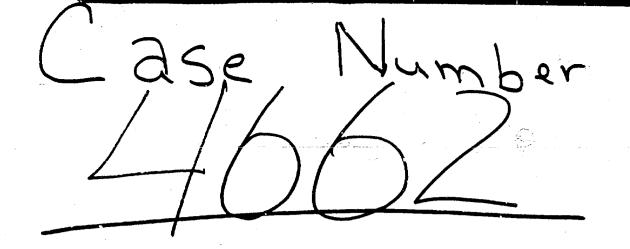
CASE 4662: Application of AMOCO PRODUCTION CO. FOR AN EXCEPTION TO ORDER NO. R-111-A, LEA COUNTY.



Application

Trascripts

Small Exhibits

ETC

25

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION MORGAN HALL, STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO February 16, 1972 EXAMINER HEARING IN THE MATTER OF: Application of Amoco Production Company for an exception to Order No. R-111-A, Eddy County, CASE NO. 4662 New Mexico. 10 BEFORE: Elvis Utz 11 Examiner 12 13 14 15 16 17 18 19 20 21 TRANSCRIPT OF HEARING 22 23 24

PAGE 3 MR. UTZ: Case Number 4662. MR. HATCH: The application of Amoco Production Company for an exception to Order No. R-111-A, Eddy County, New Mexico. MR. GROSS: Mr. Examiner, appearing for Amoco Froduction Company, Gerry Gross, of Houston, Texas. I am the attorney for Amoco, and I have one witness. THOMAS MALLOY, was called as a witness and, after being duly sworn testified 10 as follows: 11 DIRECT EXAMINATION 12 BY MR. GROSS: Would you state your name, for the record, and by 13 14 whom you are employed and in what capacity? Thoma's Malloy, and I am employed by Amoco Production 15 Company as a Staff Engineer in the Houston Division 16 17 Office, Houston, Texas. Have you previously testified before the Commission as 18 19 a Petroleum Engineer, Mr. Malloy? Yes, sir.

20

Have you prepared an Exhibit for this Hearing today 21 concerning the acception Amoco seeks to Order R-111-A? 22

Yes, I have. 23

Would you identify Amoco's Exhibit 1?

This is a structural contour map of Section 26, Township

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19 South, Range 33 East. It shows the location of the Bate Federal Well Number 2 and this is shown by the red arrow.

This well is located 660 feet from the west line and 1,830 from the south line of Section 26. It is slightly off-center of the quarter section, the quarter-quarter section, because of a rancher's fence.

This is generally a potash area and we are required to run three strings of surface casing and a salt production string.

- Q Would this provide adequate production?
- 12 A Yes, it will. It has been done on other wells in the area.
 - Q What would be the result in savings, Mr. Malloy?
 - A We estimate the result in saving would be some \$10,000 in the well.
 - Q Have you also received a letter from the Potash

 Company saying that they have no objection to this
 request?
 - A Yes.

MR. GROSS: We would like to introduce Exhibit 1 and Mr. Malloy is available for any questions.

MR. UTZ: Without objection, Exhibit 1 will be made part of the record.

25

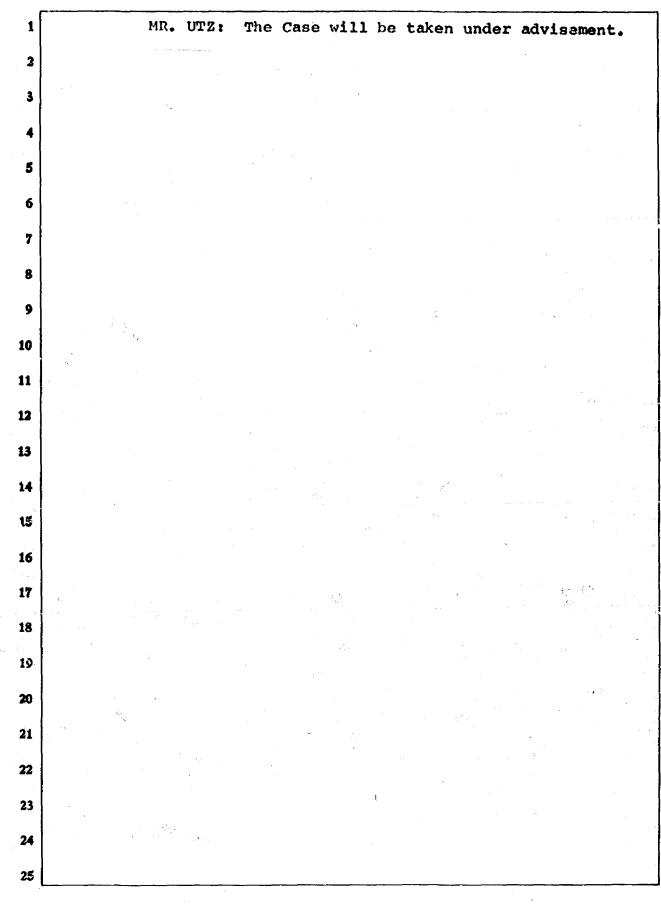
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25

