

CASE 5678: AMOCO PROD. CO. FOR
DIRECTIONAL DRILLING, LEA COUNTY,
NEW MEXICO

CASE NO.

5678

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

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. 5678
Order No. R-5221-A

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR DIRECTIONAL DRILLING,
LEA COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE COMMISSION:

It appearing to the Commission that due to clerical error, Order No. R-5221, dated June 1, 1976, does not correctly state the intended order of the Commission.

IT IS THEREFORE ORDERED:

(1) That Paragraph (4) on Page 1 of Order No. R-5221 is hereby corrected to read in its entirety as follows:

"(4) That it appears that the most beneficial and economical method of restoring production on the subject 40-acre tract is to plug the aforesaid State "E" Tract 18 Well No. 15 back from the Abo formation and directionally re-drill said well into the Abo formation some distance away from its present bottom-hole location, which is approximately 30.51 feet WSW of the surface location."

(2) That the first Paragraph of Order (1) on Page 2 of said Order No. R-5221 is hereby corrected to read in its entirety as follows:

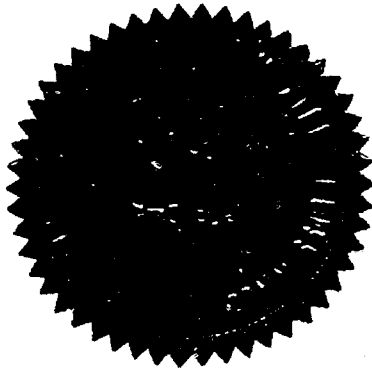
"(1) That the applicant, Amoco Production Company, is hereby authorized to re-enter its State "E" Tract 18 Well No. 15, the surface location of which is 330 feet from the North line and 2310 feet from the West line of Section 1, Township 17 South, Range 36 East, NMPM, Lovington-Abo Pool, Lea County, New Mexico, and to set a whipstock at approximately 4600 feet and directionally drill said well in a southerly direction to a true vertical depth of approximately 8500 feet, bottoming the well in the Lovington-Abo Pool within 100 feet of a point 600 feet from the North line and 2310 feet from the West line of said Section 1.

(3) That this order shall be effective nunc pro tunc as of June 1, 1976.

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Case No. 5678
Order No. R-5221-A

DONE at Santa Fe, New Mexico, this 8th day of June, 1976.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

jr/



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501



DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
June 8, 1976

STATE GEOLOGIST
EMERY C. ARNOLD

Mr. Antone Peterson
Attorney
Amoco Production Company
P. O. Box 3092
Houston, Texas 77001

Re: CASE NO. 5678
ORDER NO. R-5221-A

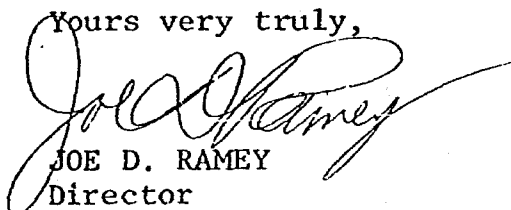
Applicant:

Amoco Production Company

Dear Sir:

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

Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC _____
Aztec OCC _____

Other _____



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501



DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
June 2, 1976

STATE GEOLOGIST
EMERY C. ARNOLD

Mr. Antone Peterson
Attorney
Amoco Production Company
P. O. Box 3092
Houston, Texas 77001

Re: CASE NO. 5678
ORDER NO. R-5221

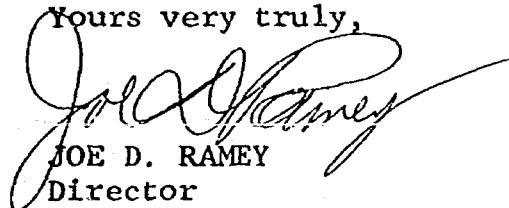
Applicant:

Amoco Production Company

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Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC _____
Aztec OCC _____

Other _____

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. 5678
Order No. R-5221

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR DIRECTIONAL DRILLING,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 12, 1976, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 1st day of June, 1976, 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, is the owner and operator of the State "E" Tract 18 Well No. 15, the surface location of which is 330 feet from the North line and 2310 feet from the West line of Section 1, Township 17 South, Range 36 East, EPM, Lovington-Abo Pool, Lea County, New Mexico.

(3) That said well has developed certain mechanical problems which render its recompletion in the Abo formation or its replacement by another well drilled to the Abo formation on the same 40-acre tract advisable.

(4) That it appears that the most beneficial and economical method of restoring production on the subject 40-acre tract is to plug the aforesaid State "E" Tract 18 Well No. 1 back from the Abo formation and directionally re-drill said well into the Abo formation some distance away from its present bottom-hole location, which is approximately 30.51 feet WSW of the surface location.

Case No. 5678
Order No. R-5221

(5) That the applicant, Amoco Production Company, seeks authority to plug said well back from its present total depth to a depth of approximately 4600 feet, and then to directionally drill in a southerly direction to a true vertical depth of approximately 8500 feet bottoming said well in the Abo formation within 100 feet of a point 600 feet from the North line and 2310 feet from the West line of the aforesaid Section 1.

(6) That approval of the application is in the interest of conservation, inasmuch as it may result in the recovery of otherwise unrecoverable oil, thereby preventing waste, and will not impair correlative rights, provided that the applicant should be required to determine the subsurface location of the bottom of the hole by means of a continuous multi-shot directional survey conducted subsequent to directional drilling, if said well is to be completed as a producing well.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized to re-enter its State "E" Tract 18 Well No. 1, the surface location of which is 330 feet from the North line and 2310 feet from the West line of Section 1, Township 17 South, Range 36 East, NMPM, Lovington-Abo Pool, Lea County, New Mexico, and to set a whipstock at approximately 4600 feet and directionally drill said well in a southerly direction to a true vertical depth of approximately 8500 feet, bottoming the well in the Lovington-Abo Pool within 100 feet of a point 600 feet from the North line and 2310 feet from the West line of said Section 1.

PROVIDED HOWEVER, that subsequent to the above-described directional drilling, should said well be a producer, a continuous multi-shot directional survey shall be made of the wellbore from total depth to the whipstock point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe Office of the Commission, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Commission's Hobbs District Office of the date and time said survey is to be commenced.

(2) That Form C-105 shall be filed in accordance with Commission Rule 1108 and the operator shall indicate thereon true vertical depths in addition to measured depths.

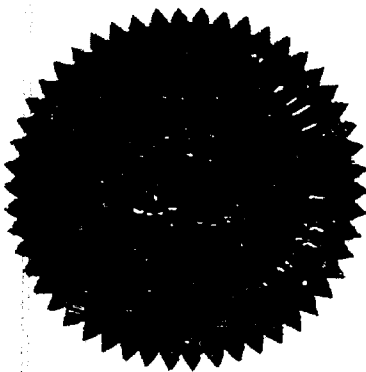
(3) That the NE/4 NW/4 of said Section 1 shall be dedicated to the subject well.

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

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Case No. 5678
Order No. R-5221.

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.



STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

Phil R. Lucero
PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

Joe D. Ramey
JOE D. RAMEY, Member & Secretary

S E A L

dr/



T. Don Stacy
Division Engineering
Manager

Case 5678

Amoco Production Company

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

April 9, 1976

File: DRC-986.51NM-1759

Re: Application for Hearing
Directional Drilling
State "E" Tract 18 Well No. 15-S/T
Lovington-Abo Pool
Lea County, New Mexico

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

Attention: Mr. Joe D. Ramey

Gentlemen:

Amoco Production Company respectfully requests a hearing for the purpose of seeking authority to sidetrack the State "E" Tract 18 Well No. 15, Lovington-Abo Pool, Lea County, New Mexico. The surface location is 330 feet from the North and 2310 feet from the West lines of Section 1, Township 17 South, Range 36 East, and the proposed bottom hole location will be 600 feet from the North and 2310 feet from the West lines of the same section.

