

CASE 6720: ARCO OIL AND GAS COMPANY TO
DRILL A HORIZONTAL DRAINHOLE, EDDY
COUNTY, NEW MEXICO

Continue
to
November 28

CASE Number

6720

Application

Transcripts.

Small Exhibits

ETC.

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100



*File
Case 6720*

September 5, 1980

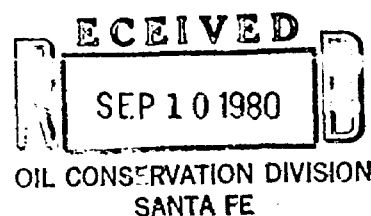
Mr. Joe D. Ramey, Director
Department of Energy and Minerals
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Dear Mr. Ramey:

In compliance with Order No. R-6203 of the Division in regard to Case No. 6720, ARCO Oil and Gas Company is filing this letter as a final report on the Empire Abo Unit J-213 drainhole.

Although Order (1) called for the drainhole to be confined within a target area extending 400 feet north and 400 feet west of the surface location (see Exhibit 1), the vertical portion of the wellbore did not "drift" to the northwest as expected. The casing shoe and kickoff point for the drainhole were actually located 22 feet east of the target area as shown in Exhibit 2. Due to the turning radius of the drainhole, thirty-five feet were drilled before we were within the target boundary. Drilling was continued until excessive torquing and a minimum vertical depth limitation halted the operation.

A total of 125 feet of drainhole was drilled with the hole terminating 86 feet north and 78 feet west of the surface location. Drilled depth was 6242' while the true vertical depth at the terminus was 6126'. The lowest point of the drainhole was approximately 6240' TVD at a drilled depth of 6161'. An isometric drawing of the drainhole is included as Exhibit 3.



Mr. Joe D. Ramey
September 5, 1980
Page 2.

The Empire Abo Unit J-213 has been completed and is still in the testing stage. Please advise us as to what further action, if any, should be taken to amend the previous order and to put this well on a producing status with the Division.

Sincerely,

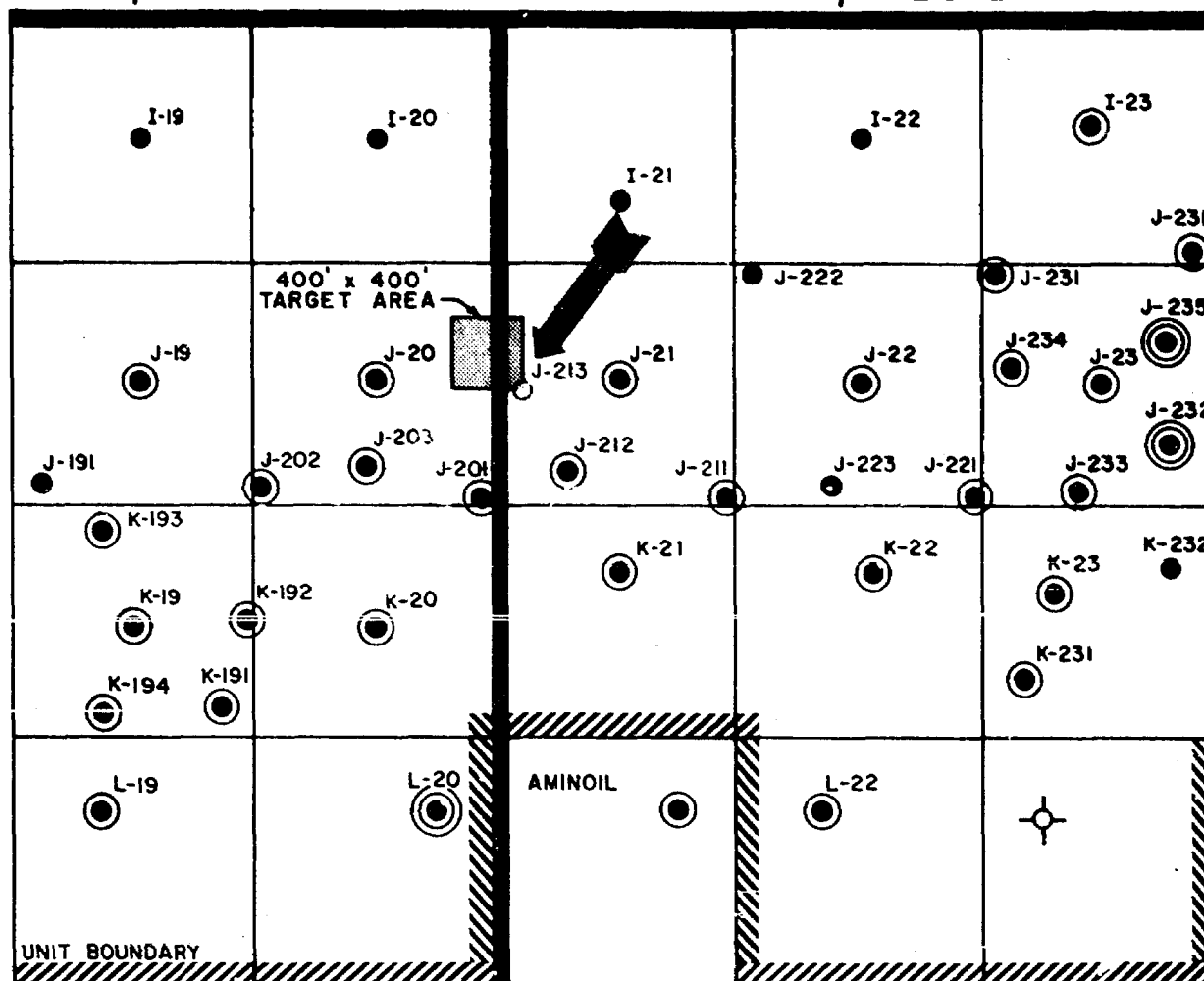
James L. Cawvey
James L. Cawvey *JLC*

JLC:jaf

Attachments

SEC. 1
T-18-S, R-27-E

SEC. 6
T-18-S, R-28-E



- ⊕ ABO DRY HOLE
- ABO WELL - SHUT IN
- ⊙ ABO PRODUCER - HIGH GOR (>2000 CF/BO)
- ⊗ ABO PRODUCER - LOW GOR (<2000 CF/BO)

EXHIBIT 1

ARCO Oil and Gas Company <small>Division of AtlanticRichfield Company</small> Permian District Midland, Texas		
EMPIRE ABO UNIT J-213 OFFSET WELLS		
Eddy County, New Mexico Scale: 1" = 1000'		
By: RYAN STRAMP	Drawn By: GLF	Date: 10-22-79
Date: 10-22-79	Revised By:	Date: 11-79
Dept: W. ENG.	Proj. No:	

46 1323

K-E 10 X 10 TO 1/4 INCH 7 X 10 INCHES
KEUFFEL & ESSER CO. MADE IN U.S.A.