(Whereupon Amoco Exhibit 1 was admitted in evidence.) CROSS-EXAMINATION BY MR. UTZ: How long will the salt be under the influence of drilling mud? 7 If I may, let me check some information on State 8 Federal Number 1. In this well, the salt section was penetrated 10 by May 1st, and the casing was set by May 8th, so 11 there was about a seven day period there. 12 What will your drilling methods be? Q I don't know that they are complete as yet, but it 15 possibly would be salt saturated mud. It apparently 14 was salt saturated mud in the Number 1 well because 16 there was not undue hole enlargement in the salt 17 section of the well. If I am not mistaken, that is the usual manner? 18 That is the usual procedure in drilling in the salt 19 section. 20 And this would be satisfactory for you if we require 21 this? 22 Surely. 23

MR. UTZ: Any other questions?

(No response.)



dearnley-meier reperting sarvage

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STATE	OF	NEW	MEXICO	•)	
		-)	SS
COUNTY	<i>t</i> 01	BEI	RNALILLO)	

I, RICHARD E. McCORMICK, a Certified Shorthand Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

CERTIFIED CHOPTHAND REPORTED

1 do hereby certify that the freegiles is a control notice of the product of the

dearnley-meier regerting server

INDEX WITNESS: PAGE THOMAS MALLOY Direct Examination by Mr. Gross 3 5 Cross-Examination by Mr. Utz 5 <u>EXHIBITS</u> APPLICANT'S: (Amoco) ACCEPTED Exhibit 1 Structural Contour Map 11 12 17 18 19 20 21 22 23 24



Other

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2068 - SANTA FE 87501 CHAIRMAN

LAND COMMISSIONER

ALEX J. ARMIJO

MEMBER

STATE GEOLOGIST

A. L. PORTER, JR.

SECRETARY – DIRECTOR

GOVERNOR BRUCE KING

March 15, 1972

Mr. Jerry Gross Amoco Production Company Post Office Box 3092 Houston, Texas 77001	Re:	Case NoOrder NoApplicant:	R-42		
	Amoco Production Company				
			· •	A Section 1	
Dear Sir:	•				
Enclosed herewith are two of Commission order recently of					
	Very tr	uly yours,			
	a.o	L. Porte	v, Q,		
	A. L. P	ORTER, Jr. ry-Director			
	:				
ALP/ir	\$ 100 mm			**	
Copy of order also sent to:	.				
Hobbs OCC x Artesia OCC					

Potash Company of America - Carlsbad, N. Mex.

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

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

> CASE No. 4662 Order No. R-4272

APPLICATION OF AMOCO PRODUCTION COMPANY FOR AN EXCEPTION TO ORDER NO. R-111-A, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 10 a.m. on February 16, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

MOW, on this 15th day of March, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FIMDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Amoco Production Company, seeks an exception to the Potash-Oil Area casing and cementing rules as set forth in Commission Order No. R-111-A for its Bate Federal Well No. 2 to be located in Unit L of Section 26, Township 19 South, Range 33 East, MMPM, East Gem-Yates Pool, Lea County, New Mexico.
- (3) That the applicant proposes to drill said well in such a manner as to eliminate running a salt protection string provided the production string is cemented to the surface.
- (4) That the applicant proposes to set a water shut-off casing string at approximately 350 feet, drill to a proposed total depth of 3700 feet, and set a production string of casing at said total depth.

