CASE NO.

6325

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
13 September 1978

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Company for unorthodox locations and directional drilling, Lea County, New Mexico.

CASE 6325

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Guy T. Buell, Esq.
Amoco Production Company
Post Office Box 3092
Houston, Texas 77001

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I N D E X

E X H I B I T S

MR. STAMETS: Call next Case 6325.

MS. TESCHENDORF: Case 6325. Application of Amoco Production Company for unorthodox locations and directional drilling, Lea County, New Mexico.

MR. STAMETS: Call for appearances in this case.

MR. BUELL: May it please the Examiner, for the Applicant, Amoco Production Company, Guy Buell.

We have one witness.

MR. STAMETS: Any other appearances in this case?

Please stand and be sworn.

(Witness sworn.)

MR. STAMETS: You may proceed.

MR. BUELL: Thank you, Mr. Examiner.

ROBERT J. DAVIDSON

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

DIRECT EXAMINATION

BY MR. BUELL:

Q. Would you state your name, by whom you're employed, and in what capacity, and what location, please?

A. My name is Robert J. Davidson. I work for Amoco Production Company as a petroleum engineer senior grade,

in the HOuston office, Houston, Texas.

Q. Mr. Davidson, what is your educational background in the field of engineering?

A. I received an Associate in Science degree from the Victoria College, Victoria, Texas, in 1972. I received my Bachelor of Science in mechanical engineering from the University of Texas in December, 1974.

Q. What have you done since graduation in 1974 in the field of engineering?

A. I began my career with Amoco Production Company in December of 1974 as engineer in the Hastings Area office outside of Alvin, Texas. In that capacity I recommended well workovers and also took care of the logging operations for wells that were being newly drilled.

Q. Mr. Davidson, how long have you been in our Divisional office in Houston?

A. In April of 1977 I was transferred to the Houston Division office in the capacity of an operations engineer for the Hastings Area office.

Q. How long have you been in your current assignment and what is your current assignment?

A. Following five months in the assignment of operations engineer for the Hastings Area office, I was transferred to the Levelland Secondary Group.

Q. By secondary group, that doesn't mean you were

a second class citizen. You were looking after our enhanced recovery program, is that correct?

A. That is correct, and I've been in that capacity for approximately a year and I've been handling the South Hobbs Unit since that time, plus other fields in that area.

Q. Are the wells that we're considering here today, were they based on recommendations you made after making a study of the waterflood operations in the Amoco operated South HObbs Unit?

A. That is correct.

MR. BUELL: May it please the Examiner, are there any questions as to Mr. Davidson's qualifications with particular reference to the South Hobbs Unit and the Hobbs Pool?

MR. STAMETS: No, there are none. The witness is considered qualified.

Q. (Mr. Buell continuing.) Mr. Davidson, in connection with your testimony here today, I want you to first look at what has been identified as our Exhibit Number One. What is that exhibit?

A. This exhibit shows the unit outlined in dark, wide blue, showing the South Hobbs Unit, which we have an interest in of 79.4 percent interest.

Q. This exhibit does not portray the entire Hobbs Pool, does it not?

A. That is correct. The total Hobbs Pool incorporates an area about three times this size and the unit is located in the far south portion of the whole --

Q. So all we're showing here is the southern portion of the Hobbs Pool?

A. That is correct.

Q. And a great portion of the Hobbs Pool is north of the northern boundary of the South Hobbs Unit?

A. That is correct.

Q. Mr. Davidson, I understand that operators in the northern portion of the Hobbs Pool are endeavoring to put together a secondary recovery program and unit for that portion of the pool. Is my understanding correct?

A. That's correct. They're in the sign-up stage at the present time.

Q. Do you know what operator is expediting the formation of that unit?

A. Shell.

Q. And they're now in the sign-up stages?

A. That is correct.

Q. All right, sir, let me ask you this. How have you identified the seven proposed wells on Exhibit One, the wells which are the subject matter of this hearing?

A. I've highlighted them in red.

Q. With a red dot?

A. Yes.

Q. All right, sir, according to the notice, the docket, two of these wells will be directionally drilled, Wells No. 122 and 125. Are you showing with the red dot the bottom hole location of those two wells or the surface location?

A. The bottom hole location.

Q. All right, sir. How have you identified the surface location for those two wells that will be directionally drilled?

A. A small round circle. Those two wells being 122 and 125.

Q. All right, sir. Do you recall approximately when unitized waterflood operations were initiated on the South Hobbs Unit?

A. Yes. The unit was formed effective on 1-1-75 and our waterflood operations began in 1-1-76.

Q. How have you identified the current injection wells that are presently in operation on the South Hobbs Unit?

A. I've highlighted them in blue dots and there's also an arrow through them.

Q. Approximately how many are there or precisely how many are there?

A. Thirty-three.

Q. How would you describe the waterflood pattern

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that we are using at this time? On the unit?

A. 80-acre five-spots.

Q. Do you have any other comments on Exhibit One, Mr. Davidson?

A. I sure do not.

Q. Turning then, if you would, to what has been identified as our Exhibit Number Two, what is that exhibit?

A. This is showing the performance for the South Hobbs Unit from January, 1970 to the present.

Q. All right, sir. Since our performance curve started in 1970, and our injection program started in January of '76, we really have approximately a six-year period of performance that we can analyze and evaluate prior to the initiation of water injection operations.

A. That is correct.

Q. All right, sir. Why don't we do this: Very briefly would you explain each curve, starting with the uppermost curve and then working your way down to the lowermost curve on Exhibit Two?

A. All right, the top curve is a curve of a number of producing wells, and the scale for that curve is to the far top lefthand corner of the exhibit, shown from zero to two hundred.

At the beginning of the initiation of our flood in beginning 1976, we have 111 wells on production and fol-

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lowing our conversion of thirty-three producers to injection, we show a drop and decrease in the number of wells to 80 wells until July 1st, 1977, at which time the unit was enlarged to incorporate the four tracts on the southwest portion of the unit, that are included in our unit boundary on Exhibit One, and then this added an additional seven wells, so right now we're showing a total producing well number of 86.

The second curve --

Q. Before we leave the first curve, I forgot to bring out on our Exhibit Number One, the producing wells in the south of the unit are shown with a conventional producing well symbol, are they not?

A. That is correct.

Q. All right, sir, now go to the second curve from the top of your Exhibit Two.

A. This is a curve of the number of injection wells and the scale to be used is the same as the one used for the producing wells to the left.

We show here at the beginning of our conversions in 1976 we're showing zero injection wells, which is understandable. At this time we began converting producing wells to injection and we show here an increase in our injection wells for the first six months of '76, and that particular time we had all 33 wells on injection and this has remained

constant since that time.

Q. All right, sir. Go to your next curve, the third curve from the top.

A. Yes. This is a curve of the gas/oil ratio for the field, and we're showing on this curve a gas/oil ratio of approximately 3000 beginning of 1977 and at the initiation of our waterflood, our GOR is 6000. The scale to be used here is on the far righthand corner, from zero to 10,000 cubic feet per barrel.

Now, I've shown here that at the beginning of our waterflood we had a GOR of 6000. We show a decrease on this curve in our GOR down to approximately 3500, and this is due to collapse of the solution gas due to our injection program.

Q. So that is one index that you reservoir engineers look at to see whether or not a waterflood is proving beneficial from the prevention of waste standpoint?

A. That is correct.

Q. All right, sir. What is your next curve on Exhibit Two?

A. The next curve is the dark blue line, which is our water production curve, and the scale to be used here is on your far righthand middle of your exhibit in barrels of water per day, going from zero, showing also 8000 barrels of water per day. Before initiation of our flood, we show

here that we had water associated with our oil production in the South Hobbs Unit, a water production magnitude of approximately 3000 barrels of water per day.

At the initiation of our injection, beginning 1976, we show a drop in our water production of approximately 2200 barrels a day, and since that time we've shown an increase in our water production of -- at the present time we're showing production of close to 11,000 barrels of water per day.

Q. All right, sir, what is the next curve, working our way towards the bottom of the Exhibit Two?

A. The next curve in light blue is our injection rate curve. The scale to be used here is on the far left-hand side of the exhibit in thousands of barrels of water injected per day.

At the initiation of our flood in the beginning of 1976, we're showing approximately 17,000 barrels of water injected per day, and following conversion of our 33 wells to injection, we're showing a peak of approximately 24,000 barrels of water injected per day, and at the present time we're injecting 17,000 barrels of water per day, and if you compare this to our production of 11,000 barrels of water per day, we have a make-up water volume of 6000 barrels of water per day.

