

Case No.

665

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Application, Transcript,  
Small Exhibits, Etc.

NO.  
CASE 665: Amerada Petroleum Corp.  
unorthodox units, etc., Bronco-Siluro-  
Devonian Pool

BEFORE THE  
OIL CONSERVATION COMMISSION  
STATE OF NEW MEXICO  
at  
Santa Fe, New Mexico

Transcript of Hearing in  
Case No.s 664, 665  
Consolidated.

February 17, 1954

Regular Hearing.

ADA DEARNLEY & ASSOCIATES  
COURT REPORTERS  
ROOM 105-106, EL CORTEZ BLDG.  
PHONES 7-9645 AND 3-9546  
ALBUQUERQUE, NEW MEXICO

BEFORE THE  
OIL CONSERVATION COMMISSION  
STATE OF NEW MEXICO  
at  
Santa Fe, New Mexico  
February 17, 1954

In the Matter of:

Amerada Petroleum Corporation's application for an order establishing a proration unit in the E/2 NE/4 of Section 14, Township 13 South, Range 38 East, Bronco-Siluro-Devonian Pool, Lea County, New Mexico, to consist of Lot 1 and 15.54 acres of Lot 2, and to increase the unit size and allowable assigned to its No. 1 Schenck Well, Lot 1, Section 14, Township 13 South, Range 38 East, Lea County.

Amerada Petroleum Corporation's application for an order establishing three proration units in SE/4 Section 11, Township 13 South, Range 38 East, Bronco-Siluro-Devonian Pool, Lea County, New Mexico, consisting of the east 43.69 acres of said SE/4 and the north and south 43.69 acres of W/2 of said SE/4, and to increase the unit size and allowable assigned to wells located in the SE/4 Section 11, Township 13 South, Range 38 East, Lea County, New Mexico.

Case No.s  
664  
665  
Consolidated.

(Notice of Publication read.)

MR. WOODWARD: Mr. John A. Woodward representing Amerada. Applicant would like to request that Case 664 and 665 be consolidated and heard together.

MR. SPURRIER: Without objections, you may proceed.

R. S. CHRISTIE

having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By MR. WOODWARD:

Q Would you state your name, please?

ADA DEARNLEY & ASSOCIATES  
COURT REPORTERS  
ROOM 105-106, EL CORTEZ BLDG.  
PHONES 7-9645 AND 5-9546  
ALBUQUERQUE, NEW MEXICO

A R. S. Christie.

Q Where do you live?

A Tulsa, Oklahoma.

Q By whom are you employed and in what capacity?

A Amerada Petroleum Corporation, Engineer.

Q You are familiar with the Bronco Field in New Mexico?

A Yes, I am.

Q Have you previously testified before this Commission in your capacity as a petroleum engineer or as an expert witness?

A Yes, sir.

MR. WOODWARD: Does the Commission accept Mr. Christie's qualification?

MR. SPURRIER: It does.

Q Mr. Christie, I hand you what has been marked Exhibit A. Will you explain what it is?

A Exhibit A has been posted on the board. It shows the proposed units here applied for in this application, or these applications.

Q I hand you what has been marked Exhibit B, will you explain what it is?

A Exhibit B is a map showing contours contoured on top of the Devonian formation.

Q I hand you what has been marked Exhibit C, will you tell what it is?

A Exhibit C is a tabulation of the pertinent well data on three wells here in this application on which we ask for unorthodox units.

Q I hand you what has been marked Exhibit D. Will you explain what it is?

ADA DEARNLEY & ASSOCIATES  
COURT REPORTERS  
ROOM 105-106, EL CORTEZ BLDG.  
PHONES 7-9645 AND 5-9546  
ALBUQUERQUE, NEW MEXICO

A Exhibit D is a productivity report on the P. I. test of Schenck No. 1 and Exhibit E is a productivity index test on the Ward Number 2. Both located in the Bronco -Siluro-Devonian field.

Q Mr. Christie, would you identify on Exhibit A the three units in Section 11 and the proration unit in Section 14 that are covered by these two applications?

A The units here proposed are outlined in red. The unit in which Ward No. 2 is contained is this long unit on the east boundary of Section 11. The other two units are approximately square units in the west half of the southeast quarter of Section 11. The unit proposed for Schenck No. 1 well is a long 40-acre unit, along the Texas, New Mexico boundary line.

Q Mr. Christie, would you explain the purpose and reason for these two applications?