-2-CASE No. 4662 Order No. R-4272

- (5) That the applicant proposes to circulate cement to the surface on the water shut-off string and if production is encountered, circulate cement on the production string back to the surface.
- (6) That the casing and cementing program proposed by the applicant would not constitute a hazard to the potash deposits in the area of the subject well provided that a salt protection string is set and mudded in prior to drilling into the pay; that said salt protection string could be pulled and production casing run to total depth and cemented to the surface if production is obtained.
- (7) That approval of the proposed special casing and cementing program for the subject well will afford the applicant the opportunity to produce its just and equitable share of the oil and gas in the subject pool, will prevent unnecessary economic loss, prevent waste, protect correlative rights, assure maximum conservation of oil, gas, and potash resources, and permit the economic recovery of oil, gas, and potash minerals within the Potash-Oil Area as defined by Order Mo. R-III-A, provided a salt protection string is utilized in accordance with the procedure outlined above.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized, as an exception to the Potash-Oil Area casing and cementing rules as set forth in Commission Order No. R-111-A, to drill, cement, and abandon its Bate Federal Well No. 2, to be located in Unit L of Section 26, Township 19 South, Range 33 East, MNPM, East Gem-Yates Pool, Lea County, New Mexico, in accordance with the casing, cementing, and abandonment procedures as set forth below:

CASING, CENENTING, AND ABANDONNENT PROCEDURE

- 1. Water Shut-Off Casing String:
 - (a) Applicant shall set oil field casing at a depth of approximately 350 feet below the surface or deeper if necessary to protect any potable water. Cement shall be circulated back to the surface on this string.

-3-CASE No. 4662 Order No. R-4272

(b) Cement shall set a minimum of 24 hours before drilling the plug or instituting tests.

2. Salt Protection String:

Applicant shall set and mud in a salt protection string below the base of the salt prior to drilling into the pay. If production is obtained, said salt protection string shall be lowered to total depth and cemented to the surface in lieu of running a protection casing string or may be pulled and a production casing string run and cemented in accordance with Item 3 below.

3. Production Casing String:

If production is encountered, applicant shall set a production string at total depth and cement shall be circulated back to the surface.

4. Cementing and Testing Procedure:

All cement mixtures and testing procedures shall be in accordance with the applicable provisions of Order No. R-111-A insofar as said provisions are not inconsistent with this order.

5. Abandonment Procedure:

Upon abandonment of the well, it shall be plugged and abandoned in accordance with the applicable provisions of Commission Order No. R-111-A.

 Applicant shall notify the Hobbs District Office of the date and hour casing is to be run and cemented and the date and hour the well is to be plugged. CASE No. 4662 Order No. R-4272

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

ALEX J. ARNIJO, Member

A. L. PORTER, Jr., Member & Secretary



Amoco Production Company

500 Jefferson Building P.O. Box 3092 Houston, Texas 77001

D. L. Ray Division Engineer

March 3, 1972

KECLIVED

int - 6 1972

OU CONSERVATION COMMI

File: TBM-986.51NM-1088

Re:

Case No. 4662

East Gen-Yates Pool Lea County, New Mexico

Mr. George Hatch, Attorney New Mexico Oil Conservation Commission State Land Office Building Box 2088 Santa Fe, New Mexico 87501

Dear Mr. Hatch:

Hearing in the above numbered Case covered our request for an exception to Rule R-111-A for our Bates Federal No. 2 well in East Gem-Yates Pool, Lea County, New Mexico. You requested certain data from our representatives.

Attached is a schematic sketch showing the approximate depths at which surface and production casing will be set in this well. Included are the theoretical volumes between the casing string and hole, based on bit sizes to be used.

Included with the sketch is a data sheet which shows the volume of cement we anticipate placing behind each casing string. The calculations indicate adequate safety factors to assure proper cementing of the casing. The amount of cement used will be changed, as necessary, when a caliper log is run.

You also requested information regarding possible time the salt section might be exposed in the hole before casing is set. Based on the drilling of Bates Federal No. 1, it appears the entire salt section will be drilled in about 36 hours. Total depth should be reached and production casing set in 3 to 4 days thereafter. You recognize, I am sure, that some of

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11 - 5 1972

Mr. George Hatch March 3, 1972 Page 2

ON CONSERVATION COMM,

this time would elapse before a salt protection string could be run. The additional exposure time will be quite small.

I trust this furnishes the data you require.