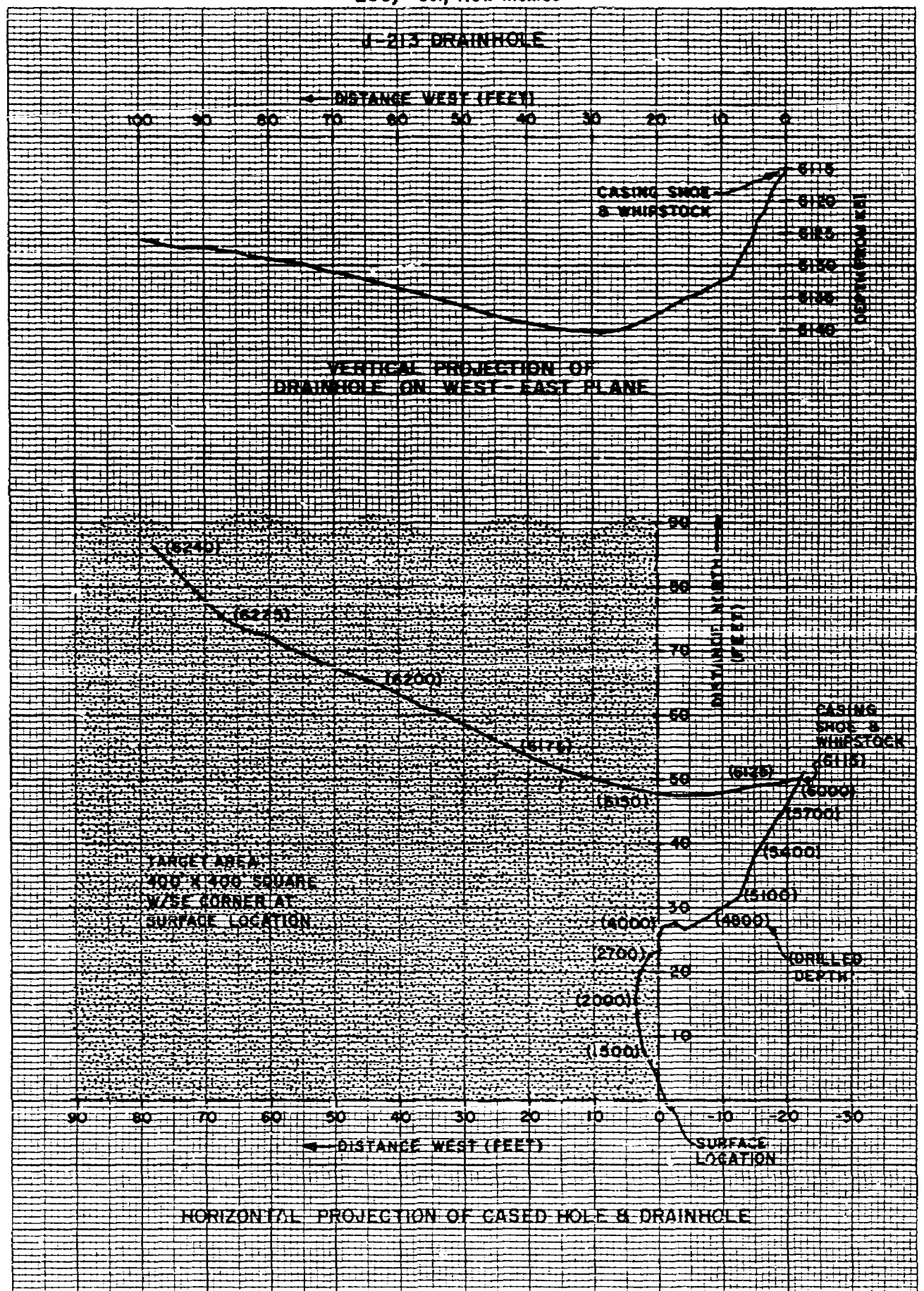


EXHIBIT 2

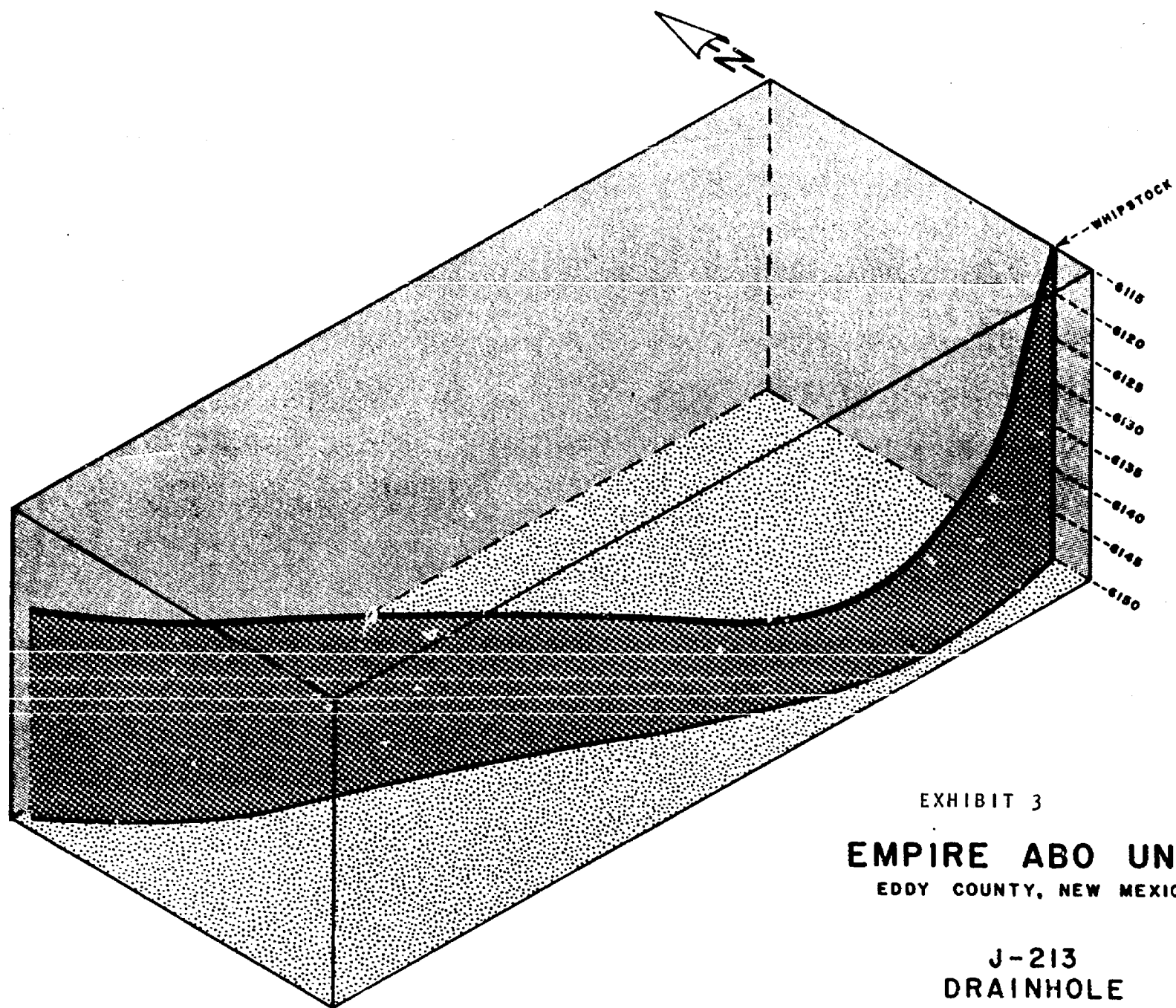


EXHIBIT 3
EMPIRE ABO UNIT
EDDY COUNTY, NEW MEXICO

J-213
DRAINHOLE

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
28 November 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of ARCO Oil and Gas Com-)
pany to drill a horizontal drainhole,)
Eddy County, New Mexico.)

CASE
6720

and)

Application of ARCO Oil and Gas Com-)
pany for an administrative procedure,)
Eddy County, New Mexico.)

CASE
6742

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Conrad Coffield, Esq.
Hinkle Law Firm
P. O. Box 3580
Midland, Texas

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (606) 471-2462
Santa Fe, New Mexico 87501

I N D E X

RYAN STRAMP

Direct Examination by Mr. Coffield	4
Cross Examination by Mr. Stamets	12

E X H I B I T S

CASE 6720

Applicant Exhibit One, Map	5
Applicant Exhibit Two, Plat	5
Applicant Exhibit Three, Document	6
Applicant Exhibit Four, Wellbore Diagram	7

CASE 6742

Applicant Exhibit One, Document	9
---------------------------------	---

SALLY WALTON BOYD
 CERTIFIED SHORTHAND REPORTER
 3030 Plaza Blanca (603) 471-3463
 Santa Fe, New Mexico 87501

1 MR. STAMETS: We'll call next, Case 6720.

2 MR. PADILLA: Application of ARCO Oil and Gas
3 Company to drill a horizontal drainhole, Eddy County, New
4 Mexico.

5 MR. STAMETS: Call for appearances.

6 MR. COFFIELD: Conrad Coffield, with the
7 Hinkle Law Firm, appearing on behalf of the applicant, and if
8 the Examiner please, we can have the subsequent case, 6742,
9 called at the same time and proceed into that case after we've
10 presented this first one with the same witness.

11 MR. STAMETS: Okay, since it concerns
12 basically the same information we'll consolidate the two
13 cases for purposes of testimony. I'd like to have you call
14 Case 6742.

15 MR. PADILLA: Application of ARCO Oil and
16 Gas Company for administrative procedure, Eddy County, New
17 Mexico.

18 MR. COFFIELD: I have one witness in these
19 cases and the witness is Mr. Ryan Stramp, who testified pre-
20 viously in Case 6741, and I trust the Examiner will consider
21 him qualified and sworn.

22 MR. STAMETS: The record shall show that
23 Mr. Stramp is qualified and sworn in this case, these cases.
24
25

SALLY WALTON BOYD
CERTIFIED SHOT-AND REPORTER
3030 Plaza Blanca (955) 471-2452
Santa Fe, New Mexico 87501

1 RYAN STRAMP

2 being called as a witness and having been duly sworn previously
3 upon his oath, testified as follows, to-wit:

4
5 DIRECT EXAMINATION

6 BY MR. COFFIELD:

7 Q Mr. Stramp, are you familiar with the ap-
8 plications 6720 and 6742?

9 A Yes, I am, sir, familiar with both appli-
10 cations.

11 Q First, with respect to 6720, what is it
12 that ARCO seeks in that case?

13 A ARCO Oil and Gas Company seeks permission
14 to drill the Empire Abo Unit Well J-213 and to complete this
15 well in the Abo Reef formation with a horizontal drainhole
16 approximately 200 feet in length. The proposed location of
17 the J-213 is 2050 feet from the north line and 100 feet from
18 the west line of Unit Letter E, Section 6, Township 18 South,
19 Range 28 East.

20 The terminus of the drainhole is targeted
21 to be in a 400-foot by 400-foot square in the northwest
22 quadrant from the surface location. We also seek from the
23 Division a determination that this well is necessary to ef-
24 fectively and efficiently drain that portion of the reservoir
25 covered by the existing proration unit on which the well is

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
1020 Plaza Blanca (602) 471-2462
Santa Fe, New Mexico 87501

1 to be drilled.

2 Q Mr. Stramp, refer to what we've marked as
3 Exhibit One in this Case 6720 and explain that exhibit to the
4 Examiner.

5 A Exhibit Number One is a map of the Empire
6 Abo Unit. The proposed location for the J-213 is indicated
7 by the arrow. The heavy dashed lines indicate the unit
8 boundaries.

9 Q Go now to Exhibit Two and explain what that
10 exhibit represents.

11 A Exhibit Number Two is a plat showing the
12 proposed location for the J-213 once again with respect to
13 the offset wells. Once again the heavy dashed line repre-
14 sents the unit boundary. All of the offsetting proration
15 units for the J-213 location are committed to the Empire Abo
16 Unit. The proposed target area is indicated by the shaded
17 area to the northwest of the surface location. The range of
18 current gas/oil ratios of the offset wells is also indicated
19 in this plat. The single open circles represent wells with
20 GORs in excess of 2000 cubic feet per barrel of oil. The
21 double open circles represent wells with GORs of 2000 cubic
22 feet per barrel or less.

23 Q Why was this particular location selected
24 and why are you planning a horizontal drainhole completion
25 for this J-213?

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (865) 471-2482
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (SSE) 471-3463
Santa Fe, New Mexico 87501

1 A As Exhibit Number Two shows, there are no
2 low GOR producers in the immediate vicinity of the proposed
3 location. The current oil production rate from this area is
4 quite low as a result of the high gas production. Due to the
5 absence of low gas/oil ratio producing wells in the area and
6 also the slow rate of gravity drainage down dip, oil remaining
7 under the J-213 location will not be produced by conventional
8 means during the life of the unit.

9 Conventional infill drilling in this area
10 has performed poorly. Gas coning seems more severe in this
11 particular section of the unit than in any other area. We
12 feel that a natural, that is a well requiring no acid treat-
13 ment, horizontal drainhole completion at the J-213 location
14 will recover significant reserves that would not otherwise
15 be produced during the life of the unit.