A I would like to read into the record a statement they are also contained in the reports handed to the Commission.

"The Bronco Siluro-Devonian Pool is located in Lea County, New Mexico and Yoakum County, Texas. Referring to Exhibit "A" it will be noted the east line of Sections 11 & 14 coincides with the boundary line between New Mexico and Texas, and because of the adjustment of the survey on the east line the SE/4 of Section 11 contains only 131.07 acres and the NE/4 of Sections 14 contains only 128.20 acres. This deficiency in acreage results in Lots of less than 40 acres being formed along the boundary line in New Mexico.

The Schenck No. 1 well is located in Lot No. 1, Section 14, T13S, R38E and it is proposed to unitize Lot No. 1 containing 24.46 acres with 15.54 acres of Lot No. 2 to form a 40 acre proration unit. The Ward No. 2 well is located in Lot No. 3, Section 11,

ADA DEARNLEY & ASSOCIATES  
COURT REPORTERS  
ROOM 105-106, EL CORTEZ BLDG.  
PHONES 7-9648 AND 5-9546  
ALBUQUERQUE, NEW MEXICO

T13S, R38E containing 25.89 acres. It is proposed to form three proration units of equal size, each unit to contain 43.69 acres, all contained within the boundary of the SE/4 of Section 11. All the acreage contained in this quarter section is one leasehold and therefore requires no unitization. All proration units herein proposed are outlined in red on Exhibit "A".

Exhibit "B" is a map of the Bronco Area showing contours drawn on the top of the Devonian formation. Our inspection of Exhibit "B" indicates that all the units here proposed lie within the productive limits of the pool.

Exhibit "C" is a tabulation of pertinent data pertaining to the three wells now completed on three of the four units here proposed. Of particular significance is the bottom-hole pressures and potential tests, which indicate good communication within the reservoir and high productivity.

Exhibits "D" & "E" are copies of productivity index reports on Schenck No. 1 and Ward No. 2. These tests further substantiate the high productivity of the wells and indicate in my opinion that one well will drain an area much larger than 40 acres."

Q Mr. Christie, inasmuch as one well will drain in excess of 40 acres, in your opinion, is it necessary to form these three proration units in the southeast quarter of Section 11 and the unit proposed in Section 14 in order to give applicant the full value of its wells in those areas? A Yes, sir.

Q In your opinion, will the formation of these units result in waste, or prejudice the correlating rights of any individual owner or operator in the area? A No, sir.

MR. WOODWARD: That is all of the testimony the applicant

ADA DEARNLEY & ASSOCIATES  
COURT REPORTERS  
ROOM 105-106, EL CORTEZ BLDG.  
PHONES 7-2645 AND 5-9546  
ALBUQUERQUE, NEW MEXICO

has in explanation of it's position here. We have got an exceptional situation along the boundary between Texas and New Mexico. We believe that the formation of these units will give us the full value of our wells without injuring the rights of any other person or resulting in waste in any form. This is an exceptional situation and an exceptional application to take care of. We will offer the Exhibits as evidence.

MR. SPURRIER: Without objection, they are received. Are there any questions of the witness? If not the witness may be excused.

(Witness excused.)

MR. ANDERSON: I have a comment on Case 664. This is John Anderson, Geological Survey, Roswell. The 1,554 acres in lot No. 2 of the proposed Schenck unit is included in a Federal lease. The proposed proration unit is satisfactory to us and we will recommend approval of a communitization agreement covering the unit we submitted.

MR. SPURRIER: Anyone else have anything in this case or in these cases? If not we will take the cases under advisement and move on to Case 666.

STATE OF NEW MEXICO }  
COUNTY OF BERNALILLO }

I HEREBY CERTIFY that the foregoing and attached transcript of hearing in Cases No. 664 and 665 before the Oil Conservation Commission, State of New Mexico, at Santa Fe, on February 17, 1954, is a true and correct record of the same to the best of my knowledge, skill and ability.

DATED at Albuquerque, New Mexico, this 23<sup>rd</sup> day of February, 1954.

  
COURT REPORTER

ADA DEARNLEY & ASSOCIATES  
COURT REPORTERS  
ROOM 105-106, EL CORTEZ BLDG.  
PHONES 7-9645 AND 5-9546  
ALBUQUERQUE, NEW MEXICO





1746

CASE NO. 665

APPLICATION OF AMERADA PETROLEUM CORPORATION  
FOR THE ESTABLISHMENT OF THREE PRORATION  
UNITS IN THE SE/4 SEC. 11-13S-38E, BRONCO  
FIELD, LEA COUNTY, NEW MEXICO, CONSISTING  
OF THE EAST 43.69 ACRES AND THE NORTH AND  
SOUTH 43.69 ACRES OF THE WEST HALF OF SAID  
QUARTER SECTION.