Q. So we've reduced our injection rate, Mr. Davidson,

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is that because we obtained partial fill-up in some of the zones in the producing reservoir under the South Hobbs Unit?

A. Yes, that is correct.

Q. All right, sir, let's go now to the bottom curve and would you briefly comment on it, please?

A. Yes. This is the green curve. This is our oil production curve, and the scale to be used is on the far bottom lefthand corner in thousands of barrels of oil per day.

We see here that in the beginning of 1970 we were producing approximately 4000 barrels of oil per day and at the initiation of the flood or in 1976, we show a drop to 1500 barrels per day, and then we see that we do have response to our flood and presently we're producing close to 4000 barrels of oil per day.

Q. We're now approaching the peak rate under water-flood recovery that we enjoyed under primary for the increment of time shown on Exhibit Two?

A. That is correct.

Q. All right, sir, do you have any other comments on Exhibit Two?

A. No, I sure don't.

Q. Turn then, if you would, to what has been identified as our Exhibit Number Three. What is that exhibit?

A. This is the same or identical to Exhibit Number

One, except for the fact that we have highlighted some proposed injectors.

Q. In other words, it's the same base map as Exhibit Number One and you've added some additional data to it which we'll get to in a minute?

A. That's correct.

Q. All right, sir. The unit outline, the injection wells, and the seven proposed wells that we're considering here today are shown as they were on Exhibit One?

A. That is correct.

Q. All right, sir. Let me ask you this: Why, after you made a study of our waterflood operations in the South Hobbs Unit, why are you recommending the drilling of these seven wells?

As I notice, Mr. Davidson, and tell me if my observation is correct, it appears that five of them are located in the area of the unit which has been under active waterflood operation and two are located to the west where waterflood operations are projected for the fairly immediate future.

A. That is correct. With respect to the five wells within the area of our current waterflood operations, I'm recommending that these wells be drilled to -- to gather additional reservoir property data and that we might better be able to inject and improve our conformance in the existing

waterflooded area.

The two wells to the west are in an area in which we haven't initiated our waterflood yet, and these wells will be drilled to gather additional reservoir data so that we might from the start optimize our conformance in injection in this area of the field.

Q. While our waterflood program has been a success in the majority portion of the unit where we've been actively waterflooding, we have not had the conformance that you as a reservoir engineer would like to see?

A. That is correct.

Q. And you think the additional data that you can get from the five wells in the portion of the unit that has been flooded and the two wells that you're proposing in the area that will be flooded, will aid you in improving conformance?

A. That's correct.

Q. It's notoriously known, is it not, Mr. Davidson, that in the Hobbs Pool there have been so many Grayburg-San Andres pools that we do have different zones of porosity and permeability?

A. Correct.

Q. All right, sir, let me ask you this: Our Exhibit Number Three, as did Exhibit Number One, I think very vividly shows the existing 80-acre five-spot pattern that we're uti-

lizing in the unit now, does it not?

A. That's correct.

Q. With that in mind, let me ask you this. Will the seven wells that you're proposing, will they blend in with the 80-acre five-spot pattern?

A. No, they will not.

Q. All right, sir, let me ask you this. Based on your study of operations in the South Hobbs Unit, do you feel that in the future we will be going to a 40-acre five-spot pattern?

A. There is that possibility.

Q. Then I'll ask you this question. Will these wells, these seven wells that you're proposing, recommending here today, fit in with a 40-acre five-spot pattern?

A. That is correct.

Q. All right, sir. Let me ask you this. Do you feel that the data that you'll be able to obtain from the five wells in the area currently under waterflood and the two wells in the area that will be waterflood, will aid you to improving the conformance of our injection program? I believe you testified that that was the case.

A. Yes, that is correct.

Q. If you could improve conformance would you increase oil recovery due to our waterflooding effort?

A. Most definitely.

Q. And every barrel of oil you can increase from a recovery standpoint will prevent waste?

A. That's correct.

Q. Another barrel that you won't leave in the reservoir?

A. That's correct.

Q. All right, sir, let me ask you this. Looking at the location of your seven proposed wells, each one of them appears to be to my eye, at least, and interior location in the unit.

A. They are, indeed.

Q. None of them are close to any of the unit boundaries?

A. No, they're not.

Q. Under these circumstances do you see how approval of the drilling and producing of these wells or later their conversion to injection can in any way adversely affect the correlative rights of any of the offset owners to the north?

A. No, I can not.

Q. Do you have anything else you'd care to add to your testimony here today, Mr. Davidson?

A. I do not.

MR. BUELL: May it please the Examiner, that's all we have by way of direct. I would like to formally offer our Exhibits One, Two, and Three, and tender Mr. Davidson for cross examination.

MR. STAMETS: These exhibits will be admitted. Are there questions of the witness? Mr. Ramey?

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Davidson, why do you want to directionally drill two wells? Do you have a problem with the surface?

A. Yes, sir, the proposed bottom hole locations for both Well 122 and Well 125 lie within streets. This is a highly congested area right here and we've obtained approval over the phone through phone conversations that we will be able to obtain the surface site which we have indicated on these particular exhibits.

Q. Thank you. Do you have a listing of the location of these wells, or is that your application?

A. Yes. Yes, sir.

Q. Do you agree with those?

A. Yes.

MR. STAMETS: I would point out we have one error in advertising. It appears to have been a typographical error. For Well No. 122 we advertised the location as the extreme southeast corner of Unit H, rather than Unit A. I think that the opportunity for error there is obvious, but as the location of the well in Unit A is still interior to the unit, I see no problem with making correction without

having to extend the hearing or re-advertise it.

MR. BUELL: Mr. Examiner, I agree with you completely. It's just a very minor typographical error. I would have full confidence in the validity of any order you would issue under this docket number.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Now your letter of August 29, 1978, this is for Mr. J. M. Brown, sets out the surface location and the bottom hole location of all of these -- sets out the surface location of all wells and the bottom hole location of 122 and 125.

MR. BUELL: Yes, sir.

Q. I presume that letter still is correct?

MR. BUELL: Yes, sir, that is correct. I would have to say this, that I appreciate the manner in which notice was issued. That gives us a little more flexibility locating the well in a corner of a proration unit rather than the specific footages that we included in our application, and I would urge the order of the Commission, if the commission does enter one, will continue the flexibility that they showed in the notice.

Q. Okay, I'm glad that you asked for that. We'll see if we can't produce an order that gives you that flexi-

bility.

MR. BUELL: Yes, sir, and as you pointed out, Mr. Examiner, they're all interior locations in the unit.

Q. Do you propose to locate the bottom hole locations by means of a directional survey?

A. That is correct.

MR. STAMETS: Any other questions of the witness? He may be excused.

Anything further in this case?

MR. BUELL: Mr. Examiner, that's all that we have.

MR. STAMETS: The case will be taken under advisement.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

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

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

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6325 heard by me on 9-13 1976.

Richard L. Stamets, Examiner
Oil Conservation Division

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R. L. Stamets

#12.2-

3920 [illegible]

[illegible]

206.20 E

401.96 N 30-52 E

Single

348.29 N

196.20 E

#125 mu Hi shot

4420 707.65 S

536.09 E

Single shot

4420 714.31 S

531.32 E

Amoco Production Company

Case 6325

P 5833

March 5, 1979

RECEIVED
MAR 09 1979
OIL CONSERVATION DIVISION
SANTA FE

File: VES-420.116-48

Re: Directional Drilling Surveys

New Mexico Oil Conservation Division
P.O. Box 1980
Hobbs, New Mexico 88240

Gentlemen:

Attached are copies of the deviation surveys for the directionally drilled South Hobbs Unit Well Nos. 122 (1726' FNL & 167' FEL, Sec 4, T-19-S, R-38-E) and 125 (2016' FNL & 763' FWL, Sec 3, T-19-S, R-38-E). Please review and advise your approval on future directionally drilled South Hobbs Unit wells for Amoco to run multi-shot to whipstock point then single-shot surveys to TD. This procedure will save Amoco time and the added cost of running an additional multi-shot survey from TD to surface. Please notice that the comparison of the results of these surveys reveals that the single shot from whipstock point to TD survey gives an accurate directional survey.

