
CASE NO.

6396

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

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. 6396
Order No. R-6225

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR POOL CREATION AND
CONTRACTION, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 7,
1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 9th day of January, 1980, the Division
Director, having considered the record and the recommendations
of the Examiner, and being fully advised in the premises,

FINDS:

That the applicant's request for dismissal should be
granted.

IT IS THEREFORE ORDERED:

That Case No. 6396 is hereby dismissed.

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

SEAL
fd/



J. R. Barnett
Regional Engineering
Manager

January 3, 1979

File: TBM-986.51NM-1302

Re: Case No. 6396
Pool Creation and Contraction
House Drinkard Pool
Lea County, New Mexico

Department of Energy and Minerals
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attention: Mr. R. L. Stamets

Gentlemen:

The following are the latest available API gravities at 60°F for Amoco operated wells in the House-Drinkard Pool, Lea County, New Mexico:

Cone "B" No. 2	60.2
Cone "A" No. 1	36.1
Cone "B" No. 1	36.3
House "C" No. 1	36.1
State "U" No. 1	36.3

Please include this information in Case No. 6396.

Yours very truly,

J. R. Barnett

JEP:sam

Amoco Production Company

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

Oil Conservation Division
Santa Fe

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

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Company
for pool creation and contraction,
Lea County, New Mexico.

CASE
6396

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
P. O. Box 3092
Houston, Texas 77001

SALLY WALTON SOYD
CERTIFIED SHORTHAND REPORTER
3030 Paul Street (SSE) (711-4488)
Santa Fe, New Mexico 87501

I N D E X

J. A. PEASE

Direct Examination by Mr. Buell	3
Cross Examination by Mr. Stamets	18

E X H I B I T S

Applicant Exhibit One, Map	18
Applicant Exhibit Two, C-109	18
Applicant Exhibit Three, Log	18
Applicant Exhibit Four, Graph	18
Applicant Exhibit Five, Graph	18
Applicant Exhibit Six, Water analysis	18
Applicant Exhibit Seven, Cross section	18

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2030 Plaza Blanca (305) 471-4462
Miami, Fla. New Mexico 87501

1 MR. STAMETS: At this time we will call Case
2 6396.

3 MS. TESCHENDORF: Case 6396. Application of
4 Amoco Production Company for pool creation and contraction,
5 Lea County, New Mexico.

6 MR. STAMETS: Call for appearances in this
7 case.

8 MR. BUELL: For Amoco Production Company, my
9 name is Guy Buell.

10 MR. STAMETS: Any other appearances? I'd
11 like to have the witness stand and be sworn, please.

12 (Witness sworn.)

13
14 J. A. PEASE
15 being called as a witness and having been duly sworn upon
16 his oath, testified as follows, to-wit:

17
18 DIRECT EXAMINATION

19 BY MR. BUELL:

20 Q Mr. Pease is our only witness, Mr. Examiner.
21 Would you state your complete name, by whom you're employed,
22 and in what capacity and at what location, please?

23 A James A. Pease, Amoco Production Company in
24 Houston, Texas, as a staff engineer.

25 Q Mr. Pease, you've testified before this body

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (905) 471-2442
Sault Ste. Marie, New Mexico 87601

1 on many previous occasions and your qualifications as a
2 petroleum engineer are a matter of public record, are they
3 not?

4 A I have and they are.

5 MR. BUELL: Any questions, Mr. Examiner?

6 MR. STAMETS: The witness is considered
7 qualified.

8 Q (Mr. Buell continuing.) In connection with
9 your testimony here today, would you look first, please, at
10 our Exhibit Number One? What is that exhibit?

11 A Exhibit Number One is a structure contour
12 map for the House Drinkard Pool. The contours are on the
13 top of the Drinkard formation.

14 Q All right, sir, how have you identified the
15 wells in this area that either, one, are producing or have
16 produced from the Drinkard formation; or have penetrated
17 the Drinkard formation and given us geological data by that
18 penetration?

19 A These are designated by orange dots.

20 Q All right, sir, we're asking for pool con-
21 traction, establishing of a new pool, and to contract the
22 House Drinkard Oil Pool we're going to have to delete some
23 acreage from the horizontal limits of that pool. How have
24 you delineated the acreage you've recommended to be deleted
25 from the House Drinkard Oil Pool?

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (602) 471-9493
Santa Fe, New Mexico 87501

1 A The acreage that we're recommending be deleted
2 is outlined by blue tape on Exhibit One.

3 Q All right, sir, and I believe this acreage
4 has already been described in the docket that Ms. Teschendorf
5 just read.

6 A That's correct.

7 Q All right, rather than burden the record with
8 describing the acreage that we're asking to be deleted, let
9 me go on to the next question.

10 How have you defined or outlined the hori-
11 zontal limits of the new pool that you're requesting the
12 Commission here today to designate and set up?

13 A This area is outlined by yellow tape on Ex-
14 hibit Number One.

15 Q All right, sir, that's 160 acres, is it not?

16 A That's correct.

17 Q I notice there is a well on that 160 acres
18 that you're asking to be designated as a new pool. What is
19 the name of that well?