Very truly yours,

Attachments

TBM: as

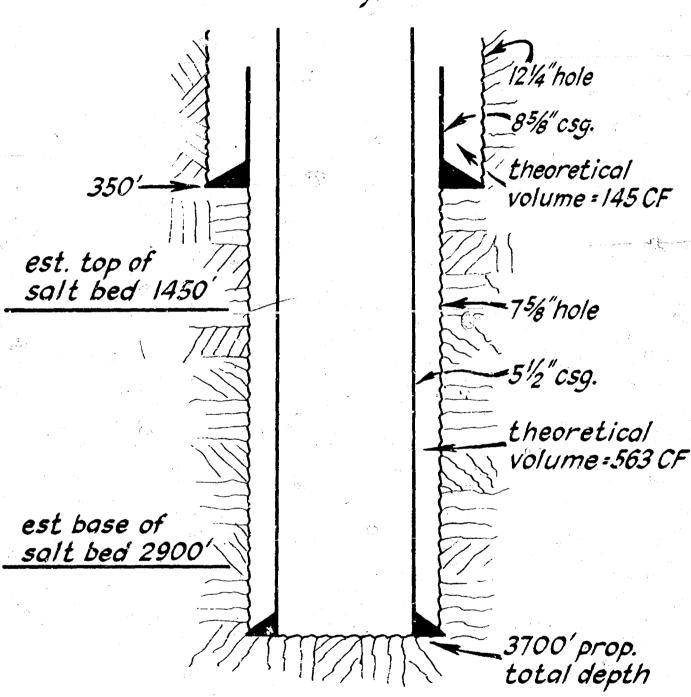
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AMOCO PROD. CO. TONGENVATION SOMM.

Bates Fedr. No.2

EAST GEM-YATES POOL

Lea County, N.M.



V.1.

CEMENTING PROGRAM

Surface Casing:

200 sacks cement w/2% CaCl = 280 cubic feet 280 cubic feet cement/145 cubic feet hole = 193% of theoretical requirements

Producing Casing:

1300 sacks cement w/4% Gel and 1% CaCl = 2691 cubic feet 2691 cubic feet cement/563 cubic feet hole= 477% of theoretical requirements

Note: Actual amount of cement used behind production pipe will be changed, as necessary, to conform to data obtained from caliper survey.

Depths shown are approximate. Actual depths at which casing is set will be selected to assure a proper casing seat is obtained.

(Case 4661 continued)

levelled in accordance with Commission Rules and Regulations.

CASE 4662:

Application of Amoco Production Company for an exception to Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules set forth in Order No. R-111-A to permit its Bate Federal Well No. 2 located in Unit L of Section 26, Township 19 South, Range 33 East, Lea County, New Mexico, to be drilled in such a manner as to eliminate running a salt protection string provided the production string is cemented to the surface.

CASE 4663: Application of Amoco Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox gas well location for its Malco "A" Federal Well No. 3 located 1650 feet from the North line and 1653 feet from the West line of Section 11, Township 18 South, Range 27 East, undesignated Pennsylvanian-Morrow Pool, Eddy County, New Mexico, with the W/2 of said Section 11 to be dedicated to the well.

CASE 4664: Application of Tenneco Oil Company for a unit agreement,
McKinley County, New Mexico. Applicant, in the abovestyled cause, seeks approval of the Lone Pine Dakota "D"
Unit Area comprising 2598 acres, more or less, of federal,
fee and Indian lands in Township 17 North, Ranges 8 and 9
West, Lone Pine Dakota "D" Pool, McKinley County, New
Mexico.

CASE 4665: Application of Tenneco Oil Company for a pressure maintenance project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot pressure maintenance project in the Lone Pine Dakota "D" Pool by the injection of gas and water into the Dakota "D" zone through five wells located in Sections 12 and 13 of Township 17 North, Range 9 West and Sections 7 and 19 of Township 17 North, Range 8 West, McKinley County, New Mexico. Applicant further seeks the designation of a project area and promulgation of rules for the project including a procedure whereby additional injection wells may be approved administratively.

Case 1662 Lear 2-16-72 Rec 2-17-72 amoro permerse to substitute the cementing the pero du dion string to the surface in lieu of minimum an intermediale soll protection dilling med skell be fully saturaled with Self. so that it will not cause a The west intheir Bates # 2 unif. J. 76-195-33 E. East Len Water pool.