16 Q Go to what we've marked as Exhibit Number
17 Three, Mr. Stramp, and explain that, please.

18 A Exhibit Number Three is a plot of cumulative
19 oil recovery versus time for a 200-foot horizontal drainhole
20 in the unit and also for a conventional vertical completion.
21 These curves are based on numeric simulation study of hori-
22 zontal drainholes in the Empire Abo Unit. This numeric model
23 incorporated geologic properties, such as porosity and perme-
24 ability characteristics typical of the Abo Reef in the unit.

25 Empire Abo Reservoir is a vuggy, fractured,

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3930 Plaza Blanca, Suite 101, Dallas, Texas 75219
Phone (214) 471-3463
Telex 730101

1 dolomitized reef, exhibiting a high degree of vertical perme-
2 ability. These geologic reservoir properties combined with
3 the presence of a large gas cap overlying the oil column re-
4 sult in a producing well at Empire being very susceptible to
5 gas coning. Once a well begins to cone free gas, the oil
6 rate declines very rapidly as a result of the relative perme-
7 ability characteristics of the reservoir.

8 The additional reserves expected to be re-
9 covered by horizontal drainholes in the Empire Abo Unit come
10 from a reduction in gas coning through the dispersion of the
11 withdrawal points in the reservoir.

12 Q Mr. Stramp, go to what we've marked as
13 Exhibit Four and explain that exhibit to the Examiner, please.

14 A Exhibit Number Four is a wellbore diagram
15 for the J-213. We propose to drill a vertical hole to ap-
16 proximately 6225 feet. We will then log and drill stem test
17 the well to locate the gas/oil contact. A target zone will
18 be selected from the logs, casing will be set, and the drain-
19 hole drilling operations will begin. A whipstock will be
20 used to initiate the turn. Flexible drill collars will be
21 used to drill a drainhole extending approximately 200 feet
22 in a northwesterly direction from the kickoff point. The
23 vertical hole will be surveyed with a gyroscopic multi-shot
24 directional survey prior to the initiation of the drainhole
25 drilling. Several magnetic directional surveys will also

1 be run during the drilling of the drainhole in the drainhole
2 portion of the wellbore.

3 Upon the completion of the drainhole drilling
4 we will submit a brief report to the Division detailing the
5 directional survey data and giving the location of the drain-
6 hole terminus.

7 Q Have these exhibits One through Four been
8 prepared by you or under your supervision?

9 A Yes, sir, they were.

10 Q What other comments do you have in this
11 connection, Mr. Stramp?

12 A I would like to state that we're confident
13 that we have resolved the problems that resulted in the pre-
14 mature termination of the drilling of the first horizontal
15 drainhole in the Empire Abo Unit and that we fully expect to
16 drill the full 200 feet of drainhole in the J-213.

17 Q Now, as a related matter, let's go to
18 matters in connection with Case Number 6742. What is it that
19 ARCO seeks by this application?

20 A ARCO Oil and Gas Company seeks an admini-
21 strative procedure through which the Oil Conservation Division
22 may rule on any future application by ARCO to drill directional
23 wells or horizontal drainholes in the Empire Abo Unit.

24 Q Does an administrative procedure currently
25 exist for approval of conventionally drilled infill wells in

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Mexico (955) 411-2452
Santa Fe, New Mexico 87501

1 the Empire Abo Unit?

2 A. Yes, sir. Rule 14 of the special rules and
3 regulations for the Empire Abo Unit Pressure Maintenance Pro-
4 ject contained in Division Order R-4549 and later modified
5 in Order R-4549-B sets forth an administrative procedure for
6 the drilling of conventional producing and injecting wells
7 within the unit.

8 Q Please describe and identify what we've
9 marked as Exhibit One in this Case 6742.

10 A. Exhibit Number One is a copy of the Division
11 Order R-4549-B. Page five of this order contains special
12 rule 14 for the Empire Abo Unit. As I mentioned, this rule
13 sets forth an administrative procedure for the approval of
14 conventional infill and producing -- excuse me, conventional
15 infill producing and injecting wells. Rule 14 also details
16 the necessary contents of an application to drill under this
17 administrative procedure.

18 Q What restrictions do you propose be placed
19 on the locations of horizontal drainholes and other deviated
20 wells to be granted administrative approval?

21 A. We propose that the new administrative
22 procedure apply to any horizontal drainhole or other direction-
23 ally drilled well whose targeted bottom hole location is no
24 closer than 330 feet from the nearest unit boundary and whose
25 surface location is no closer than 10 feet to any quarter

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (995) 471-2465
Santa Fe, New Mexico 87501

1 quarter section line. We also propose that the new procedure
2 cover directionally drilled water or gas injection wells whose
3 targeted bottom hole location is no closer than 1320 feet
4 from the nearest unit boundary.

5 Q Mr. Stramp, what information do you propose
6 be contained in an application for permission to drill under
7 the new administrative procedure?

8 A The contents of an application under the
9 new administrative procedure will be very similar to the con-
10 tests required in an application for a conventional well.
11 First of all, a letter stating a proposed plan for the drilling
12 of the well. Second, a map of the Empire Abo Unit indicating
13 those lands committed to the unit and also showing the sur-
14 face location of the proposed well, the location of all other
15 wells within the unit area, and also identifying all offset
16 operators. Third, a more detailed plat showing the surface
17 location of the proposed well, the targeted bottom hole
18 location, and all Abo wells on the proration unit on which
19 the well is to be drilled, and also all Abo wells on offsetting
20 proration units, and in addition, any nearby unit boundaries.
21 Fourth, a schematic wellbore drawing of the proposed well,
22 indicating a proposed casing plan, wellbore configuration,
23 and all pertinent depths. Fifth, a letter stating that all
24 offset operators to the proposed well have been furnished a
25 complete copy of the application and the date of such noti-

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (955) 471-2483
Santa Fe, New Mexico 87501

1 fication. And sixth, upon completion of the drilling of the
2 well, ARCO will submit a brief report to the Division de-
3 scribing the bottom hole location of the wellbore.

4 Q Mr. Stramp, are there any further specific
5 points that you would like for the new administrative proce-
6 dure to include?

7 A Yes, sir. We would like to have a provision
8 in the procedure to allow or an administrative amendment of
9 the proposed target area for horizontal drainholes and other
10 directionally drilled wells if their final bottom hole loca-
11 tions do not fall within the previously described target area
12 and the actual bottom hole location is within the authority
13 of the administrative procedure.

14 Q Mr. Stramp, in your opinion will the ap-
15 proval of the two applications in Cases Numbers 6720 and 6742
16 be in the interest of prevention of waste and protection of
17 correlative rights?

18 A Yes, sir.

19 MR. COFFIELD: Mr. Examiner, I move the
20 admission of Exhibits One through Four in Case 6720 and Ex-
21 hibit One in Case 6742.

22 MR. STAMETS: These exhibits will be ad-
23 mitted.

24 MR. COFFIELD: And I have no further ques-
25 tions of Mr. Stramp on direct examination.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (895) 471-2482
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca (986) 471-2492
Santa Fe, New Mexico 87501

CROSS EXAMINATION

BY MR. STAMETS:

Q Mr. Stramp, do you have a proposed rule that you were reading from there that you intended to submit to the Division?

A A proposed rule.

Q Right, you had a number of specific proposals.

A No, those were just in the administrative procedure for a conventional well. They have the different contents of the application enumerated and I just numbered mine, too. I'll be happy to give you a copy of this testimony so you can --

Q Very good, that's what I need.

A Okay.

Q Have you, let's see, back on the first case, 6720, you have a 400 by 400 foot target area, is that correct?

A Yes, sir.

Q North and west of the well location. So the wellbore could wind up actually in two proration units, I would assume.

A Yes, sir, that would be a possibility. Both

1 proration units are committed to the unit and I don't know
2 what administrative problems that might result in, but that
3 is a possibility.

4 MR. STAMETS: Are there any questions of
5 the witness? He may be excused.

6 Anything further in this case, these cases?
7 We'll take the cases under advisement.

8
9 (Hearing concluded.)
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (SOS) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I SALLY W. BOYD, a Certified Shorthand Reporter,
DO HEREBY CERTIFY that the foregoing and attached Transcript
of Hearing before the Oil Conservation Division was reported
by me; that the said transcript is a full, true, and correct
record of the hearing, prepared by me to the best of my
ability from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd, C.S.R.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2030 Plaza Blanca (695) 471-3462
Santa Fe, New Mexico 87501

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6720 & 6742
heard by me on 11-28 1977.
Richard H. Starnes, Examiner
Oil Conservation Division



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

December 31, 1979

Mr. Conrad Coffield
Hinkle, Cox, Eaton, Coffield
& Hensley
Attorneys at Law
P. O. Box 3580
Midland, Texas 79702

Re: CASE NO. 6720
ORDER NO. R-6203

Applicant:

ARCO Oil and Gas Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD	<u>x</u>
Artesia OCD	<u>x</u>
Aztec OCD	

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6720
Order No. R-6203

APPLICATION OF ARCO OIL AND GAS
COMPANY TO DRILL A HORIZONTAL
DRAINHOLE, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 28, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 21st day of December, 1979, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, ARCO Oil and Gas Company, seeks approval to drill and complete its Empire Abo Unit Well No. J-213 from a surface location which is 2050 feet from the North line and 100 feet from the West line of Section 6, Township 18 South, Range 28 East, Empire-Abo Pool, with a single horizontal drainhole of about 200 feet in length in the Abo formation.

(3) That the applicant proposes to vertically drill said well through the Abo Reef in a conventional manner, set casing below the gas-oil contact, and by means of a specially constructed whipstock and knuckle-joint drill collars, turn said well in a northwesterly direction at the rate of approximately 5 degrees per foot, continuing such drilling until horizontal, and then drill in a northwesterly direction to complete the drainhole within a target area extending 400 feet North and 400 feet West of the kick-off point.

-2-

Case No. 6720
Order No. R-6203

(4) That the applicant should constantly monitor the pitch and direction of the drainhole as it is being drilled, and should file with the Division a final report of drilling upon completion thereof, specifying in said report the depth and location of the terminus of the drainhole.