20 A This is the Amoco Production Company Cone B.
21 Well No. 2.

22 Q Is that an oil well or a gas well?

23 A It is a gas well.

24 Q All right, sir, and you highlighted that well
25 on Exhibit One by a red arrow.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2024 Plaza Elanque (505) 471-4469
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
 3080 Plaza, Dallas (955) 471-4462
 Dallas, Texas 75241

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

A That's correct.

Q What is the significance of the orange area pointing to a well immediately to the south?

A This is a well in which we recently obtained a bottom hole pressure buildup test. This is the Amoco Cone B No. 1.

Q That's a current producing oil well in the House Drinkard Oil Pool?

A Yes, sir.

Q All right, sir, I notice in the central portion of your Exhibit One there is a line, a green dotted line, running west to east that connects four wells. What is the significance of that line?

A This represents the line of section, of the log cross section which will be Exhibit Number Seven.

Q That's going to be a later exhibit.

A That's correct.

Q All right, sir, do you have any other comments on Exhibit Number One?

A No, sir.

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

A Exhibit Number Two is a copy of New Mexico Oil Conservation Division Form C-109, which has been completed as application for creation of a new pool.

1 MR. BUELL: Mr. Examiner, we didn't know
2 whether or not, since we're not asking for a discovery al-
3 lowable for a gas well, whether or not this form was en-
4 tirely appropriate or required, but in view of the fact that
5 it does have a lot of data on it that we thought would be
6 of benefit to the Commission, to resolve all doubts we are
7 filing it.

8 All the data on here are more or less self-
9 explanatory, Mr. Pease?

10 A I believe so.

11 Q Do you have any comments on any of it?

12 A No, sir.

13 Q All right. Turn to Exhibit Three, if you
14 will. What is that exhibit?

15 A Exhibit Three is a copy of the compensated
16 neutron formation density log on the Amoco Cone B No. 2.
17 It's a complete log and includes both the 2-inch scale and
18 the 5-inch scale, and on the 5-inch scale the producing
19 formations in the area of this well have been shown.

20 Q All right, sir. Briefly state for the record
21 some of the zones above the Drinkard. This well is com-
22 pleted in the Drinkard formation, is it not?

23 A Yes, sir.

24 Q Some of the formations above the Drinkard
25 that are productive from other wells in this area. You might

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
1020 Plaza Blanca (SOS) 471-4463
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (991) 471-4468
Santa Fe, New Mexico 87501

1 as well start with the most shallow and work your way down
2 to the Drinkard, if you would.

3 A All right. The shallowest zone is the San
4 Andres and it occurs at 4296 in this well.

5 Q And you have identified in what manner the
6 top of the San Andres zone on this log?

7 A It's shown by a green line on the 5-inch
8 scale section.

9 Q What do we come to next going down the hole?

10 A Next we have the Glorieta at 5648 feet.
11 Then the Blinebry is 6100 feet; the Tubb at 6620; the
12 Drinkard is topped at 6881; and also producing in this field
13 but not penetrated by this well is the Abo formation. It
14 has produced in the past, that is.

15 Q All the producing formations in this area
16 that were penetrated, you have identified the top of that
17 formation, as you did the San Andres, with a green horizon-
18 tal line.

19 A That's correct.

20 Q Do you have any other comments on Exhibit
21 Three?

22 A I believe also on Exhibit Three inside the
23 depth column by little red brackets we've shown the per-
24 forated -- perforated interval of the Cone B No. 2.

25 Q All right, sir. Turn now, if you would, to

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Flam Blanca (305) 471-4402
Santa Fe, New Mexico 87501

1 what has been identified as our Exhibit Four. What is that
2 exhibit?

3 A Exhibit Four is a copy of a bottom hole pres-
4 sure survey report run by John West Engineering Company out
5 of Hobbs, New Mexico, on the Cone B No. 2. The graph there
6 is a plot of bottom hole pressure versus depth and the most
7 significant things are shown on the upper righthand portion
8 and that would be the pressures at the various depths.

9 Q We're going to be talking about the Cone B
10 2 and the Cone B 1. So everybody can keep it straight, the
11 Cone B 2 was our gas well that we feel has penetrated a new
12 gas field.

13 A That's correct.

14 Q And the B 1, the Cone B 1, is an offset oil
15 well that's been producing for many years.

16 A That's correct.

17 Q All right, sir. What is the bottom hole
18 pressure on our Cone B 2, the gas well?

19 A The measured pressure at a depth of 6970
20 feet was 2006 psi.

21 Q All right, sir. We'll be referring to this
22 a little later, but let's go on now, if you would, to our
23 Exhibit Number Five. What is that exhibit?

24 A Exhibit Five is -- contains three pages. The
25 first page is the graph of the bottom hole pressure build-

1 up test on the Cone B No. 1, which is a pumping oil well.