Yours very truly,

Original Signed by:
V. E. STALEY

V.E. STALEY

RWA:sa

Attachment

cc - Each well file
416 File SHU
NMOCD-Santa Fe

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT WELL NO. 122
LEA COUNTY, NEW MEXICO
EASTMAN WHIPSTOCK, INC.
MAGNETIC MULTI SHOT WT-1178 S-0542
SURVEYOR: DICK CRANDELL 11-30-78
MAGNETIC MULTI SHOT WT-1278 S-0665
SURVEYOR: MIKE TEAFF 12-13-78

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		CLOSURE DISTANCE FEET	CLOSURE DIRECTION D M	DOG LEG SEVERITY DEG/100FT
0.	0 0	0	0.00	0.00	0.00	0.00	0 0	0.0
94.	0 30	N 36 E	94.00	.33 N	.24 E	.41	N 36 0 E	.5
153.	0 45	N 20 E	153.00	.90 N	.54 E	1.05	N 31 7 E	.5
214.	1 0	N 36 E	213.99	1.72 N	.98 E	1.98	N 29 39 E	.6
272.	1 15	N 46 E	271.98	2.56 N	1.74 E	3.10	N 34 9 E	.6
330.	1 0	N 20 E	329.97	3.50 N	2.37 E	4.22	N 34 7 E	1.0
390.	0 30	N 37 E	389.96	4.19 N	2.74 E	5.00	N 33 14 E	.9
449.	0 30	N 85 E	448.96	4.43 N	3.15 E	5.45	N 35 41 E	.7
480.	0 45	S 84 E	479.96	4.42 N	3.52 E	5.65	N 38 29 E	.9
541.	0 45	S 90 E	540.95	4.38 N	4.31 E	6.15	N 44 33 E	.1
602.	1 0	N 71 E	601.94	4.54 N	5.23 E	6.92	N 49 4 E	.6
664.	1 0	N 62 E	663.93	4.97 N	6.22 E	7.96	N 51 24 E	.3
723.	1 0	N 63 E	722.93	5.44 N	7.13 E	8.97	N 52 40 E	.0
786.	1 0	N 80 E	785.92	5.79 N	8.17 E	10.02	N 54 41 E	.5
845.	1 0	S 80 E	844.91	5.79 N	9.20 E	10.87	N 57 48 E	.6
905.	1 0	S 80 E	904.90	5.61 N	10.23 E	11.66	N 61 16 E	0.0
967.	0 45	N 57 E	966.89	5.79 N	11.13 E	12.55	N 62 31 E	1.1
1030.	0 30	S 48 E	1029.89	5.74 N	11.77 E	13.10	N 64 0 E	1.2
1090.	0 30	S 60 E	1089.88	5.44 N	12.19 E	13.35	N 65 59 E	.2
1153.	0 15	S 75 E	1152.88	5.28 N	12.57 E	13.64	N 67 14 E	.4
1215.	0 45	S 60 E	1214.88	5.07 N	13.07 E	14.02	N 68 48 E	.8
1277.	0 45	S 78 E	1276.88	4.78 N	13.83 E	14.63	N 70 55 E	.4
1339.	0 45	N 84 E	1338.87	4.74 N	14.63 E	15.38	N 72 3 E	.4
1401.	1 0	N 84 E	1400.86	4.84 N	15.58 E	16.31	N 72 45 E	.4
1461.	1 0	N 68 E	1460.85	5.09 N	16.59 E	17.35	N 72 56 E	.5
1524.	1 0	N 50 E	1523.84	5.65 N	17.53 E	18.42	N 72 7 E	.5
1621.	1 0	N 52 E	1620.83	6.72 N	18.84 E	20.01	N 70 22 E	.0
1652.	1 0	N 50 E	1651.82	7.06 N	19.26 E	20.52	N 69 52 E	.1
1713.	1 45	N 47 E	1712.81	8.03 N	20.36 E	21.89	N 68 28 E	1.2
1775.	4 0	N 37 E	1774.72	10.34 N	22.44 E	24.70	N 65 16 E	3.7

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		CLOSURE DISTANCE FEET	CLOSURE DIRECTION D M	DOG LEG SEVERITY DEG/100FT
1836.	6 15	N 33 E	1835.48	14.80 N	25.56 E	29.54	N 59 56 E	3.7
1898.	7 0	N 36 E	1897.06	20.69 N	29.61 E	36.13	N 55 3 E	1.3
1960.	7 45	N 34 E	1958.55	27.21 N	34.18 E	43.69	N 51 28 E	1.3
2021.	8 30	N 35 E	2018.94	34.32 N	39.06 E	52.00	N 48 42 E	1.3
2083.	9 45	N 35 E	2080.15	42.37 N	44.70 E	61.59	N 46 32 E	2.0
2145.	10 45	N 36 E	2141.16	51.35 N	51.11 E	72.45	N 44 52 E	1.6
2206.	11 0	N 35 E	2201.06	60.72 N	57.79 E	83.83	N 43 35 E	.5
2268.	11 15	N 36 E	2261.90	70.46 N	64.74 E	95.69	N 42 34 E	.5
2329.	11 15	N 36 E	2321.73	80.09 N	71.73 E	107.52	N 41 51 E	0.0
2391.	11 30	N 36 E	2382.51	89.98 N	78.92 E	119.69	N 41 15 E	.4
2484.	11 0	N 35 E	2473.72	104.75 N	89.45 E	137.75	N 40 30 E	.6
2545.	11 15	N 37 E	2533.58	114.28 N	96.37 E	149.49	N 40 9 E	.8
2607.	11 0	N 36 E	2594.41	123.89 N	103.49 E	161.43	N 39 52 E	.5
2669.	10 45	N 37 E	2655.30	133.29 N	110.45 E	173.11	N 39 39 E	.5
2730.	10 30	N 37 E	2715.25	142.28 N	117.21 E	184.34	N 39 29 E	.4
2792.	10 0	N 38 E	2776.26	151.03 N	123.93 E	195.37	N 39 22 E	.9
2853.	8 15	N 35 E	2836.49	158.80 N	129.68 E	205.03	N 39 14 E	3.0
2915.	8 15	N 36 E	2897.85	166.05 N	134.85 E	213.91	N 39 5 E	.2
2977.	8 0	N 37 E	2959.22	173.09 N	140.06 E	222.66	N 38 59 E	.5
3038.	7 45	N 37 E	3019.65	179.77 N	145.09 E	231.01	N 38 54 E	.4
3100.	7 30	N 35 E	3081.10	186.42 N	149.93 E	239.23	N 38 48 E	.6
3162.	8 0	N 33 E	3142.53	193.35 N	154.60 E	247.56	N 38 39 E	.9
3223.	8 15	N 36 E	3202.92	200.46 N	159.49 E	256.16	N 38 30 E	.8
3285.	9 0	N 36 E	3264.22	207.98 N	164.95 E	265.45	N 38 25 E	1.2
3346.	10 15	N 23 E	3324.36	216.84 N	169.96 E	275.51	N 38 5 E	4.1
3408.	11 0	N 17 E	3385.30	227.57 N	173.87 E	286.39	N 37 23 E	2.2
3470.	11 30	N 19 E	3446.10	239.08 N	177.61 E	297.83	N 36 37 E	1.0
3531.	12 0	N 18 E	3505.83	250.86 N	181.55 E	309.66	N 35 54 E	.9
3593.	12 45	N 16 E	3566.38	263.56 N	185.43 E	322.26	N 35 8 E	1.4
3655.	13 30	N 17 E	3626.76	277.06 N	189.43 E	335.63	N 34 22 E	1.3

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET	CLOSURE DISTANCE FEET	CLOSURE DIRECTION D M	DOG LEG SEVERITY DEG/100FT
3716.	14 0	N 15 E	3686.02	291.00 N 193.43 E	349.42	N 33 37 E	1.1
3778.	14 45	N 13 E	3746.07	305.93 N 197.15 E	363.96	N 32 48 E	1.5
3839.	15 30	N 14 E	3804.96	321.41 N 200.87 E	379.01	N 32 0 E	1.3
3901.	16 15	N 12 E	3864.60	337.93 N 204.68 E	395.09	N 31 12 E	1.5
3927.	16 15	N 12 E	3889.56	345.05 N 206.20 E	401.96	N 30 52 E	0.0

FINAL CLOSURE - DIRECTION: N 30 DEGS 51 MINS 42 SECS E
DISTANCE: 401.96 FEET

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT WELL NO. 122
LEA COUNTY, NEW MEXICO
MAGNETIC MULTISHOT SURVEY WT1178-S0542
SINGLE SHOT SURVEY WT1178-D0499
EASTMAN WHIPSTOCK, INC.
FEBRUARY 15, 1979

