. We

2. Temporary Orders R-69 and R-69-A have not resulted in waste or prejudiced correlative rights.

3. The same considerations justifying these orders still apply to a further extension of 80-acre spacing in the Bagley-Siluro-Devonian Pool for a period of one year.

4. Developments in the pool since April, 1952, also support an extension of Order R-69-A in all its particulars.

5. Forty acre spacing of the Devonian at Bagley would result in the drilling of unnecessary wells.

Testimony in Support of Amerada's Position

To save time and establish a more complete predicate for consideration of the question now before the Commission, it is requested that the records of previous hearings in this case be incorporated by reference and made a part of this record.

The first witness in support of Amerada's position is Mr. John A. Veeder. Mr. Veeder is a Geologist for Amerada Petroleum Corporation and is qualified to testify as an expert witness. The substance of his testimony is as follows:

1. The probable productive area of the Devonian at Bagley is the same as the area covered by Order R-69-A.

2. The Devonian in this area shows an anticlinal structure topped by a cap of impervious, cherty limestone.

3. There is no evidence of any structural irregularities in the area which would prevent the movement of oil through the pay.

4. The Bagley Devonian reservoir has very good vugular and fractured type porosity which is connected and continuous throughout the reservoir.

5. Nothing in the structure or lithology of the Devonian of Bagley would

believe Order R-69-A has worked fairly and efficiently from the standpoint of all concerned.

The order has not resulted in waste. It has promoted the uniform development of the field and the conservation of critical materials.

There is no evidence of any change in conditions since April, 1952 which necessitates discontinuance or modification of Order R-69 nor is there any evidence which should prevent extension of Order R-69 for another year.

Conversely, 40-acre spacing of the Devonian at Bagley would result in the drilling of unnecessary wells and would waste money and materials.

LIST OF EXHIBITS

1. Commission's Order R-69.
2. Commission's Order R-69-A.
3. Notice of Commission with respect to this hearing.
4. Commission's Interlocutory Order R-69-B.
5. Area map of the probable productive limits of the Devonian at Bagley with the locations of all wells drilled in the field.
6. Schlumberger, Amerada's BHN No. 1.
7. Completion Data Sheet on all Bagley Devonian wells.
8. Structure map contoured on top of the Devonian.
9. Structure map contoured on top of the Devonian Pay.
10. A graph showing cumulative and monthly production of oil and water and the bottom hole pressure history of the Devonian Reservoir at Bagley.

EXHIBIT 1

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO FOR THE
PURPOSE OF CONSIDERING:

CASE No. 249
ORDER No. R-69

IN THE MATTER OF THE APPLICATION OF
AMERADA PETROLEUM CORPORATION FOR AN
ORDER ESTABLISHING PRORATION UNITS
AND UNIFORM SPACING OF WELLS FOR THE
BAGLEY-SILURO-DEVONIAN POOL, LEA COUNTY,
NEW MEXICO

ORDER OF THE COMMISSION

BY THE COMMISSION

This matter came on for hearing at Santa Fe, New Mexico, on April 24, 1951, on the application of Amerada Petroleum Corporation to establish proration units and uniform spacing of wells for the Bagley Siluro-Devonian pool, in Lea County, New Mexico.

The Commission having heard the evidence presented and being fully advised,

FINDS:

1. That due public notice having been given as required by law, the Commission has jurisdiction of the subject matter and of the parties.

2. That the information now available indicates that one well will effectively drain an area of 80 acres and considering the shortage of casing and other tubular materials the Bagley Siluro-Devonian pool should be developed on 80-acre proration units for a period of one year.

3. That the probable productive limits of the Bagley Siluro-Devonian pool ascertainable from the information available at the time of the hearing in this case comprise the following land in Lea County, New Mexico.

All of section 34, T. 11 S, R. 33 E
NW/4 and S/2 section 35, T.11 S, R.33 E
N/2 and SE/4 section 3, T.12 S, R.33 E
All of section 2, T.12 S, R.33 E
E/2 NW/4 and N/2 NE/4 section 11, T.12 S, R.33 E

IT IS THEREFORE ORDERED:

1. That 80-acre proration units are hereby established for the Bagley Siluro-Devonian pool as delineated above, which shall comprise the west half and east half of each Governmental quarter section, except the following units, to-wit:

N/2 NW/4 section 35, T.11 S, R.33 E
S/2 NW/4 section 35, T.11 S, R.33 E
N/2 NW/4 section 3, T.12 S, R.33 E
S/2 NW/4 section 3, T.12 S, R.33 E

B
Amerada

N/2 NE/4 section 2, T.12 S, R.33 E
SW/4 NE/4 and NW/4 SE/4 section 2, T.12 S, R.33E
SE/4 NE/4 and NE/4 SE/4 section 2, T.12 S, R.33 E
S/2 SE/4 section 2, T.12 S, R.33 E
N/2 NE/4 section 11, T.12 S, R.33 E

2. All wells drilled into the Bagley Siluro-Devonian pool shall be located in the center of the northwest and the southeast quarters of each governmental quarter section, with a tolerance of 150 feet in any direction to avoid surface obstructions.

3. That no well shall be drilled or produced in said pool except in conformity with the spacing pattern set forth above without special order of the Commission after notice and hearing.

4. That all wells producing or hereafter completed in the Bagley Siluro-Devonian pool are hereby given an allowable equivalent to one and one-half times the top allowable for a 40-acre proration unit with the deep pool adaptation, as provided for in the rules and regulations of the Commission.

5. If any well is drilled as an exception to the well spacing pattern set forth above under special order of the Commission, the allowable for such well shall be the top allowable for a 40-acre proration unit with the deep pool adaptation, as provided by the rules and regulations of the Commission.

6. This order shall cover all of the Bagley Siluro-Devonian common source of supply and any extension thereof as may be determined by further development, and shall continue in force for a period of one year from the first day of May, 1951.

Done this 1st day of May 1951.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

/S/ Guy Shepard
GUY SHEPARD, Member

/S/ R. R. Spurrier
R. R. SPURRIER, Secretary

EXHIBIT 2

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION COMMISSION
OF NEW MEXICO FOR THE PURPOSE OF
CONSIDERING:

CASES 249 AND 315
(Consolidated)
ORDER No. R-69-A

THE MATTER OF THE APPLICATION OF
AMERADA PETROLEUM CORPORATION FOR
AN ORDER ESTABLISHING PRORATION UNITS
AND UNIFORM SPACING OF WELLS FOR THE
BAGLEY-SILURO-DEVONIAN POOL, LEA
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at Santa Fe, New Mexico, on April 24, 1951 and again on April 15, 1952, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 29th day of April 1952, the Commission, a quorum being present, having considered the testimony adduced and the exhibits received at said hearings, and being fully advised in the premises,

FINDS:

(1) That due public notice has been given as required by law, and the Commission has jurisdiction of this cause and all the matters and things relating thereto.

(2) That heretofore, the Commission, by virtue of Order No. R-69, to which reference is hereby made, established 80-acre proration units, establishing a spacing pattern, provided for an allowable equal to one and one-half times the top allowable for a 40-acre proration unit (with deep-pool adaptation), and provided for an exception to the 80-acre drilling pattern with adjustment of allowables.

(3) That Order No.69, effective May 1, 1951, was a temporary Order, established for a period of one year.

(4) That geological and engineering data now available to the Commission indicates that one well apparently will drain 80 acres, and the Bagley-Siluro-Devonian pool should be developed on 80-acre proration units for a further period of one year.

(5) That information presented to the Commission indicates that the adoption of secondary-recovery methods at present is not necessary.

(6) That the operators in the Bagley-Siluro-Devonian pool should present to the Commission a monthly report showing complete production and reservoir information.

EXHIBIT A

Amerada

(7) That Order No R-69 should be extended for a period of one year upon the conditions and limitations herein set forth.

IT IS THEREFORE ORDERED:

(1) That Order No. R-69, be, and it hereby is extended for a period of one year from the first day of May 1952, upon the following terms and conditions, to-wit:

(a) That each operator in the Bagley-Siluro-Devonian pool shall file with the Commission office at Santa Fe, New Mexico, on or before the 15th day of each and every month, a monthly tabulated report for each well showing the allowable, the actual oil production, the oil runs, water production, gas production, cumulative oil production, cumulative water production, and cumulative gas production. This requirement is in addition to and supplementary to the other reports and surveys presently required by the Commission, and is not in substitution or in lieu thereof.

(b) That said operators shall cause a pool-wide bottom-hole pressure survey to be taken during the months of July 1952, November 1952, and March 1953, and the results thereof reflecting such pressures of each well shall be submitted in writing to the Commission on or before the fifth day of the following month. (Bottom-hole pressure tests shall be taken as prescribed by Rule 302 of the Commission's Rules and Regulations.)

(c) At the regular Commission hearing for the month of April in 1953, the operators shall show cause why said pool shall not be placed on a 40-acre spacing pattern with allowable adjustment.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

OIL CONSERVATION COMMISSION - Signed by: Edwin L. Mechem, Chairman; Guy Shepard, Member; R. R. Spurrier, Secretary

EXHIBIT 3

NOTICE OF PUBLICATION, STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION, SANTA FE, NEW MEXICO

The State of New Mexico by its Oil Conservation Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder of the following public hearing to be held at 9 o'clock a.m. on April 16, 1953, at Mabry Hall, State Capitol, in the City of Santa Fe, New Mexico

STATE OF NEW MEXICO TO: All named parties and persons having any right, title, interest or claim in the following cases, and notice to the public.

CASE 249: (Readvertisement)

In the matter of the application of the Oil Conservation Commission upon its own motion for an order directed to the operators in the Bagley-Siluro-Devonian Pool to show cause why said pool shall not be placed on a 40-acre spacing pattern with allowable adjustment, to conform with provisions of Commission Order No. R-69-A

CASE 522:
etc. *

GIVEN under the seal of the New Mexico Oil Conservation Commission this 26th day of March, 1953.

STATE OF NEW MEXICO

OIL CONSERVATION COMMISSION

(SEAL)

R. R. SPURRIER,
Secretary

COPY

COPY

EXHIBIT C

EXHIBIT NO. 4

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN RE: CASES 294 AND 315
(CONSOLIDATED) - TEMPORARY
80-ACRE SPACING IN THE BAGLEY-
SILURO-DEVONIAN POOL, LEA
COUNTY, NEW MEXICO. ORDER NO. R-69-B

INTERLOCUTORY ORDER

WHEREAS on the 29th day of April, 1952, the Oil Conservation Commission of New Mexico issued Order R-69-A as a temporary order for a period of one year from and after May 1, 1952, and

WHEREAS said order will expire by its own terms unless extended, and

WHEREAS due notice to show cause why the Bagley-Siluro-Devonian Pool in Lea County, New Mexico, should not be placed on 40-acre spacing with allowable adjustment following expiration of Order R-69-A, was given all interested parties, returnable April 17, 1953, and each and all of the parties duly appeared on said date, and moved the Commission for continuance, and

Good cause therefor appearing,

IT IS THEREFORE ORDERED:

First, That said cause be, and the same hereby is continued to the next regularly advertised hearing of this Commission;

Second, That all the rights, obligations and duties included in and imposed by Order R-69-A dated April 29, 1952, be, and the same hereby are extended, and remain in full force and effect until the regular May 1953 hearing of the Commission, and the regular issuance thereafter of the Commission order in the premises, but in no event beyond June 1, 1953.

DONE at Santa Fe, New Mexico, this 20th day of April, 1953.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Edwin L. Mechem, Chairman

E. S. Walker, Member

S E A L R. R. Spurrier, Secretary

D

Amerada

New Mexico

OIL CONSERVATION COMMISSION

GOVERNOR EDWIN L. MECHEM
CHAIRMAN

LAND COMMISSIONER E.S.WALKER
MEMBER

STATE GEOLOGIST R.R.SPURRIER
SECRETARY AND DIRECTOR

P. O. BOX 871
SANTA FE, NEW MEXICO

Case 249.