TESTIMONY IN SUPPORT OF AMERADA PETROLEUM CORPORATION'S  
APPLICATIONS FOR ORDERS ESTABLISHING PRORATION UNITS  
IN THE BRONCO SILURO-DEVONIAN POOL, LEA COUNTY, NEW MEXICO

The Bronco Siluro-Devonian Pool is located in Lea County, New Mexico and Yoakum County, Texas. Referring to Exhibit "A" it will be noted the east line of Sections 11 & 14 coincides with the boundary line between New Mexico and Texas, and because of the adjustment of the survey on the east line the SE/4 of Section 11 contains only 131.07 acres and the NE/4 of Section 14 contains only 128.20 acres. This deficiency in acreage results in Lots of less than 40 acres being formed along the boundary line in New Mexico.

The Schenck No. 1 well is located in Lot No. 1, Section 14, T13S, R38E and it is proposed to unitize Lot No. 1 containing 24.46 acres with 15.54 acres of Lot No. 2 to form a 40 acre proration unit. The Ward No. 2 well is located in Lot No. 3, Section 11, T13S, R38E containing 25.89 acres. It is proposed to form three proration units of equal size, each unit to contain 43.69 acres, all contained within the boundary of the SE/4 of Section 11. All the acreage contained in this quarter section is one leasehold and therefore requires no unitization. All proration units herein proposed are outlined in red on Exhibit "A".

Exhibit "B" is a map of the Bronco Area showing contours drawn on the top of the Devonian formation. Our inspection of Exhibit "B" indicates that all the units here proposed lie within the productive limits of the pool.

Exhibit "C" is a tabulation of pertinent data pertaining to the three wells now completed on three of the four units here proposed. Of particular significance is the bottom-hole pressures and potential tests,

- 2 -

which indicate good communication within the reservoir and high productivity.

Exhibits "D" & "E" are copies of productivity index reports on Schenk No. 1 and Ward No. 2. These tests further substantiate the high productivity of the wells and indicate in my opinion that one well will drain an area much larger than 40 acres.