PLANE OF PROPOSED DIRECTION IS N 21 DEG. 31 MIN. E

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOG LEG SEVERITY DEG/100FT
0.	0 0	0	0.00	0.00	0.00	0.00	0.0
94.	0 30	N 36 E	94.00	.40	.33 N	.24 E	.5
153.	0 45	N 20 E	153.00	1.03	.90 N	.54 E	.5
214.	1 0	N 36 E	213.99	1.96	1.72 N	.98 E	.6
272.	1 15	N 46 E	271.98	3.02	2.56 N	1.74 E	.6
330.	1 0	N 20 E	329.97	4.12	3.50 N	2.37 E	1.0
390.	0 30	N 37 E	389.96	4.90	4.19 N	2.74 E	.9
449.	0 30	N 85 E	448.96	5.29	4.43 N	3.18 E	.7
480.	0 45	S 84 E	479.96	5.41	4.42 N	3.52 E	.9
541.	0 45	S 90 E	540.95	5.66	4.38 N	4.31 E	.1
602.	1 0	N 71 E	601.94	6.14	4.54 N	5.23 E	.6
664.	1 0	N 62 E	663.93	6.90	4.97 N	6.22 E	.3
723.	1 0	N 63 E	722.93	7.68	5.44 N	7.13 E	.0
786.	1 0	N 80 E	785.92	8.38	5.79 N	8.17 E	.5
845.	1 0	S 80 E	844.91	8.76	5.79 N	9.20 E	.6
905.	1 0	S 80 E	904.90	8.97	5.61 N	10.23 E	0.0
967.	0 45	N 57 E	966.89	9.47	5.79 N	11.13 E	1.1
1030.	0 30	S 48 E	1029.89	9.66	5.74 N	11.77 E	1.2
1090.	0 30	S 60 E	1089.88	9.53	5.44 N	12.19 E	.2
1153.	0 15	S 75 E	1152.88	9.52	5.28 N	12.57 E	.4
1215.	0 45	S 60 E	1214.88	9.51	5.07 N	13.07 E	.8
1277.	0 45	S 78 E	1276.88	9.52	4.78 N	13.83 E	.4
1339.	0 45	N 84 E	1338.87	9.78	4.74 N	14.63 E	.4
1401.	1 0	N 84 E	1400.86	10.21	4.84 N	15.58 E	.4
1461.	1 0	N 68 E	1460.85	10.82	5.09 N	16.59 E	.5
1524.	1 0	N 50 E	1523.84	11.69	5.65 N	17.53 E	.5
1670.	0 45	N 0 E	1669.83	13.84	7.61 N	18.44 E	.5
1739.	3 15	N 32 E	1738.78	16.21	9.90 N	19.10 E	3.8
1759.	4 45	N 34 E	1758.73	17.58	11.07 N	19.85 E	7.5
1818.	5 45	N 32 E	1817.48	22.87	15.59 N	22.79 E	1.7

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOG LEG SEVERITY DEG/100FT
1910.	7 15	N 35 E	1908.89	33.05	24.28 N	28.54 E	1.7
2034.	9 15	N 35 E	2031.60	50.36	38.85 N	38.75 E	1.6
2156.	10 45	N 36 E	2151.74	70.91	56.10 N	51.05 E	1.2
2239.	11 0	N 35 E	2233.25	86.11	68.85 N	60.14 E	.4
2366.	11 0	N 35 E	2357.92	109.67	88.70 N	74.04 E	0.0
2491.	11 0	N 36 E	2480.62	132.82	108.11 N	87.89 E	.2
2609.	10 45	N 36 E	2596.50	154.37	126.13 N	100.98 E	.2
2734.	10 45	N 37 E	2719.31	176.69	144.87 N	114.85 E	.1
2813.	8 15	N 32 E	2797.22	189.59	155.61 N	122.23 E	3.3
2880.	8 0	N 30 E	2863.55	198.93	163.72 N	127.11 E	.6
2975.	7 45	N 33 E	2957.65	211.75	174.82 N	133.91 E	.5
3065.	7 15	N 33 E	3046.88	223.26	184.67 N	140.30 E	.6
3151.	7 30	N 33 E	3132.17	234.08	193.93 N	146.32 E	.3
3238.	8 30	N 35 E	3218.32	245.98	203.97 N	153.09 E	1.2
3300.	9 45	N 22 E	3279.53	255.64	212.59 N	157.77 E	3.9
3368.	10 15	N 19 E	3346.50	267.45	223.65 N	161.90 E	1.1
3459.	11 45	N 18 E	3435.83	284.78	240.12 N	167.41 E	1.7
3548.	12 15	N 17 E	3522.88	303.24	257.76 N	172.98 E	.6
3672.	13 30	N 16 E	3643.76	330.77	284.26 N	180.82 E	1.0
3762.	14 30	N 14 E	3731.09	352.40	305.29 N	186.46 E	1.2
3902.	16 15	N 12 E	3866.07	389.10	341.45 N	194.81 E	1.3
3927.	16 15	N 12 E	3890.07	396.00	348.29 N	196.26 E	0.0

FINAL CLOSURE - DIRECTION: N 29 DEGS 24 MINS 4 SECS E
DISTANCE: 399.78 FEET

AMOCO PRODUCTION COMPANY
SOUTH HOBBS UNIT WELL NO. 125
LEA COUNTY, NEW MEXICO
MAGNETIC MULTISHOT SURVEY WT1278-S0701
SINGLE SHOT SURVEY WT1278-00690
EASTMAN WHIPSTOCK, INC.
FEBRUARY 15, 1979

PLANE OF PROPOSED DIRECTION IS S 41 DEG. 44 MIN. E

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOG LEG SEVERITY DEG/100FT
134.	0 0	0	134.00	0.00	0.00	0.00	0.0
195.	0 30	S 31 W	195.00	.08	.23 S	.14 W	.8
255.	0 45	S 52 W	255.00	.16	.72 S	.57 W	.6
316.	0 45	S 57 W	315.99	.07	1.18 S	1.22 W	.1
376.	0 45	S 36 W	375.99	.09	1.72 S	1.78 W	.5
436.	0 45	S 20 W	435.98	.36	2.41 S	2.15 W	.3
497.	0 45	S 5 E	496.97	.88	3.19 S	2.26 W	.5
557.	0 30	S 34 W	556.97	1.24	3.81 S	2.42 W	.8
618.	0 30	S 36 W	617.97	1.36	4.25 S	2.72 W	.0
678.	0 15	S 24 W	677.97	1.48	4.59 S	2.92 W	.4
739.	0 15	S 5 E	738.97	1.65	4.85 S	2.96 W	.2
799.	0 30	S 16 W	798.97	1.91	5.24 S	3.00 W	.5
859.	0 15	S 33 W	858.96	2.07	5.59 S	3.16 W	.5
920.	0 15	S 22 E	919.96	2.24	5.85 S	3.19 W	.4
980.	0 0	0	979.96	2.37	5.97 S	3.14 W	.4
1041.	0 30	S 3 W	1040.96	2.56	6.24 S	3.15 W	.8
1101.	0 30	S 5 W	1100.96	2.92	6.76 S	3.19 W	.0
1161.	0 30	S 50 W	1160.96	3.10	7.21 S	3.42 W	.6
1222.	0 45	S 60 W	1221.95	3.03	7.59 S	3.97 W	.4
1282.	0 30	S 38 W	1281.95	3.02	8.02 S	4.46 W	.6
1343.	1 15	S 48 W	1342.94	3.10	8.70 S	5.09 W	1.3
1403.	0 30	S 28 W	1402.94	3.27	9.42 S	5.65 W	1.3
1464.	0 45	S 34 W	1463.93	3.46	9.99 S	6.00 W	.4
1524.	1 0	S 46 W	1523.93	3.59	10.69 S	6.58 W	.5
1559.	0 45	S 40 W	1558.92	3.64	11.08 S	6.95 W	.8
1668.	0 45	S 24 W	1667.91	4.04	12.29 S	7.70 W	.2
1778.	2 45	S 16 E	1777.85	6.34	15.57 S	7.93 W	2.0
1808.	3 45	S 29 E	1807.81	7.94	17.14 S	7.28 W	4.1
1826.	5 15	S 33 E	1825.75	9.33	18.35 S	6.55 W	8.5
1916.	7 30	S 39 E	1915.19	19.27	26.43 S	.68 W	2.6