Seth — Exhibit A-B-C-D (& consolidated record)

A — 6-17
B — 6-
C — Plat
D — 6-5

Woodward — (Brief Summary & Written statement)
Exhibit E - (aerial map of Bagley field)
" F (Schlumberger Unit. #1 Sh. B7-V)
w/ Vernon " G (Prod. Data Prod sheets of Devonian production in Bagley field)
" H (Structural map — (Contour) of Bagley)
" I (2 - Structural map Bagley field on top of Devonian)
w/ Spurrier — J - (Graph — Wells, oil Prod + Gas Water prod Well etc in field)
K

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

April 30, 1952

COPY

Mr. Booth Kellough
Amerada Petroleum Corporation
Tulsa, Oklahoma

Dear Mr. Kellough:

We are sending you herewith signed copies (2) of Order R-69-A issued by the Oil Conservation Commission on April 29, 1952, in Case 249 (as consolidated with Case 315).

Very truly yours,

R. R. Spurrier
Secretary - Director

RRS:nr

Encl.

VIA AIR MAIL

F

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

July 31, 1952

COPY

Mr. Jack Campbell
Atwood, Malone and Campbell
Roswell, New Mexico

Dear Jack:

In Order No. R-69-A concerning the Amerada 80-acre spacing case in Bagley-Siluro-Devonian, the Commission requested all operators in the pool to submit a monthly report of operations.

To date, Texas & Pacific Coal and Oil Co. has not submitted any of the required monthly reports. Inasmuch as you have represented them at previous Commission hearings, I deemed it advisable to contact you so that you could advise T.P. that the requested information has not been received.

I am enclosing a copy of the order issued in the case for your information.

Sincerely,

W. B. Macey
Chief Engineer

WBM:nr

Cl. Case 249

3

BAGLEY-SILURO/DEVONIAN
PRESSURE PRODUCTION HISTORY
Datum - 6700

Survey Period	No. Wells Surveyed	Arithmetic Average BHP	Current Rate			Cumulative Rate		
			BHP Drop	Oil Production Barrels	Psi Drop Million Barrels	BHP Drop	Oil Production (Bbls)	Psi Drop Million Batfels
Original		4285						
November, 1949	2	4274	11	21,303	516	11	21,303	516
April, 1950	7	4253	21	184,969	113.5	32	206,272	155
October, 1950	9	4252	1	208,747	4.8	33	415,019	79.5
April, 1951	12	4259	-7	414,978	-	26	829,997	31.3
October, 1951	15	4167	92	935,309	98.36	118	1,765,306	66.8
April, 1952	16	4199	-32	816,827	-	86	2,582,133	33.3

4-15-52

3 15

Tatum, New Mexico
July 14, 1952

Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico

Gentlemen:

In compliance with your order No. R 69-A, dated April 29, 1952, concerning the Bagley Silure-Devonian Pool, Lea County, New Mexico, we are submitting the attached tabulation of production data for the month of June 1952.

Contained in the tabulation is the monthly report for each well showing the allowable, the actual oil production, the oil runs, water production, gas production, cumulative oil production, cumulative water production and cumulative gas production.

Very truly yours,

AMERADA PETROLEUM CORP.

K. V. Stephenson

K. V. Stephenson
Foreman

KVS/jre

Enc.
cc: Mr. R. S. Christie
Mr. J. C. Blackwood
Monument Office
File

BAGLEY SILURO-DEVONIAN POOL

PRODUCTION DATA

June 1952

LEASE	ALLOW-ABLE BBLS.	ACTUAL OIL BBLS.	OIL RUN BBL.	WATER BBL.	GAS CU. FT.	CUMULATIVE OIL BBL.	CUMULATIVE WATER BBL.	CUMULATIVE GAS CU. FT.
AMERADA								
State BTA #1	10,140	9,714	10,504	-	310,848	286,090	-	9,154,880
State BTC #1	10,140	10,076	10,518	-	322,432	266,857	-	8,539,424
State BTC #3	10,140	10,076	10,518	-	322,432	151,039	-	4,833,248
State BTD #1	10,140	10,673	10,452	-	341,536	246,007	110,195	7,872,224
State BTD #2	10,140	8,819	8,979	-	282,208	169,835	25,018	5,434,720
State BTD #3	10,140	8,819	8,979	-	282,208	155,320	16,744	4,970,240
State BTI #1	10,020	9,448	9,909	-	302,336	181,926	-	5,821,632
State BTL #1	10,140	10,036	10,040	-	321,152	103,417	-	3,309,344
State BTM #1	1,112	599	1,419	5,391	19,168	5,267	47,817	168,544
State BTN #1	9,126	3,541	2,843	-	113,312	3,541	-	113,312
Caudle #2	5,130	3,815	4,279	5,723	122,080	117,479	46,560	3,759,328
Caudle #5	6,570	6,485	6,700	-	207,520	39,379	-	1,260,128
Chambers #1	2,100	974	938	2,273	31,168	40,387	37,130	1,292,384
Mathers #1	8,400	5,023	5,774	321	160,736	132,155	3,551	4,228,960
Mathers "A" #1	10,140	9,635	10,128	-	308,320	84,039	-	2,689,248
Mathers "A" #2	10,140	9,635	10,128	1,071	308,320	43,384	2,445	1,388,288
TOTALS	133,718	117,368	122,108	14,779	3,755,776	2,026,122	289,460	64,835,904

Rule on Case file

Tatum, New Mexico
November 7, 1952

Oil Conservation Commission
Santa Fe, New Mexico

Gentlemen:

In compliance with your order No. R 69-A, dated April 29, 1952, concerning the Bagley Siluro-Devonian Pool, Lea County, New Mexico, We are submitting the attached tabulation of production data for the month of October 1952.

Contained in the tabulation is the mounthly report for each well showing the allowable, the actual oil production, the oil runs, water production, gas production, cumulative oil production, cumulative water production, and cumulative gas production.

Very truly yours,

AMERADA PETROLEUM CORPORATION

K. V. Stephenson

K. V. Stephenson
Foreman

KVS/rha

CC: Oil Conservation Commission, Hobbs
Mr. W. B. Macey
Mr. R. S. Christie
Mr. J. C. Blackwood
Mr. W. G. Abbott
File

BAGLEY SILURO-DEVONIAN POOL

PRODUCTION DATA

November 1952

LEASE	ALLOW-ABLE BBLS.	ACTUAL OIL BBLS.	OIL RUN BBLS.	WATER BBLS.	GAS CU. FT.	CUMULATIVE OIL BBLS.	CUMULATIVE WATER BBLS.	CUMULATIVE GAS CU. FT.
State BTA #1	9,827	9,831	9,659	-	314,592	324,138	-	10,372,544
State BTC #1	9,827	9,832	9,671	-	314,624	304,731	-	9,751,392
State BTC #3	9,827	9,832	9,670	-	314,624	188,912	-	6,045,184
State BTD #1	9,827	9,830	9,533	-	314,560	283,936	110,195	9,085,952
State BTD #2	9,827	9,023	9,021	679	288,736	204,808	26,267	6,553,856
State BTD #3	9,827	9,023	9,022	-	288,736	190,293	16,744	6,089,376
State BTI #1	9,610	9,616	9,623	-	307,712	219,258	-	7,016,256
State BTL #1	9,827	9,831	9,628	-	314,592	141,278	-	4,520,896
State BTM #1	1,395	856	949	7,704	27,392	9,671	82,292	309,472
State BTN #1	9,827	9,835	9,640	-	314,720	39,015	-	1,248,480
Caudle #2	5,939	4,893	4,755	7,340	156,576	132,567	74,983	4,242,144
Caudle #5	6,386	6,394	6,243	556	204,608	63,558	882	2,033,856
Chambers #1	3,100	1,862	1,871	7,005	59,584	46,224	52,870	1,479,168
Mathers #1	9,827	9,832	9,899	972	314,624	167,089	7,005	5,346,848
Mathers "A" #1	9,827	9,307	9,233	1,034	297,824	119,345	2,539	3,819,040
Mathers "A" #2	9,827	9,307	9,232	8,253	297,824	78,688	21,681	2,518,016
TOTALS	134,527	129,104	127,649	33,543	4,131,328	2,513,515	395,428	80,432,480

Case 249

October 3, 1952

Heidel and Swarthout
115 North First Street
Lovington, New Mexico

Attention: Mr. A. M. Swarthout

Dear Mr. Swarthout:

In reply to your letter of September 26, 1952 you will find enclosed Commission Order #R-69-A.

This Order will explain in full the status of the spacing in the Bagley-Siluro-Devonian Pool.

Very truly yours,

R. R. Spurrier
Secretary - Director

RRS:lh
enc. 1

R-69-R

wbm

LAW OFFICES OF
HEIDEL & SWARTHOUT
115 NORTH FIRST STREET
LOVINGTON, NEW MEXICO

F. L. HEIDEL
A. M. SWARTHOUT
H. D. ROSEBROUGH, JR.

September 26, 1952

Oil Conservation Commission
State of New Mexico
Santa Fe, New Mexico

Gentlemen:

We would appreciate your advising us as to the present status of the spacing in the Bagley-Siluro-Devonian pool.

At the time that the order was entered in case No. 249 in 1951, it was our understanding that said order was a temporary one, expiring at the end of one year unless extended by the Commission. I also noted some months ago a notice of hearing concerning a change in the spacing of said pool from 80 to 40 acres on the Commission's own motion.

We desire this information on behalf of Mr. W. S. Mathers of Caprock, New Mexico, a mineral owner in said pool.

Very truly yours,

A. M. Swarthout

of HEIDEL & SWARTHOUT

AMS:gk

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

February 12, 1951

Amerada Petroleum Corporation
Box 312
Midland, Texas

Attention: Mr. J. C. Blackwood

Subject: Special Core Analysis
Mathers No. 1 Well
Bagley Hightower Field
Lea County, New Mexico

Gentlemen:

The Mathers No. 1 well was cored using diamond coring equipment and water base mud. The cores were logged, sampled and quick-frozen at the well site by a representative of Core Laboratories, Inc. and transported to the Midland laboratory for analysis.

The Devonian formation was cored from 10,879 to 10,965 feet with one hundred per cent core recovery being obtained in this interval. The cores were analyzed by special whole-core methods to take into account the effects of vugs and fractures upon the physical characteristics of the cores. The entire cored interval is considered to be oil productive where permeable.

Results of these analyses are presented in tabular and graphical form on the enclosed Coregraph. Estimates of recoverable oil by gas expansion and water drive mechanisms of recovery are given on page one.

We trust that we have been of assistance in the proper evaluation and development of this reservoir.

Very truly yours,

Core Laboratories, Inc.

R. S. Bynum

R. S. Bynum, (mw)
District Engineer

RSB:aa

RM F-11A

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS

Page 1 of 1
File ML-418 S
Well Mathers No. 1

CORE SUMMARY AND CALCULATED RECOVERABLE OIL

CORE SUMMARY

FORMATION NAME	Devonian			
DEPTH, FEET	10,879.0-10,965.0			
% CORE RECOVERY	100			
FEET OF PERMEABLE, PRODUCTIVE FORMATION RECOVERED	85.0			
AVERAGE PERMEABILITY MILLIDARCYS	Max: 21 90°: 5.5			
CAPACITY — AVERAGE PERMEABILITY × FEET PRODUCTIVE FORMATION	Max: 1785 90°: 468			
AVERAGE POROSITY, PERCENT	4.4			
AVERAGE RESIDUAL OIL SATURATION, % PORE SPACE	13.4			
GRAVITY OF OIL, °A.P.I.	46			
AVERAGE TOTAL WATER SATURATION, % PORE SPACE	53.0			
AVERAGE CALCULATED CONNATE WATER SATURATION, % PORE SPACE	53.0			
SOLUTION GAS-OIL RATIO, CUBIC FEET PER BARREL (1)	30			
FORMATION VOLUME FACTOR—VOLUME THAT ONE BARREL OF STOCK TANK OIL OCCUPIES IN RESERVOIR (1)	1.05			

CALCULATED RECOVERABLE OIL

Prediction dependent upon complete isolation of each division. Structural position of well, total permeable thickness of oil zone and drainage area of well should be considered.