Respectfully submitted,

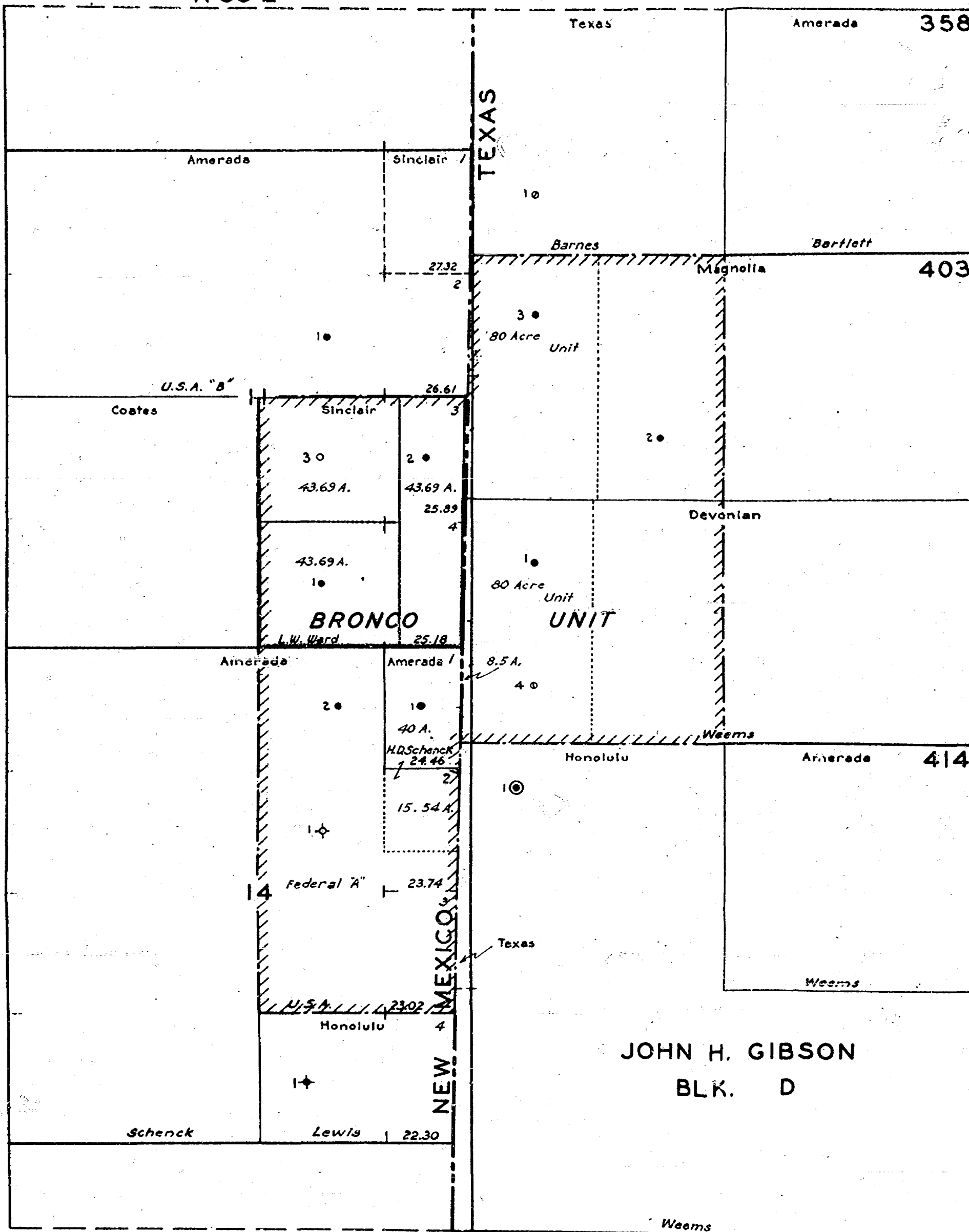
*R. S. Christie*  
R. S. Christie



R 38 E

EXHIBIT "A"

T  
13  
S



Unit Outline

Acreage within this outline owned as follows:

BRONCO POOL

EXHIBIT "C"

PERTINENT WELL DATA

	<u>Schenck No. 1</u>	<u>Ward No. 1</u>	<u>Ward No. 2</u>
Location	660' F NL & 477.18' F EL Section 14, T13S, R38E	660' F SL & 660' F WL Section 11, T13S, R38E	1983' F SL & 520' F EL Section 11, T13S, R38E
Spudded	11-21-52	4-7-53	7-7-53
Completed	4-4-53	7-3-53	9-24-53
Elevation (DF)	3810'	3809'	3810'
Top Devonian	11,387'	11,670'	11,566'
Top Pay	11,387'	11,670'	11,566'
Oil String	7" at 11,411' 5" liner 12,030'	5 1/2" set at 11,725'	5 1/2" set at 11,650'
Perforations	11,420-11,515' 11,535-11,615' 11,700-11,780'	open hole	open hole
Total Depth	12,548' P.B. 11,780'	11,890'	11,871'
Acidized	11,420-11,780' w/5000 gals.	11,725-11,890' w/1000 gals.	11,650-11,871' w/1000 gals.
Potential Test	560 bbls. in 24 hrs. 3/4" choke, GOR 205 Gravity 43.5° API	1598 in 24 hrs. based on 6 hr. test 1/2" choke, GOR 125 Gravity 43.9° API	1744 bbls. in 24 hrs. based on 8 hr. test 1/2" choke, GOR 113 Gravity 45° API
Reservoir Pressure at -8000'	6-18-53 4788# 9-28-53 4767#	9-28-53 4768#	10-3-53 BHP 4771#
Original Pressure 4789# Wells #1, 11-24-52			