2 Q That's a well immediately south of the Cone
3 B 2 and the well is identified on Exhibit One with an orange
4 arrow.

5 A That's correct.

6 Q What is that about, it looks to be about
7 1320 feet south of the Cone B 2.

8 A Yes, sir.

9 Q All right, sir. Do you want to go ahead now
10 and discuss what's on the other two pages of the three-page
11 exhibit?

12 A Okay. The well was shutin for a total of
13 about 250 hours and it did not reach a stabilized bottom
14 hole pressure during this time, so pages two and three,
15 then, represent calculations made which were used to deter-
16 mine what time we should extrapolate this bottom hole pres-
17 sure to obtain an average pressure for the 40-acre drainage
18 area of the well.

19 This time is shown on the last page of 654
20 hours, and the pressure at this time would be 397 psi.

21 Q All right, sir, now on page one of this ex-
22 hibit you have shown the static buildup pressure and the
23 time period in which you projected it would take to build-
24 up in red as an addenda to the printed portion of the first
25 page.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
300 Plaza Blanca (SOS) 471-2403
San Antonio, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3028 Plaza Blanca (955) 471-2403
Ft. Worth, Texas 76101

1 A That's correct.

2 Q And this calculation that was used to make
3 the extrapolation of static or full buildup, is it a common
4 formula that is used?

5 A In the industry, yes, sir.

6 Q Do you see any sense in burdening the record
7 with going through all the steps?

8 A No, sir.

9 Q And I believe your conclusion was that in
10 654 hours it would reach static condition with a bottom
11 hole pressure of 397 psi.

12 A That's correct.

13 Q Approximately how many days is 654 hours?

14 A Let's see, 27 and 1/4 days.

15 Q All right, sir, when you compare the pressure
16 shown on our Exhibit Four for our Cone B 2 of over 2000
17 pounds with this buildup pressure of this producing well
18 1320 feet south of only 397, there is a dramatic difference,
19 is there not?

20 A Yes, sir.

21 Q Let me ask you this. About what depth is
22 our Cone B 2, the gas well?

23 A It's perforated from 7050 to 7080 feet.

24 Q Would you anticipate if you were under normal
25 conditions in a normal area that the absolute virgin bottom

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plum Branch (S.S.) 411-4403
Bellaire, Pa., New Mexico 87001

1 hole pressure of a reservoir that deep would be 2000 pounds
2 or in excess of 2000 pounds?

3 A Normally you would anticipate around 3000
4 pounds; maybe a little bit higher than that.

5 Q All right, how do you account for the fact
6 that the bottom hole pressure in the Cone B 2 is only 2000,
7 if you can account for it?

8 A Well, there would be a couple explanations.
9 One would be there could have been some well in the past
10 that produced from this formation that we can't locate and
11 the other would be, of course, it could have depleted some
12 during the test. The well was tested for about ten days
13 before this well was shut in for bottom hole pressure build-
14 up.

15 Q Are there other data that show the separate
16 nature of our Cone B No. 2 gas well with the older Drinkard
17 oil production in the House pool?

18 A Well, we had --

19 Q Other than the 1600 pound pressure differ-
20 ential.

21 A We have Exhibit Seven, the log cross section.

22 Q All right, sir. Do you have any other com-
23 ments on Four and Five, our two pressure exhibits?

24 A No, sir.

25 Q Turn then, if you would, to Exhibit Six. What

1 is that?

2 A Exhibit Six is a series of water analyses
3 done by the Halliburton Services. It consists of three
4 pages. On the first page are two different analyses from
5 the water from the Cone B No. 2.

6 On the second page is a water analysis for
7 water produced by the Cone A 1 and the Amoco Cone B No. 1.

8 Q Well, now, Mr. Pease, we know where the Cone
9 B 1 is. It's just south of our B 2 and we talked about it
10 before. Where is Cone A 1? Is it in the southeast of the
11 northwest of Section 12?

12 A Yes, it's the southeast of the northwest of
13 12.

14 MR. BUELL: I thought, Mr. Examiner, you
15 might want to spot that on your Exhibit One to see the geo-
16 graphical spread of these water samples.

17 Q All right, what well or wells are included
18 on page three of our Exhibit Number Six?

19 A On the third page is the Amoco House C No. 1
20 which is located in the southeast of the northeast of Sec-
21 tion 11, and it's the last well on the log cross section.
22 And the other well on this page three is the Amoco State
23 U No. 1, which is located in the southeast of the southeast
24 of Section 2, which would put it just due north of the
25 House C No. 1.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza, Dallas (955) 471-4401
Dallas, Texas 75201

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3088 Plaza Miras (666) 471-4463
Santa Fe, New Mexico 87501

1 Q Mr. Pease, in the interest of time, we won't
2 go through with each component of, or each element of these
3 water samples, but in going through them did you notice
4 some of the elements that there was a distinct difference
5 between the content in our Cone B No. 2, the gas well, from
6 these other oil wells?

7 A Yes, sir.

8 Q Why don't, for the record -- what were those
9 components or elements?

10 A Well, the calcium ions, the chloride ions,
11 the sulphates and the biocarbonates.

12 Q Very, very rapidly give the calcium that we
13 found in the two samples of our Cone B 2 with the range of
14 the calcium from the other four wells.