BY NATURAL OR GAS EXPANSION, BBLS. PER ACRE FOOT (2)	27			
INCREASE DUE TO WATER DRIVE, BBLS. PER ACRE FOOT	80			
TOTAL AFTER COMPLETE WATER DRIVE, BBLS. PER ACRE FOOT (3)	107			

Core Laboratories, Inc.

R. S. Bynum

R. S. Bynum (mw)

NOTE:

(*) REFER TO ATTACHED LETTER.

(1) REDUCTION IN PRESSURE FROM estimated SATURATION PRESSURE TO ATMOSPHERIC PRESSURE.

(2) AFTER REDUCTION FROM ORIGINAL RESERVOIR PRESSURE TO ZERO POUNDS PER SQUARE INCH.

(3) RESERVOIR PRESSURE MAINTAINED BY WATER DRIVE OR ABOVE estimated ORIGINAL SATURATION PRESSURE.

(4) NO ESTIMATE FOR GAS PHASE RESERVOIRS.

AS

CORE LABORATORIES, INC. CORE LAB Petroleum Reservoir Engineering

COMPANY	AMERADA PETROLEUM CORPORATION	DATE ON	1-27-51	FILE NO.	ML-418 S
WELL	MATHERS NO. 1	DATE OFF	2- 7-51	ENGRS.	JIC:CLS:WEM:VBO
FIELD	BAGLEY HIGHTOWER	FORMATION	DEVONIAN	ELEV.	4254' D.F.
COUNTY	LEA STATE NEW MEXICO	DRLG. FLD.	WATER BASE MUD	CORES	CHRISTENSEN DIA.
LOCATION		REMARKS	SAMPLED BY CORE LABORATORIES, INC.		

Special Analysis

CORE REPORT

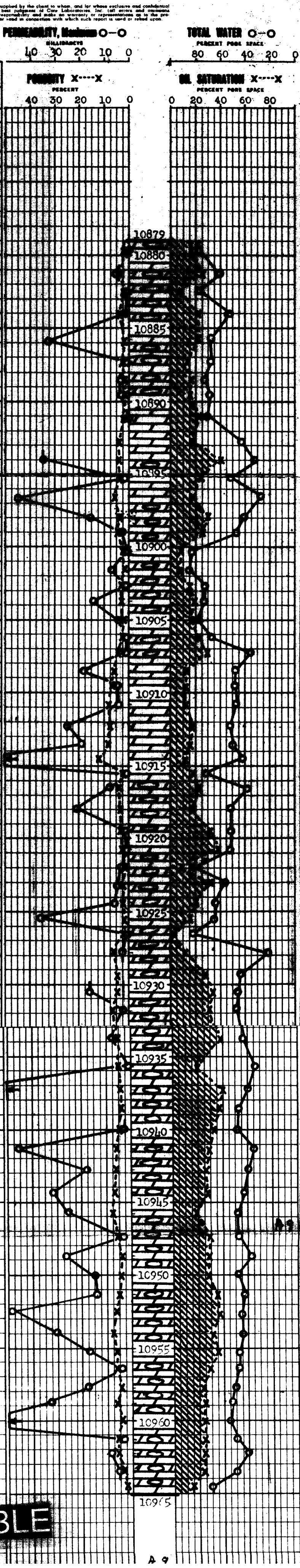
SAND LIMESTONE CONGLOMERATE CHERT

SHALE DOLOMITE

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS MAX.	PERMEABILITY MILLIDARCYS 90°	POROSITY %	RESIDUAL SATURATION % PORE SPACE OIL	RESIDUAL SATURATION % PORE SPACE TOTAL WATER	VISUAL DESCRIPTION
	D - DENSE			P - POROUS			
	F - FRACTURED			V - VUGGY			
1	10879.0-80.6	<0.1	<0.1	1.8	16.7	78.0	D, F
2	80.6-81.9	4.8	1.1	2.8	25.0	60.7	D, F
3	10881.9-83.3	0.1	<0.1	1.4	7.1	78.6	D, F
4	83.3-84.9	0.4	0.3	3.3	21.2	51.5	D, F
5	10884.9-86.8	33	6.6	1.9	21.1	68.4	D, F
6	86.8-87.8	0.8	0.7	1.5	13.3	66.7	D, F
7	10887.8-89.0	2.0	0.7	1.9	15.8	73.7	D, F
8	89.0-90.3	2.5	2.4	2.0	15.0	70.0	D, F
9	90.3-91.8	<0.1	<0.1	2.5	24.0	72.0	SL P, F
10	10891.8-93.5	*	*	5.6	18.0	43.1	SL V, P
11	93.5-94.6	35	0.8	4.0	40.0	32.5	SL P, F
12	10894.6-96.0	1.2	0.1	3.9	23.1	51.3	SL P
13	96.0-97.3	45	17	6.0	18.3	28.3	D, SL F
14	97.3-98.5	14	0.3	3.4	29.4	41.2	SL P, F
15	98.5-99.5	4.3	1.5	4.4	25.0	47.7	SL P, V
16	10899.5-02.2	0.4	0.2	1.2	8.3	83.3	D
17	10902.2-02.3	7.3	1.2	1.4	7.1	85.8	D
18	02.3-03.3	1.4	0.5	2.6	15.4	73.1	D
19	03.3-04.3	14	<0.1	2.7	13.5	74.1	D
20	04.3-05.7	3.1	1.8	2.4	16.7	79.2	D
21	10905.7-06.8	1.5	0.9	1.8	22.2	66.7	D
22	06.8-07.9	0.3	0.1	3.4	29.4	35.3	P, F
23	10907.9-09.1	17	15	6.8	13.2	48.6	P, SL V
24	09.1-10.1	4.8	4.0	6.8	11.8	48.6	P, SL V
25	10.1-11.7	4.1	2.5	8.0	11.3	47.5	P, SL V
26	10911.7-13.0	25	17	7.8	18.0	51.2	P, SL V
27	13.0-14.1	19	17	8.7	14.9	49.4	P, SL V
28	14.1-15.2	117	64	12.6	11.1	42.1	P, SL V
29	15.2-16.1	0.4	0.4	2.1	19.0	71.4	SL P, F
30	16.1-17.3	7.8	2.7	4.0	22.4	37.5	SL P, F
31	17.3-18.8	21	4.7	2.9	17.3	51.7	SL P, D
32	10918.8-20.0	1.8	1.3	2.9	31.1	51.7	P, D
33	20.0-21.4	0.6	0.4	2.1	38.1	52.3	SL P
34	21.4-22.4	2.5	<0.1	2.2	9.1	81.8	D
35	22.4-23.8	3.5	3.3	2.5	32.0	56.0	D
36	23.8-24.9	6.5	2.5	2.5	20.0	64.0	D
37	24.9-26.0	36	2.1	2.0	15.0	65.0	D
38	26.0-27.0	0.7	0.5	1.2	Tr.	83.3	D
39	27.0-28.6	2.6	2.3	6.8	10.3	20.6	D, F, P
40	10928.6-30.0	*	*	5.1	27.5	43.2	SL P, F
41	10930.0-31.2	16	1.6	5.0	34.0	46.0	SL P, F
42	31.2-32.8	2.2	2.0	6.8	30.9	47.1	SL P, F
43	10932.8-34.9	7.1	5.4	5.5	38.1	43.7	D, F
44	10934.9-36.5	0.4	0.2	5.6	19.7	34.0	D, F
45	10936.5-38.0	58	5.5	4.8	39.6	39.6	D, F
46	38.0-39.3	*	*	4.1	36.6	46.4	D, F
47	39.3-40.6	4.3	3.8	4.1	31.7	48.8	D, F
48	10940.6-42.1	46	13	6.3	28.6	34.8	D, F
49	42.1-43.5	18	12	6.3	25.4	39.7	D, F
50	43.5-44.8	32	28	7.0	27.1	42.8	D, F
51	10944.8-46.7	26	15	7.3	19.2	47.9	D, F
52	10946.7-48.1	4.5	0.8	5.6	28.5	48.2	D, F
53	48.1-49.5	27	10	4.2	28.9	38.6	D, F, P
54	49.5-50.4	15	12	4.5	26.7	48.9	D, F, P
55	50.4-51.8	14	7.2	4.9	34.7	42.8	D, F
56	10952.9-53.2	48	5.7	6.7	35.8	44.7	D, F
57	53.2-54.7	31	4.1	7.7	31.2	45.4	D, F
58	54.7-55.7	17	4.7	6.0	35.0	46.7	D, F
59	10955.7-57.2	4.7	4.7	5.4	27.7	46.1	D, F
60	57.2-58.3	14	6.2	4.2	32.1	53.6	D, F
61	58.3-59.4	33	13	6.0	25.0	53.2	D, F
62	59.4-60.4	2.3	1.5	4.2	23.8	54.8	D, F
63	60.4-61.7	4.0	<0.1	4.8	22.9	50.0	D, F
64	61.7-62.8	8.8	2.6	5.7	22.7	46.4	D, F
65	10962.8-64.0	4.1	1.3	4.4	22.7	50.2	D, F
66	64.0-65.6	*	*	2.7	11.8	70.2	D, F

* INSUITABLE FOR ANALYSIS

ILLEGIBLE



CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

January 26, 1951

Amerada Petroleum Corporation
Box 312
Midland, Texas

Attention: Mr. J. C. Blackwood

Subject: Special Core Analysis
BTJ-1 Well
Caudle Area
Lea County, New Mexico

Gentlemen:

The BTJ-1 well was cored using diamond coring equipment and water base mud. The cores were logged, sampled and quick-frozen by a representative of Core Laboratories, Inc. and transported to the Midland laboratory for analysis.

The BTJ-1 well was cored from 10,925 to 11,140 feet, with one hundred per cent core recovery being obtained in this interval. The Devonian formation was tentatively topped at 10,991 feet; however, only the cores from 11,099 to 11,140 feet were judged worthy of analysis.

Results of these analyses are presented in tabular and graphical form on the enclosed Coregraph. Estimates of recoverable oil by gas expansion and water drive mechanisms of recovery are presented on page one.

We trust these data will assist in the proper evaluation and development of this reservoir.

Very truly yours,

Core Laboratories, Inc.

RS Bynum (PG)

R. S. Bynum,
District Engineer

RSB:aa

FORM F-11A

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS

Page 1 of 1
File ML-412 S
Well BTJ-1

CORE SUMMARY AND CALCULATED RECOVERABLE OIL

CORE SUMMARY

FORMATION NAME	Devonian			
DEPTH, FEET	11,099.0-11,140.0			
% CORE RECOVERY	100			
FEET OF PERMEABLE, PRODUCTIVE FORMATION RECOVERED	31.0			
AVERAGE PERMEABILITY MILLIDARCYS	Max: 3.0 90°: 1.3			
CAPACITY — AVERAGE PERMEABILITY × FEET PRODUCTIVE FORMATION	Max: 93 90°: 40			
AVERAGE POROSITY, PERCENT	4.4			
AVERAGE RESIDUAL OIL SATURATION, % PORE SPACE	11.9			
GRAVITY OF OIL, °A.P.I.	45			
AVERAGE TOTAL WATER SATURATION, % PORE SPACE	51.6			
AVERAGE CALCULATED CONNATE WATER SATURATION, % PORE SPACE	51.6			
SOLUTION GAS-OIL RATIO, CUBIC FEET PER BARREL (1)	300			
FORMATION VOLUME FACTOR—VOLUME THAT ONE BARREL OF STOCK TANK OIL OCCUPIES IN RESERVOIR (1)	1.21			

CALCULATED RECOVERABLE OIL

Prediction dependent upon complete isolation of each division. Structural position of well, total permeable thickness of oil zone and drainage area of well should be considered.