Attached is a map showing the area of the Lovington-Abo Pool, including the surface location of the captioned well and offset operators.

It is respectfully requested that this matter be included on the Docket of the Hearing to be held May 12, 1976.

Yours very truly,


Attachment

JCH:as

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 12, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Company) CASE
for directional drilling, Lea County,) 5678
New Mexico.)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: William F. Carr, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Antone L. Peterson, III, Esq.
Legal Counsel for Amoco Production
500 Jefferson Building
P. O. Box 3092
Houston, Texas

ATWOOD, MALONE, MANN & COOTER
Attorneys at Law
Security National Bank Bldg.
Roswell, New Mexico

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Phone (505) 982-9212

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I N D E X

JOHN C. HUNTER

Direct Examination by Mr. Peterson

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Cross Examination by Mr. Nutter

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EXHIBIT INDEX

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Amoco's Exhibit No. One, Map

9

Amoco's Exhibit No. Two, Plat

9

Amoco's Exhibit No. Three, Survey

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1 MR. NUTTER: We will call Case Number 5678.

2 MR. CARR: Case 5678, application of Amoco Production
3 Company for directional drilling, Lea County, New Mexico.

4 MR. PETERSON: Mr. Examiner, I am Antone Peterson
5 representing Amoco Production Company. I would like the
6 record to show that an appearance has been entered in my behalf
7 by New Mexico counsel, Atwood, Malone, Mann and Cooter.

8 MR. NUTTER: Yes, we have their appearance.

9 MR. PETERSON: Amoco will have one witness today,
10 Mr. John Hunter. I would like Mr. Hunter sworn at this time.

11 (THEREUPON, the witness was duly sworn.)

12
13 JOHN C. HUNTER

14 called as a witness, having been first duly sworn, was
15 examined and testified as follows:

16
17 DIRECT EXAMINATION

18 BY MR. PETERSON:

19 Q Would you please state your name, employer and the
20 capacity in which you are employed?

21 A My name is John C. Hunter, I'm employed by Amoco
22 Production Company in Houston, Texas as a Petroleum Engineer,
23 Senior Grade.

24 Q You have testified before the Commission previously?

25 A Yes, I have.

1 MR. PETERSON: Are Mr. Hunter's qualifications
2 acceptable?

3 MR. NUTTER: Yes, they are.

4 Q (Mr. Peterson continuing.) Mr. Hunter, first I would
5 like for you to look at Exhibit One, what has been labeled as
6 Amoco's Exhibit One and tell us what that exhibit shows?

7 A Exhibit Number One is a map of the Lovington-Abo
8 Pool in Lea County, New Mexico. On this map are shown all Abo
9 completions and their respective operators.

10 Q I notice you have one completion marked with a red
11 arrow, would you explain the significance of that arrow, please?

12 A The red arrow points to the surface location of the
13 Amoco State "E" Tract 18 Well No. 15 which we propose to
14 sidetrack to an orthodox bottom-hole location two hundred and
15 seventy feet due south of the surface location. The surface
16 location is three hundred and thirty feet from the north line
17 and twenty-three hundred and ten feet from the west line of
18 Section 1, Township 17 South, Range 36 East and the proposed
19 bottom-hole location will be six hundred feet from the north
20 line and twenty-three hundred and ten from the west line of
21 the same section.

22 Q Why is a hearing required to sidetrack this well,
23 Mr. Hunter?

24 A Rule 111-B of the New Mexico Oil Conservation
25 Commission Rules and Regulations requires that a hearing be

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1 held for wells that are directionally drilled.

2 Q What necessitates the sidetracking of this particular
3 well?

4 A Well No. 15 is currently completed in an Upper Abo
5 Reef stringer, however, there is unrepairable communication
6 between the Upper Abo and the Lower Abo in this well and we have
7 decided to make a new completion in the Abo. We evaluated
8 sidetracking versus drilling a new well and found that we can
9 save in excess of one hundred thousand dollars by sidetracking
10 the well.

11 Q What formation will you be attempting to produce from
12 in sidetracking this well?

13 A We anticipate that we will encounter the Lower Abo at
14 an updip location and we will produce from the Lower Abo.

15 Q All right, do you have any further comments regarding
16 Exhibit Number One?

17 A No, I don't.

18 Q I would like for you now to look at what has been
19 labeled Amoco's Exhibit Two and would you please tell the
20 Examiner what that exhibit shows?

21 A Exhibit Number Two is a plat showing the northwest
22 quarter of Section 1, Township 17 South, Range 36 East, including
23 the locations of all current Abo completions.

24 Q I notice that you have marked a portion of that
25 tract, it appears to be the northeast quarter of that quarter

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1 section in red and white tape, would you explain the
2 significance of that tape, please?

3 A. The red and white tape outlines the boundaries of
4 the proration unit for Well No. 15.

5 Q. And if you would also explain the markings within
6 that quarter-quarter section?

7 A. Oh, yes, the surface location of Well No. 15 is
8 marked with the solid blue dot. Extending due south from this
9 location is a dashed line leading to an X and this X marks the
10 bottom-hole location of the proposed sidetrack.

11 Q. Could you give us a brief idea of the procedure you
12 would use in sidetracking this well?

13 A. Yes, sir, briefly, we will spot a cement plug across
14 the current Abo perforations in Well No. 15, then we will
15 set a bridge plug above the Abo and cap it with thirty-five
16 feet of cement. We will come up hole setting hundred foot
17 cement plugs at the top of each pay zone, between the Abo
18 and the kick-off point. We will then cut the casing at
19 approximately forty-six hundred feet and pull all of the casings
20 down to that point. We will then spot a cement plug at the
21 casing stub, dress it off and kick off with a Dyna-Drill,
22 just enough to clear the old hole by orienting to the south,
23 in the direction we want to end up.

24 We will then drill to about sixty-nine hundred
25 feet before we make any attempts to build up an angle. At

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1 about sixty-nine hundred feet we will run our directional
2 drilling equipment and build up our angle until we encounter
3 our bottom-hole location at a true vertical depth of about
4 eighty-five hundred feet. We will then run seven-inch casing
5 back to the surface and circulate cement behind the pipe above
6 all pay zones.

7 Q What tolerance would you recommend from the proposed
8 bottom-hole location?

9 A Well, in a situation like this, we are proposing an
10 orthodox bottom-hole location. The Commission generally
11 grants a one-hundred-foot radius of tolerance around the
12 proposed bottom-hole location. This tolerance would be satis-
13 factory to Amoco.

14 Q Do you have any other comments regarding Exhibit
15 Two?

16 A No, sir, I don't.

17 Q I now direct your attention to what has been labeled
18 Amoco's Exhibit Three, would you please tell us what that
19 is?

20 A Exhibit Number Three is Eastman Whipstock's report
21 of a subsurface gyro multi-shot directional survey run on
22 Amoco State "E" Tract 18 Well No. 15 on April 12th, 1976. It
23 includes a tabulation of all shot points with the angle of
24 inclination, the coordinates and so forth at each point. It
25 also includes a plat which gives a visual illustration of the

1 random path that Well No. 15 took when it was being drilled.