AMERADA BOTTOM-HOLE PRESSURE-TEMPERATURE REPORT

R.P.G. 3 NO. 4703 CLOCK NO. HK 1931 SPEED 24 HR. LEASE L. W. Ward WELL NO. 2  
 ELEMENT NO. 10,655N RANGE 0-6000 CORR. TO - 'F. LOCATION Bronco S/D Pool Lea, County, N.M.  
 RUN BY JRE/RAB CALCULATED BY JRE/RAB REPORTED BY RAB DATE RUN 10-2-53 TIME 10:45 PULLED 10-3-53 TIME 10:37 a.m.  
 9-24-53 581.23 bbl. in 8 hrs. WELL DATA Gas measurement by orifice well tester.  
 POTENTIAL: CHOKED 2" OIL WATER 0 G.O.R. 113 ZONE Devonian 11,566' BOTTOM T.D. 11,871  
 HOW PRODUCED Natural flow thru tbgs. P.I. CASING 5 1/2" DEPTH 11,650' TUBING 2" DEPTH 11,864  
 HOURS SHUT IN 46 WELL HEAD PRESS.: GAS Pkr. TUB 1000 TOP LINER - PERFORATIONS Open hole 11,650-11,871  
 LAST RESERVOIR PRESSURE Initial 11,810 DATE. ELEVATION 3810 DENSITY OF OIL 45.0 SP. GR. OF GAS  
 Flow line : 1627' of 3" Estimated shrinkage - 12%  
 Trap press: 65 psi

TEST RECORD

PURPOSE OF TEST To determine flowing characteristics of well.

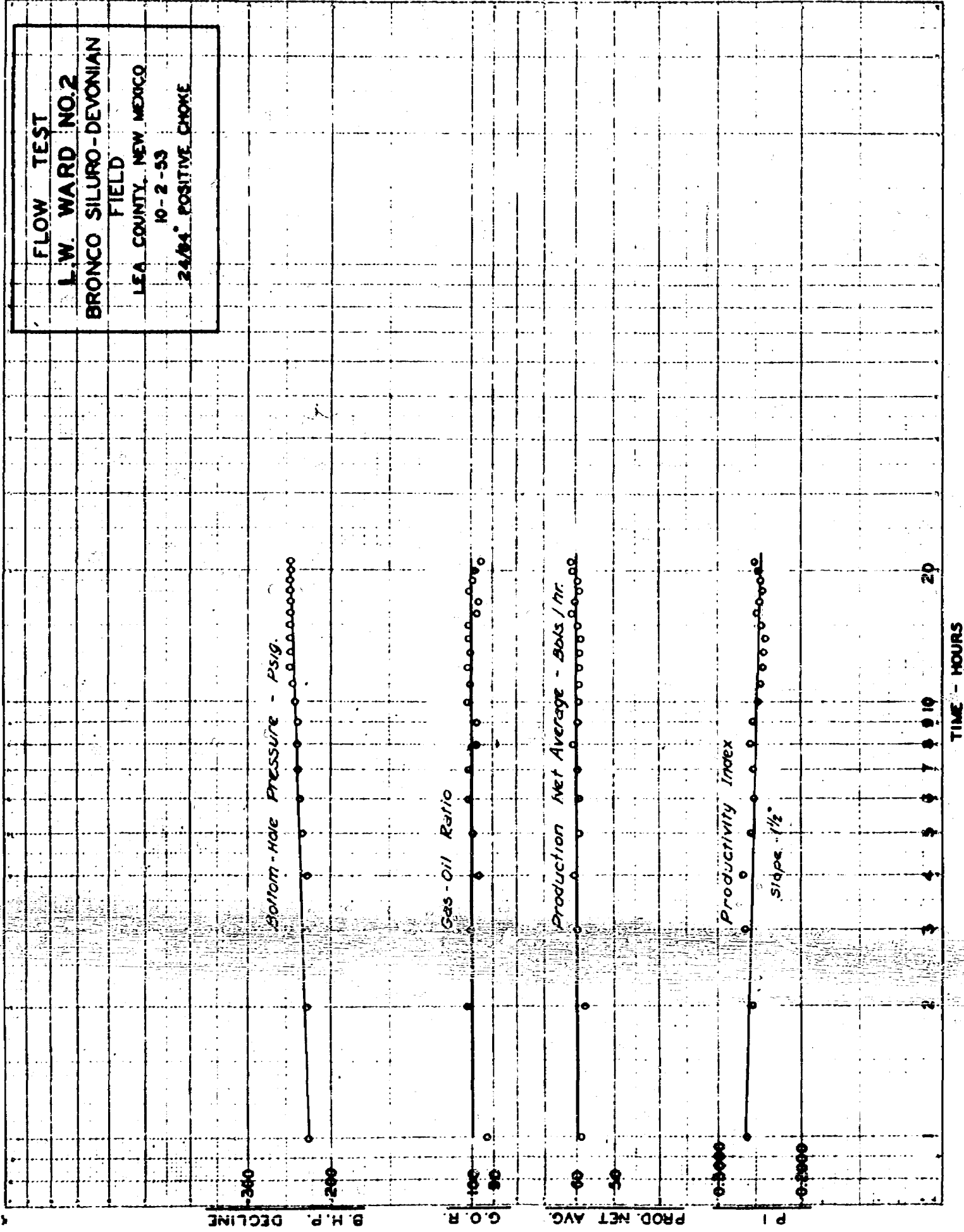
TIME	DEPTH	WELL PRESSURE	Press. Decline	Tbg. Prod.	Prod. Net	Prod. Net Average	P. I. (Hrly)	Tbg. Press.	WELL GOR	Remarks