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES FEET		DOG LEG SEVERITY DEG/100FT
2007.	8 15	S 40 E	2005.33	31.72	36.05 S	7.25 E	.8
2128.	10 30	S 40 E	2124.71	51.42	51.15 S	19.92 E	1.9
2251.	12 45	S 40 E	2245.17	76.20	70.13 S	35.85 E	1.8
2371.	15 0	S 40 E	2361.67	104.96	92.17 S	54.34 E	1.9
2494.	17 0	S 40 E	2479.69	138.84	118.14 S	76.13 E	1.6
2651.	19 45	S 41 E	2628.88	188.32	155.77 S	108.27 E	1.8
2767.	21 15	S 40 E	2737.53	228.93	186.66 S	134.65 E	1.3
2894.	21 30	S 39 E	2855.79	275.16	222.38 S	164.10 E	.3
3021.	20 30	S 36 E	2974.35	320.57	258.48 S	191.80 E	1.2
3144.	20 0	S 36 E	3089.75	362.93	292.92 S	216.82 E	.4
3268.	19 0	S 34 E	3206.64	404.03	326.83 S	240.56 E	1.0
3337.	19 45	S 35 E	3271.73	426.74	345.69 S	253.53 E	1.2
3396.	22 0	S 33 E	3326.85	447.57	363.12 S	265.28 E	4.0
3521.	23 0	S 34 E	3442.34	494.91	403.01 S	291.68 E	.9
3611.	24 0	S 34 E	3524.87	530.47	432.76 S	311.75 E	1.1
3670.	24 15	S 39 E	3578.72	554.48	452.14 S	326.09 E	3.5
3726.	25 0	S 41 E	3628.62	577.80	470.01 S	341.09 E	2.0
3886.	26 15	S 42 E	3773.88	646.99	521.84 S	386.94 E	.8
4030.	28 15	S 44 E	3901.90	712.90	570.05 S	431.90 E	1.5
4120.	28 0	S 40 E	3981.27	755.32	601.57 S	460.28 E	2.1
4180.	27 15	S 36 E	4034.43	783.08	623.49 S	477.41 E	3.3
4240.	26 0	S 35 E	4088.07	809.81	645.38 S	493.02 E	2.2
4300.	24 45	S 35 E	4142.28	835.34	666.45 S	507.77 E	2.1
4360.	24 45	S 34 E	4196.76	860.26	687.15 S	522.00 E	.7
4420.	24 15	S 35 E	4251.36	884.94	707.65 S	536.09 E	1.1

FINAL CLOSURE - DIRECTION: S 37 DEGS 8 MINS 46 SECS E
DISTANCE: 887.79 FEET

HOCO PRODUCTION COMPANY
OUTH HOBBS UNIT WELL NO. 125
EA COUNTY, NEW MEXICO
ASTMAN CHRISTOCK, INC.
AGNETIC MULTI SHOT WT-1278 S-0701
URVEYOR: MIKE TEAFF 12-18-78
AGNETIC MULTI SHOT WT-1278 S-0711
URVEYOR: MIKE TEAFF 12-29-78
AGNETIC MULTI SHOT WT-1278 S-0712
2-13-79

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		CLOSURE DISTANCE FEET	CLOSURE DIRECTION D M	DOG LEG SEVERITY DEG/100FT
0.	0 0	0	0.00	0.00	0.00	0.00	0 0	0.0
195.	0 30	S 31 W	195.00	.73 S	.44 W	.85	S 31 0 W	.3
255.	0 45	S 52 W	254.99	1.22 S	.87 W	1.50	S 35 33 W	.6
316.	0 45	S 57 W	315.99	1.68 S	1.52 W	2.27	S 42 7 W	.1
376.	0 45	S 36 W	375.98	2.22 S	2.09 W	3.04	S 43 15 W	.5
436.	0 45	S 20 W	435.98	2.91 S	2.45 W	3.81	S 40 9 W	.3
497.	0 45	S 5 E	496.97	3.69 S	2.56 W	4.49	S 34 41 W	.5
557.	0 30	S 34 W	556.97	4.32 S	2.72 W	5.10	S 32 12 W	.8
618.	0 30	S 36 W	617.97	4.75 S	3.02 W	5.63	S 32 28 W	.0
678.	0 15	S 24 W	677.97	5.09 S	3.22 W	6.02	S 32 18 W	.4
739.	0 15	S 5 E	738.97	5.35 S	3.26 W	6.27	S 31 22 W	.2
799.	0 30	S 16 W	798.96	5.74 S	3.30 W	6.62	S 29 54 W	.5
859.	0 15	S 33 W	858.96	6.10 S	3.46 W	7.01	S 29 36 W	.5
920.	0 15	S 22 E	919.96	6.35 S	3.49 W	7.24	S 28 46 W	.4
980.	0 0	0	979.96	6.47 S	3.44 W	7.33	S 27 58 W	.4
1041.	0 30	S 3 W	1040.96	6.74 S	3.45 W	7.57	S 27 7 W	.8
1101.	0 30	S 5 W	1100.96	7.26 S	3.49 W	8.05	S 25 40 W	.0
1161.	0 30	S 50 W	1160.96	7.71 S	3.72 W	8.56	S 25 46 W	.6
1222.	0 45	S 60 W	1221.95	8.09 S	4.27 W	9.15	S 27 48 W	.4
1282.	0 30	S 36 W	1281.95	8.52 S	4.76 W	9.76	S 29 11 W	.6
1343.	1 15	S 48 W	1342.94	9.20 S	5.39 W	10.67	S 30 23 W	1.3
1403.	0 30	S 28 W	1402.93	9.92 S	5.95 W	11.57	S 30 59 W	1.3
1464.	0 45	S 34 W	1463.93	10.49 S	6.30 W	12.23	S 30 59 W	.4
1524.	1 0	S 46 W	1523.92	11.19 S	6.88 W	13.14	S 31 36 W	.5
1559.	0 45	S 40 W	1558.92	11.58 S	7.25 W	13.66	S 32 3 W	.8
1626.	0 45	S 34 W	1625.91	12.28 S	7.78 W	14.54	S 32 21 W	.1
1688.	1 0	S 35 W	1687.91	13.06 S	8.31 W	15.48	S 32 29 W	.4
1750.	3 0	S 10 W	1749.87	15.04 S	9.13 W	17.60	S 31 16 W	3.4
1811.	4 15	S 28 E	1810.74	18.78 S	8.54 W	20.64	S 24 27 W	4.3
1873.	6 15	S 35 E	1872.48	23.62 S	5.58 W	24.27	S 13 18 W	3.4

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		CLOSURE DISTANCE FEET	CLOSURE DIRECTION D M	DOG LEG SEVERITY DEG/100FT
1935.	7 15	S 40 E	1934.05	29.40 S	1.15 W	29.42	S 2 14 W	1.9
1997.	8 0	S 39 E	1995.50	35.75 S	4.09 E	35.98	S 6 31 E	1.2
2058.	9 15	S 41 E	2055.61	42.75 S	9.97 E	43.90	S 13 7 E	2.1
2120.	10 0	S 39 E	2116.94	50.69 S	16.63 E	53.35	S 18 10 E	1.3
2162.	11 0	S 38 E	2177.90	59.54 S	23.66 E	64.07	S 21 41 E	1.6
2243.	12 15	S 40 E	2237.64	69.09 S	31.40 E	75.89	S 24 26 E	2.2
2305.	13 0	S 38 E	2298.14	79.62 S	39.93 E	89.07	S 26 38 E	1.4
2367.	14 15	S 41 E	2359.40	90.89 S	49.21 E	103.36	S 28 26 E	2.3
2429.	15 30	S 41 E	2418.32	102.90 S	59.66 E	118.94	S 30 6 E	2.0
2490.	16 30	S 39 E	2476.96	115.78 S	70.46 E	135.53	S 31 20 E	1.9
2552.	17 45	S 40 E	2535.21	129.86 S	82.08 E	153.63	S 32 18 E	2.1
2614.	19 0	S 41 E	2595.04	144.73 S	94.77 E	172.99	S 33 13 E	2.1
2675.	20 0	S 39 E	2652.54	160.32 S	107.86 E	193.23	S 33 56 E	2.0
2737.	21 0	S 40 E	2710.62	177.08 S	121.67 E	214.85	S 34 30 E	1.7
2799.	21 45	S 40 E	2768.35	194.39 S	136.19 E	237.35	S 35 1 E	1.2
2861.	22 0	S 38 E	2825.89	212.34 S	150.73 E	260.40	S 35 22 E	1.3
2922.	21 45	S 36 E	2882.50	230.25 S	164.72 E	283.10	S 35 35 E	.4
2984.	21 45	S 38 E	2940.08	248.35 S	178.87 E	306.06	S 35 46 E	0.0
3046.	21 0	S 37 E	2997.82	266.28 S	192.62 E	328.65	S 35 53 E	1.3
3107.	20 30	S 36 E	3054.06	283.65 S	205.48 E	350.26	S 35 55 E	1.0
3169.	20 0	S 35 E	3113.03	301.12 S	217.94 E	371.71	S 35 54 E	1.0
3231.	19 30	S 35 E	3171.38	318.28 S	229.95 E	392.66	S 35 51 E	.8
3292.	19 15	S 35 E	3228.93	334.86 S	241.56 E	412.90	S 35 48 E	.4
3354.	21 30	S 33 E	3287.04	352.75 S	253.63 E	434.47	S 35 43 E	3.8
3416.	22 15	S 33 E	3344.58	372.13 S	266.21 E	457.55	S 35 35 E	1.2
3478.	23 0	S 32 E	3401.81	392.24 S	279.03 E	481.36	S 35 26 E	1.4
3539.	23 15	S 33 E	3457.91	412.45 S	291.90 E	505.29	S 35 17 E	.8
3601.	24 0	S 34 E	3514.71	433.17 S	305.61 E	530.12	S 35 12 E	1.4
3663.	24 45	S 35 E	3571.18	454.25 S	320.11 E	555.71	S 35 10 E	1.4
3724.	25 0	S 40 E	3626.52	474.60 S	335.72 E	581.34	S 35 16 E	3.5