2 Q Does this exhibit show the current bottom-hole
3 location of this particular well?

4 A Yes, it does. According to Eastman's calculations,
5 using a radius of curvature method of computation, they have
6 determined that the current bottom-hole location is seven
7 point four feet south and twenty-nine point six feet west of the
8 surface location.

9 Q If this application is granted will you run a
10 directional survey in the sidetracked hole?

11 A Yes, sir, we will run a directional survey as
12 required by 111-B of the Commission's Rules and Regulations.
13 What we will do is run a single-shot survey from the kickoff
14 point down to our bottom-hole location in our sidetracked
15 hole. This is necessary, of course, so we will know where
16 we are at all times, if we've got the right angle, the right
17 direction and so forth.

18 We will then take a portion of the gyro multi-shot
19 survey in old well No. 15, which is Exhibit Number Three, and
20 we will take the interval between the surface and the
21 kickoff point and combine this with our single-shot survey in
22 the sidetracked hole from the kickoff point to the bottom-hole
23 location. We will submit this composite directional survey
24 to the Commission if it is acceptable to them.

25 Q Do you have any further comments regarding Exhibit

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1 Three, Mr. Hunter?

2 A. Only that we will supply the Commission with the
3 results of our work.

4 Q. In your opinion will the sidetracking of this hole
5 prevent waste, protect correlative rights and promote conserva-
6 tion?

7 A. I believe it will in all three cases. We will
8 prevent waste by drilling a well to recover oil that ordinarily
9 might not be recovered due to the mechanical condition of
10 Well No. 15. Furthermore, we will protect our correlative
11 rights by making a Lower Abo completion on a proration unit
12 where we do not currently have a Lower Abo completion and,
13 furthermore, we will protect the correlative rights of our
14 offset operators by bottoming the well in an orthodox
15 location.

16 Q. Do you have any further comments regarding Exhibit
17 Three, Mr. Hunter?

18 A. No, I don't.

19 MR. PETERSON: Mr. Examiner, I move that Amoco's
20 Exhibits One through Three be admitted into evidence.

21 MR. NUTTER: Amoco's Exhibits One through Three
22 will be admitted into evidence.

23 (THEREUPON, Amoco's Exhibits One through
24 Three were admitted into evidence.)

25 MR. PETERSON: No further questions of the witness,

1 Mr. Examiner.

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CROSS EXAMINATION

4 BY MR. NUTTER:

5 Q Mr. Hunter, you stated that this Well No. 15 is
6 currently completed in the Upper Abo stringers?

7 A Yes, sir.

8 Q That there is a mechanical problem and it is in
9 communication with the Lower Abo?

10 A Yes, sir.

11 Q What is the problem, is the Lower Abo producing
12 water?

13 A Yes, sir, we are making a tremendous amount of
14 water.

15 Q Is it getting up into your Upper Abo production then?

16 A That is correct.

17 Q Now, you expect, when you deviate this well to
18 the south that you will bottom it into the Lower Abo but it
19 will be structurally higher than the Abo formation at the
20 current location, so you would be producing from the Abo and
21 you anticipate water-free from the Lower Abo, but you would
22 anticipate water-free production.

23 A Yes, we hope for water-free production, we hope for
24 a top allowable well.

25 Q How about your No. 17 to the south, is it Upper or

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1 Lower Abo?

2 A. No. 17 to the south is Lower Abo.

3 Q. Is it a pretty good well?

4 A. Yes, sir.

5 Q. Now, on this survey you were talking about, it would
6 appear from the plat in Exhibit Number Three that the kickoff
7 point of forty-six hundred feet is just thirteen or fourteen
8 feet off of the surface location, is that correct?

9 A. Yes, sir, it appears to be that.

10 Q. So actually even down to TD here you have a remark-
11 ably straight hole so far?

12 A. Yes, sir, it appears to be.

13 Q. Now, the composite survey that you propose to submit
14 to the Commission upon completion of the well, does not quite
15 fit the requirement that the Commission normally imposes on
16 a directionally drilled well. They want a single-shot survey
17 taken as you drill the well which is, of course, necessary to
18 see where you are going, but then the Commission normally
19 requires a continuous multi-shot survey after the well has
20 been drilled, so you could start at the bottom, couldn't you
21 and take a multi-shot survey back up to the kickoff point and
22 then add that to the survey that was taken prior to the drill-
23 ing of the well?

24 A. We could do that. It is just duplication of effort.
25 We feel like our experience is that the single-shot survey is

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1 just as accurate as the multi-shot survey.

2 Q Well, the Commission's experience has not been to
3 that effect. They prefer a multi-shot survey upon completion
4 of the well, one continuous survey after the well has been
5 completed. However, I think that a composite of that multi-
6 shot survey from TD to forty-six hundred feet added to the
7 continuous shot survey that you've got here from forty-six
8 hundred feet to surface would be adequate.

9 A Okay. That's fine with us. We are just trying to
10 avoid duplication of effort and expense.

11 Q The single-shot tells you where you are going and
12 the multi-shot tells you where you got to.

13 A Yes, sir. It is our feeling, though, that usually
14 when you run a single-shot survey you stop and take the shots
15 at more frequent intervals than you do in your multi-shot
16 survey.

17 Q Right. Our multi-shot survey requirement normally is
18 one shot every hundred feet.

19 A Okay. Well, in that case, I don't think that the
20 survey we currently have would conform to your requirement. I
21 think it is every two hundred feet.

22 Q It appears to be on here, yes.

23 MR. NUTTER: Are there further questions of Mr. Hunter?
24 He may be excused.

25 (THEREUPON, the witness was excused.)

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1 MR. NUTTER: Do you have anything further, Mr.
2 Peterson?

3 MR. PETERSON: No, sir.


4 MR. NUTTER: Does anyone have anything they wish
5 to offer in Case Number 5678? We will take the case under
6 advisement.

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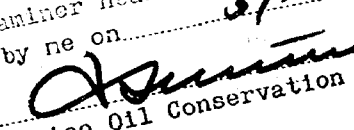
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

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Phone (505) 982-9212

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5678
heard by me on 5/12, 1974.

New Mexico Oil Conservation Commission

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
May 12, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Company) CASE
for directional drilling, Lea County,) 5678
New Mexico.)

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: William F. Carr, Esq.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Antone L. Peterson, III, Esq.
Legal Counsel for Amoco Production
500 Jefferson Building
P. O. Box 3092
Houston, Texas

ATWOOD, MALONE, MANN & COOTER
Attorneys at Law
Security National Bank Bldg.
Roswell, New Mexico

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I N D E X

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1 MR. NUTTER: We will call Case Number 5678.

2 MR. CARR: Case 5678, application of Amoco Production
3 Company for directional drilling, Lea County, New Mexico.

4 MR. PETERSON: Mr. Examiner, I am Antone Peterson
5 representing Amoco Production Company. I would like the
6 record to show that an appearance has been entered in my behalf
7 by New Mexico counsel, Atwood, Malone, Mann and Cooter.

8 MR. NUTTER: Yes, we have their appearance.

9 MR. PETERSON: Amoco will have one witness today,
10 Mr. John Hunter. I would like Mr. Hunter sworn at this time.

11 (THEREUPON, the witness was duly sworn.)

12
13 JOHN C. HUNTER

14 called as a witness, having been first duly sworn, was
15 examined and testified as follows:

16
17 DIRECT EXAMINATION

18 BY MR. PETERSON:

19 Q Would you please state your name, employer and the
20 capacity in which you are employed?

21 A My name is John C. Hunter, I'm employed by Amoco
22 Production Company in Houston, Texas as a Petroleum Engineer,
23 Senior Grade.