BY NATURAL OR GAS EXPANSION, BBLS. PER ACRE FOOT (2)	24			
INCREASE DUE TO WATER DRIVE, BBLS. PER ACRE FOOT	72			
TOTAL AFTER COMPLETE WATER DRIVE, BBLS. PER ACRE FOOT (3)	96			

Core Laboratories, Inc.

RS Bynum (PB)

R. S. Bynum

NOTE:

(*) REFER TO ATTACHED LETTER.

(1) REDUCTION IN PRESSURE FROM estimated SATURATION PRESSURE TO ATMOSPHERIC PRESSURE.

(2) AFTER REDUCTION FROM ORIGINAL RESERVOIR PRESSURE TO ZERO POUNDS PER SQUARE INCH.

(3) RESERVOIR PRESSURE MAINTAINED BY WATER DRIVE OR ABOVE estimated ORIGINAL SATURATION PRESSURE.

(4) NO ESTIMATE FOR GAS PHASE RESERVOIRS.

AB

CORE LABORATORIES, INC. CORE LAB *Petroleum Reservoir Engineering*

COMPANY AMERADA PETROLEUM CORPORATION — DATE ON 1-7-51 — FILE NO. ML-[illegible] S
WELL BTU-1 — DATE OFF 1-22-51 — ENGRS. WRIGHT-MEEK-CLS
FIELD SAUNDERS AREA — FORMATION AS NOTED — ELEV.
COUNTY LEA — STATE NEW MEXICO — DRLG. FLD. WATER BASE MUD — CORES CHRISTENSEN DIA.
LOCATION — REMARKS SAMPLED BY CORE LABORATORIES, INC.

Special Analysis

CORE REPORT

SAND LIMESTONE CONGLOMERATE CHERT
SHALE DOLOMITE

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS MAX.	PERMEABILITY MILLIDARCYS 90°	POROSITY %	RESIDUAL SATURATION % PORE SPACE OIL	RESIDUAL SATURATION % PORE SPACE TOTAL WATER	VISUAL DESCRIPTION
	D - DENSE						
	F - FRACTURED						
	P - POROUS						
	V - VUGGY						

PERMEABILITY, Maximum O—O MILLIDARCYS 40 30 20 10 0
TOTAL WATER O—O PERCENT PORE SPACE 80 60 40 20 0
POROSITY X----X PERCENT 40 30 20 10 0
OIL SATURATION X----X PERCENT PORE SPACE 0 20 40 60 80

MISSISSIPPIAN
10925
10930
10935
10940
10945
10950
10955
10960
10965
10970
10975
10980
10985
10990
DEVONIAN
10995
11000
11005
11010
11015
11020
11025
11030
11035
11040

FORMATION BETWEEN 10925 AND 11040 FEET NOT CONSIDERED
[illegible] ANALYSIS

BI

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

January 23, 1951

Amerada Petroleum Corporation
Box 312
Midland, Texas

Attention: Mr. J. C. Blackwood

Subject: Special Core Analysis
Caudle No. 2 Well
Caudle Area
Lea County, New Mexico

Gentlemen:

The Caudle No. 2 well was cored using diamond coring equipment and water base mud. The cores were logged at the well site by a representative of Core Laboratories, Inc., and all cores judged worthy of analysis were quick-frozen and transported to the Midland laboratory.

The Mississippian formation was cored from 10,927 to 11,012 feet. Six samples, representing the zone from 10,963 to 10,973 feet, were selected from this interval for analysis. These samples consisted of a dense limestone possessing slight oil stain. The porosity and permeability in this zone were quite low and, consequently, productive possibilities are slight.

The Devonian formation was cored from 11,012 to 11,077 feet with one hundred per cent core recovery being obtained in this interval. All recovered core was analyzed, except the interval 11,012 to 11,015 feet which consisted of dense dolomite, and the interval 11,062.5 to 11,064.5 feet which was too broken for accurate analysis. The entire cored interval is considered to be oil productive where permeable.

Results of these analyses are presented in tabular and graphical form on the enclosed Coregraph. A summary of core analysis data for the section from 11,016.3 to 11,077.0 feet, along with estimates of recoverable oil

by gas expansion and water drive mechanisms of recovery, are presented on page one of the report.

We trust that we have been of assistance in the proper evaluation and development of this reservoir.

Very truly yours,

Core Laboratories, Inc.

RS Bynum (pg)

R. S. Bynum,
District Engineer

RSB:aa

FORM F-11A

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS

Page 1 of 1
File ML-410 S
Well Caudle No. 2

CORE SUMMARY AND CALCULATED RECOVERABLE OIL

CORE SUMMARY

FORMATION NAME	Devonian				
DEPTH, FEET	11,016.3-11,077.0				
% CORE RECOVERY	100				
FEET OF PERMEABLE, PRODUCTIVE FORMATION RECOVERED	58.7				
AVERAGE PERMEABILITY MILLIDARCYS	Max: 26 90°: 6.7				
CAPACITY — AVERAGE PERMEABILITY X FEET PRODUCTIVE FORMATION	Max: 1526 90°: 393				
AVERAGE POROSITY, PERCENT	3.7				
AVERAGE RESIDUAL OIL SATURATION, % PORE SPACE	17.7				
GRAVITY OF OIL, °A.P.I.	45				
AVERAGE TOTAL WATER SATURATION, % PORE SPACE	65.5				
AVERAGE CALCULATED CONNATE WATER SATURATION, % PORE SPACE	65.5				
SOLUTION GAS-OIL RATIO, CUBIC FEET PER BARREL (1)	300				
FORMATION VOLUME FACTOR—VOLUME THAT ONE BARREL OF STOCK TANK OIL OCCUPIES IN RESERVOIR (1)	1.21				

CALCULATED RECOVERABLE OIL

Prediction dependent upon complete isolation of each division. Structural position of well, total permeable thickness of oil zone and drainage area of well should be considered.

BY NATURAL OR GAS EXPANSION, BBLS. PER ACRE FOOT (2)	14			
INCREASE DUE TO WATER DRIVE, BBLS. PER ACRE FOOT	17			
TOTAL AFTER COMPLETE WATER DRIVE, BBLS. PER ACRE FOOT (3)	31			

Core Laboratories, Inc.

R S Bynum (PE)

R. S. Bynum

NOTE:

(*) REFER TO ATTACHED LETTER.

(1) REDUCTION IN PRESSURE FROM estimated SATURATION PRESSURE TO ATMOSPHERIC PRESSURE.

(2) AFTER REDUCTION FROM ORIGINAL RESERVOIR PRESSURE TO ZERO POUNDS PER SQUARE INCH.

(3) RESERVOIR PRESSURE MAINTAINED BY WATER DRIVE OR ABOVE estimated ORIGINAL SATURATION PRESSURE.

(4) NO ESTIMATE FOR GAS PHASE RESERVOIRS.

A3

CORE LABORATORIES, INC. *Petroleum Reservoir Engineering*

COMPANY
WELL
FIELD
COUNTY STATE
LOCATION

DATE ON
DATE OFF
FORMATION
DRLG. FLD.
REMARKS

FILE NO.
ENGRS.
ELEV.
CORES

Special Analysis

CORE REPORT

SAND
SHALE
LIMESTONE
DOLOMITE
CONGLOMERATE
CHERT

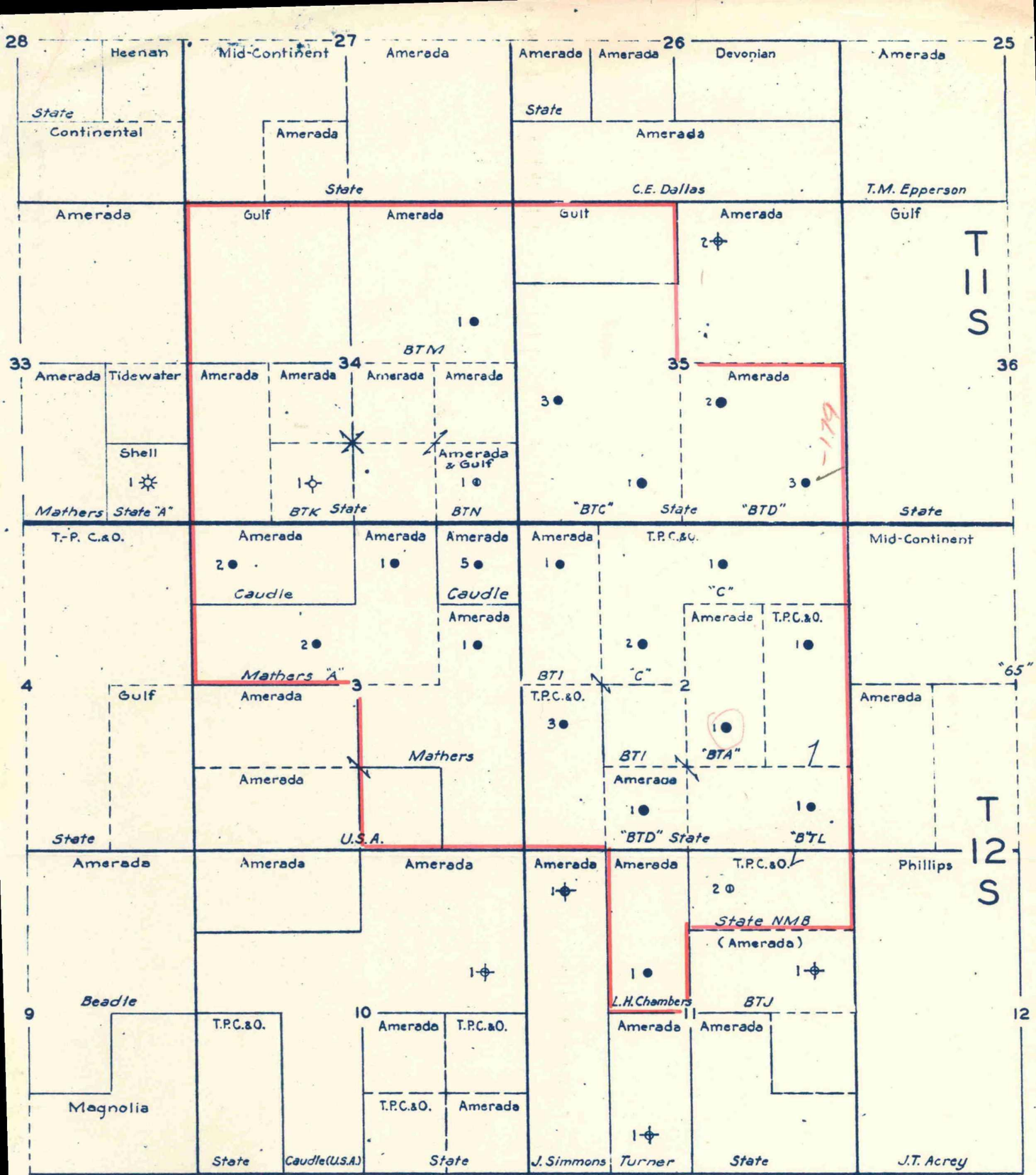
SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS MAX	PERMEABILITY MILLIDARCYS 90°	POROSITY %	RESIDUAL SATURATION % PORE SPACE OIL	RESIDUAL SATURATION % PORE SPACE TOTAL WATER