(5) That the proposed drainhole, if successfully completed as proposed, should make possible the production of an increased volume of oil from the subject well without coning of gas into the wellbore, thereby preventing waste, will not impair but will protect correlative rights, and should be approved.

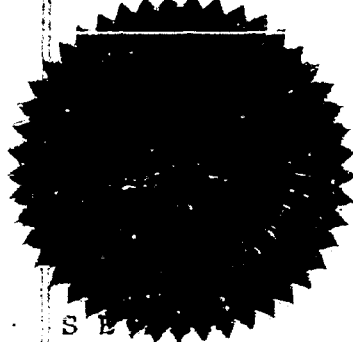
IT IS THEREFORE ORDERED:

(1) That the applicant, ARCO Oil and Gas Company, is hereby authorized to complete its Empire Abo Unit Well No. J-213, the surface location of which is 2050 feet from the North line and 100 feet from the West line of Section 6, Township 18 South, Range 28 East, NMPM, Empire-Abo Pool, Eddy County, New Mexico, in such a manner as to provide a 200-foot horizontal drainhole beneath the gas-oil contact in the Abo Reef, extending in a northwesterly direction and confined within a target area extending 400 feet North and 400 feet West of the surface location.

(2) That the applicant shall constantly monitor the pitch and direction of the drainhole as it is being drilled, and shall file a report of drilling upon completion thereof, specifying in said report the depth and location of the terminus of the drainhole.

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

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



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
JOE D. RAMEY
Director

S E
fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
Santa Fe, New Mexico
14 November 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of ARCO Oil and Gas Com-
pany to drill a horizontal drain-
hole, Eddy County, New Mexico.

CASE
6720

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (SSE) 411-2462
Santa Fe, New Mexico 87502

MR. NUTTER: Call next Case Number 6720.

MR. PADILLA: Application of ARCO Oil and Gas Company to drill a horizontal drainhole, Eddy County, New Mexico.

MR. NUTTER: Applicant in this case has requested continuance and a revision of the application.

Case Number 6720 will be continued to the hearing scheduled to be held at this same place at 9:00 o'clock a. m. November 28th, 1979.

It will also be re-advertised to change the content.

(Hearing continued.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (SOS) 471-2402
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand Reporter,
DO HEREBY CERTIFY that the foregoing and attached Transcript
of Hearing before the Oil Conservation Division was reported
by me; that the said transcript is a full, true, and correct
record of the hearing, prepared by me to the best of my
ability, from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a correct report of the proceedings in
the hearing of Case No. 6720
heard by me on 11/14 1979.
[Signature], Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (S&S) 471-2402
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
Santa Fe, New Mexico
14 November 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of ARCO Oil and Gas Com-
pany to drill a horizontal drain-
hole, Eddy County, New Mexico.

CASE
6720

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Ernest L. Padilla, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3020 Plaza Blanca, (505) 471-2462
Santa Fe, New Mexico 87501

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MR. NUTTER: Call next Case Number 6720.

MR. PADILLA: Application of ARCO Oil and Gas Company to drill a horizontal drainhole, Eddy County, New Mexico.

MR. NUTTER: Applicant in this case has requested continuance and a revision of the application.

Case Number 6720 will be continued to the hearing scheduled to be held at this same place at 9:00 o'clock a. m. November 28th, 1979.

It will also be re-advertised to change the content.

(Hearing continued.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2030 Plaza Blanca (SOS) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand Reporter,
DO HEREBY CERTIFY that the foregoing and attached Transcript
of Hearing before the Oil Conservation Division was reported
by me; that the said transcript is a full, true, and correct
record of the hearing, prepared by me to the best of my
ability, from my notes taken at the time of the hearing.

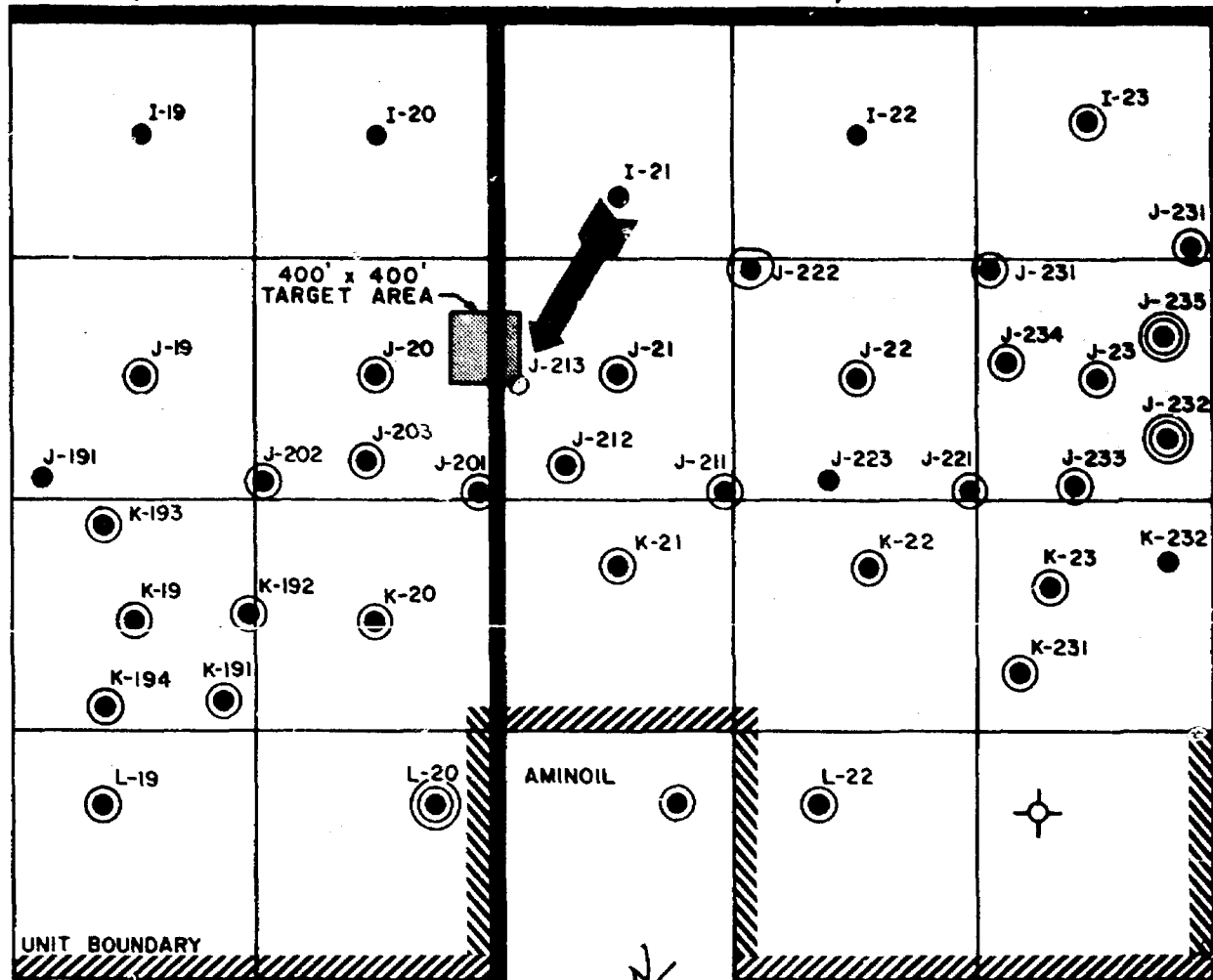
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Exon. hear. hearing of Case No. 6720
heard by me on 11/14 1979.
[Signature], Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (666) 471-2462
Santa Fe, New Mexico 87501