24 Q You have testified before the Commission previously?

25 A Yes, I have.

1 MR. PETERSON: Are Mr. Hunter's qualifications
2 acceptable?

3 MR. NUTTER: Yes, they are.

4 Q (Mr. Peterson continuing.) Mr. Hunter, first I would
5 like for you to look at Exhibit One, what has been labeled as
6 Amoco's Exhibit One and tell us what that exhibit shows?

7 A Exhibit Number One is a map of the Lovington-Abo
8 Pool in Lea County, New Mexico. On this map are shown all Abo
9 completions and their respective operators.

10 Q I notice you have one completion marked with a red
11 arrow, would you explain the significance of that arrow, please?

12 A The red arrow points to the surface location of the
13 Amoco State "E" Tract 18 Well No. 15 which we propose to
14 sidetrack to an orthodox bottom-hole location two hundred and
15 seventy feet due south of the surface location. The surface
16 location is three hundred and thirty feet from the north line
17 and twenty-three hundred and ten feet from the west line of
18 Section 1, Township 17 South, Range 36 East and the proposed
19 bottom-hole location will be six hundred feet from the north
20 line and twenty-three hundred and ten from the west line of
21 the same section.

22 Q Why is a hearing required to sidetrack this well,
23 Mr. Hunter?

24 A Rule 111-B of the New Mexico Oil Conservation
25 Commission Rules and Regulations requires that a hearing be

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1 held for wells that are directionally drilled.

2 Q What necessitates the sidetracking of this particular
3 well?

4 A Well No. 15 is currently completed in an Upper Abo
5 Reef stringer, however, there is unrepairable communication
6 between the Upper Abo and the Lower Abo in this well and we have
7 decided to make a new completion in the Abo. We evaluated
8 sidetracking versus drilling a new well and found that we can
9 save in excess of one hundred thousand dollars by sidetracking
10 the well.

11 Q What formation will you be attempting to produce from
12 in sidetracking this well?

13 A We anticipate that we will encounter the Lower Abo at
14 an updip location and we will produce from the Lower Abo.

15 Q All right, do you have any further comments regarding
16 Exhibit Number One?

17 A No, I don't.

18 Q I would like for you now to look at what has been
19 labeled Amoco's Exhibit Two and would you please tell the
20 Examiner what that exhibit shows?

21 A Exhibit Number Two is a plat showing the northwest
22 quarter of Section 1, Township 17 South, Range 36 East, including
23 the locations of all current Abo completions.

24 Q I notice that you have marked a portion of that
25 tract, it appears to be the northeast quarter of that quarter

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1 section in red and white tape, would you explain the
2 significance of that tape, please?

3 A. The red and white tape outlines the boundaries of
4 the proration unit for Well No. 15.

5 Q. And if you would also explain the markings within
6 that quarter-quarter section?

7 A. Oh, yes, the surface location of Well No. 15 is
8 marked with the solid blue dot. Extending due south from this
9 location is a dashed line leading to an X and this X marks the
10 bottom-hole location of the proposed sidetrack.

11 Q. Could you give us a brief idea of the procedure you
12 would use in sidetracking this well?

13 A. Yes, sir, briefly, we will spot a cement plug across
14 the current Abo perforations in Well No. 15, then we will
15 set a bridge plug above the Abo and cap it with thirty-five
16 feet of cement. We will come up hole setting hundred foot
17 cement plugs at the top of each pay zone, between the Abo
18 and the kick-off point. We will then cut the casing at
19 approximately forty-six hundred feet and pull all of the casings
20 down to that point. We will then spot a cement plug at the
21 casing stub, dress it off and kick off with a Dyna-Drill,
22 just enough to clear the old hole by orienting to the south,
23 in the direction we want to end up.

24 We will then drill to about sixty-nine hundred
25 feet before we make any attempts to build up an angle. At

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1 about sixty-nine hundred feet we will run our directional
2 drilling equipment and build up our angle until we encounter
3 our bottom-hole location at a true vertical depth of about
4 eighty-five hundred feet. We will then run seven-inch casing
5 back to the surface and circulate cement behind the pipe above
6 all pay zones.

7 Q What tolerance would you recommend from the proposed
8 bottom-hole location?

9 A Well, in a situation like this, we are proposing an
10 orthodox bottom-hole location. The Commission generally
11 grants a one-hundred-foot radius of tolerance around the
12 proposed bottom-hole location. This tolerance would be satis-
13 factory to Amoco.

14 Q Do you have any other comments regarding Exhibit
15 Two?

16 A No, sir, I don't.

17 Q I now direct your attention to what has been labeled
18 Amoco's Exhibit Three, would you please tell us what that
19 is?

20 A Exhibit Number Three is Eastman Whipstock's report
21 of a subsurface gyro multi-shot directional survey run on
22 Amoco State "E" Tract 18 Well No. 15 on April 12th, 1976. It
23 includes a tabulation of all shot points with the angle of
24 inclination, the coordinates and so forth at each point. It
25 also includes a plat which gives a visual illustration of the

1 random path that Well No. 15 took when it was being drilled.

2 Q Does this exhibit show the current bottom-hole
3 location of this particular well?

4 A Yes, it does. According to Eastman's calculations,
5 using a radius of curvature method of computation, they have
6 determined that the current bottom-hole location is seven
7 point four feet south and twenty-nine point six feet west of the
8 surface location.

9 Q If this application is granted will you run a
10 directional survey in the sidetracked hole?

11 A Yes, sir, we will run a directional survey as
12 required by 111-B of the Commission's Rules and Regulations.
13 What we will do is run a single-shot survey from the kickoff
14 point down to our bottom-hole location in our sidetracked
15 hole. This is necessary, of course, so we will know where
16 we are at all times, if we've got the right angle, the right
17 direction and so forth.

18 We will then take a portion of the gyro multi-shot
19 survey in old well No. 15, which is Exhibit Number Three, and
20 we will take the interval between the surface and the
21 kickoff point and combine this with our single-shot survey in
22 the sidetracked hole from the kickoff point to the bottom-hole
23 location. We will submit this composite directional survey
24 to the Commission if it is acceptable to them.

25 Q Do you have any further comments regarding Exhibit

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1 Three, Mr. Hunter?

2 A. Only that we will supply the Commission with the
3 results of our work.

4 Q In your opinion will the sidetracking of this hole
5 prevent waste, protect correlative rights and promote conserva-
6 tion?

7 A. I believe it will in all three cases. We will
8 prevent waste by drilling a well to recover oil that ordinarily
9 might not be recovered due to the mechanical condition of
10 Well No. 15. Furthermore, we will protect our correlative
11 rights by making a Lower Abo completion on a proration unit
12 where we do not currently have a Lower Abo completion and,
13 furthermore, we will protect the correlative rights of our
14 offset operators by bottoming the well in an orthodox
15 location.

16 Q Do you have any further comments regarding Exhibit
17 Three, Mr. Hunter?

18 A. No, I don't.

19 MR. PETERSON: Mr. Examiner, I move that Amoco's
20 Exhibits One through Three be admitted into evidence.

21 MR. NUTTER: Amoco's Exhibits One through Three
22 will be admitted into evidence.

23 (THEREUPON, Amoco's Exhibits One through
24 Three were admitted into evidence.)