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	TRUE VERTICAL DEPTH FEET	RECTANGULAR COORDINATES FEET		CLOSURE DISTANCE FEET	CLOSURE DIRECTION D M	DOG LEG SEVERITY DEG/100FT
3786.	25 15	S 41 E	3682.66	494.62 S	352.62 E	607.56	S 35 30 E	.8
3848.	26 15	S 41 E	3738.50	514.95 S	370.49 E	634.38	S 35 44 E	1.6
3910.	27 0	S 42 E	3793.92	535.76 S	388.90 E	662.03	S 35 59 E	1.4
3971.	27 45	S 43 E	3848.09	556.44 S	407.85 E	689.90	S 36 14 E	1.4
4033.	28 30	S 44 E	3902.77	577.64 S	427.97 E	718.90	S 36 32 E	1.4
4120.	28 0	S 40 E	3979.41	608.23 S	455.51 E	759.90	S 36 50 E	2.3
4180.	27 15	S 36 E	4032.57	630.15 S	472.64 E	787.70	S 36 52 E	3.3
4240.	26 0	S 35 E	4086.20	652.04 S	488.25 E	814.59	S 36 50 E	2.2
4300.	24 45	S 35 E	4140.41	673.10 S	503.00 E	840.28	S 36 46 E	2.1
4360.	24 45	S 34 E	4194.90	693.81 S	517.23 E	865.38	S 36 42 E	.7
4420.	24 15	S 35 E	4249.50	714.31 S	531.32 E	890.25	S 36 39 E	1.1

FINAL CLOSURE - DIRECTION: S 36 DEGS 38 MINS 34 SECS E
DISTANCE: 890.25 FEET

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

JERRY APODACA
GOVERNOR

NICK FRANKLIN
SECRETARY

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

Re: CASE NO. 6325
ORDER NO. R-5833

Mr. Guy Buell, Attorney
Amoco Production Company
P. O. Box 3092
Houston, Texas 77001

Applicant:

Amoco Production 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 OCC x
Artesia OCC x
Aztec OCC

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. 6325
Order No. R-5833

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

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 13, 1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 20th day of October, 1978, 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, Amoco Production Company, seeks approval for the unorthodox locations of the following South Hobbs Unit Wells located in Township 19 South, Range 38 East, Hobbs Pool, Lea County, New Mexico:

WELL NO.	LOCATION	SECTION
120	1272' FNL and 1420' FWL	5
121	1450' FNL and 150' FWL	4
123	2390' FNL and 150' FEL	6
124	1925' FSL and 2380' FEL	4
126	1295' FSL and 1365' FWL	10

(3) That the applicant further seeks authority for the directional drilling of two wells on its South Hobbs Unit, Hobbs Pool, Lea County, New Mexico, both in Township 19 South, Range 38 East, as follows:

Well No. 122, surface location 1726 feet from the North line and 167 feet from the East line of Section 4, bottom-hole location within 100 feet of a point 1315 feet from the North line and 5 feet from the East line of Section 4;

Well No. 125, surface location 2016 feet from the North line and 763 feet from the West line of Section 3, bottom-hole location within 100 feet of a point 2635 feet from the North line and 1315 feet from the West line of said Section 3.

(4) That the applicant seeks authority to directionally drill said wells to permit the surface locations to be more distant from streets in the City of Hobbs.

(5) That the applicant should be required to determine the subsurface location of the bottom of the holes by means of continuous multi-shot directional drilling, if said wells are to be completed as producing wells.

(6) That the wells at the proposed unorthodox locations and at the proposed directionally drilled bottom-hole locations are to permit the applicant to evaluate the effectiveness of its South Hobbs Unit Pressure Maintenance Project and to increase the ultimate recovery therefrom.

(7) That approval of the subject application will prevent the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized the unorthodox locations of the following South Hobbs Unit Wells located in Township 19 South, Range 38 East, Hobbs Pool, Lea County, New Mexico:

WELL NO.	LOCATION	SECTION
120	1272' FNL and 1420' FWL	5
121	1450' FNL and 150' FWL	4
123	2390' FNL and 150' FEL	6
124	1925' FSL and 2380' FEL	4
126	1295' FSL and 1365' FWL	10

IT IS FURTHER ORDERED:

(1) That the applicant is hereby authorized to directionally drill two wells on its South Hobbs Unit, Hobbs Pool, Lea County, New Mexico, both in Township 19 South, Range 38 East, as follows:

Well No. 122, surface location 1726 feet from the North line and 167 feet from the East line of Section 4, bottom-hole location within 100 feet of a point 1315 feet from the North line and 5 feet from the East line of Section 4;

Well No. 125, surface location 2016 feet from the North line and 763 feet from the West line of Section 3, bottom-hole location within 100 feet of a point 2635 feet from the North line and 1315 feet from the West line of said Section 3.

PROVIDED HOWEVER, that subsequent to the above-described directional drilling, should said wells be producers, 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 Division, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the Division's Hobbs district office of the date and time said surveys are to be commenced.

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

(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 herein-above designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E
fd/

ATWOOD, MALONE, MANN & COOTER
A PROFESSIONAL ASSOCIATION
LAWYERS

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

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
BRIAN W. COPPLE

RANDAL W. ROBERTS

September 7, 1978

Mr. Joe D. Ramey
Secretary-Director
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Examiner Hearing September 13, 1978
Case No. 6325

Dear Mr. Ramey:

We would appreciate your filing the enclosed Entry of Appearance for Amoco Production Company in Case No. 6325.

Thank you and with regards, I am

Very truly yours,

Paul Cooter

PC/le

Encl.

cc: Guy Buell, Esq.
w/encl.

BEFORE THE OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION)
OF AMOCO PRODUCTION COMPANY FOR)
UNORTHODOX LOCATIONS AND DIRECTIONAL) Case No. 6325
DRILLING, LEA COUNTY, NEW MEXICO.)

ENTRY OF APPEARANCE

The undersigned hereby enter appearance herein in behalf of AMOCO PRODUCTION COMPANY, with Guy Buell of Houston, Texas.

ATWOOD, MALONE, MANN & COOTER, P.A.

By _____

P. O. Drawer 700
Roswell, New Mexico 88201

Attorneys for Amoco Production Company

Dockets Nos. 31-78 and 32-78 are tentatively set for hearing on September 27 and October 11, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - MONDAY - SEPTEMBER 11, 1978

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6289: (Continued from August 23, 1978, Commission Hearing)

Application of Bill Taylor for enforcement and amendment of Order No. R-5332, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a determination of well costs, an accounting of expenditures and costs withheld from production, and the amendment of Order No. R-5332 to remove the present operator of the pooled proration unit comprising the N/2 of Section 13, Township 22 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, and designate another operator for said unit.

CASE 6146: (DE NOVO)

Application of Jerome P. McHugh for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Tapacito-Gallup and Basin-Dakota production within the wellbore of his Jicarilla Well No. 5 located in Unit D of Section 29, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

Upon application of Jerome P. McHugh this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 6328: Application of Maralo, Inc., for statutory unitization, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order unitizing, for the purpose of secondary recovery, all mineral interests in the Jalmat Yates Unit underlying the following described lands in Township 25 South, Range 36 East:

Section 12: SE/4
Section 13: NE/4

and the following described lands in Township 25 South, Range 37 East:

Section 18: NW/4 and N/2 SW/4

all in Lea County, New Mexico.