SEC. 1
T-18-S, R-27-E

SEC. 6
T-18-S, R-28-E

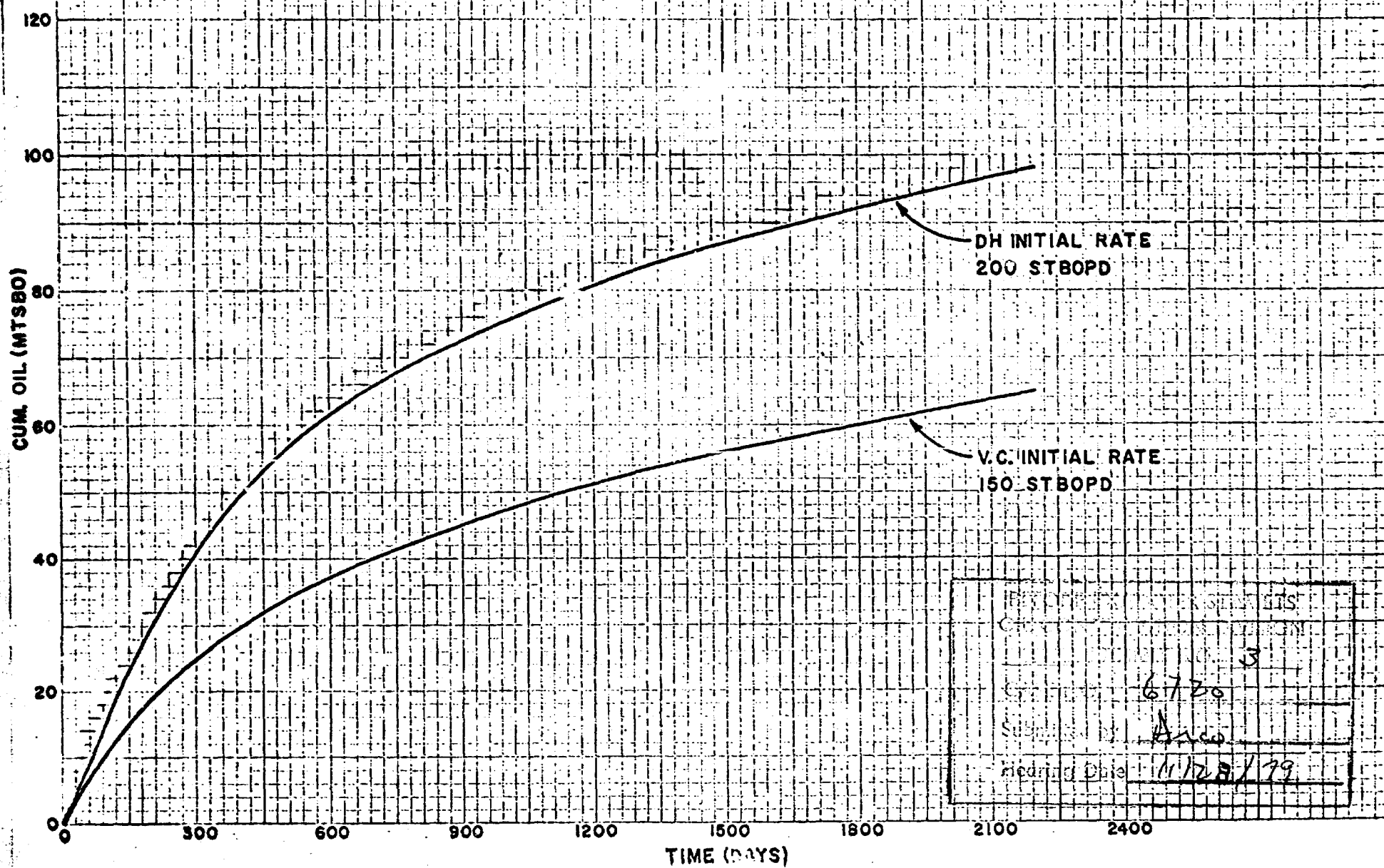


- ✱ ABO DRY HOLE
- ABO WELL - SHUT IN
- ⊙ ABO PRODUCER - HIGH GOR (>2000 CF/BO)
- ⊞ ABO PRODUCER - LOW GOR (<2000 CF/BO)

FIELD NO. 6720
 COUNTY 2
 SUBMITTER Arco
 Hearing Date 11/28/79

ARCO Oil and Gas Company <small>Division of AtlanticRichfield Company</small> Permian District Midland, Texas		
EMPIRE ABO UNIT J-213 OFFSET WELLS		
Eddy County, New Mexico Scale: 1"=1000'		
By: RYAN STRAMP	Drawn By: G.L.F.	Date: 10-22-79
Date: 10-22-79	Reviewed By:	Date: 11-79
Dist: W. ENG.	Eng. No.:	

EMPIRE ABO UNIT
200' DRAINHOLE (DH) COMPARED TO VERTICAL COMPLETION (V.C.)
CUMULATIVE OIL VS TIME

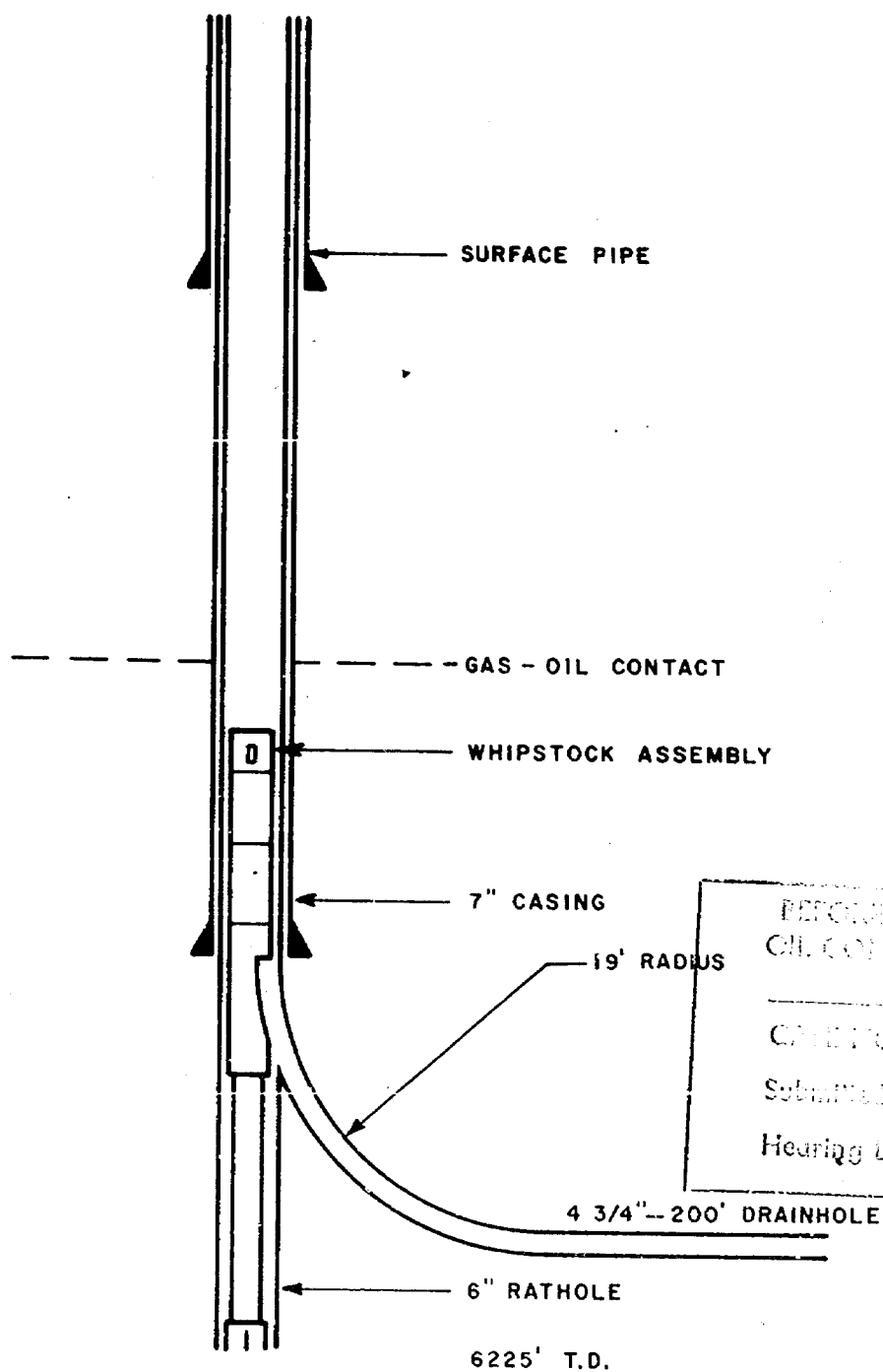


EMPIRE ABO UNIT

EDDY COUNTY, NEW MEXICO

J-213

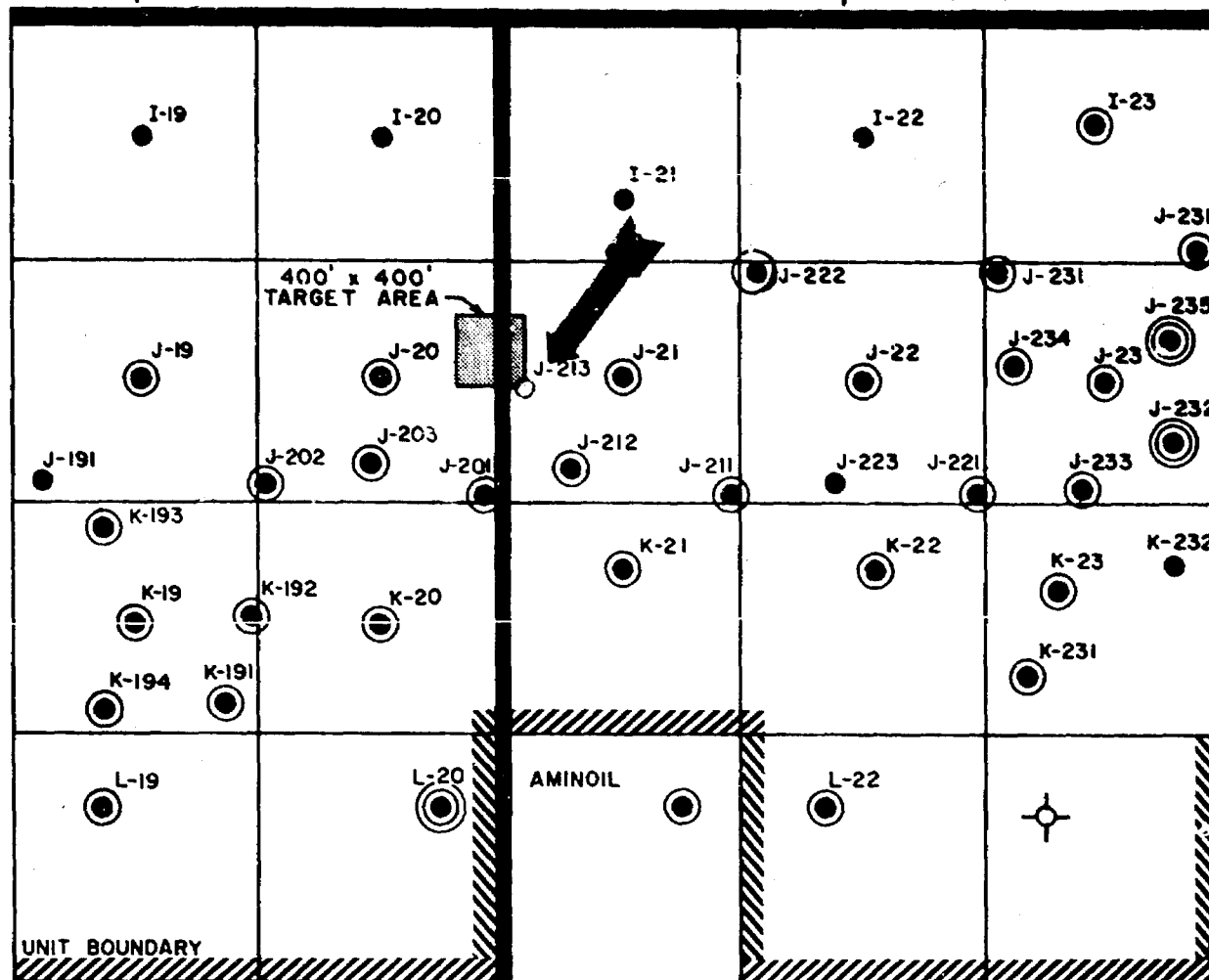
ABO REEF DRAINHOLE



DEPARTMENT OF MINERAL RESOURCES
OIL CONTROL DIVISION
WELL NO. <u>4</u>
CASE NO. <u>6720</u>
Submitted by <u>Asco</u>
Hearing Date <u>11/28/79</u>