11:15A	11810									
11:45A	11810	4771	-	-	-	-	-	1000	-	Opened well on a 24/64" Pos. Choke. Oil immediately
12:45P		4546	225	40.03	60.75	58.84	0.2615	545	93	
1:45		4544	227	-	56.92	57.62	0.2538	546	102	
2:45		4544	227	-	58.31	59.69	0.2630	547	100	
3:45		4544	227	-	61.07	60.38	0.2660	550	96	
4:45		4541	230	-	59.69	59.00	0.2565	551	99	
5:45		4538	233	-	58.31	58.48	0.2510	550	101	
6:45		4535	236	-	58.65	59.69	0.2529	549	101	
7:45		4535	236	-	60.72	60.72	0.2573	549	97	
8:45		4535	236	-	60.72	59.69	0.2529	548	97	
9:45		4532	239	-	58.55	59.17	0.2476	548	102	
10:45		4529	242	-	59.69	59.17	0.2445	547	100	
11:45		4526	245	-	58.65	59.00	0.2408	547	102	
12:45A		4526	245	-	59.34	58.83	0.2401	547	100	
1:45		4526	245	-	58.31	58.31	0.2380	547	101	
2:45		4526	245	-	58.31	59.52	0.2429	547	101	
3:45		4526	245	-	60.72	61.07	0.2493	547	97	
4:45		4526	245	-	61.41	60.03	0.2450	547	96	
5:45		4526	245	-	58.65	59.00	0.2408	547	101	
6:45		4526	245	-	59.34	59.69	0.2436	547	99	
7:45		4526	245	-	60.03	60.72	0.2478	547	98	
8:45		4526	245	-	61.41	61.41	0.2507	547	95	Shut well in Storage full