25 MR. PETERSON: No further questions of the witness,

1 Mr. Examiner.

2

3

CROSS EXAMINATION

4 BY MR. NUTTER:

5 Q Mr. Hunter, you stated that this Well No. 15 is
6 currently completed in the Upper Abo stringers?

7 A Yes, sir.

8 Q That there is a mechanical problem and it is in
9 communication with the Lower Abo?

10 A Yes, sir.

11 Q What is the problem, is the Lower Abo producing
12 water?

13 A Yes, sir, we are making a tremendous amount of
14 water.

15 Q Is it getting up into your Upper Abo production then?

16 A That is correct.

17 Q Now, you expect, when you deviate this well to
18 the south that you will bottom it into the Lower Abo but it
19 will be structurally higher than the Abo formation at the
20 current location, so you would be producing from the Abo and
21 you anticipate water-free from the Lower Abo, but you would
22 anticipate water-free production.

23 A Yes, we hope for water-free production, we hope for
24 a top allowable well.

25 Q How about your No. 17 to the south, is it Upper or

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1 Lower Abo?

2 A No. 17 to the south is Lower Abo.

3 Q Is it a pretty good well?

4 A Yes, sir.

5 Q Now, on this survey you were talking about, it would
 6 appear from the plat in Exhibit Number Three that the kickoff
 7 point of forty-six hundred feet is just thirteen or fourteen
 8 feet off of the surface location, is that correct?

9 A Yes, sir, it appears to be that.

10 Q So actually even down to TD here you have a remark-
 11 ably straight hole so far?

12 A Yes, sir, it appears to be.

13 Q Now, the composite survey that you propose to submit
 14 to the Commission upon completion of the well, does not quite
 15 fit the requirement that the Commission normally imposes on
 16 a directionally drilled well. They want a single-shot survey
 17 taken as you drill the well which is, of course, necessary to
 18 see where you are going, but then the Commission normally
 19 requires a continuous multi-shot survey after the well has
 20 been drilled, so you could start at the bottom, couldn't you
 21 and take a multi-shot survey back up to the kickoff point and
 22 then add that to the survey that was taken prior to the drill-
 23 ing of the well?

24 A We could do that. It is just duplication of effort.
 25 We feel like our experience is that the single-shot survey is

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1 just as accurate as the multi-shot survey.

2 Q Well, the Commission's experience has not been to
3 that effect. They prefer a multi-shot survey upon completion
4 of the well, one continuous survey after the well has been
5 completed. However, I think that a composite of that multi-
6 shot survey from TD to forty-six hundred feet added to the
7 continuous shot survey that you've got here from forty-six
8 hundred feet to surface would be adequate.

9 A Okay. That's fine with us. We are just trying to
10 avoid duplication of effort and expense.

11 Q The single-shot tells you where you are going and
12 the multi-shot tells you where you got to.

13 A Yes, sir. It is our feeling, though, that usually
14 when you run a single-shot survey you stop and take the shots
15 at more frequent intervals than you do in your multi-shot
16 survey.

17 Q Right. Our multi-shot survey requirement normally is
18 one shot every hundred feet.

19 A Okay. Well, in that case, I don't think that the
20 survey we currently have would conform to your requirement. I
21 think it is every two hundred feet.

22 Q It appears to be on here, yes.

23 MR. NUTTER: Are there further questions of Mr. Hunter?
24 He may be excused.

25 (THEREUPON, the witness was excused.)

1 MR. NUTTER: Do you have anything further, Mr.
2 Peterson?

3 MR. PETERSON: No, sir.

4 MR. NUTTER: Does anyone have anything they wish
5 to offer in Case Number 5678? We will take the case under
6 advisement.

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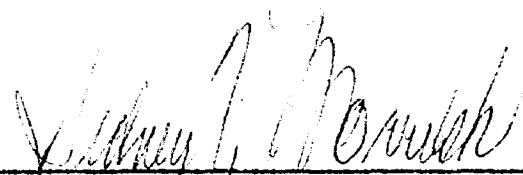
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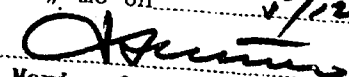
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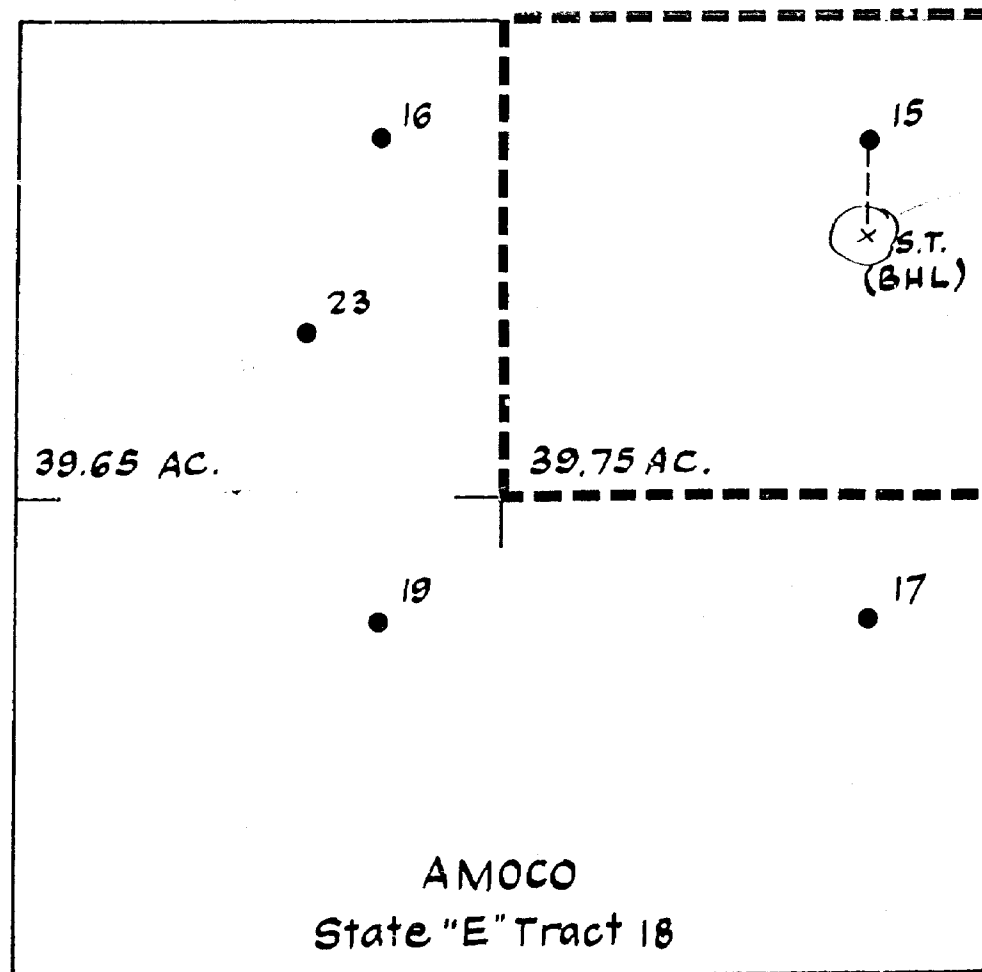
REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,
do hereby certify that the foregoing and attached Transcript
of Hearing before the New Mexico Oil Conservation Commission
was reported by me, and the same is a true and correct record
of the said proceedings to the best of my knowledge, skill and
ability.


Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 9678
heard by me on 5/12, 1974

Examiner
New Mexico Oil Conservation Commission



Target area:
100' radius of
a point &
600' ENL &
2310' ENL

Portion of
LOVINGTON-ABO POOL

NW/4 of sec. 1
T 17 S, R 36 E

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
Amoco EXHIBIT NO. 2
CASE NO. 5678

Lea Co., New Mexico
1"=500'



REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

AMOCO PRODUCTION COMPANY
COMPANY

STATE "E" TRACT 18 Well No. 15
WELL NAME

Lea County, New Mexico
LOCATION

JOB NUMBER

WT476-G097

TYPE OF SURVEY

Gyro Multishot Survey

DATE

April 12, 1976

SURVEY BY

Jack L. Henderson

OFFICE

Midland, Texas

AMOCO PRODUCTION COMPANY

PAGE 1

LEA COUNTY NEW MEXICO

STATE 'E' TRACT 18

* SUBMITTED BY *

WELL NO 15

* EASTMAN-WHIPSTOCK *

GYRO MULTISHOT SURVEY

* INC. *

WT4766097

APRIL 12, 1976

RECORD OF SURVEY

PRO. DIRECTION 0 0

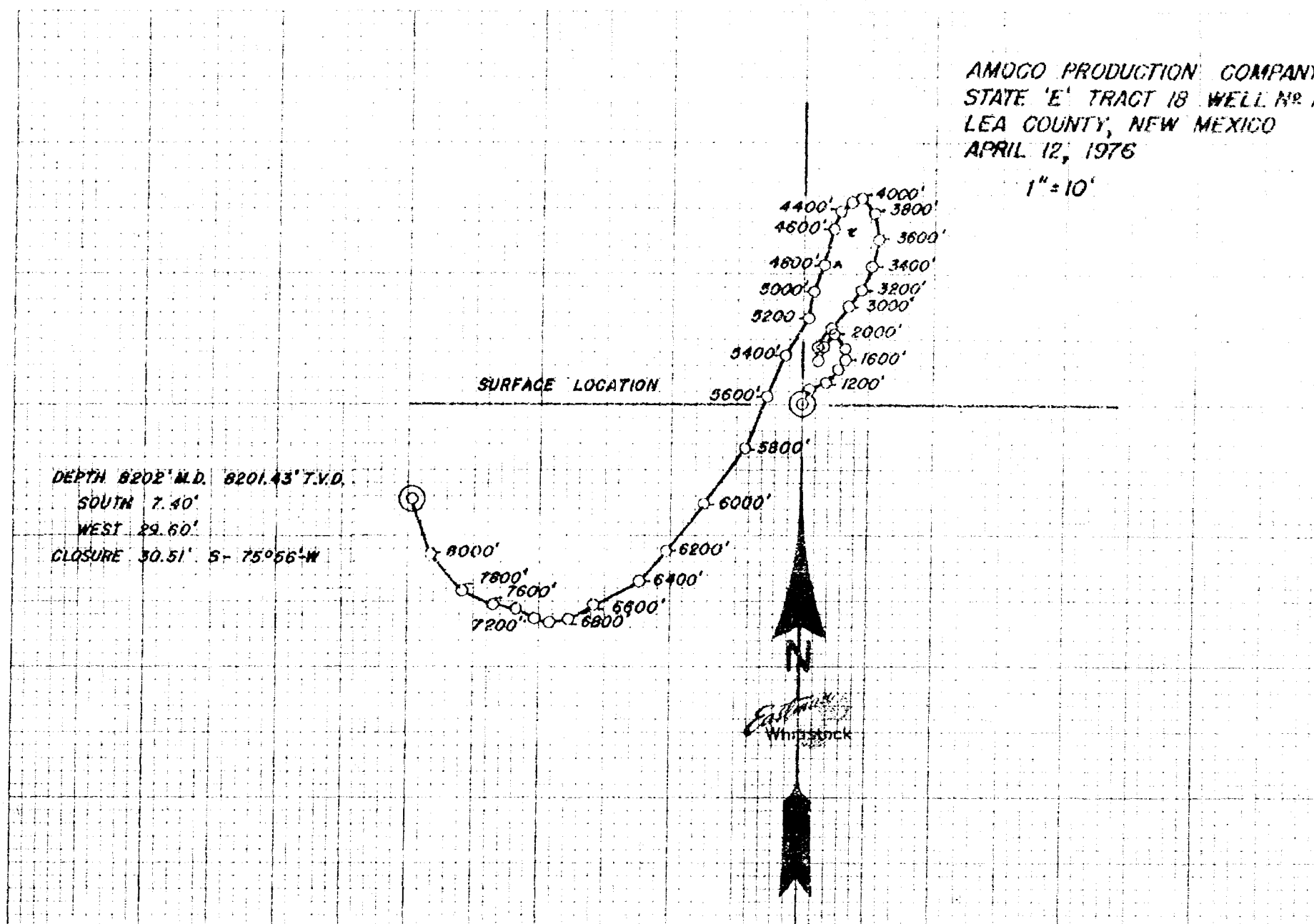
MEAS. DEPTH	COURSE LENGTH	TRUE COURSE LENGTH	TRUE VERT. DEPTH	ANGLE OF INCLIN		COURSE DIRECTION		VERT. SEC.	DOG LEG DEGP	RECTANGULAR COORDINATES	
				D	M	D	M				
0	0.	0.00	0.00	0	0	N	0 0 E	0.00	0.00	0.00	0.00
200	200.	200.00	200.00	0	0	N	0 0 E	0.00	0.01	0.00	0.00
400	200.	200.00	400.00	0	0	N	0 0 E	0.00	0.01	0.00	0.00
600	200.	200.00	600.00	0	0	N	0 0 E	0.00	0.01	0.00	0.00
800	200.	200.00	800.00	0	15	N	34 0 E	0.00	0.13	0.41 N	0.13E
1000	200.	200.00	1000.00	0	15	N	45 0 E	0.00	0.12	1.08 N	0.68E
1200	200.	200.00	1199.99	0	30	N	68 0 E	0.00	0.12	1.80 N	1.77E
1400	200.	200.00	1399.99	0	15	N	37 0 E	0.00	0.12	2.59 N	2.79E
1600	200.	200.00	1599.99	0	15	N	30 0 E	0.00	0.12	3.32 N	3.27E
1800	200.	200.00	1799.99	0	15	N	3 0 W	0.00	0.12	4.15 N	3.03E

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE LENGTH	TRUE VERT. DEPTH	ANGLE OF INCLIN		COURSE DIRECTION	VERT. SEC.	DOG LEG DEGP/100		RECTANGULAR COORDINATES	
				D	M			D	M		
2000	200.	200.00	1999.98	0	30	N 64 0 W	0.00	0.12		5.19 N	2.34E
2200	200.	200.00	2199.98	0	15	S 14 0 W	0.00	0.12		4.20 N	1.54E
2400	200.	200.00	2399.97	0	15	S 36 0 W	0.00	0.12		3.41 N	1.17E
2600	200.	200.00	2599.97	0	15	N 10 0 E	0.00	0.12		4.21 N	1.51E
2800	200.	199.99	2799.96	0	45	N 25 0 E	0.00	0.25		5.87 N	2.04E
3000	200.	199.99	2999.95	0	30	N 58 0 E	0.00	0.12		7.48 N	3.46E
3200	200.	199.99	3199.94	0	30	N 16 0 E	0.00	0.12		8.85 N	4.49E
3400	200.	199.99	3399.94	0	30	N 23 0 E	0.00	0.12		10.49 N	5.07E
3600	200.	199.99	3599.92	0	45	N 17 0 E	0.00	0.12		12.54 N	5.82E
3800	200.	199.99	3799.91	0	30	N 12 0 W	0.00	0.12		14.65 N	5.27E
4000	200.	200.00	3999.91	0	15	N 68 0 W	0.00	0.12		15.62 N	4.46E
4200	200.	200.00	4199.91	0	15	S 79 0 W	0.00	0.12		15.37 N	3.63E
4400	200.	200.00	4399.91	0	15	S 30 0 W	0.00	0.12		14.88 N	2.94E
4600	200.	199.99	4599.90	0	45	S 15 0 W	0.00	0.25		13.27 N	2.27E
4800	200.	199.98	4799.88	0	45	S 18 0 W	0.00	0.25		10.76 N	1.53E
5000	200.	199.99	4999.87	0	30	S 11 0 W	0.00	0.12		8.65 N	0.98E
5200	200.	199.99	5199.86	0	45	S 28 0 W	0.00	0.12		6.60 N	0.26E
5400	200.	199.98	5399.84	1	0	S 29 0 W	0.00	0.12		3.91 N	1.20W
5600	200.	199.97	5599.80	1	0	S 16 0 W	0.00	0.12		0.69 N	2.54W
5800	200.	199.95	5799.76	1	30	S 32 0 W	0.00	0.25		3.28 S	4.31W