15 A In the Cone B 2 the calcium ion ranged from
16 9000 to 12,500 parts per million. In the other four
17 samples in the other four wells it ranged from 15,000 to
18 18,500 parts per million.

19 Q All right, sir, let's go to the chlorides.

20 A On the chlorides ions in the Cone B 2 the
21 two samples range from 162,000 to 170,000 whereas in the
22 other samples it ranged from 97,000 to 109,000.

23 Q The sulphate?

24 A The sulphates range from 2200 to 2300 parts
25 per million in the Cone B No. 2 whereas in the other four

1 wells it ranged from 1400 to 1500 parts per million.

2 Q I believe you said you also noticed a differ-
3 ence in bicarbonates.

4 A Yes, sir, the biocarbonates range from 145
5 to 160 parts per million in the Cone B 2 whereas the other
6 four wells this was 220 to 280 parts per million.

7 Q Do these data, as the 1600 pound pressure
8 differential, would they also indicate that the Cone B 2 is
9 producing from an accumulation of gas that is not in com-
10 munication with the Drinkard oil in the old House pool?

11 A Yes, sir.

12 Q All right, sir. Do you have any other com-
13 ments on those samples?

14 A No, sir.

15 Q Are you ready for the cross section now, Mr.
16 Pease?

17 A Yes, sir.

18 MR. BUELL: Mr. Examiner, that lays on the
19 green dots on our Exhibit One and it's generally a west to
20 east section.

21 Q All right. Would you comment very briefly
22 on our Exhibit Number Seven, Mr. Pease?

23 A Well, as you pointed out, Exhibit Seven is
24 the log cross section. The discovery well for the new gas
25 zone is the well on the right, the Cone B Well No. 2, and

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza, Alhambra (800) 471-2449
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (661) 411-4466
Santa Fe, New Mexico 87501

1 the other three wells are -- two of them are currently pro-
2 ducing and the second well from the lefthand has been aban-
3 doned; at least the Drinkard zone has.

4 Q Do you have the latest test data for each
5 well plotted at the bottom of the log?

6 A Yes, sir, it's listed at the bottom of the
7 log.

8 Q Now, I notice there are two horizontal lines
9 running across the extent of the exhibit. What are they,
10 Mr. Pease?

11 A Well, this would be a structural cross sec-
12 tion and the top line represents a minus 3200; that's the
13 dashed line.

14 The second line represents the top of the
15 Drinkard in these four wells.

16 Q Have you highlighted on this exhibit the
17 completion intervals of the four wells that are shown hereon?

18 A Yes, sir, the three oil wells have been shown
19 by the green bars and the gas interval for the gas well has
20 been highlighted by yellow.

21 Q On this structural cross section, Mr. Pease,
22 what do you see when you compare the structural position of
23 the gas completion in our Cone B 2 with the --

24 MR. STAMETS: Is that the one with all the
25 pretty colors?

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2000 Plaza Blanca (S.S.) 411-2482
Santa Fe, New Mexico 87501

1 MR. BUELL: Oh, gosh almighty, Mr. Examiner,
2 I kept yours and you got mine.

3 MR. STAMETS: Thank you, sir.

4 Q Mr. Pease, I think I'd asked you when you
5 compared the structural position of the gas completion in
6 our Cone B 2 with the oil completion shown on this struc-
7 tural cross section, what do you see?

8 A Well, we see we have a gas productive inter-
9 val here that's lower than the oil producing interval in the
10 two wells on the left and is within the oil producing in-
11 terval in the well, the Cone A No. 1.

12 Q Does this in addition to our pressure data,
13 in addition to our water sample analyses, from a geological
14 standpoint does this indicate separation of the Cone B 2
15 gas from the House Drinkard oil pool?

16 A Yes, sir.

17 Q You just don't find gas below oil in a common
18 accumulation of hydrocarbons, do you, Mr. Pease?

19 A No, sir.

20 Q Do you feel that our recommendation here to-
21 day will serve conservation by allowing the efficient pro-
22 duction of the gas that we've discovered in our Cone B 2?

23 A Yes, sir.

24 Q Do you see how it can in any way adversely
25 affect the correlative rights of any of the owners of interest

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
18 Plaza Blanca (888) 471-2462
Santa Fe, New Mexico 87501

1 in this area?

2 A No, sir.

3 Q Do you have anything else you'd care to add
4 at this time?

5 A No.

6 MR. BUELL: May it please the Examiner, that's
7 all we have by way of direct. I would like to formally
8 offer our Exhibits One through Seven inclusive.

9 MR. STAMETS: These exhibits will be admitted.

10
11 CROSS EXAMINATION

12 BY MR. STAMETS:

13 Q Mr. Pease, starting in reverse order here,
14 of the exhibits, looking at the cross section first, it
15 would appear as though the gas zone in your Cone B No. 2
16 is about 170 feet below the top of the Drinkard.