EXPLANATIONS OR CHART

Total oil production prior to test: 673 bbls.

Total oil production during test: 1249.63



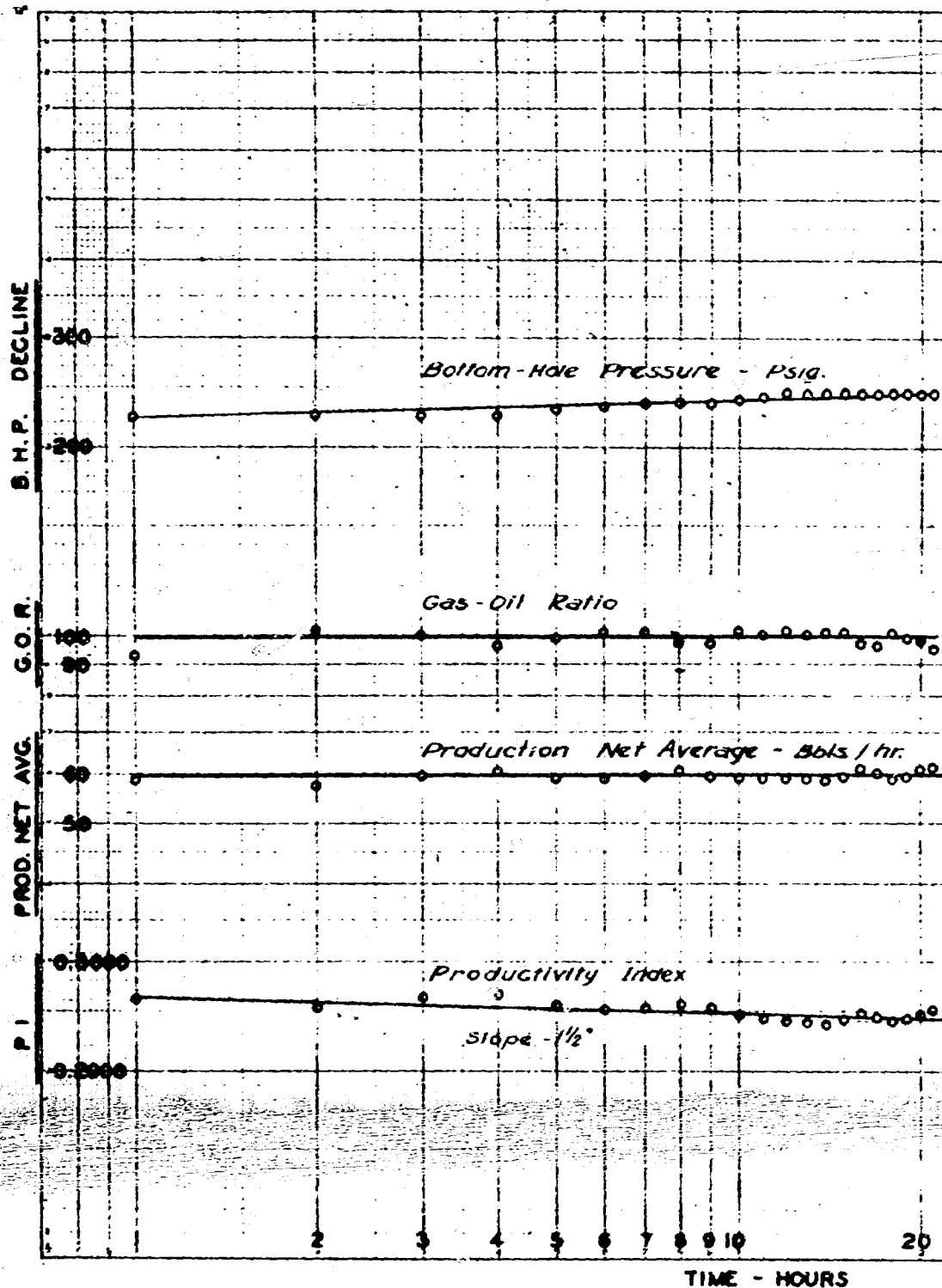


NO. 3123. LOGARITHMIC: 2 3/4 BY 2 3/4-INCH CYCLES.



CODEX BOOK COMPANY, INC. NORWOOD, MASSACHUSETTS.  
PRINTED IN U. S. A.

FLOW TEST  
L.W. WARD NO. 2  
BRONCO SILURO-DEVONIAN  
FIELD  
LEA COUNTY, NEW MEXICO  
10-2-53  
24/64" POSITIVE CHOKE





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:

CASE NO. 665  
ORDER No. R-471

THE APPLICATION OF AMERADA  
PETROLEUM CORPORATION FOR THE  
ESTABLISHMENT OF THREE PRORATION  
UNITS IN THE SE/4 SECTION 11, TOWNSHIP  
13 SOUTH, RANGE 38 EAST, NMPM., BRONCO  
SILURO-DEVONIAN POOL, LEA COUNTY, NEW  
MEXICO, CONSISTING OF THE EAST 43.69  
ACRES OF SAID SE/4, AND THE NORTH AND  
SOUTH 43.69 ACRES OF THE W/2 OF SAID  
QUARTER SECTION.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a. m., on February 17, 1954, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 27<sup>th</sup> day of May, 1954, the Commission, a quorum being present, having considered the records and testimony adduced at said hearing, and being fully advised in the premises,

FINDS:

(1) That due notice of the time and place of hearing and the purpose thereof having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.

(2) That the applicant is the owner of oil and gas leases covering the SE/4 of Section 11, Township 13 South, Range 38 East, Lea County, New Mexico.

(3) That applicant has completed its Ward No. 1 well, located approximately 660 feet from both the south and west lines of said quarter section; its Ward No. 2 Well, located approximately 660 feet from the north and 520 feet from the east line of said quarter section; and its Ward No. 3 Well, located 660 feet from both the north and west lines of said quarter section.

(4) That each of these wells is a producing oil well within the defined limits of the Bronco Siluro-Devonian Pool, Lea County, New Mexico.

(5) That the east line of said quarter section coincides with the boundary line between New Mexico and Texas, and because of the adjustment of the survey on the east line, this quarter section contains only 131.07 acres.

(6) That because of the size and shape of said quarter section, four 40-acre proration units substantially in the form of a square cannot be established in said quarter section and all three of said wells cannot be located on 40 contiguous surface acres in the form of a square within the said quarter section.