PERMEABILITY, Maximum O–O
MILLIDARCYS

POROSITY X----X
PERCENT
40 30 20 10 0

TOTAL WATER O O
PERCENT PORE SPACE
90 80 70 60 50

OIL SATURATION X----X
PERCENT PORE SPACE
0 20 40 60 80



R. 33 E.

BAGLEY FIELD

LEA COUNTY NEW MEXICO

SILURO-DEVONIAN POOL

SCALE

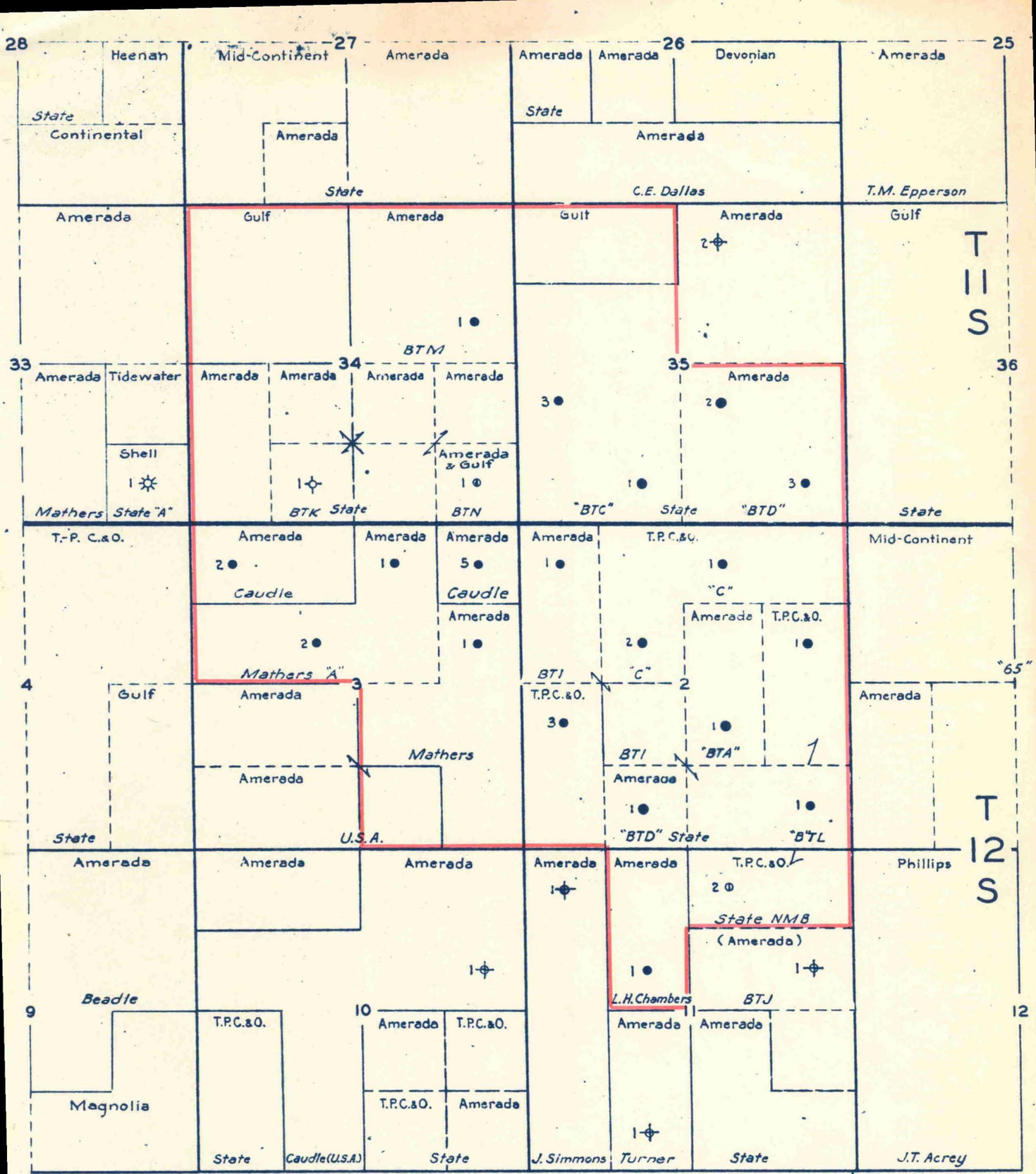
0 2000 4000 6000

FEET

Case 249-45

Ex. 5

4-15-52
Case 249(315)



R. 33 E.

BAGLEY FIELD

LEA COUNTY NEW MEXICO

SILURO-DEVONIAN POOL

SCALE

0 2000 4000 6000

FEET

EXHIBIT NO. 5

Case 249-315

4-1552

Amended Ex 2 Case 249

BAGLEY FIELD - LEA COUNTY, NEW MEXICO:

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	DEVONIAN COMPLETION		
BTA #1	10730 (-6484)	10760 (-6514)	30'	TD 11766 (-7520)	PB 10965 (-6719)	Spud 11-25-48 Comp. 7-26-49 5-1/2" Csg. @ 11200 w/600 sacks. PB 10965 (-6719). Perf. 10950-65 w/60 holes. Wash w/250 gals. acid. IP: F 1744 BOPD thru 1/2" ch. (Based on 5½ hr. test of 400 BO) GOR 28-1 Grav. 44.4 Corr.
BTC #1	10662 (-6410)	10699 (-6447)	37'	TD 10980 (-6728)	No PB	7-5/8" Csg. @ 10980. Spud 6-5-49 Perf. 10959-979 w/80 holes. Comp. 10-23-49 IP: F Nat. 1137 BOPD thru 1/2" ch. (Based on 17-3/4 hr. test of 841 BO) GOR 33-1, Grav. 46.2 Corr.
BTC #2	11603 (-7357)	11657 (-7411)	54'	TD 11715 (-7469)	D & A	8-5/8" Csg. @ 3886'. D & A. Spud 3-27-50 Comp 8-11-50
BTC #3	10722 (-6470)	10767 (-6515)	45'	TD 10965 (-6713)	No. PB	5-1/2" Csg. @ 10895 w/660 sacks. Trtd. open hole 10895-10965 w/500 gals. acid. IP: F 2112 BO 24 hrs. thru 1/2" ch., Gas Vol. 65,400 CFGPD, GOR 32-1, Grav. 46.0 Corr. Spud 12-15-50 Comp 4-8-51
BTD #1	10870 (-6620)	10924 (-6674)	54'	TD 10995 (-6745)	No PB	5-1/2" Csg. @ 10980 Trt. open hole 10980-995 4/500 gal. acid. IP: F 929 BO 24 hrs. thru 1/2" ch. GOR 32, Grav. 45.5 Corr. Spud 8-8-49 Comp 12-5-49
BTD #2	10670 (-6421)	10720 (6471)	50'	TD 10975 (-6726)	No. PB	5-1/2" Csg. @ 10960. Trt. open hole 10960-975 w/2500 gal. acid. IP: F 539 BO 24 hrs. thru 1/2" ch., GOR 34-1, Grav. 46.8 Corr. Spud 11-7-49 Comp. 3-31-50
* BTD #3	10712 (-6465)	10777 (-6530)	65'	TD 10957 (-6710)	No. PB	5-1/2" Csg. @ 10897. Wash open hole 10897-10957 w/500 gal. acid. IP: F 1130 BO plus 2.26 Bbls. BS 24 hrs. thru 1/2" ch. GOR 33-1, Grav. 45.8 Corr.

Spud 5-17-50 Comp 9-8-50

BAGLEY FIELD - LEA COUNTY, NEW MEXICO

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	DEVONIAN COMPLETION	
BTI #1	10762 (-6512)	10799 (-6549)	37'	TD 10960 (-6710) No PB	5-1/2" Csg. @ 10922. Spud 8-14-50 Comp 12-5-50 Wash open hole 10922-10960 w/500 gals. acid. IP: F 1597 BO plus 3.20 Bbls. BS 24 hrs. thru 1/2" ch. GOR 26-1, Grav. 46.0 Corr.
BTJ #1	10965 (-6722)	11066 (-6823)	101'	TD 11140 (-6897) D & A	TD 11140, D & A. Spud 9-16-50 Comp. 1-17-51
BTK #1					Drilling. Spud 2-9-51
CAUDLE #1	11008 (-6752)	11081 (-6825)	73'	TD 11083 (-6827) PB 9045 (-4789)	Spud 3-27-49 Comp 8-12-49 5-1/2 Csg. @ 9522,PB 9045 (-4789). Perf. 9040-9045, 8920-8980, 9001-9020, 9028-40. Trt. 250 gals. acid thru perf. 9040-45; trt. 500 gals. acid thru perf. 8920-80; trt. 3500 gals. acid thru perf. 9001-20;trt. with 2000 gals. acid thru perf. 9001-20 and 9028-40. Total 6250 Gal. acid. IP: F 285 BO plus 7 BW 24 hrs. thru 1/2" ch. GOR 1176-1, Grav. 46.8 Corr.
CAUDLE #2	11010 (-6744)	11017 (-6751)	7'	TD 11084 (-6817) DO 11055 (-6789)	5-1/2" Csg. @ 11083, DO 11055. Spud 9-20-50 Perf. 11012-11045 w/132 jet shots. Comp 1-19-51 Trt. total 4500 gals. acid thru perf. 11012-11045. IP: F 458 BO plus 1.16 BBS plus 6 BW 24 hrs. thru 1/2" ch., Gas Vol. 16,810 CFGPD, GOR 37.1, Grav. 44.3 Corr.

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BAGLEY FIELD - LEA COUNTY, NEW MEXICO

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	D E V O N I A N	C O M P L E T I O N	
CHANBERS #1	10928 (-6678)	11016 (-6766)	88'	TD 11040 (-6790)	PB 11026 (-6776)	Spud 4-21-50 Comp 8-16-50 5-1/2" Csg. @ 11040, PB 11026 (-6776). Perf. 11010-26. Trtd. 250 gals. acid. IP: F 159 BO plus 23 BW 24 hrs. thru 1" ch. on gas lift.
~~CHAMBERS #2~~ Turner #1						Drilling. ~~Spud 2-10-50~~
SIMMONS #1	10952 (-6699)	11025 (-6772)	73'	TD 11046 (-6793)	PB 9040 (-4787)	Spud 12-9-49 - Comp 4-28-50 5-1/2" Csg. @ 9450, PB 9040 (-4787) Perf. 9000-9040. Trt. with 4500 gals. acid. IP: F 292 BO plus 172 BW 24 hrs. thru 1/2" ch. GOR 1847-1, Grav. 45.3 Corr.
MATHERS #1	10860 (-6606)	10876 (-6622)	16'	TD 10964 (-6710)	No. PB	5-1/2" Csg. @ 10934. Trt. open hole 10934-10964 w/500 gal. acid. Perf. 5-1/2" Csg. 10920-10935 w/60 jet shots. Trt. open hole & Perf. w/2000 gas. acid. IP: F 381 BO plus 1/2 BBS plus 7 BAW 24 hrs. thru 1/2" ch. Gas Vol. 12,000 CFGPD, GOR 31-1, Grav. 45.6 Corr. Spud 10-26-50 Comp ~~28~~ 2-8-51

BAGLEY FIELD - LEA COUNTY, NEW MEXICO

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	DEVONIAN COMPLETION		
T&P #1-B	10722 (-6479)	10795 (-6552)	73'	TD 10914 (-6671)	No. PB	Spud 6-30-49 Comp 12-9-49 7-5/8" Csg. @ 10765. Trt. open hole 10765-10914 with 5500 gal. acid IP: F 2460 BOPD thru open 2-1/2" tbg. (based o 2 hr. test), GOR 12-1, Grav 46.6 Corr.
T&P #1-C	10563 (-6317)	10660 (-6414)	97'	TD 10822 (-6576)	No PB	5-1/2" Csg. @ 10650. Spud 12-2-49 Comp 4-21 Wash open hole 10650-10822 with 500 gal. acid. IP: F 1566 BOPD thru 3/8" ch. (Based on 4 hr test, GOR 29-1, Grav. 46.1 Corr.
T&P #2-C	10739 (-6491)	10760 (-6512)	21'	TD 10949 (-6701)	No PB	7" Csg. @ 10778. Spud 2-17-50 Comp 6-9-50 Wash open hole 10778-10949 with 500 gal. acid. IP: F 1104 BO 24 hrs thru 16/64" ch. GOR 27-1, Grav. 45.7.
T&P #3-C	10848 (-6594)	10920 (-6666)	72'	TD 11034 (-6780)	PB 10994 (-6740)	5-1/2" Csg. @ 11034', PB 10994 (-6740). Perf. 10907-994 Trt. 500 gal. acid Spud 4-22-50 Comp 8-18-50 IP: F 1080 BO 24 hrs. thru 24/64" ch. GOR 25-1, Grav. 45.6 Corr.