SEC. 1
T-18-S, R-27-E

SEC. 6
T-18-S, R-28-E



- ⊕ ABO DRY HOLE
- ABO WELL - SHUT IN
- ⊙ ABO PRODUCER - HIGH GOR (>2000 CF/BO)
- ⊗ ABO PRODUCER - LOW GOR (<2000 CF/BO)

REVIEWED BY _____ DATE _____

CHECKED BY _____ DATE _____

6720

Set by _____

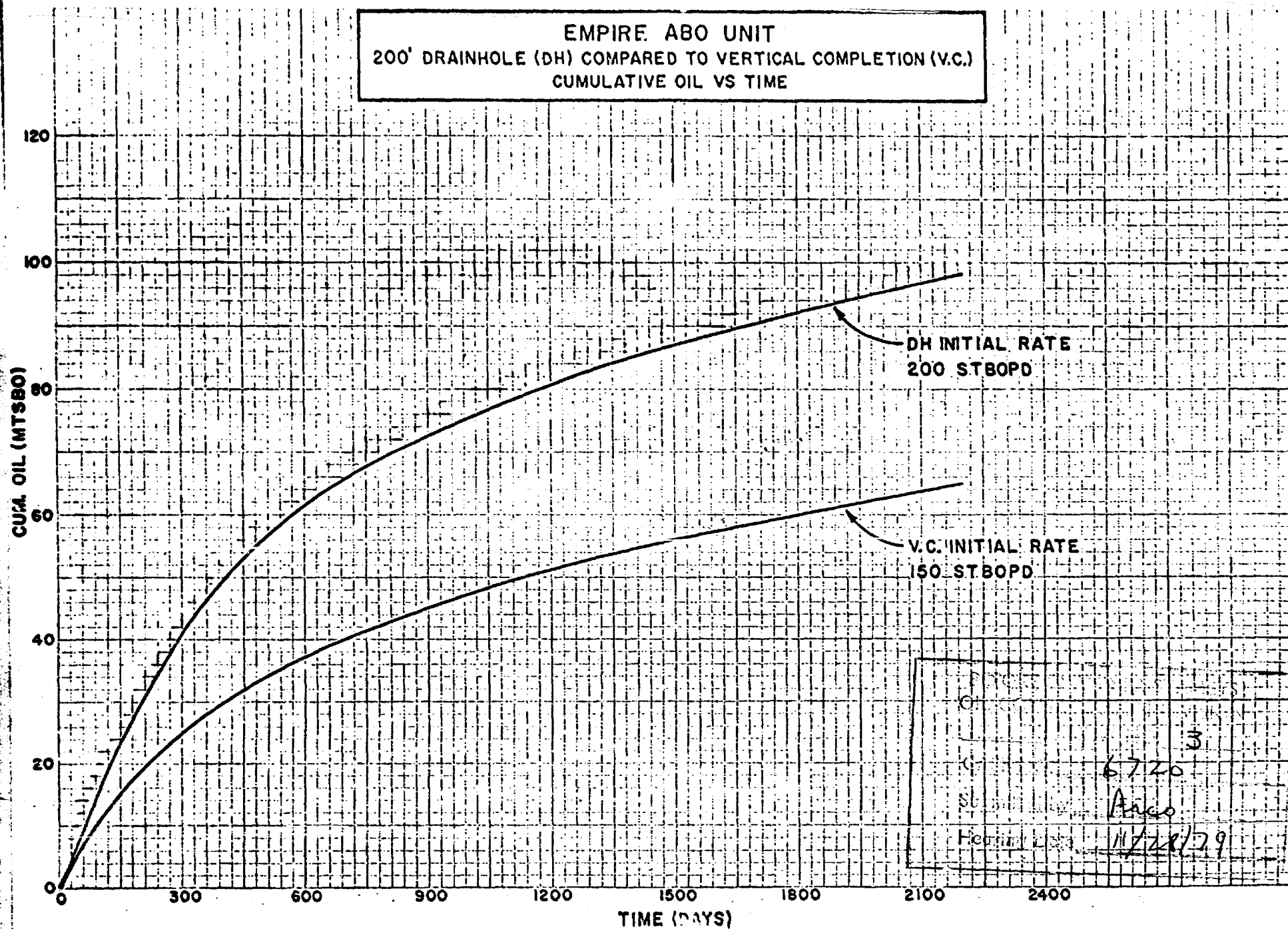
Hearing Date 11/28/79

ARCO Oil and Gas Company ♦
Division of Atlantic Richfield Company
Permian District Midland, Texas

EMPIRE ABO UNIT
J-213 OFFSET WELLS

Eddy County, New Mexico
Scale: 1"=1000'

By: RYAN STRAMP	Drawn By: GLF	Date: 10-22-79
Date: 10-22-79	Revised By: //	Date: 11-79
Dept: W. ENG.	Sup. No:	

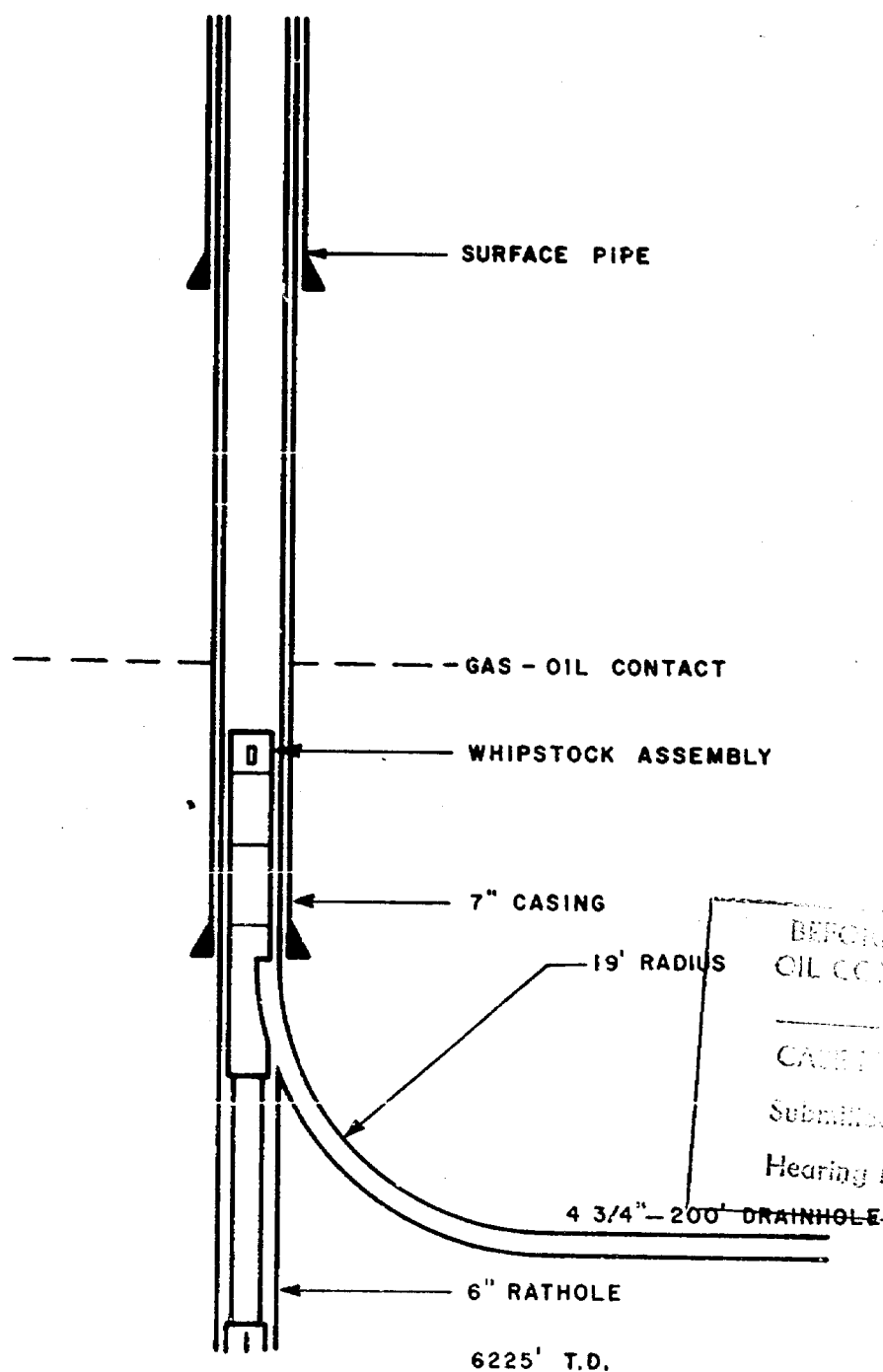


EMPIRE ABO UNIT

EDDY COUNTY, NEW MEXICO

J-213

ABO REEF DRAINHOLE



BEFORE THE BOARD OF LAND & NATURAL RESOURCES
OIL COMMISSION
CASE NO. 4
CAUSE NO. 6720
Submitted by: Arco
Hearing Date: 11/28/79