17 A Yes, sir.

18 Q Okay, when you come to the left then to the
19 Cone A 1, it would also appear that only the very top of
20 this zone has been penetrated in the Cone A 1.

21 A That's correct.

22 Q Do you have any evidence that that portion
23 of the reservoir that's open in the Cone A 1 that's in the
24 Cone B 2 that is producing or has ever produced in the Cone
25 A 1?

1 A Well, the Cone A 1 is an open hole completion.
2 The casing is set there to 7032 feet. I'm not aware of any
3 surveys which would indicate where the production is coming
4 from, from that open hole section.

5 Q Okay, now have you examined the perforated
6 interval, or the producing interval, in the other wells in
7 the House Drinkard to determine whether or not this zone in
8 your -- the B 2 zone is producing in any of those other
9 wells?

10 A Not to my knowledge. I haven't looked at
11 all of the logs.

12 Q Okay. Your Exhibit Number One shows some
13 Drinkard producing wells in the west half of Section 6.

14 A Those have been abandoned.

15 Q Those have all been abandoned?

16 A Yes, sir.

17 Q Those are no longer producing?

18 A That's correct.

19 Q What was the pool name for that pool?

20 A It was the House Drinkard. One of the wells
21 was an Amoco well and the other well was a Wilson well.

22 Q That was the House Drinkard. Okay, I presume
23 that they would still be -- that the pool boundary still goes
24 out there or has that been contracted?

25 A It has not been contracted.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (855) 471-4443
Santa Fe, New Mexico 87501

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
308 Plaza Blanca (905) 471-4403
Santa Fe, New Mexico 87501

1 Q Okay, does your proposal here leave a window
2 in the House Drinkard or is it continuous from the producing
3 wells in the southwest to the old abandoned wells in the
4 northeast?

5 A It's continuous.

6 MR. BUELL. We're just taking the wedge out
7 of it, Mr. Examiner, we're not isolating any wells that are
8 currently producing in the House Drinkard oil pool or any
9 wells that had previously produced from the House Drinkard
10 oil pool, except the three abandoned wells and our new dis-
11 covery well that are shown within the blue outline on Ex-
12 hibit one.

13 Q How old is this House Drinkard pool?

14 A I don't know the exact discovery date but
15 some of the wells were drilled in the early '50s.

16 Q So it is quite an old pool?

17 A Yes.

18 Q Is this situation that you've discovered here
19 unique or do you periodically stumble across this in south-
20 east New Mexico?

21 A This is the first one that I'm aware of.

22 MR. BUELL: It would be unique to Mr. Pease.

23 Q Do you have any indication -- talking about
24 the pressure, now, do you have any indication that you're
25 going to have the kind of a pressure drawdown that -- that

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2080 Plaza Blanca (955) 471-4488
Buckin Pa, New Mexico 87501

1 you theorize may be the reason why you only got 2000 pounds
2 instead of 3000?

3 A Well, the well tested the almost 3-million
4 cubic feet a day and the flowing tubing pressure, I believe,
5 was about 650 pounds. The other Amoco wells in this pool,
6 the oil wells are on pump. I believe the records show that
7 there are two flowing wells, but all of the existing oil
8 wells are right at stripper rates. I believe the highest
9 average rate is 7 barrels a day.

10 Q I guess the final question is why do you all
11 want this -- what is the bottom line, as they are wont to
12 say these days?

13 A Under the existing rules the well would be
14 restricted, I believe, to about 300 Mcf a day, if it was
15 produced in the House Drinkard.

16 MR. BUELL: I intended to include that as a
17 question, Mr. Examiner, and overlooked it.

18 Q And have you examined the production rate on
19 all the wells in the House Drinkard now?

20 A Yes, sir.

21 Q Are any of them capable of producing the
22 maximum amount of oil allowed?

23 A No, nor the maximum gas.

24 Q So they are all producing less than would be
25 allowed by either a GOR rule or oil rules.

1 Is there any way, in your opinion, that pro-
2 duction at unrestricted rates from the Cone B 2 Well could
3 affect the other wells in the pool?

4 A No, sir.

5 Q Does Amoco have any plans to develop any
6 additional wells in the area?

7 A Not that I'm aware of.

8 Q If the Division determined that this was a
9 problem that needed a little further study, or which needed
10 some periodic review, would Amoco object to such review or
11 such additional data?