AMERADA PETROLEUM CORPORATION
WELL COSTS

BAGLEY POOL
LEA COUNTY, NEW MEXICO

Lease	Well No.	Depth	Tangible Costs	Intangible Costs	Total	Remarks
State BT "A"	1	11766'	$59,530.04	$359,112.11	$418,642.15	
State BT "C"	1	10980	64,185.64	216,166.87	280,352.51	
ate BT "C"	2	11715	9,190.13	168,918.24	178,108.37	Dry hole
State BT "C"	3		38,667.00	156,522.00	195,189.00	Now drilling - cost estimated
State BT "D"	1	10995	41,583.80	168,394.71	209,978.51	
State BT "D"	2	10975	44,136.23	178,529.63	222,665.86	
State BT "D"	3	10957	45,621.10	162,185.62	207,806.72	
State BT "I"	1	10960	43,445.00	157,225.00	200,670.00	Recent completion - cost estimated
State BT "J"	1	11140	8,553.00	148,125.00	156,678.00	Recent dry hole - cost estimated
Caudle	1	11083	36,160.80	188,053.60	224,214.40	Dry in Devonian - producing in Pennsylvanian
Caudle	2		40,172.00	165,925.00	206,097.00	Recent completion - cost estimated
Chambers	1	11040	46,501.02	149,129.15	195,630.17	
Mathers	1		42,137.00	159,425.00	201,562.00	Now drilling - cost estimated
Simmons	1	11046	51,740.21	169,798.81	221,539.02	Dry in Devonian - producing in Pennsylvanian

Amerada 28

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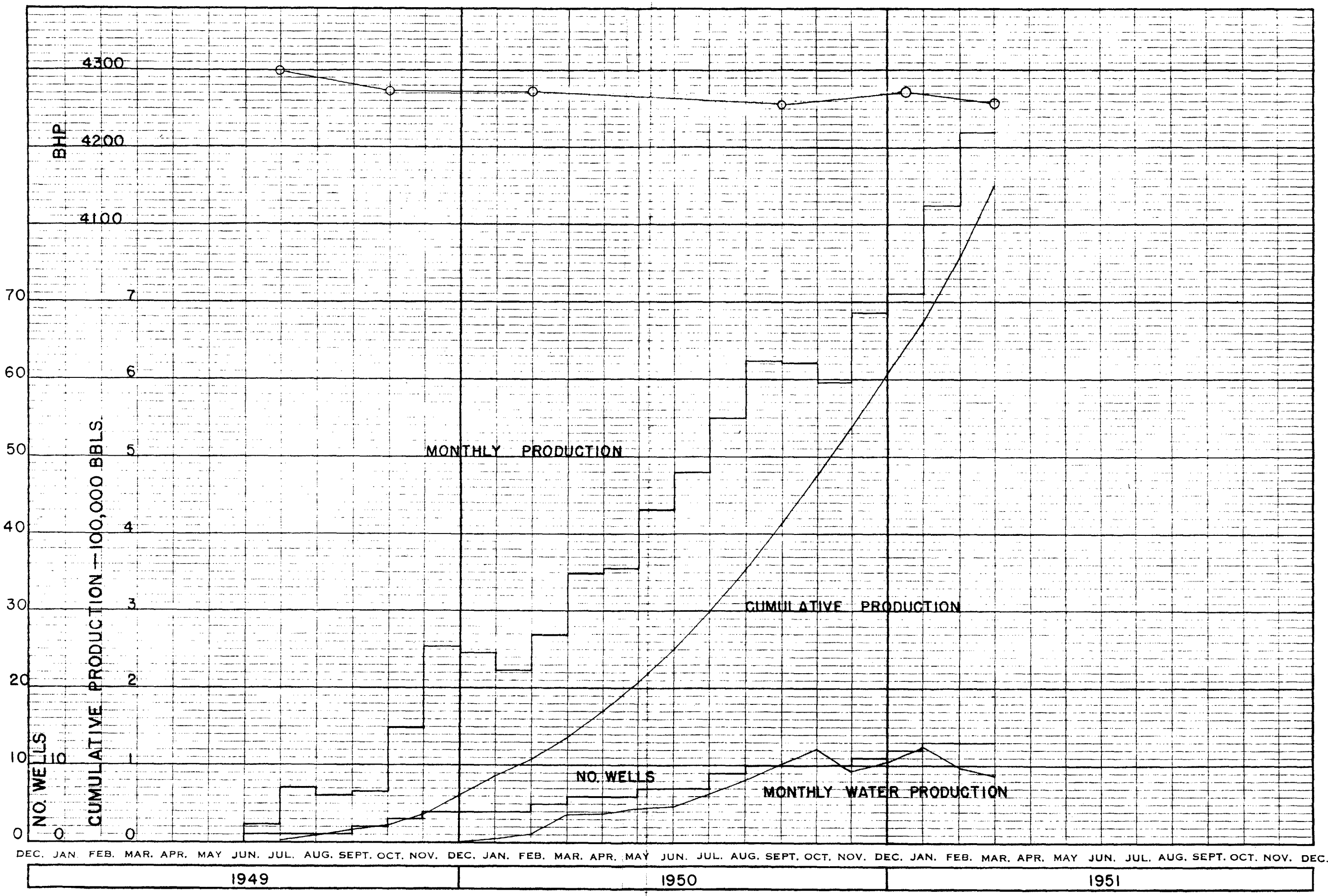
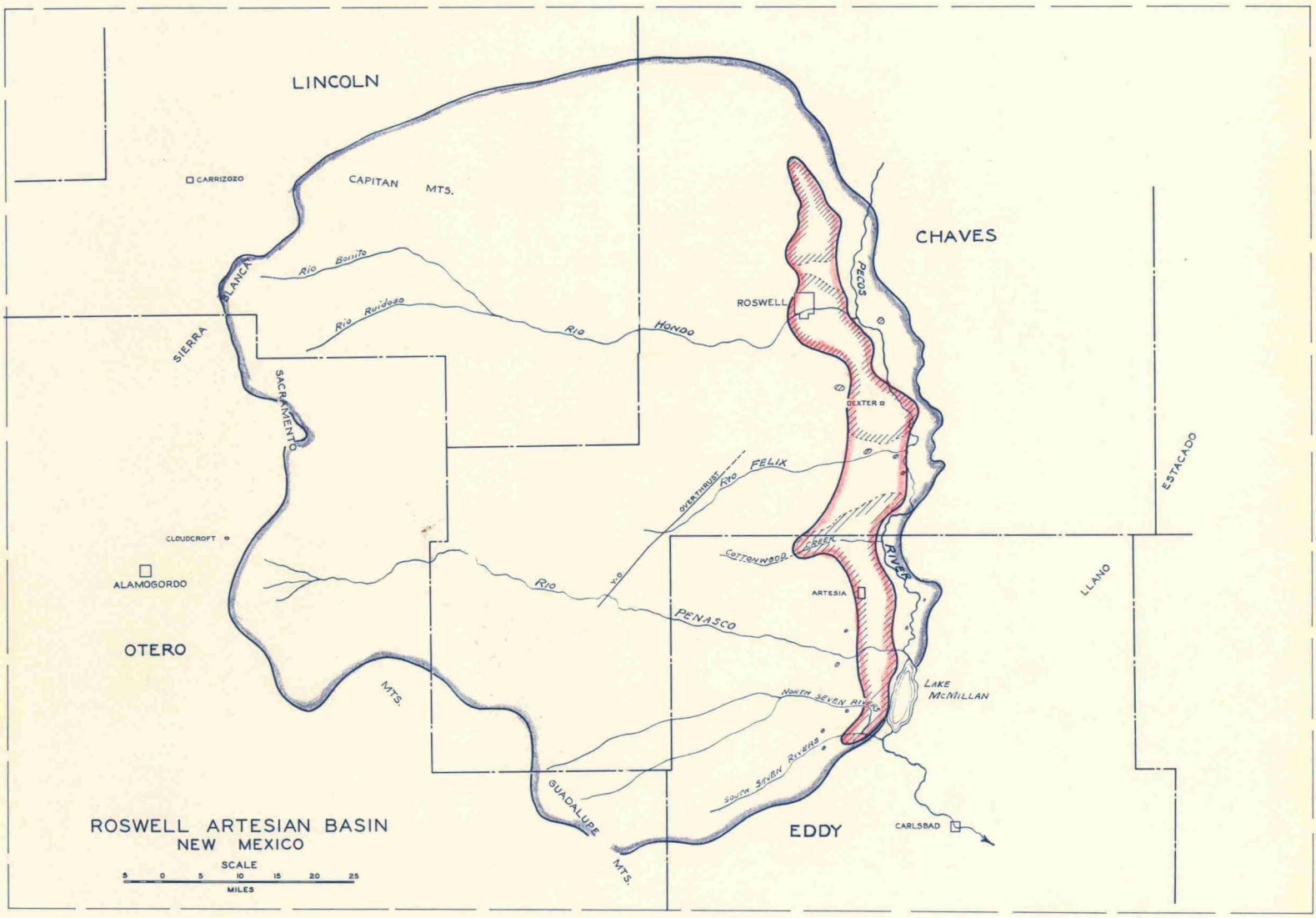
Ex 24
Case 249