- CASE 6736: Application of Doyle Hartman for compulsory pooling and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Gas Pool to form a 360-acre non-standard gas proration unit comprising the S/2 SE/4 of Section 36, Township 24 South, Range 36 East; SW/4 of Section 31, Township 24 South, Range 37 East; and the N/2 NW/4 and NW/4 NE/4 of Section 6, Township 25 South, Range 37 East, to be dedicated to a well to be drilled 660 feet from the South line and 990 feet from the West line of said Section 31. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6707: (Continued from November 14, 1979, Examiner Hearing)
- Application of Gulf Oil Corporation for a unit agreement, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Southeast Bisti Unit Area, comprising 7,048 acres, more or less, of State and Federal lands in Townships 24 and 25 North, Range 10 West.
- CASE 6737: Application of Gulf Oil Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the W/2 of Section 4, Township 19 South, Range 32 East, North Lusk-Morrow Gas Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6739: Application of Mobil Oil Corporation for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gavilar-Pictured Cliffs and Blanco Mesaverde production in the wellbore of its Jicarilla D Well No. 1 located in Unit N of Section 24, Township 26 North, Range 3 West. Applicant further seeks the establishment of an administrative procedure for approval of downhole commingling of the aforesaid pools in others of its wells in Sections 7, 8, 17, 18, and 19, Township 26 North, Range 2 West, Sections 1, 2, 11 thru 14, 23, and 24, Township 26 North, Range 3 West, and Sections 11 thru 15, 23 thru 27, 35, and 36, Township 27 North, Range 3 West.
- CASE 6740: Application of Hondo Oil and Gas Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Pennsylvanian test well to be drilled 1550 feet from the North line and 660 feet from the West line of Section 10, Township 18 South, Range 28 East, the N/2 of said Section 10 to be dedicated to the well.
- CASE 6741: Application of ARCO Oil and Gas Company for an amendment to Order No. R-6054, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-6054 to amend the findings in said order to make said findings more specific as to the necessity for the drilling of infill wells in the Empire Abo Unit in order to recover additional gas pursuant to the Natural Gas Policy Act of 1978; further to amend said order to make such findings applicable to present and future drilling operations including the drilling of horizontal drainholes.
- CASE 6720: (Continued from November 14, 1979, Examiner Hearing)
- Application of ARCO Oil and Gas Company to drill a horizontal drainhole, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval to drill and complete its Empire Abo Unit Well No. J-213, located in Unit E of Section 6, Township 18 South, Range 28 East, Empire-Abo Pool, with a single horizontal drainhole of about 200 feet in length in the Abo formation.
- CASE 6742: Application of ARCO Oil and Gas Company for an administrative procedure, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of an administrative procedure for approval of the drilling of horizontal drainholes in the Empire Abo Unit, Empire-Abo Pool.
- CASE 6743: (This case will be dismissed.)
- Application of Exxon Corporation for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit disposal of produced brine in several unlined surface pits located on its Laguna Grande Unit Area in Sections 16, 21, 28, 29, 32, and 33, Township 23 South, Range 29 East.
- CASE 6744: Application of Texas Oil & Gas Corporation for special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Riverside-Morrow Gas Pool to provide for 320-acre spacing rather than 160 acres. In the absence of objection, this pool will be placed on the standard 320-acre spacing for Pennsylvanian gas pools rather than the present 160-acre spacing.

ARCO Oil and Gas Company
Permian District
Post Office Box 1610
Midland, Texas 79702
Telephone 915 684 0100



November 8, 1979

Mr. Daniel S. Nutter, Examiner
New Mexico Energy & Minerals Dept.
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Continuance of Case 6720

Dear Sir:

This letter is to confirm our telephone conversation in which I requested that Case 6720 be continued from the November 14, 1979 hearing to the hearing to be held on November 28, 1979.

Thank you for your cooperation.

Very truly yours,

Ryan L. Stramp

Ryan L. Stramp

RLS:ad

Dockets Nos. 43-79 and 44-79 are tentatively set for November 28 and December 12, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 14, 1979

9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for December, 1979, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for December, 1979, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 6715: Application of Texaco Inc. for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Loomis Fed. Well No. 1 to be drilled 1600 feet from the North line and 660 feet from the West line of Section 5, Township 21 South, Range 32 East, South Salt Lake-Morrow Gas Pool, the N/2 of said Section 5 to be dedicated to the well.

CASE 6707: (Continued from October 31, 1979, Examiner Hearing)

Application of Gulf Oil Corporation for a unit agreement, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Southeast Bisti Unit Area, comprising 7,048 acres, more or less, of State and Federal lands in Townships 24 and 25 North, Range 10 West.

CASE 6716: Application of Alpha Twenty-One Production Company for two non-standard proration units and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 40-acre non-standard proration unit comprising the NW/4 SE/4 of Section 8, Township 25 South, Range 37 East, Jalmat Gas Pool, to be dedicated to El Paso Natural Gas Company's Langlie Federal Well No. 3, and also a 120-acre unit comprising the E/2 SE/4 and SW/4 SE/4 of said Section 8 to be dedicated to a well to be drilled by applicant at a standard location thereon; applicant further seeks a waiver of existing well spacing requirements and a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of an existing proration unit which cannot be so drained by the existing well.

CASE 6717: Application of O. H. Berry for a non-standard proration unit and an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 160-acre non-standard gas proration unit comprising the NE/4 of Section 15, Township 24 South, Range 36 East, Jalmat Gas Pool, to be dedicated to his Isbell Well No. 6 at an unorthodox location 418 feet from the North line and 351 feet from the East line of said Section 15.

CASE 6718: Application of Southland Royalty Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 1325 feet from the North line and 2303 feet from the East line of Section 14, Township 19 South, Range 29 East, Oil-Potash Area, the E/2 of said Section 14 to be dedicated to the well.

CASE 6719: Application of Sam H. Snoddy for an amendment to Order No. R-5521, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5521, which authorizes the directional drilling of the Federal Well No. 2 in Section 25, Township 20 South, Range 32 East, to permit the well to be bottomed at approximately 1014 feet from the South line and 1285 feet from the West line of said Section 25.

CASE 6710: (Continued from October 31, 1979, Examiner Hearing)

Application of ARCO Oil and Gas Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Blinetry and Montoya production in the wellbores of the following wells on its State V Lease: No. 3 located in Unit B, No. 6 located in Unit H, and No. 7 located in Unit A, all in Section 25, Township 25 South, Range 37 East.

CASE 6720: Application of ARCO Oil and Gas Company to drill a horizontal drainhole, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval to drill and complete its Empire Abo Unit Well No. J-213, located in Unit E of Section 6, Township 18 South, Range 28 East, Empire-Abo Pool, with a single horizontal drainhole of about 200 feet in length in the Abo formation.

LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.
STUART D. SHANOR
C. D. MARTIN
PAUL J. KELLY, JR.
JAMES H. BOZARTH

DOUGLAS L. LUNSFORD
PAUL M. BOHANNON
J. DOUGLAS FOSTER
K. DOUGLAS FERRIN
C. RAY ALLEN
JACQUELINE W. ALLEN
T. CALDER EZZELL, JR.
WILLIAM B. BURFORD
JOHN S. NELSON
RICHARD E. OLSON

LAW OFFICES
HINKLE, COX, EATON, COFFIELD & HENSLEY
1000 FIRST NATIONAL BANK TOWER
POST OFFICE BOX 3580
MIDLAND, TEXAS 79702
(915) 683-4691

RECEIVED
OCT 30 1979
OIL CONSERVATION DIVISION
SANTA FE
OF COURSE
CLARENCE B. HINKLE
W. E. BONDURANT, JR. 09/24/79
ROSWELL, NEW MEXICO OFFICE
600 HINKLE BUILDING
(505) 822-6510

ONLY ATTYS. COFFIELD, MARTIN, BOZARTH,
BOHANNON, FOSTER, ALLEN, ALLEN & BURFORD
LICENSED IN TEXAS

October 26, 1979

Case 6720

Mr. Dan Nutter
Chief Engineer
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: ARCO Oil and Gas Company,
Division of Atlantic Richfield
Company, Unit Operator of the
Empire Abo Unit, to Drill and
Complete Well J-213 using a
Single Horizontal Drainhole

Dear Dan:

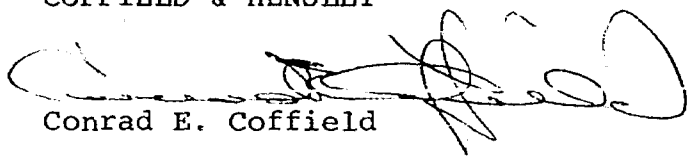
Transmitted herewith you will find triplicate executed
copies of an Application for ARCO for a single horizontal
drainhole.

This will also confirm the setting of this matter on
the docket for Examiner's hearing on November 14, 1979.

I trust that the enclosed copies of the Application are
all that is needed in order for this to be set for the
November 14 hearing. However, if anything is needed in
addition, please let me know.

Very truly yours,

HINKLE, COX, EATON,
COFFIELD & HENSLEY


Conrad E. Coffield

CEC:rh
Enclosures
xc: Mr. Jerry L. Tweed
xc: Mr. Ryan L. Stramp
xc: Mr. Horace Burton

RECEIVED
OCT 20 1975
OIL CONSERVATION DIVISION
SANTA FE

BEFORE THE OIL CONSERVATION DIVISION

DEPARTMENT OF ENERGY AND MINERALS

STATE OF NEW MEXICO

APPLICATION OF ARCO OIL AND)
GAS COMPANY, DIVISION OF ATLANTIC)
RICHFIELD COMPANY, UNIT OPERATOR)
OF THE EMPIRE ABO UNIT, TO DRILL)
AND COMPLETE WELL J-213 USING A)
SINGLE HORIZONTAL DRAINHOLE)

Case 6720

APPLICATION

Comes ARCO Oil and Gas Company, Division of Atlantic Richfield Company, Unit Operator of the Empire Abo Unit, Eddy County, New Mexico, acting by and through the undersigned attorneys, and hereby makes application to drill Unit Well J-213 using a single horizontal drainhole of about 200 feet in length, completing the well in the Abo formation, Empire Abo Pressure Maintenance Project as approved by Orders R-4549, R-4549A, R-4549B, R-4549C and R-4549D, and in support thereof respectfully shows:

1. The Oil Conservation Division, Department of Energy and Minerals, of the State of New Mexico, granted approval of the Empire Abo Unit Agreement by Order R-4548, dated June 15, 1973, and granted approval of the ARCO - Empire Abo Unit Pressure Maintenance Project by Order R-4559 also dated June 15, 1973, as subsequently amended by Order R-4549A, dated January 15, 1974, Order R-4549B, dated April 30, 1974, Order R-4549C, dated July 1, 1975, and Order R-4549D, dated November 17, 1975.