12 A No, sir.

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

15 Anything further in this case?

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

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

19 (Hearing concluded.)
20
21
22
23
24
25

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
8807 Penn. Avenue G-63, 471-9463
Baltimore 26, New Mexico 87501

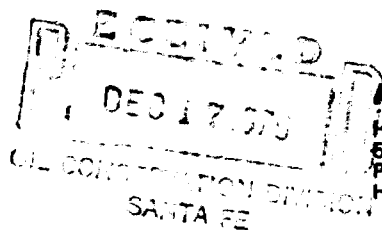
REPORTER'S CERTIFICATE

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 W. 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. 6396, heard by me on 12-27, 1976.
Richard J. Blum, Examiner
Oil Conservation Division

SALLY WALTON BOYD
COURT REPORTER
300 Park Street, Suite 300
Smith Pk., New Mexico 87801



Amoco Production Company

Houston Region
600 Jefferson Building
Post Office Box 3092
Houston, Texas 77001

J. R. Barnett
Regional Engineering
Manager

December 10, 1979

File: JCA-986.51NM-4160

Re: Case No. 6396
Creation of New Pool
House Lower Drinkard Gas Pool
Lea County, New Mexico

Energy and Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

Attention: Mr. Joe D. Ramey

Dear Mr. Ramey:

Case No. 6396 concerned Amoco Production Company's request for contraction of the House Drinkard Oil Pool and creation of a new pool (House Lower Drinkard Gas Pool) for Amoco's Cone "B" Well No. 2, located in the NE/4 Sec. 12, T-20-S, R-38-E, Lea County, New Mexico. The case was held on December 7, 1978, but action was delayed at Amoco's request pending additional drilling in the area. Since the hearing, the productivity of the Cone "B" Well No. 2 has declined from a potential of approximately 2.9 MMCFD to 320 MCFD. Amoco believes contraction of the House Drinkard Oil Pool and creation of a new gas pool is not justified at this time.

Amoco Production Company therefore respectfully requests Case No. 6396 be dismissed.

Yours very truly,

JCA/rw

Handwritten:
Dione
Type
Dismissal
Please

Dockets Nos. 40-78 and 41-78 are tentatively set for hearing on December 20, 1978 and January 3, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - THURSDAY - DECEMBER 7, 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:

Can't indicate
CASE 6392: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corinne Grace, The Travelers Indemnity Company, and all other interested parties to appear and show cause why the Indian Hills Com. Well No. 1 located in Unit J of Section 8, Township 21 South, Range 24 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6393: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider the amendment of Rule 104 F of the Division Rules and Regulations to provide for the administrative approval of the unorthodox location of wells drilled within secondary recovery or pressure maintenance projects.

CASE 6394: In the matter of the hearing called by the Oil Conservation Division on its own motion to consider the adoption of an administrative procedure and Forms C-132 and C-132-A, all for the purpose of making wellhead price ceiling category determinations under the Natural Gas Policy Act of 1978.

CASE 6395: Application of David Basken for pool contraction and pool extension, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the Indian Basin-Morrow Gas Pool by the deletion therefrom of Section 9, Township 21 South, Range 24 East, Eddy County, New Mexico, and the extension of the Cemetery-Morrow Gas Pool to include the aforesaid Section 9.

CASE 6396: Application of Amoco Production Company for pool creation and contraction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the House Drinkard oil pool by the deletion therefrom of the NE/4 and E/2 SE/4 of Section 12 and the E/2 NE/4 of Section 13, both in Township 20 South, Range 38 East, and the W/2 of Section 7 and the NW/4 of Section 18, Township 20 South, Range 39 East, and the creation of a new gas pool for Lower Drinkard production in the NE/4 of Section 12, Township 20 South, Range 38 East, all in Lea County, New Mexico.

*Running late
George Humber*
CASE 6397: Application of Western Oil Producers, Inc. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 4, Township 24 South, Range 35 East, Cinta Roja-Morrow Gas Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6398: 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 for the Wolfcamp and Pennsylvanian formations of its State Com Well No. 1, to be located 660 feet from the South and West lines of Section 18, Township 21 South, Range 26 East, Catclaw Draw Field, Eddy County, New Mexico, all of said Section 18 to be dedicated to the well in the Morrow formation.

CASE 6399: Application of Texas Oil & Gas Corporation for compulsory pooling, 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 32, Township 18 South, Range 27 East, Eddy County, New Mexico, to be dedicated to a well to be drilled 710 feet from the North line and 2330 feet from the West line of said section. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6400: Application of Coronado Exploration Corporation for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying each of the following 40-acre tracts: SW/4 SW/4 Section 7; SW/4 SW/4 Section 8; SW/4 SE/4 Section 18; NW/4 NW/4 Section 19; and NW/4 NW/4 Section 20, all in Township 10 South, Range 28 East, Race Track-San Andres Pool, Chaves County, New Mexico. Also the NE/4 NE/4 Section 28, Township 10 South, Range 28 East, LE Rauch-San Andres Pool, Chaves County, and the SW/4 NE/4 Section 15, Township 11 South, Range 28 East, East Chisum-San Andres Pool, Chaves County. Each of the aforesaid 40-acre tracts would comprise a drilling unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered, with respect to each of the above described drilling units and well, will be the cost of drilling and completing the 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 each well and a charge for risk involved in drilling each well.

Gr + ✓ Dec 20
CASE 6401: Application of Southland Royalty Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Mesaverde production within the wellbore of its Jicarilla 101 Well No. 1 located in Unit A of Section 1, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

✓ Dec 20
CASE 6402: Application of Southland Royalty Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gallup and Dakota production within the wellbore of its Jicarilla 101 Well No. 2 located in Unit 14 of Section 12, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.