PRODUCTION DATA

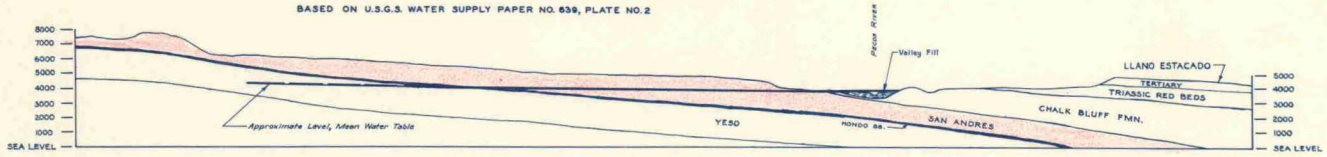
BAGLEY SILURO-DEVONIAN POOL





GENERALIZED EAST-WEST CROSS SECTION

BASED ON U.S.G.S. WATER SUPPLY PAPER NO. 639, PLATE NO. 2



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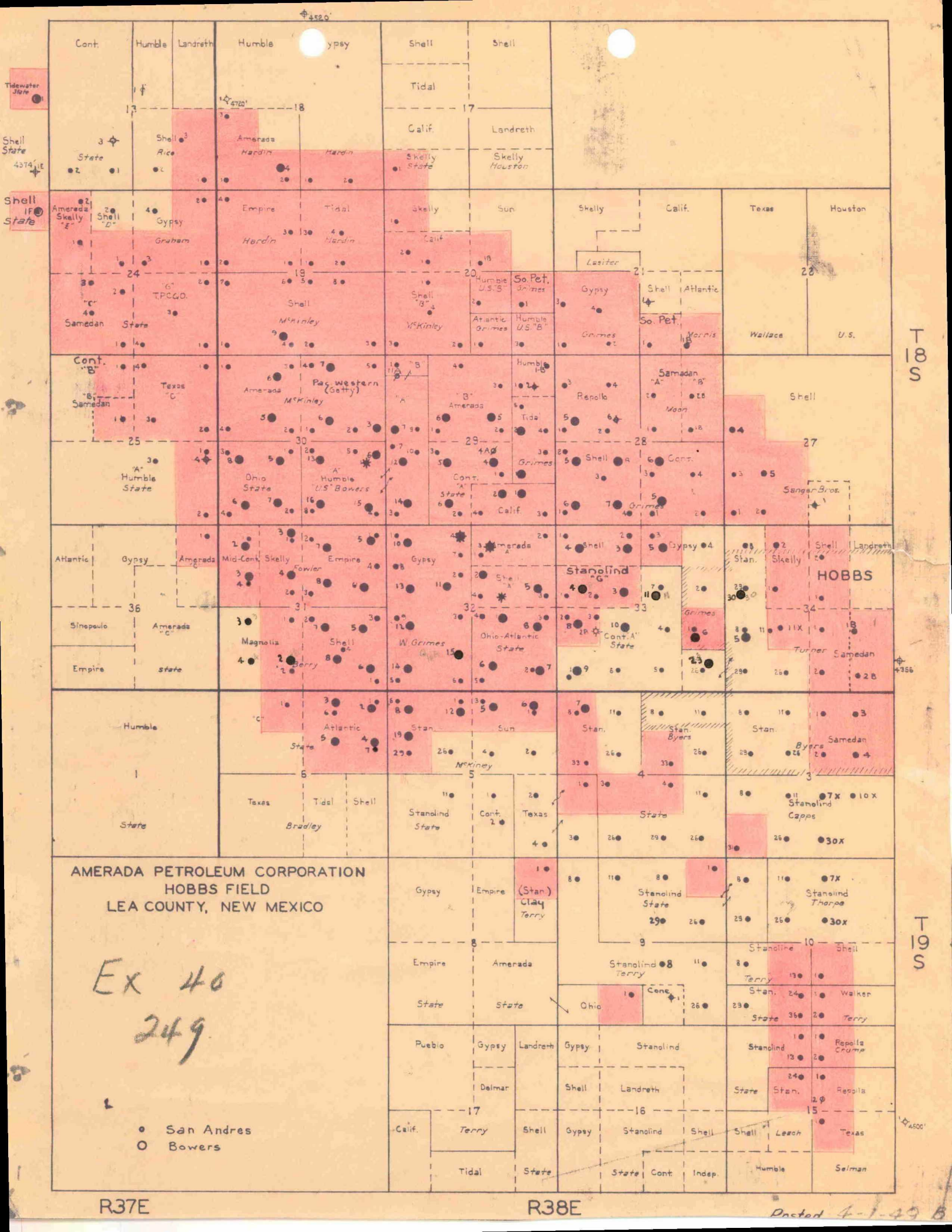
AMERADA PETROLEUM CORPORATION
HOBBS FIELD
LEA COUNTY, NEW MEXICO
Ex 40
249
San Andres
Bowers
T 18 S
T 19 S
R37E
R38E
HOBBS
Posted 4-1-49

Total allocation (May) 5614 bbls
Amerada - 4029 (71.8)
T.P - 1585 (28.2%)

Under new proration Total Pool 4639
Amerada 3359 72.4
T.P. 1280 27.6

Total Cal. acreage in Pool
Considered Productive - 1840 acres
(above - 6770 contour)

T.P.'s Productive acreage 400 (21.7%)

Bagley - Siluro/Devonian Field
Pressure History of Two Texas Pacific Coal and Oil Company Shut-in Wells
Datum -6700

	1952 November		February		March		April			
	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Time Shut in	Drop B. H. P.	Time Period
T. P. State "B" #3(a)			4190	82 days	4125	109 days	4118	142 days	65	Feb to March
T. P. State "D" #1(b)	4215	80 hours	4214	84 days	4185	111 days	4180	144 days	30	Nov to March
Field Average	4134	53 hours			4125	48 to 72 hours			9	Nov to March

(a) This well has been shut in since completion (11/16/52).

(b) This well produced 1000 barrels of test oil during a productivity index test on 11/13/52 and has been shut in since that date.

EXHIBIT 1

Texas-Pacific

Bagley - Siluro/Devonian Field
Pressure History of Two Texas Pacific Coal and Oil Company Shut-in Wells
Datum -6700

	1952 November		February		March		April	
	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Tim Shut
T. P. State "B" #3(a)			4190	82 days	4125	109 days	4118	142
T. P. State "D" #1(b)	4215	80 hours	4214	84 days	4185	111 days	4180	144
Field Average	4134	53 hours			4125	48 to 72 hours		

(a) This well has been shut in since completion (11/16/52).

(b) This well produced 1000 barrels of test oil during a productivi index test on 11/13/52 and has been shut in since that date.

Bagley - Siluro/Devonian Field
Pressure History of Two Texas Pacific Coal and Oil Company Shut-in Wells
Datum -6700

	1952 November		February		March		April			
	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Time Shut in	Drop B. H. P.	Time Period
T. P. State "B" #3(a)			4190	82 days	4125	109 days	4118	142 days	65	Feb to March
T. P. State "D" #1(b)	4215	80 hours	4214	84 days	4185	111 days	4180	144 days	30	Nov to March
Field Average	4134	53 hours			4125	48 to 72 hours			9	Nov to March

(a) This well has been shut in since completion (11/16/52).

(b) This well produced 1000 barrels of test oil during a productivity index test on 11/13/52 and has been shut in since that date.

Bagley - Siluro/Devonian Field
Pressure History of Two Texas Pacific Coal and Oil Company Shut-in Wells
Datum -6700

	1952 November		February		March		April			
	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Time Shut in	B. H. P.	Time Shut in	Drop B. H. P.	Time Period
T. P. State "B" #3(a)			4190	82 days	4125	109 days	4118	142 days	65	Feb to March
T. P. State "D" #1(b)	4215	80 hours	4214	84 days	4185	111 days	4180	144 days	30	Nov to March
Field Average	4134	53 hours			4125	48 to 72 hours			9	Nov to March

(a) This well has been shut in since completion (11/16/52).

(b) This well produced 1000 barrels of test oil during a productivity index test on 11/13/52 and has been shut in since that date.

Case 249

Exhibit # G

[redacted] - [redacted] - [redacted] COUNTY, NEW MEXICO.

WELL	LAND	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	DEVONIAN COMPLETION	
BT [redacted]	#1	10,780 (-6480)	10,788 (-6514)	38'	TD 11,766 (-7520)	PB 10,965 (-6719)
BTC [redacted]	[redacted]	10,662 (-6410)	10,699 (-6447)	37'	TD 10,980 (-6728)	No PB
BTC [redacted]	[redacted]	11,603 (-7357)	11,657 (-7411)	54'	TD 11,715 (-7469)	D & A
BTC [redacted]	[redacted]	10,722 (-6470)	10,767 (-6515)	45'	TD 10,965 (-6713)	No PB
BT [redacted]	#1	10,870 (-6620)	10,924 (-6674)		TD 10,995 (-6745)	No PB

5-1/2" Csg. @ 11,220 with 600 sacks. PB 10,965 (-6719).
Perf. 10,960-[illegible] with 60 holes. Wash with [illegible] gals. acid.
IP: F [illegible] BOPD thru 1/2" ch. (Based on [illegible] of 400 BO) GOR 20-1, Grav. [illegible]
Spud 11-25-49 [illegible] 2-26-49

7-5/8" Csg. @ 10,[illegible].
Perf. 10,[illegible] with 80 holes.
IP: F Est. 1197 BOPD thru 1/2" ch. (Based on 17-3/4 hr. test of 841 BO) GOR 33-1, Grav. 46.2 Corr.
Spud [illegible] Completed 10-28-49

8-5/8" Csg. @ 3886'.
Spud 3-27-50 Completed 8-11-50

5-1/2" Csg. @ 10,895 with 660 sacks.
Trtd. open hole 10,895-10,965 with 500 gals. acid.
IP: F 2112 BO 24 hrs. thru 1/2" ch. Gas [illegible] 65,400 CFGPD, GOR 32-1, Grav. 46.0 Corr.
Spud 12-15-50 Completed 4-8-51

5-1/2" Csg. @ 10,980'.
Trt. open hole 10,980-995 with 500 gals.
IP: F 929 BO 24 hrs. thru 1/2" ch. GOR 3[illegible] 45.5 Corr.
Spud 8-8-49 Completed 12-5-49.

PARK (E BASIN) FIELD - LEA COUNTY, NEW MEXICO

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN GAP	DEVONIAN COMPLETION	
BTD #2	10,670 (-6421)	10,720 (-6471)	50'	TD 10,975 (-6726) No PB	5-1/2" Csg. @ 10,960. Trt. open hole 10,960-975 with 2500 gals. acid. IP: F 539 BO 24 hrs. thru 1/2" ch. GOR 34-1, Grav. 44.8 Corr. Spud 11-7-49 Completed 3-31-50
BTD #3	10,712 (-6465)	10,777 (-6530)	65'	TD 10,957 (-6708) No PB PB(-6623) (-6481) -6568) (6591-6612) 6563 - 6578.	5-1/2" Csg. @ 10,897. Wash open hole 10,897-10,957 with 500 gals. acid. IP: F 1130 BO plus 2.26 Bbls. BS 24 hrs. thru 1/2" ch. GOR 33-1, Grav. 45.8 Corr. Spud 5-17-50 Completed 9-8-50.
BTI #1	10,762 (-6512)	10,799 (-6549)	37'	TD 10,960 (-6710) No PB	5-1/2" Csg. @ 10,922. Wash open hole 10,922-10,960 with 500 gals. acid. IP: F 1597 BO plus 3.20 Bbls BS 24 hrs. thru 1/2" ch. GOR 26-1, Grav. 46.0 Corr. Spud 8-14-50 Completed 12-5-50
BTJ #1	10,965 (-6722)	11,066 (-6823)	101'	TD 11,140 (-6897) D & A	TD 11,140'. Spud 9-16-50 Completed 1-17-51
BTK #1	10,997 (-6732)	11,047 (-6782)	50'	TD 11,060 (-6795) PB 9435 (-5178)	5-1/2" Csg. @ 9915 PB 9435 (-5175) Perf. 9045-63, 9290-9308, 9320-75, 9390-9435. Trt. 4000 gals. acid thru perf. 9045-63. Trt. 3000 gals. acid thru perf. 9320-75. Trt. 1000 gals. acid thru perf. 9290-9308. Total 8000 gals. acid. Set pkr. @ 9016. IP: F 313 BO 24 hrs. thru 24/64" ch. Gas Vol. 1,673,327 CFGPD, GOR 5349-1, Grav. 49.9 Corr. Spud 2-9-51 Completed 6-9-51