2. That Applicant proposed to drill a vertical hole, the surface location of which will be 2050' FNL and 100' FWL, Section 6, Township 18 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, through the Abo Reef, log and test, then set casing to a point below the gas-oil contact. Whipstock will then be set and attempt will be made to drill 4-3/4" drainhole using approximately a 23' radius at point of departure from vertical, continuing to drill drainhole horizontally to total length of about 200 feet. Well will then be completed as a producer.

3. That, if successful, the horizontal drainhole will more efficiently and effectively drain the portion of the reservoir covered by the existing proration unit that would not be so drained by the existing wells on the proration unit.

4. Applicant requests permission to drill, complete and produce the Unit J-213 as a horizontal drainhole.

5. In the opinion of Applicant, said horizontal drainhole as outlined in this Application, is in the interest of conservation, prevention of waste, the protection of correlative rights, and will tend to promote the greatest recovery of oil and gas from the unitized area.

6. Applicant requests that this matter be set for hearing at the Examiner's hearing to be held on November 14, 1979.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

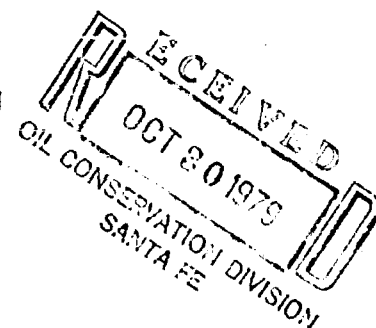
By: 

Conrad E. Coffield
Post Office Box 3580
Midland, Texas 79702
Attorneys for ARCO Oil &
Gas Company, Division of
Atlantic Richfield Company

BEFORE THE OIL CONSERVATION DIVISION

DEPARTMENT OF ENERGY AND MINERALS

STATE OF NEW MEXICO



APPLICATION OF ARCO OIL AND)
GAS COMPANY, DIVISION OF ATLANTIC)
RICHFIELD COMPANY, UNIT OPERATOR)
OF THE EMPIRE ABO UNIT, TO DRILL)
AND COMPLETE WELL J-213 USING A)
SINGLE HORIZONTAL DRAINHOLE)

Case 6720

APPLICATION

Comes ARCO Oil and Gas Company, Division of Atlantic Richfield Company, Unit Operator of the Empire Abo Unit, Eddy County, New Mexico, acting by and through the undersigned attorneys, and hereby makes application to drill Unit Well J-213 using a single horizontal drainhole of about 200 feet in length, completing the well in the Abo formation, Empire Abo Pressure Maintenance Project as approved by Orders R-4549, R-4549A, R-4549B, R-4549C and R-4549D, and in support thereof respectfully shows:

1. The Oil Conservation Division, Department of Energy and Minerals, of the State of New Mexico, granted approval of the Empire Abo Unit Agreement by Order R-4548, dated June 15, 1973, and granted approval of the ARCO - Empire Abo Unit Pressure Maintenance Project by Order R-4559 also dated June 15, 1973, as subsequently amended by Order R-4549A, dated January 15, 1974, Order R-4549B, dated April 30, 1974, Order R-4549C, dated July 1, 1975, and Order R-4549D, dated November 17, 1975.

2. That Applicant proposed to drill a vertical hole, the surface location of which will be 2050' FNL and 100' FWL, Section 6, Township 18 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, through the Abo Reef, log and test, then set casing to a point below the gas-oil contact. Whipstock will then be set and attempt will be made to drill 4-3/4" drainhole using approximately a 23' radius at point of departure from vertical, continuing to drill drainhole horizontally to total length of about 200 feet. Well will then be completed as a producer.

3. That, if successful, the horizontal drainhole will more efficiently and effectively drain the portion of the reservoir covered by the existing proration unit that would not be so drained by the existing wells on the proration unit.

4. Applicant requests permission to drill, complete and produce the Unit J-213 as a horizontal drainhole.

5. In the opinion of Applicant, said horizontal drainhole as outlined in this Application, is in the interest of conservation, prevention of waste, the protection of correlative rights, and will tend to promote the greatest recovery of oil and gas from the unitized area.

6. Applicant requests that this matter be set for hearing at the Examiner's hearing to be held on November 14, 1979.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By: 

Conrad E. Coffield
Post Office Box 3580
Midland, Texas 79702
Attorneys for ARCO Oil &
Gas Company, Division of
Atlantic Richfield Company

BEFORE THE OIL CONSERVATION DIVISION

DEPARTMENT OF ENERGY AND MINERALS

STATE OF NEW MEXICO

APPLICATION OF ARCO OIL AND)
GAS COMPANY, DIVISION OF ATLANTIC)
RICHFIELD COMPANY, UNIT OPERATOR)
OF THE EMPIRE ABO UNIT, TO DRILL)
AND COMPLETE WELL J-213 USING A)
SINGLE HORIZONTAL DRAINHOLE)



Case 6720

APPLICATION

Comes ARCO Oil and Gas Company, Division of Atlantic Richfield Company, Unit Operator of the Empire Abo Unit, Eddy County, New Mexico, acting by and through the undersigned attorneys, and hereby makes application to drill Unit Well J-213 using a single horizontal drainhole of about 200 feet in length, completing the well in the Abo formation, Empire Abo Pressure Maintenance Project as approved by Orders R-4549, R-4549A, R-4549B, R-4549C and R-4549D, and in support thereof respectfully shows:

1. The Oil Conservation Division, Department of Energy and Minerals, of the State of New Mexico, granted approval of the Empire Abo Unit Agreement by Order R-4548, dated June 15, 1973, and granted approval of the ARCO - Empire Abo Unit Pressure Maintenance Project by Order R-4559 also dated June 15, 1973, as subsequently amended by Order R-4549A, dated January 15, 1974, Order R-4549B, dated April 30, 1974, Order R-4549C, dated July 1, 1975, and Order R-4549D, dated November 17, 1975.

2. That Applicant proposed to drill a vertical hole, the surface location of which will be 2050' FNL and 100' FWL, Section 6, Township 18 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, through the Abo Reef, log and test, then set casing to a point below the gas-oil contact. Whipstock will then be set and attempt will be made to drill 4-3/4" drainhole using approximately a 23' radius at point of departure from vertical, continuing to drill drainhole horizontally to total length of about 200 feet. Well will then be completed as a producer.

3. That, if successful, the horizontal drainhole will more efficiently and effectively drain the portion of the reservoir covered by the existing proration unit that would not be so drained by the existing wells on the proration unit.

4. Applicant requests permission to drill, complete and produce the Unit J-213 as a horizontal drainhole.

5. In the opinion of Applicant, said horizontal drainhole as outlined in this Application, is in the interest of conservation, prevention of waste, the protection of correlative rights, and will tend to promote the greatest recovery of oil and gas from the unitized area.

6. Applicant requests that this matter be set for hearing at the Examiner's hearing to be held on November 14, 1979.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By: 

Conrad E. Coffield
Post Office Box 3580
Midland, Texas 79702
Attorneys for ARCO Oil &
Gas Company, Division of
Atlantic Richfield Company

Nov. 14 Wrg

ARCO Oil and Gas Co

drain hole

J-213 surf loc 2050 FNL 100 FNL
6-185-28E

Empire Gas Pool Eddy Co N Mex

200' ~~drain~~ drain hole

Ryan Stamp Phone 684-0200

Florence:

add similar to Case 6572 on June 13 docket

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. ~~6720~~ 6720
Order No. ~~R-6203~~ R-6203

APPLICATION OF ARCO OIL AND GAS
COMPANY TO DRILL A HORIZONTAL
DRAINHOLE, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on ~~June 13, 1979~~ ^{November 28, 1979},
at Santa Fe, New Mexico, before Examiner ~~Daniel S. Nutter~~. ^{R-6203}

NOW, on this ~~26th~~ day of ~~June~~, 1979, the Division
Director, 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 Division has jurisdiction of this cause and the
subject matter thereof.

(2) That the applicant, ARCO Oil and Gas Company, seeks
approval to drill and complete its Empire Abo Unit Well No. ~~J-213~~
~~K-142~~, the surface location ~~of which, previously approved by~~
~~Administrative Order NGL-999~~, is 2050 feet from the ~~North~~ line
and 100 feet from the West line of Section 6, Township 18 South,
Range 28 East, Empire-Abo Pool, with a single horizontal drain-
hole of about 200 feet in length in the Abo formation.

(3) That the applicant proposes to vertically drill said
well through the Abo Reef in a conventional manner, set casing
below the gas-oil contact, and by means of a specially constructed
whipstock and knuckle-joint drill collars, turn said well in a
~~northwesterly~~ direction at the rate of approximately 5 degrees
per foot, continuing such drilling until horizontal, and then
drill in a ~~northwesterly~~ direction to complete the drainhole
~~feet South and East~~ of the kick-off point.

(4) That the applicant should constantly monitor the pitch
and direction of the drainhole as it is being drilled, and

within a target
area extending
400 feet North
and 400 feet
West

should file with the Division a final report of drilling upon completion thereof, specifying in said report the depth and location of the terminus of the drainhole.

(5) That the proposed drainhole, if successfully completed as proposed, should make possible the production of an increased volume of oil from the subject well without coning of gas into the wellbore, thereby preventing waste, will not impair but will protect correlative rights, and should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, ARCO Oil and Gas Company, is hereby authorized to complete its Empire Abo Unit Well No. ~~K22~~ *J-213*, the surface location of which is 2050 feet from the North line and 100 feet from the West line of Section 6, Township 18 South, Range 23 East, NMPM, Empire-Abo Pool, Eddy County, New Mexico, in such a manner as to provide a 200-foot horizontal drainhole beneath the gas-oil contact in the Abo Reef, extending in a *Northwesterly* direction ~~from the surface location and confined within a target area extending 400 feet North and 400 feet West of the surface location.~~

(2) That the applicant shall constantly monitor the pitch and direction of the drainhole as it is being drilled, and shall file a report of drilling upon completion thereof, specifying in said report the depth and location of the terminus of the drainhole.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


JOE D. RAMEY
Director

S E A L

fd/