(7) That the establishment of three proration units in said quarter section consisting of the most easterly 43.69 acres of said quarter section and 43.69 acres each on the north and south of the west half of said quarter section, as more particularly shown by applicant's Exhibit 'A' attached to the application filed herein, will secure to applicant the full use and value of its wells in said quarter section, and will be in the interest of conservation and protection of correlative rights.

IT IS THEREFORE ORDERED:

(1) That there are hereby established three proration units, each consisting of 43.69 acres in the SE/4 of Section 11, Township 13 South, Range 38 East, NMPM., Lea County, New Mexico, said units to be assigned respectively to Amerada Wells Ward No. 1, Ward No. 2, and Ward No. 3, as prayed for in the application filed herein, and as shown for particularly by Exhibit 'A' which is attached to said application and incorporated herein by reference.

(2) That applicant's Ward No. 1 Well, Ward No. 2 Well, and Ward No. 3 Well shall each be granted an allowable in the proportion that its 43.69-acre unit bears to the standard or orthodox proration for said pool all until further order of the Commission.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*E. L. Mechem*  
Edwin L. Mechem, Chairman

*E. S. Walker*  
E. S. Walker, Member

*R. R. Spurrier*  
R. R. Spurrier, Member and Secretary

(SEAL)

MEMORANDUM

TO: Oil Conservation Commission, and Messrs. Yost and Kitts  
FROM: W. B. Macey, Chief Engineer  
Subject: Case 665

This case is a companion case to Case 664 and involves the creation of three proration units in the SE/4 of Section 11, Township 13 South, Range 38 East.

The SE/4 contains only 131.07 acres. The reduced size of the quarter section being occasioned by the Texas-New Mexico state line.

It is proposed by the Amerada to form three proration units of 43.69 acres each in this SE/4. They have drilled and completed two wells to the Bronco Pool producing horizon and a third well is presently drilling. The wells are known as follows:

The #1 Ward is located in the SW/4 SE/4; the #2 Ward is located in Lot 3 and the #3 Ward, which is presently drilling is located in the NW/4 SE/4.

RECOMMENDATION:

It is recommended that the application be approved and that an order be entered providing for the formation of three proration units of 43.69 acres each within the SE/4 of the section and that the allowables assigned each of the three wells be in the proportion of 43.69/40ths times the top unit allowable as assigned the Bronco-Siluro-Devonian Pool.

April 19, 1954

In the matter of the  
application of Overade  
Pet Corp for an order  
commencing certain  
lands in <sup>Lot 4</sup> Sec. 11, T13S,  
R 38E with Lot 3, <sup>Sec 11</sup> T13S  
R 38 E, Brown Paul Lee County  
N.M., in order to increase  
the unit size & allocate  
assigned its No 2 word  
Lot 3, Sec 11, T13S, R 38E  
N.M.P.M. Lee County N.M.

See  
Corrected application

C. 1005

BEFORE THE OIL CONSERVATION  
COMMISSION OF THE STATE OF  
NEW MEXICO

APPLICATION OF AMERADA PETRO-  
LEUM CORPORATION TO INCREASE THE  
UNIT AND ALLOWABLE FOR ITS WARD  
# 2 WELL IN THE NE/4 SE/4 SECTION  
11, TOWNSHIP 13 SOUTH, RANGE 38  
EAST, BRONCO FIELD, LEA COUNTY,  
NEW MEXICO.

APPLICATION

Comes now, Amerada Petroleum Corporation and alleges and states;

(1) That it is the owner of oil and gas leases covering the SE/4 of Section 11, Township 13 South, Range 38 East, Lea County, New Mexico.

(2) That it heretofore completed its Ward #2 Well in the NE/4 SE/4 of said section, consisting of approximately 25.18 acres.

(3) That said well is an oil well producing from the Bronco Pool in Lea County, New Mexico.

(4) That applicant proposes to communitize royalty interest in the NE/4 SE/4 with royalty interest in other contiguous lands in said quarter section to form a unit for oil and gas purposes consisting of approximately 40 contiguous acres.

(5) That an increase in the allowable for said well proportionate to the increase in acreage proposed herein will not result in waste or prejudice correlative rights.

WHEREFORE, Applicant respectfully requests that this matter be set down for hearing and that the allowable for said well be increased proportionately to the increase in acreage proposed herein.

Dated this 21 day of January, 1954.

AMERADA PETROLEUM CORPORATION

By:

*John A. Woodward*

J. A. Woodward  
Attorney for Amerada Petroleum  
Corporation.