POTASH COMPANY OF AMERICA

MINE AND REFINERY: P. O. BOX 31 . CARLSBAD, NEW MEXICO BEZOE ACE DE SOS . TU 23844

February 1, 1972

FEB- 3 1972

OIL CONSERVATION COMM,

H. N. CLARK

New Mexico Oil Conservation Commission P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Re:

Casing Program - Amoco Production Co. Shallow Zone Test - Sec. 26, T. 29 S., R. 33 E., Lea County, New Mexico

Gentlemen:

Potash Company of America Division of Ideal Basic Industries, Inc. will not file an objection in the above case.

Very truly yours,

HNC/jm

H. N. Clark Vice President

cc: Amoco Production Company
500 Jefferson Building
Houston, Texas 77001
Attention: Mr. D. L. Ray, Division Engineer



MEMBER: AMERICAN POTASH INSTITUT

RECEIVED

ATWOOD, MALONE, MANN & COOTER LAWYERS

JEFF D. ATWOOD [1883-1960]

CHARLES F. MALONE
RUSSELL D. MANN
RUSSELL D. MANN
CHUTA F. BOB F. TURNER
ROBERT A. JOHNSON
JOHN W. BASSETT
ROBERT E. SABIN
RUFUS E. THOMPSON

P. O. DRAWER 700 SECURITY NATIONAL BANK BUILDING ROSWELL, NEW MEXICO 88201

February 4, 1972

Mr. A. L. Porter, Jr. Secretary-Director Oil Conservation Commission Post Office Box 2088 Santa Fe, New Mexico

> RE: Cases Nos. 4662 and 4663 Examiner Hearing for February 16, 1972

Dear Mr. Porter:

Would you please file the enclosed Entries of Appearance in the captioned cases. The presentation will be handled by Jerry Gross of Amoco Production Company's Houston office.

Appreciating your courtesy, and with our kind regards, I

Very truly yours

Paul Cooter

PC:sah Enc1.

am,

cc: Guy Buell, Esquire

FEB-7 1972

OIL CONSERVATION COMM.

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION)
OF AMOCO PRODUCTION COMPANY
FOR AN EXCEPTION TO ORDER NO.)
R-111-A, EDDY COUNTY, NEW MEXICO.)

No. 4662

ENTRY OF APPEARANCE

The undersigned Atwood, Malone, Mann & Cooter of Roswell, New Mexico, hereby enter their appearance herein for Amoco Production Company with Jerry Gross, Esquire, of Houston, Texas.

ATWOOD, MALONE, MANN & COOTER

BY

Attorneys for Amoco Production Company Post Office Drawer 700 Roswell, New Mexico 88201



Amoco Production Company

Ope 4662

D. L. Ray

Re:

January 24, 1972

Smoco Production 500 Jefferson Building P.O. Box 3092 Houston, Texas 77001 JAN 26 1972 CONSERVATION COMM.

File: TBM-986.521NM-624

Request for Hearing Exception to Rule R-111 East Gem-Yates Pool Lea County, New Mexico

New Mexico Oil Conservation Commission (3) P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.

Gentlemen:

Amoco Production Company respectfully requests a Hearing for the purpose of obtaining an exception to the casing program requirements of Rule R-111 for a well to be drilled in the potash-oil area at a location 660 FWL and 1990 FST Section 26 (1720s, 1232), Ica County, New Mexico. Amou will request authority to utilize a two string casing program for a shallow zone well by omitting the salt protection string and circulating cement on the oil string.

Attached is a map showing our proposed location and names of offset Operators. We understand that Potash Company of American is the only holder of potash rights within 1 mile of the location.

It is respectfully requested that this matter be included on Examiner Hearing Docket for February 16, 1972.

Yours very truly,

Attachments

co: Potash Company of America P. O. Box 31 Carlsbad, New Mexico 88220

DRC:as

DRAFT

GMH/dr

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

Liva

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

CASE No. 4662

Order No. R.

APPLICATION OF AMOCO PRODUCTION COMPANY FOR AN EXCEPTION TO ORDER NO. R-111-A, EDDY COUNTY, NEW MEXICO.