Gr + ✓ Dec 20
CASE 6403: Application of Consolidated Oil & Gas, Inc. for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Basin Dakota and Blanco Mesaverde production within the wellbore of its O'Shea Well No. 1 located in Unit K of Section 3, Township 31 North, Range 13 West, San Juan County, New Mexico.

✓ CASE 6404: Application of Sun Production Company for compulsory pooling, non-standard gas proration unit, and an unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Elmont Gas Pool underlying the SE 1/4 of Section 35, Township 19 South, Range 36 East, Lea County, New Mexico, to form a non-standard 160-acre proration unit to be dedicated to a well to be drilled at an unorthodox location 810 feet from the South line and 2030 feet from the East line of said section. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

✓ CASE 6405: Application of LaRue and Muncy for exception to Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its Federal #2 Well No. 1 located in Unit I of Section 15, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed in the following manner: set surface casing and circulate cement; eliminate salt protection string; and do not circulate cement on production casing.

**NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION FOR DISCOVERY ALLOWABLE AND CREATION OF A NEW POOL**

Form C-109
Adopted 9-1-68

NOTE: This form is to be filed and attachments made in accordance with the provisions of Rule 309.
If discovery is claimed for more than one zone, separate forms must be filed for each.

Operator Amoco Production Company		Address P.O. Drawer "A", Levelland, TX 79336	
Lease Name Cone "B"		Well No. 2	County Lea
Well Location Unit Letter G ; 1980 Feet from The North Line and 1980 Feet From the East Line of Section 12 Township 20-S Range 38-E NMPM			
Suggested Pool Names (List in order of preference) 1. House Lower Drinkard 2. 3.			
Name of Producing Formation Lower Drinkard		Perforations 7050' - 60', 7066' - 80'	Date of Filing Form C-104
Was "Affidavit of Discovery" Previously Filed For This Well in this Pool?		If Yes, Give Date of Filing	Date Well was Spudded 8-26-78 Date Compl. Ready to Prod. 10-4-78
Total Depth 7150	Plugged Back Depth 7120	Depth Casing Shoe NA	Tubing Depth 6976 Elevation (Gr., SF, RKB, RT, etc.) 3568.4 GR
Well Potential (Test to be taken only after all load oil has been recovered)			
Gas 9 Bbls. Oil Per Day Based On 9 Bbls In 24 Hours; 7 Bbls Water Per Day Based On 7 Bbls In 24 Hours; Gas Production During Test: 2900 MCF; Gas-Oil Ratio: 322222 Method Of Producing: Flow Chk. Size: 20/64"			

NEAREST PRODUCTION TO THIS DISCOVERY (Includes past and present oil or gas producing areas and zones whether this discovery is based on horizontal or vertical separation):

Pool Name House Drinkard	Name of Producing Formation Drinkard	Top of Pay 6976	Bottom of Pay 7070	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Pool 1320' South		Vertical Distance from Subject Discovery Zone to Producing Interval this Pool 1320' South		

NEAREST COMPARABLE PRODUCTION (Includes past and present oil or gas production from this pay or formation only):

Pool Name House Drinkard	Top of Pay 6976	Bottom of Pay 7070	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Comparable Pool 1320' South			

Is "County Deep" Discovery Allowable Requested for Subject Discovery Well? NO	If Yes, Give Name, Location, and Depth of Next Deepest Oil Production in this County
---	--

Is the Subject Well Multiple Completion? NO	Is Discovery Allowable Requested for other Zone(s)? NO	If Yes, Name all Such Formations
---	--	----------------------------------

LIST ALL OPERATORS OWNING LEASES WITHIN ONE MILE OF THIS WELL (Attach additional sheet if necessary)


NAME	ADDRESS
Amerada Hess Corporation	Drawer D Monument, NM 88265
Llano Inc.	Box 1320 Hobbs, NM 88240
Western Equipment Company	Box 5457 Midland, TX 79701
B.A. Ray	Box 1385 Midland, TX 79701
R.A. Pierce	Box 303 Eunice, NM 88231
Damson Oil Corporation	260 North Belt East, Suite 300 Houston, TX 77060
Wolfson Oil Company	311 C & K Petro Bldg., Midland, TX 79701

Attach evidence that all of the above operators have been furnished a copy of this application. Any of said operators who intends to object to the designation of the subject well as a discovery well, eligible to receive a discovery allowable, must notify the appropriate District Office and the Santa Fe Office of the Commission of such intent in writing within ten days after receiving a copy of this application.

Remarks:	<p align="right">6396 Pace 12-7-78</p>
----------	--

CERTIFICATION

I hereby certify that all rules and regulations of the New Mexico Oil Conservation Commission have been complied with, with respect to the subject well, and that it is my opinion that a bona fide discovery of a hitherto unknown common source of oil supply has been made in said well. I further certify that the discovery allowable for the subject well, if authorized, will be produced from the subject zone in this well only. Further, that the information given herein and attached hereto is true and complete to the best of my knowledge and belief.