The unitized interval would be all formations or zones extending from the top of the Yates formation down to 100 feet below the base of the Queen formation in the Humble-Winters "A" Well No. 2 located in Unit C of Section 18, Township 25 South, Range 37 East.

Among the matters to be considered at the hearing will be the necessity of unit operations; the designation of a unit operator; the determination of the horizontal and vertical limits of the unit area; the determination of a fair, reasonable, and equitable allocation of production and costs of production, including capital investment, to each of the various tracts in the unit area; the determination of credits and charges to be made among the various owners in the unit area for their investment in wells and equipment; and such other matters as may be necessary and appropriate for carrying on efficient unit operations, including, but not necessarily limited to, unit voting procedures, selection, removal, or substitution of unit operator, and time of commencement and termination of unit operations.

CASE 6313: Application of Maralo, Inc., for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its Jalmat Yates Unit Area, Lea County, New Mexico, by the injection of water into various wells located in Township 25 South, Ranges 36 and 37 East.

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 13, 1978

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

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

ALLOWABLE: (1) Consideration of the allowable production of gas for October, 1978, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for October, 1978, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 6314: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Overland Drilling & Exploration, Ltd., Ohio Casualty Insurance Company, and all other interested parties to appear and show cause why the Lowe State Well No. 1 located in Unit E of Section 15, Township 19 South, Range 29 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6315: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Hugh L. Johnston, Sr., General Insurance Co. of America, and all other interested parties to appear and show cause why the Continental State Well No. 5 located in Unit C of Section 30, Township 17 South, Range 29 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6316: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Cortez Corporation, Aetna Casualty & Surety Company, and all other interested parties to appear and show cause why the Fair Well No. 1 located in Unit D of Section 24, Township 18 South, Range 26 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6290: (Continued from August 16, 1978, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit R. A. Crane, Jr., Great American Insurance Co., and all other interested parties to appear and show cause why the Donella Well No. 1 located in Unit P of Section 3, Township 29 North, Range 15 West, San Juan County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6307: (Continued from August 30, 1978, Examiner Hearing)

Application of Exxon Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Drinkard and Wantz-Abo production in the wellbore of its F. F. Hardison B Well No. 10, located in Unit A of Section 34, Township 21 South, Range 37 East, Lea County, New Mexico. (This case will be dismissed.)

CASE 6317: Application of Harvey E. Yates Company for an unorthodox gas well location and a non-standard proration unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 301.75-acre non-standard gas proration unit comprising the N/2 of Section 18, Township 18 South, Range 29 East, Eddy County, New Mexico, to be dedicated to a well to be drilled 1980 feet from the North line and 660 feet from the East line of said Section 18 to test the Morrow formation.

CASE 6318: Application of Coquina Oil Corporation for an increase in casinghead gas allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 303 C 4 to increase the casinghead gas allowable for its Vivian Well No. 1, located in Unit F of Section 30, Township 22 South, Range 38 East, Lea County, New Mexico, the Drinkard and Granite Wash zones in said well being commingled pursuant to Order No. DHC-255 and subject to the GOR limit for the Wantz-Granite Wash Pool.

CASE 6319: Application of Belco Petroleum Corporation for an unorthodox well location and compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp formation underlying the N/2 of Section 31, Township 21 South, Range 27 East, Eddy County, New Mexico, to be dedicated to its Mollie Com Well No. 1 located at an unorthodox location 1100 feet from the North line and 1575 feet from the East line of said section. Also to be considered will be the cost of recompleting 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 6320: Application of Texas Oil & Gas 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 Coquina Federal Com. Well No. 1 to be drilled 660 feet from the North line and 1980 feet from the West line of Section 32, Township 18 South, Range 27 East, to test the Morrow formation, the W/2 of said Section 32 to be dedicated to the well.

CASE 6321: Application of Texas Oil & Gas 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 Shugart State Com. Well No. 1 to be drilled 660 feet from the South line and 1980 feet from the West line of Section 16, Township 18 South, Range 31 East, Eddy County, New Mexico, to test the Wolfcamp and Pennsylvanian formations, the W/2 of said Section 16 to be dedicated to the well.

CASE 6283: (Continued from August 2, 1978, Examiner Hearing)

Application of Texas Oil & Gas Corporation for a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 320-acre non-standard gas proration unit comprising the W/2 of Section 16, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon.

CASE 6322: Application of Yates Petroleum Corporation for pool contraction, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-391 to contract the horizontal limits of the Empire-Pennsylvanian Gas Pool to the following:

All of Sections 28 and 29, Township 17 South, Range 28 East

In the alternative, applicant seeks to limit the special pool rules for said pool to the present horizontal limits of the pool.

CASE 6323: Application of Yates Petroleum Corporation for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the W/2 of Section 23, Township 17 South, Range 28 East, Empire-Pennsylvanian Gas Pool, Eddy County, New Mexico, to be dedicated to its Lucas Store JZ Well No. 1 located at an unorthodox location 1980 feet from the North line and 860 feet from the West line of said section. Also to be considered will be the cost of 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 6324: Application of Yates Petroleum Corporation for downhole commingling or pool creation, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Wolfcamp and Upper Penn gas production in the wellbore of its Box Canyon GJ Fed. Well No. 1 located in Unit J of Section 13, Township 21 South, Range 21 East, Eddy County, New Mexico. In the alternative, applicant seeks the creation of a new Permo-Penn gas pool for said well.

CASE 6325: Application of Amoco Production Company for unorthodox locations and directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox locations of the following South Hobbs Unit wells located in Township 19 South, Range 38 East, Hobbs Pool, Lea County, New Mexico:

Well No. 120 located 1272 feet from the North line and 1420 feet from the West line of Section 5;
Well No. 121 located 1450 feet from the North line and 150 feet from the West line of Section 4;
Well No. 123 located 2390 feet from the North line and 150 feet from the East line of Section 6;
Well No. 124 located 1925 feet from the South line and 2380 feet from the East line of Section 4;
Well No. 126 located 1295 feet from the South line and 1365 feet from the West line of Section 10;
Well No. 122 located 1726 feet from the North line and 167 feet from the East line of Section 4;
and Well No. 125 located 2016 feet from the North line and 763 feet from the West line of Section 3.

Applicant further seeks authority to directionally drill wells Nos. 122 and 125 to bottomhole locations in the extreme southeast corners of Unit H of Section 4 and Unit E of Section 3, respectively.

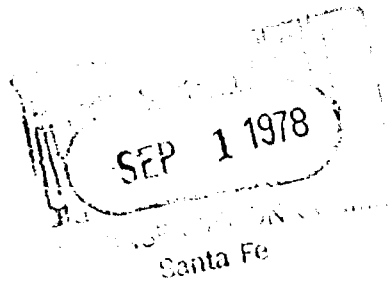
CASE 6326: Application of Energy Reserves Group, Inc., for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle South Blanco-Pictured Cliffs and Otero-Chacra production in the wellbore of its Jicarilla 35 Well No. 3, located in Unit B of Section 2, Township 24 North, Range 5 West, Rio Arriba County, New Mexico.

CASE 6327: Application of O. H. Berry for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its J. L. Isabell Well No. 5-Y located 340 feet from the North line and 330 feet from the East line of Section 15, Township 24 South, Range 36 East, Santa Rosa formation, Lea County, New Mexico, the NE/4 of said Section 15 to be dedicated to the well.

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

J. M. Brown
Division Engineering
Manager

August 29, 1978



File: TBM-986.51NM-4572

Re: Application for Hearing
Unorthodox Well Locations
and directional drilling.
Hobbs Pool
Lea County, New Mexico

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attention: Mr. Joe D. Ramey

Gentlemen:

Confirming telephone request of August 22, 1978 to Mr. Richard L. Stamets, Amoco Production Company requests a hearing to obtain approval of unorthodox locations for the following wells in the South Hobbs Unit, Hobbs Field, Lea County, New Mexico:

South Hobbs Unit No.	Location (All in T-19-S, R-38-E)
120	1272' FNL & 1420' FWL, Section 5
121	1450' FNL & 150' FWL, Section 4
122 SL	1726' FNL & 167' FEL, Section 4
122 BHL	1315' FNL & 5' FEL, Section 4
123	2390' FNL & 150' FEL, Section 6
124	1925' FSL & 2380' FEL, Section 4
125 SL	2016' FNL & 763' FWL, Section 3
125 BHL	2635' FNL & 1315' FWL, Section 3
126	1295' FSL & 1365' FWL, Section 10

Approval to directionally drill Unit Well Nos. 122 and 125 will also be requested. Attached is a map of the area. Please direct any questions to Mr. Jim Allen, phone (713) 652-5497.