MEAS.	COURSE	TRUE COURSE	TRUE VERT.	ANGLE OF INCLIN	COURSE DIRECTION	VERT. SEC.	DOG LEG DEG PER 100	RECTANGULAR COORDINATES	
DEPTH	LENGTH	LENGTH	DEPTH	D M	D M				
6000	200.	199.93	5999.69	1 30	S 33 0 W	0.00	0.25	7.70 S	7.12W
6200	200.	199.94	6199.63	1 15	S 51 0 W	0.00	0.12	11.25 S	10.32W
6400	200.	199.96	6399.59	1 0	S 53 0 W	0.00	0.12	13.67 S	13.42W
6600	200.	199.98	6599.57	0 45	S 59 0 W	0.00	0.12	15.37 S	15.95W
6800	200.	199.99	6799.55	0 30	S 60 0 W	0.00	0.12	16.48 S	17.83W
7000	200.	200.00	6999.55	0 15	S 75 0 W	0.00	0.12	16.98 S	19.04W
7200	200.	200.00	7199.55	0 30	N 55 0 W	0.00	0.12	16.43 S	20.22W
7400	200.	199.99	7399.54	0 30	N 88 0 W	0.00	0.12	15.88 S	21.85W
7600	200.	199.99	7599.53	0 30	N 66 0 W	0.00	0.12	15.49 S	23.54W
7800	200.	199.98	7799.51	1 0	N 53 0 W	0.00	0.25	14.17 S	25.80W
8000	200.	199.97	7999.48	1 0	N 27 0 W	0.00	0.25	11.52 S	28.02W
8200	200.	199.95	8199.43	1 30	N 15 0 W	0.00	0.25	7.45 S	29.58W
8202	2.	2.00	8201.43	1 30	N 15 0 W	0.00	1.00	7.40 S	29.60W

BOTTOM HOLE CLOSURE 30.51 FEET AT S 75 55 58 W

(METHOD OF COMPUTATION--RADIUS OF CURVATURE)

$1'' \approx 10'$ 



EASTMAN WHIPSTOCK, INC.

P. O. BOX 5577

MIDLAND, TEXAS 79701

STATE OF Texas
COUNTY OF Midland

I, Jack L. Henderson, in the employ of the Directional Drilling Department of Eastman Whipstock, Inc., did on the days of April 12, 19 76 thru , 19 conduct or supervise the taking of a Gyro Multishot Survey by the method of Magnetic Oriented Survey from a depth of -0- feet to 8208 feet, with records of inclination being taken at approx. every 200 feet.

This survey was conducted at the request of Amoco Production Company for their State "E" Tract 18 Well No. 15 Lea County, State of New Mexico, in the Field.

STATE OF Texas
COUNTY OF Midland

Before me the undersigned authority, on this day personally appeared Jack L. Henderson, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that the same is a true and correct statement of facts therein recited.

Subscribed and sworn to before me this 13 day of April, 19 76.

Notary Public in and for the
Midland County, Texas

Dockets Nos. 15-76 and 16-76 are tentatively set for hearing on May 26 and June 9, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MAY 12, 1976

9 A.M. - OIL CONSERVATION COMMISSION 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 June, 1976, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(2) Consideration of the allowable production of gas for June, 1976, from five prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 5676: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal GC Com Well to be drilled 660 feet from the South and East lines of Section 32, Township 17 South, Range 25 East, Eddy County, New Mexico, to test the Morrow formation, the E/2 of said Section 32 to be dedicated to the well.

CASE 5677: Application of Yates Petroleum Corporation for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Dunken Nose Unit Area comprising 6393 acres, more or less, of State and Fee lands in Township 17 South, Ranges 18 and 19 East, Chaves County, New Mexico.

CASE 5678: Application of Amoco Production Company for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to deviate its State "E" Tract 18 Well No. 15, the surface location of which is 330 feet from the North line and 2310 feet from the West line of Section 1, Township 17 South, Range 36 East, Lovington-Abo Pool, Lea County, New Mexico, by directionally drilling said well and bottoming it in the Abo formation within 100 feet of a point 600 feet from the North line and 2310 feet from the West line of said Section 1.

CASE 5679: Application of Amoco Production Company for approval of an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Empire South Deep Unit Well No. 9 to be drilled 660 feet from the North line and 990 feet from the West line of Section 5, Township 18 South, Range 29 East, South Empire-Morrow Gas Pool, Eddy County, New Mexico, the W/2 of said Section 5 to be dedicated to the well.

CASE 5680: Application of Amoco Production Company for compulsory pooling, Eddy 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 21, Township 20 South, Range 25 East, Cemetery-Morrow Gas Pool, Eddy County, New Mexico, to be dedicated to David Fasken's Cemetery Federal Com Well No. 1 located in Unit L of said Section 21. 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 David Fasken as operator of the well and a charge for the risk involved in drilling said well.

CASE 5681: Application of A. H. Rains for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates formation through the open-hole interval from approximately 550 feet to 561 feet in his Pure State Well No. 1, located in Unit J of Section 15, Township 21 South, Range 27 East, Magruder-Yates Pool, Eddy County, New Mexico.

CASE 5098: (Reopened)

In the matter of Case 5098 being reopened pursuant to the provisions of Order No. R-4682, which order established special rules for the Red Tank-Morrow Gas Pool, Lea County, New Mexico, including a provision for 640-acre spacing. All interested parties may appear and show cause why said pool should not be developed on 320-acre spacing.

CASE 5473: (Reopened)

In the matter of Case 5473 being reopened pursuant to the provisions of Order No. R-5029, which order established special rules and regulations for the West Knowles-Drinkard Pool, Lea County, New Mexico, including a provision for 80-acre spacing and proration units. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

ATWOOD, MALONE, MANN & COOTER
LAWYERS

JEFF D. ATWOOD [1883-1960]
ROSS L. MALONE [1910-1974]

MAY - 6 1976
OIL CONSERVATION COMM.
Santa Fe

P. O. DRAWER 700
SECURITY NATIONAL BANK BUILDING
ROSWELL, NEW MEXICO 88201
[505] 622-6221

CHARLES F. MALONE
RUSSELL D. MANN
PAUL A. COOTER
BOB F. TURNER
ROBERT A. JOHNSON
JOHN W. BASSETT
ROBERT E. SABIN
RUFUS E. THOMPSON
RALPH D. SHAMAS

MAY
5th
1976

Mr. Joe Ramey, Director
Oil Conservation Commission
State Land Office Building
Santa Fe, New Mexico 87501

Re: Examiner Hearing May 12, 1976

Dear Mr. Ramey:

Please find enclosed Entries of Appearance in
Cases Nos. 5678, 5679 and 5680.