JW 3-9-72

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 16, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz

NOW, on this <u>day of February</u>, 1972, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Amoco Production Company, seeks an exception to the potash-oil area casing and cementing rules as set forth in Commission Order No. R-111-A for its Bate Federal Well. 2, located in Unit L of Section 26, Township 19 South, Range 33 East, NMPM, East Managery Pool, Lea County, New Mexico.

- (3) That the applicant proposes to drill said well in such a manner as to eliminate running a salt protection string provided the production string is cemented to the surface.
- (4) That the applicant proposes to set a savings easing string at approximately ______feet_ a water shut-off casing will to the string at approximately ______ feet, a salt protection string at approximately ______ feet_ feet, and a liner to total depth.

 approximately ______ feet_ at a said feetal depth.

 approximately ______ feet_
- the surface on the cavings string, mud in the water shut-off string, sirculate cement to the surface on the call protection string, and if production is encountered circulate cement on the lines back into the call protection approximately
- That approval of the proposed special casing and cementing program for the subject well will afford the applicant and others the opportunity to produce the just and equitable share of the oil and gas in the subject pool, will prevent unnecessary economic loss, prevent waste, protect correlative rights, assure maximum conservation of oil, gas, and potash resources, and permit the economic recovery of oil, gas, and potash minerals within the Potash-Oil Area as defined by Order No. R-111-A, provided a Real protection along is utilized in accordance with the protective described above, IT IS THEREFORE ORDERED:
- (1) That the applicant, Amoco Production Company, is
 hereby authorized, as an exception to the Potash-Oil Area

 casing and cementing rules as set forth in Commission Order

 (6) That the lawn and American program frapes of
 the applicant would not constitute a hazard to
 the pakash deposits in the area of the Embjert well proved

 that a said protestion Thrue, set and mudded in
 pricar to driefing into the pay; That said said said protestion

 Thrue Canil the page of the production carries, then to total

No. R-ill-A, to drill, cement, and abandon its Bate Federal Well
No. 2, to be located in Unit L of Section 26, Township 19 South,
Range 33 East, NMPM, East Gem Yates Pool, Lea County, New Mexico,
in accordance with the casing, cementing, and abandonment
procedures as set forth below:

CASING, CEMENTING, AND ABANDONMENT PROCEDURE

- 1. Water Shut-Off Casing String:
 - (a) Operator shall set oil field casing at a depth of approximately 900 feet below the surface or deeper if necessary to protect any potable water. Casing shall be mudded in or Cement shall be circulated back to the surface of the

State will y

(b) 12 commend, rement shall set a minimum of 24 hours before drilling the plug or instituting tests.

(c) If midded in the water short-off casing string may be pulled after the sall protection casing string has been run to total depth.

- 3, Production Casing String:
 - shall set a production in the productive interval and back into the salt protection string at least 100 feet. Cement shall be circulated at least 100 feet back into the calt protection string.

Cementing and Testing Procedure:

All cement mixtures and testing procedures shall be in accordance with the applicable provisions of Order No. R-lll-A insofar as said provisions are not inconsistent with this order.

Upon abandonment of the well, it shall be plugged and abandoned in accordance with the standard statewide rules and regulations

L. Salt Proceed on Streing:

(a) Applicant show att and much in a salt protection attring below the have to the soult with the drieding into the pay. If protection is of tained, and salt protection string shall be lowered to total depth and permented to the distriction him of running a plodue tion, carry of this or may be made and a profuse tion, carry thing or may be made and a profuse to the said and a profuse tion of the said and a profuse tion 3 has

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of the New Mexico Oil Conservation Commission. Cement plugs of 25 sacks each (at least 100 feet in length) shall be spotted opposite the pay horizon, below the salt section, above the salt section, and at the base of the shoe of the surface casing, and 10 sacks shall be used at the surface. In addition, 25-sack dement plugs shall be sported opposite any water bearing horizon encountered while drilling.

- Applicant shall notify the Hobbs District Office of the date and hour casing is to be run and cemented and the date and hour the well is to be plugged.
- (2) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

Van amond Prod. Co. exception to caring gragam reg wremen to Rule R-111-A D well in pakash-ail area authority to utilize a z-stru Cog prog, for a Shawar zone will by chulting Selt per Technon slowing & Circ Cul 26-195-R33E 660 FWL Rea Co Bate - Feleral Well no 2

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FOR AN UNORTHODOX GAS WELL LOCATION, EDDY COUNTY, N. MEX.