Yours very truly,

J M Brown

JCA:dml
Attachment

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

J. M. Brown
Division Engineering
Manager

August 29, 1978

File: TBM-986.51NM-4572

Re: Application for Hearing
Unorthodox Well Locations
and directional drilling.
Hobbs Pool
Lea County, New Mexico

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attention: Mr. Joe D. Ramey

Gentlemen:

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South Hobbs Unit No.	Location (All in T-19-S, R-38-E)
120	1272' FNL & 1420' FWL, Section 5
121	1450' FNL & 150' FWL, Section 4
122 SL	1726' FNL & 167' FEL, Section 4
122 BHL	1315' FNL & 5' FEL, Section 4
123	2390' FNL & 150' FEL, Section 6
124	1925' FSL & 2380' FEL, Section 4
125 SL	2016' FNL & 763' FWL, Section 3
125 BHL	2635' FNL & 1315' FWL, Section 3
126	1295' FSL & 1365' FWL, Section 10

Approval to directionally drill Unit Well Nos. 122 and 125 will also be requested. Attached is a map of the area. Please direct any questions to Mr. Jim Allen, phone (713) 652-5497.

Yours very truly,

J M Brown

JCA:dml
Attachment

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

J. M. Brown
Division Engineering
Manager

August 29, 1978

File: TEM-986.51NN-4572

Re: Application for Hearing
Unorthodox Well Locations
and directional drilling.
Hobbs Pool
Lea County, New Mexico

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attention: Mr. Joe D. Ramey

Gentlemen:

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South Hobbs Unit No.	Location (All in T-19-S, R-38-E)
120	1272' FNL & 1420' FWL, Section 5
121	1450' FNL & 150' FWL, Section 4
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122 BHL	1315' FNL & 5' FEL, Section 4
123	2390' FNL & 150' FEL, Section 6
124	1925' FSL & 2380' FEL, Section 4
125 SL	2016' FNL & 763' FWL, Section 3
125 BHL	2635' FNL & 1315' FWL, Section 3
126	1295' FSL & 1365' FWL, Section 10

Approval to directionally drill Unit Well Nos. 122 and 125 will also be requested. Attached is a map of the area. Please direct any questions to Mr. Jim Allen, phone (713) 652-5497.

Yours very truly,

J M Brunger

JCA:dml
Attachment

8-22-75

Jim Pease Amoco for 12 th

Appl of Amoco Prod Co for
NSL and directional drlg Lea Co NM

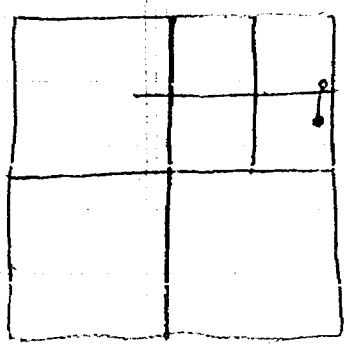
Appl seeks

	#	location	S T R
S. Hobbs	4+120	1272 FNL 1420 FWL	5-19S-38E
	121	1450 FNL 150 FWL	4
	~~122~~ 123	2390 FNL 150 FEL	6
	124	1925 FSL 2380 FEL	4
	126	1295 FSL 1365 FWL	10

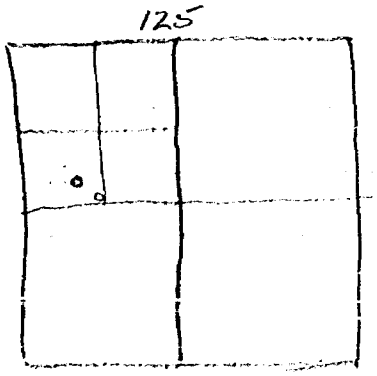
NSL & directional

#	Surface	S-T-R	Bottom
#122	1926 FNL 167 FEL	4-19S-38E →	~~1320~~ 1315 FNL 5 FEL Sec 4
125	2016 FNL 763 FWL	3-19S-38E →	~~2645 FSL~~ 2635 FNL 1315 FWL Sec 3

#122



125



in the extreme SE corner of Unit A of Sec 4

OPL

in the extreme SE corner of Unit L of Section 3

ROUGH

dr/

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. 6325

Order No. R-5833

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

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on September 13, 19 78, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this _____ day of ~~September~~ October, 19 78, 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, Amoco Production Company, seeks approval for the unorthodox locations of the following South Hobbs Unit Wells located in Township 19 South, Range 38 East, Hobbs Pool, Lea County, New Mexico:

WELL NO.	LOCATION	SECTION
120	1272' FNL and 1420' FWL	5
121	1450' FNL and 150' FWL	4
123	2390' FNL and 150' FEL	6
124	1925' FSL and 2380' FEL	4
126	1295' FSL and 1365' FWL	10
~~122~~	~~1726' FNL and 167' FEL~~	~~4~~
~~125~~	~~2016' FNL and 763' FWL~~	~~3~~

(3) That the applicant ~~Gulf Oil Corporation~~ further seeks authority for the directional drilling of ~~two~~ three wells on its ~~Central Drinkard~~ South Hobbs Unit, Hobbs Pool, Lea County, New Mexico, both in Township 19 South, Range 38 East, as follows:

Well No. ~~123~~ 122, surface location ~~1631~~ 1726 feet from the ~~South~~ North line and ~~167~~ 168 feet from the East line of Section 4 ~~38~~, bottom-hole location within 100 feet of a point ~~1335~~ 1315 feet from the North line and 15 feet from the East line of Section ~~4~~ 4;

Well No. ~~121~~ 125, surface location ~~2016~~ feet from the North line and 763 feet from the West line of Section 3, bottom-hole location within 100 feet of a point 2635 feet from the North line and 1315 feet from the West line of said Section 3.

(4) That the applicant seeks authority to directionally drill said wells to permit the surface locations to be more distant from ~~occupied dwellings on the outskirts of the town of Eunice.~~ streets in the City of Hobbs.

(5) That the applicant should be required to determine the subsurface location of the bottom of the holes by means of continuous multi-shot directional drilling, if said wells are to be completed as producing wells.

(6) That the wells at the proposed surface locations and at the proposed directionally drilled bottom hole locations are to permit the applicant to evaluate the effectiveness of its South Hobbs Unit Pressure Maintenance Project and to increase the ultimate recovery therefrom.

(7) That approval of the subject application will prevent the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells, and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amoco Production Company, is hereby authorized the unorthodox locations of the following South Hobbs Unit Wells located in Township 19 South, Range 38 East, Hobbs Pool, Lea County, New Mexico:

WELL NO.	LOCATION	SECTION
120	1272' FNL and 1420' FWL	5
121	1450' FNL and 150' FWL	4
123	2390' FNL and 150' FEL	6
124	1925' FSL and 2380' FEL	4
126	1295' FSL and 1365' FWL	10
~~122~~	~~1726' FNL and 167' FEL~~	~~4~~
~~125~~	~~2016' FNL and 763' FWL~~	~~3~~

IT IS ~~THEREFORE~~ Further ORDERED:

(1) That the applicant, ~~Gulf Oil Corporation~~, is hereby authorized to directionally drill ~~two~~ wells on its ~~Central~~ South Hobbs Unit, Hobbs ~~Drinkard Unit, Drinkard~~ Pool, Lea County, New Mexico, ~~both~~ in Township ~~21~~ 19 South, Range ~~37~~ 38 East, as follows:

Well No. ~~122~~ 125, surface location 1726 feet from the ~~South~~ North line and 167 feet from the ~~East~~ West line of Section ~~4~~ 4, bottom-hole location within 100 feet of a point ~~1315~~ 1335 feet from the North line and 5 feet from the East line of Section ~~4~~ 4;

Well No. ~~125~~ 122, surface location ~~1465~~ 2016 feet from the North line and 763 feet from the West line of Section ~~3~~ 3, bottom-hole location within 100 feet of a point 2635 ~~2665~~ feet from the North line and 1315 feet from the ~~East~~ West line of said Section ~~3~~ 3.

Well No. 422, surface location 1155 feet from the North line and 1000 feet from the West line of Section 33, bottom-hole location within 100 feet of a point 1305 feet from the North line and 1335 feet from the West line of said Section 33.

PROVIDED HOWEVER, that subsequent to the above-described directional drilling, should said wells be producers, 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~~ Division, Box 2088, Santa Fe, New Mexico; and that the operator shall notify the ~~Commission's~~ Division's Hobbs district office of the date and time said surveys are to be commenced.

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

(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.