PARK (ELLENBURGER) FIELD - LEA COUNTY, NEW MEXICO

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN GAP	DEVONIAN COMPLETION	
NEW #1	10,824 (-4579)	10,838 (-4593)	14'	TD 10,970 (-4725) PB 10,952 (-4707)	5-1/2" Csg. @ 10,970 PB 10,952. Perf. 10,840-10,888 & 10,928-10,952. Trt. perf. with 2000 acid. IP: F 733 BO 24 hrs. thru 1/4" ch., GOR 49-1. Grav. 45.5 Corr. Spud 5-17-51 Completed 6-26-51
NEW #1	10,960 (-4705)	10,984 (-4729)	24'	TD 11,010 (-4755) PB 11,006 (-4751)	5-1/2" Csg. 11,010 PB 11,006. Perf. 10,976-11,006. Trt. 3000 acid. Re-trt. 1000 acid. IP: F 65 BO plus 374 BW 24 hrs. thru 3/4" ch. on input gas. Grav. 45.8 Corr. Spud 7-18-51 Completed 10-25-51
NEW #1					Drilling. Spud 3-4-52. Comp. 6-4-52 See See completion last sheet.
CANDLE #1	11,008 (-4752)	11,021 (-4825)	73'	TD 11,085 (-4827) PB 9045 (-4789)	5-1/2" Csg. @ 9522, PB 9045 (-4789). Perf. 9040-9045, 8920-8980, 9001-9020, 9028-40. Trt. 250 gals. acid thru perf. 9040-45; Trt. 1000 gals. acid thru perf. 8920-80; Trt. 2000 gals. acid thru perf. 9001-20; Trt. with 2000 gals. acid thru perf. 9001-20 and 9028-40. Total 6250 gal. acid. IP: F 285 BO plus 7 BW 24 hrs. thru 1/2" ch. GOR 1176-1, Grav. 46.8 Corr. Spud 3-27-49 Completed 8-12-49

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	DEVONIAN COMPLETION		
CAUDLE #2	11,080 (-6744)	11,087 (-6751)	7'	TD 11,084 (-6817)	DO 11,055 (-6789)	5-1/2" Csg. @ 11,083, DO 11,055. Perf. 11,012-11,045 with 132 jet shots. Trt. total 4500 gals. acid thru perf. 11,012-11,045. IP: F 458 BO plus 1.16 B BS plus 6 BW 24 hrs. thru 1/2" ch. Gas Vol. 16,810 CFGPD, GOR 37.1 Grav. 44.3 Corr. Spud 9-20-50 Completed 1-19-51
CAUDLE #5	10,844 (-6588)	10,866 (-6610)	22'	TD 10,966 (-6710)	No PB	5-1/2" Csg. @ 10,860. Trt. open hole 10,860-10,966 with 6000 acid. IP: F 403 BO 24 hrs. thru 3/4" ch. on input Gas. Grav. 41.6 Corr. Spud 9-4-51 Completed 12-15-51
CHAMBERS #1	10,928 (-6678)	11,016 (-6766)	88'	TD 11,040 (-6790)	PB 11,026 (-6776)	5-1/2" Csg. @ 11,040, PB 11,026 (-6776). Perf. 11,010-26. Trtd. 250 gals. acid. IP: F 159 BO plus 23 BW 24 hrs. thru 1" ch. on gas lift. Spud 4-21-50 Completed 8-16-50
CHAMBERS #2	10,890 (-6641)	10,979 (-6730)	89'	TD 11,000 (-6751)	PB 9033 (-4784)	5-1/2" Csg. @ 11,000 PB 9033 (-4784) Perf. Csg. 9005-9033 with 112 holes. Trt. perf. with 500 gals. acid. IP: F 846 BO plus 1 B BS thru 20/64" ch. Gas Vol. 1,312,000 CFGPD, GOR 1550-1, Grav. 42.5 Corr. Spud 2-10-51 Completed 5-11-51

PAGE #5 BAGLEY FIELD - LEA COUNTY, NEW MEXICO

WELL & No.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN GAP	DEVONIAN	COMPLETION	
MATHERS #1	10,860 (-6606)	10,876 (-6622)	16'	TD 10,964 (-6710)	No PB	5-1/2" Csg. @ 10934. Trt. open hole 10,934-10,964 with 500 gals. acid. Perf. 5-1/2" Csg. 10,920-10,935 with 60 jet shots. Trt. open hole & perf. with 2000 gals. acid. IP: F 361 BO plus 1/2 B BS plus 7 B AW 24 hrs. thru 1/2" ch. Gas Vol. 12,000 CFGPD, GOR 31-1 Grav. 45.6 Corr. Spud 10-26-50 Completed 2-8-51
MATHERS #1-A	10,922 (-6665)	10,940 (-6683)	18'	TD 10,995 (-6738)	PB 10,966 (-6709)	5-1/2" Csg. @ 10,995 PB 10,966 Perf. 10,930-10,966 Trt. perf. with 2500 gals. acid. IP: F 304 BO 24 hrs. thru 3/4" ch. GOR 35-1, Grav. 45.0 Corr. Spud 6-23-51 Completed 9-7-51
MATHERS #2-A	10,982 (-6722)	11,002 (-6742)	20'	TD 11,030 (6770)	No PB	5-1/2" Csg. @ 11,000. Wash open hole 11,000-11,030 W/500 acid. IP: F 1342 BOPD thru 1/2" ch. (Based on 8 hr. test) GOR 18-1, Grav. 44.5 Corr. Spud 10-10-51 Completed 1-19-52
SIMMONS #1	10,952 (-6699)	11,025 (-6772)	73'	TD 11,046 (-6793)	PB 9040 (-4787)	5-1/2" Csg. @ 9450, PB 9040 (-4787. Perf. 9000-9040. Trt. with 4500 gals. acid. IP: F 292 BO plus 172 BW 24 hrs. thru 1/2" ch., GOR 1847-1, Grav. 45.3 Corr. Spud 12-9-49 Completed 4-28-50
TURNER #1	11,000 (-6746)	11,096 (-6842)	96'	TD 11,115 (-6861)	No PB	TD 11,115 (-6861) D & A Spud 4-15-51 Completed 7-14-51

PAGE #6 - BAGLEY FIELD - LEA COUNTY, NEW MEXICO

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY Est.	DEVONIAN CAP	DEVONIAN COMPLETION	
SHELL #1-A	11,040 (-6766)	11,062 (-6788)	22'	TD 11,075 (-6801) PB 9815 (-5541)	5-1/2" Csg. @ 9890 PB 9815. Perf. Csg. 9805-9815. Trt. perf. w/2000 acid. IP: F 11,000,000 CFGPD thru 24/64" ch., SI Spud 6-29-51 Completed 10-26-51
T&P #1-B	10,722 (-6479)	10,795 (-6552)	73'	TD 10,914 (-6671) No PB	7-5/8" Csg. @ 10,765. Trt. open hole 10,765-10,914 with 5500 gal. acid. IP: F 2460 BOPD thru open 2-1/2" thg. (based on 2 hr. test) GOR 18-1, Grav. 46.6 Corr. Spud 6-30-49 Completed 12-9-49
T&P #2-B					Building Spud 10-30-51. Comp. 5-30-52 See Completion last Sheet.
T&P #1-C	10,563 (-6317)	10,660 (-6414)	97'	TD 10,822 (-6576) No PB	5-1/2" Csg. @ 10,650. Wash open hole 10,650-10,822 with 500 gals. acid. IP: F 1566 BOPD thru 3/8" ch. (Based on 4 hr. test, GOR 29-1, Grav. 46.1 Corr. Spud 12-2-49 Completed 4-21-50
T&P #2-C	10,739 (-6491)	10,760 (-6512)	21'	TD 10,949 (-6701) No PB	7" Csg. @ 10,778. Wash open hole 10,778-10,949 with 500 gals. acid. IP: F 1104 BO 24 hrs. thru 16/64" ch. GOR 27-1, Grav. 45.7. Spud 2-17-50 Completed 6-9-50

PAGE #7 - BAGLEY FIELD - LEA COUNTY, NEW MEXICO

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	D E V O N I A N	C O M P L E T I O N	
TXP #3-C	10,848 (-6594)	10,920 (-6666)	72'	TD 11,034 (-6780)	PB 10,994 (-6740)	5-1/2" Csg. @ 11,034', PB 10,994 (-6740) Perf. 10,907-994. Trt. 500 gals. acid. IP: F 1080 BO 24 hrs. thru 24/64" ch. GOR 25-1, Grav. 45.6 Corr. Spud 4-28-50 Completed 8-18-50
TXP #4-C	10,916 (-6662)	10,960 (-6706)	44'	TD 11,019 (-6765)	PB 9034 (-4780)	7" Csg. 11,[illegible] PB 9034. Perf. 8986-90[illegible]. Wash perf. w/500 gals. Trt. perf w/1500 gals. IP: F 312 BOPD thru 1/2" ch. (Based on 1 hr test) GOR 1808-1 Grav. 48.0 Cor Spud 6-21-51 Completed 11-9-51

BAGLEY FIELD - LEA COUNTY, NEW MEXICO:

WELL & NO.	TOP DEVONIAN	TOP DEVONIAN PAY	DEVONIAN CAP	DEVONIAN COMPLETION	
AMERADA BTN #1	10,826 (-6568)	10,880 (-6622)	54'	TD 10,970 (-6712) No PB	5½" Csg. @ 10,850 Acidized open hole 10,850-10,970 w/5(IP: F 696 BOPD thru 1/4" ch. (Based o hr. test of 348 BO) GOR 18-1 Gravity 46.0 Corr. Spud 3-4-52 Comp 6-4-52
T&P #2-B	10,860 (-6617)	10,952 (-6709)	92'	TD 11,033 (-6790) PB 10,987 (-6744)	5½"Csg. @ 11,033, PB 10,987 (-6744) Perf. 10,936-10,987 w/204 holes. Acidized perf. w/total 2500 gal. acid IP: F 360 BO/24 hrs. thru 1/4" ch., G 34-1, Gravity 46.0 Corr. Spud 10-30-51 Comp 5-30-52

PRODUCTION DATA

BAGLEY SILURO-DEVONIAN POOL

BHP

4300

4200

4100

4258

4213

4/1/52

MONTHLY OIL PRODUCTION

CUMULATIVE PRODUCTION

NO. WELLS

MONTHLY WATER PRODUCTION

MONTHLY PRODUCTION - 1000 BBLS.

CUMULATIVE PRODUCTION - 100,000 BBLS.

NO. WELLS

1949 1950 1951 1952 1953

KEUFFEL & ESSER CO., N. Y. NO. 358-192L
Five Years by Months on Long Side X 10th Divisions.
MADE IN U.S.A.

EXHIBIT No. 16

Case 249-315

Case 2 (3/5)

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

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BAGLEY-SILURO DEVONIAN FIELD
PRODUCTIVITY INDEX DATA ON T.P.C. & O.CO. WELLS
$PI = Q/(P_s - P_f)$

Case 2972
3/15

BHP

4700
4600
4500
4400
4300
4200
4100
4000
3900
3800
3700

C-1 PI=40.96
B-1 PI=16.56
C-2 PI=2.62
C-3 PI=6.54

200 400 600 800 1000 1200 1400 1600 1800 2000 2200 2400 2600 2800 3000

Q-BOPD

Exhibit # 10 J

BAGLEY SILURO — DEVONIAN POOL
PRODUCTION DATA

BOTTOM HOLE PRESSURE

4500
4000
3500
250

MONTHLY PRODUCTION - 1000 BBLS.

200
150
100
50
0

CUMULATIVE OIL PRODUCTION →

← MONTHLY OIL PRODUCTION

NO. OF WELLS →

← MONTHLY WATER PRODUCTION

6
5
4
3
2
30
20
10
0

- 1,000,000 BBLS

NO. OF WELLS CUMULATIVE PRODUCTION

DEC. JAN. FEB. MAR. APR. MAY JUN. JUL. AUG. SEP. OCT. NOV. DEC.

1949 | 1950 | 1951 | 1952 | 1953 | 1954 | 1955 | 19 | 19 | 19

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

AMERADA PETROLEUM CORP.
MONUMENT POOL
LEA COUNTY NEW MEXICO
SCALE - 1½" = 1 MILE

R 36 E

R 37 E

T 19 S

T 20 S

Abo
Blinebry
Paddock

Ex 41
249

Dev to 5-1-48

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

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