Very truly yours,


Charles F. Malone

C
F
M

*

V
Encls.

Cc: Guy Buell, Esquire

BEFORE THE OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION)
OF AMOCO PRODUCTION COMPANY FOR)
DIRECTIONAL DRILLING, STATE "E")
TRACT 18 WELL NO. 15, SECTION 1,)
TOWNSHIP 17 SOUTH, RANGE 36 EAST,) CASE NO. 5678
LOVINGTON-ABO POOL, LEA COUNTY,)
NEW MEXICO.)

ENTRY OF APPEARANCE

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

ATWOOD, MALONE, MANN & COOTER

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



Case 5678

Amoco Production Company

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

T. Don Stacy
General Counsel
May 1976

April 9, 1976

File: DRC-986.51NM-1759

Re: Application for Hearing
Directional Drilling
State "E" Tract 18 Well No. 15-S/T
Lovington-Abo Pool
Lea County, New Mexico

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

Attention: Mr. Joe D. Ramey

Gentlemen:

Amoco Production Company respectfully requests a hearing for the purpose of seeking authority to sidetrack the State "E" Tract 18 Well No. 15, Lovington-Abo Pool, Lea County, New Mexico. The surface location is 330 feet from the North and 2310 feet from the West lines of Section 1, Township 17 South, Range 36 East, and the proposed bottom hole location will be 600 feet from the North and 2310 feet from the West lines of the same section.

Attached is a map showing the area of the Lovington-Abo Pool, including the surface location of the captioned well and offset operators.

It is respectfully requested that this matter be included on the Docket of the Hearing to be held May 12, 1976.

Yours very truly,


Attachment

JCH:as



Amoco Production Company

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

T. Don Stacy
District Engineer
May 1976

April 9, 1976

File: DRC-986.51NM-1759

Re: Application for Hearing
Directional Drilling
State "E" Tract 18 Well No. 15-S/T
Lovington-Abo Pool
Lea County, New Mexico

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

Attention: Mr. Joe D. Ramey

Gentlemen:

Amoco Production Company respectfully requests a hearing for the purpose of seeking authority to sidetrack the State "E" Tract 18 Well No. 15, Lovington-Abo Pool, Lea County, New Mexico. The surface location is 330 feet from the North and 2310 feet from the West lines of Section 1, Township 17 South, Range 36 East, and the proposed bottom hole location will be 600 feet from the North and 2310 feet from the West lines of the same section.

Attached is a map showing the area of the Lovington-Abo Pool, including the surface location of the captioned well and offset operators.

It is respectfully requested that this matter be included on the Docket of the Hearing to be held May 12, 1976.

Yours very truly,

T. Don Stacy

Attachment

JCH:as

DRAFT

dr/

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. 5678

Order No. R- 5221

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR DIRECTIONAL DRILLING,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on May 12,
19 76, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of May, 19 76, 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, is the
owner and operator of the State "E" Tract 18 Well No. 15, the
surface location of which is 330 feet from the North line and
2310 feet from the West line of Section 1, Township 17 South,
Range 36 East, NMPM, Lovington-Abo Pool, Lea County, New Mexico.

(3) That said well has developed certain mechanical problems which render its recompletion in the Abo formation or its replacement by another well drilled to the Abo formation on the same 40-acre tract advisable.

(4) That it appears that the most beneficial and economical method of restoring production on the subject 40-acre tract is to plug the aforesaid State "E" Tract 18 Well No. 1 back from the Abo formation and directionally re-drill said well into the Abo formation some distance away from its present bottom-hole location, which is approximately 30.51 feet WSW of the surface location.

(5) That the applicant, Amoco Production Company, seeks authority to plug said well back from its present total depth to a depth of approximately 4600 feet, and ~~then to~~ directionally drill in a southerly direction to a true vertical depth of approximately 8500 feet bottoming said well in the Abo formation within 100 feet of a point 600 feet from the north line and 2310 feet from the West line of the aforesaid Section 1.

(6) That approval of the application is in the interest of conservation, inasmuch as it may result in the recovery of otherwise unrecoverable oil, thereby preventing waste, and will not impair correlative rights, provided that the applicant should be required to determine the subsurface location of the bottom of the hole by means of a continuous multi-shot directional survey conducted subsequent to directional drilling, if said well is to be completed as a producing well.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized to re-enter its State "E" Tract 18 Well No. 1, the surface location of which is 330 feet from the North line and 2310 feet from the West line of Section 1, Township 17 South, Range 36 East, NMPM, Lovington-Abo Pool, Lea County, New Mexico, and to set a whipstock at approximately 4600 feet and directionally drill said well in a southerly direction to a true vertical depth of approximately 8500 feet, bottoming the well in the Lovington-

-3-

Case No. 5678
Order No. R-

Abo Pool within 100 feet of a point 600 feet from the North line and 2310 feet from the West line of said Section 1.

PROVIDED HOWEVER, that subsequent to the above-described directional drilling, should said well be a producer, a continuous multi-shot directional survey shall be made of the wellbore from total depth to the whipstock point with shot points not more than 100 feet apart; that the operator shall cause the surveying company to forward a copy of the survey report directly to the Santa Fe Office of the Commission, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Commission's Hobbs District Office of the date and time said survey is to be commenced.

(2) That Form C-105 shall be filed in accordance with Commission Rule 1108 and the operator shall indicate thereon true vertical depths in addition to measured depths.

(3) That the NE/4 NW/4 of said Section 1 shall be dedicated to the subject well.

(4) 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.

dr/

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. 5678
Order No. R-5221-A

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR DIRECTIONAL DRILLING,
LEA COUNTY, NEW MEXICO.

NUNC PRO TUNC ORDER

BY THE COMMISSION:

It appearing to the Commission that due to clerical error,
Order No. R-5221, dated June 1, 1976, does not correctly state
the intended order of the Commission,

IT IS THEREFORE ORDERED:

(1) That paragraph (4) on Page 1 of Order No. R-5221 is
hereby corrected to read in its entirety as follows:

"(4) That it appears that the most beneficial and economical
method of restoring production on the subject 40-acre tract
is to plug the aforesaid State "E" Tract 18 Well No. 15
back from the Abo formation and directionally re-drill
said well into the Abo formation some distance away
from its present bottom-hole location, which is
approximately 30.51 feet WSW of the surface location."

(2) That ^{the first paragraph of Order} ~~Paragraph (1)~~ ^{said Order No. R-5221} on Page 2 of the ~~findings~~ ^{order} is hereby
corrected to read in its entirety as follows:

"(1) That the applicant, Amoco Production Company, is
hereby authorized to re-enter its State "E" Tract 18
Well No. 15, the surface location of which is 330
feet from the North line and 2310 feet from the West
line of Section 1, Township 17 South, Range 36 East,
NMPM, Lovington-Abo Pool, Lea County, New Mexico,
and to set a whipstock at approximately 4600 feet
and directionally drill said well in a southerly
direction to a true vertical depth of approximately
8500 feet, bottoming the well in the Lovington-Abo
Pool within 100 feet of a point 600 feet from

the North line and 2310 feet from the West line of said
Section 1.

~~PROVIDED HOWEVER,~~

(3) That this order shall be effective nunc pro tunc as
of June 1, 1976.

DONE at Santa Fe, New Mexico, this _____ day of June,
1976.