Administrative Supervisor
November 17, 1978

Position
Date

JOHN W. WEST ENGINEERING COMPANY
412 NORTH DAL PASO, HOBBS, NEW MEXICO

TELEPHONES 393-3942
393-3117

BOTTOM HOLE PRESSURE SURVEY REPORT

OPERATOR AMOCO PRODUCTION COMPANY
LEASE CONE "B"
WELL NO. 2
FIELD _____
DATE 11-1-78 TIME 9:30 A.M.
STATUS SHUT-IN TEST DEPTH 6,970'
TIME S.I. 11 DAYS LAST TEST DATE _____
CAS. PRES. _____ BHP LAST TEST _____
TUB. PRES. 1589 PSI BHP CHANGE _____
ELEV. _____ FLUID TOP _____
DATUM _____ WATER TOP _____
TEMP _____ RUN BY B.J.T.
CLOCK NO. 20842 GAUGE NO. 16363
ELEMENT NO. 39331 (0-4200 - (PSI)

DEPTH	PRESSURE	GRADIENT
000	1589	
6470	1970	.059
6870	2000	.075
6970	2006	.060

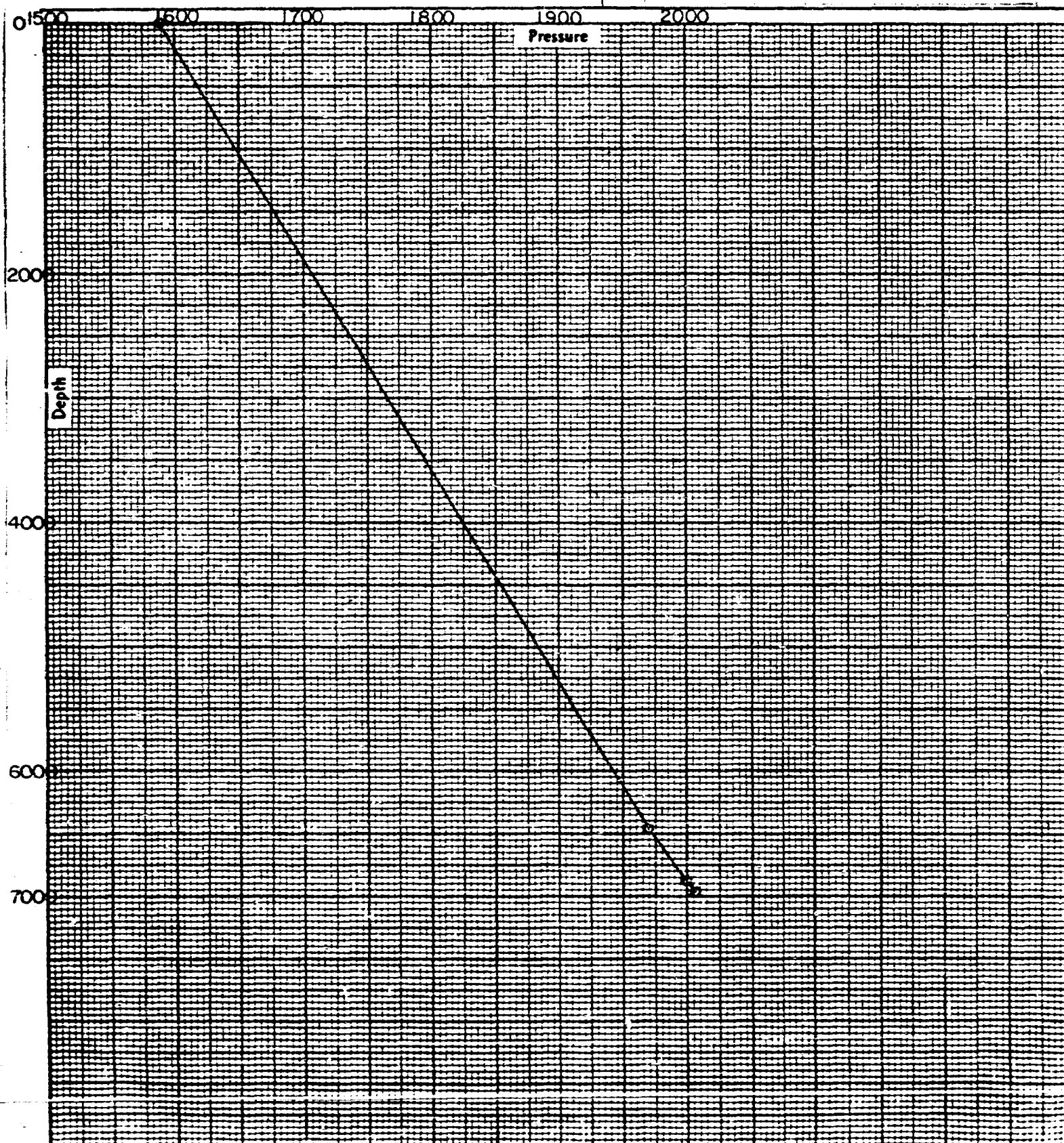
Amoco

41

6396

Pease

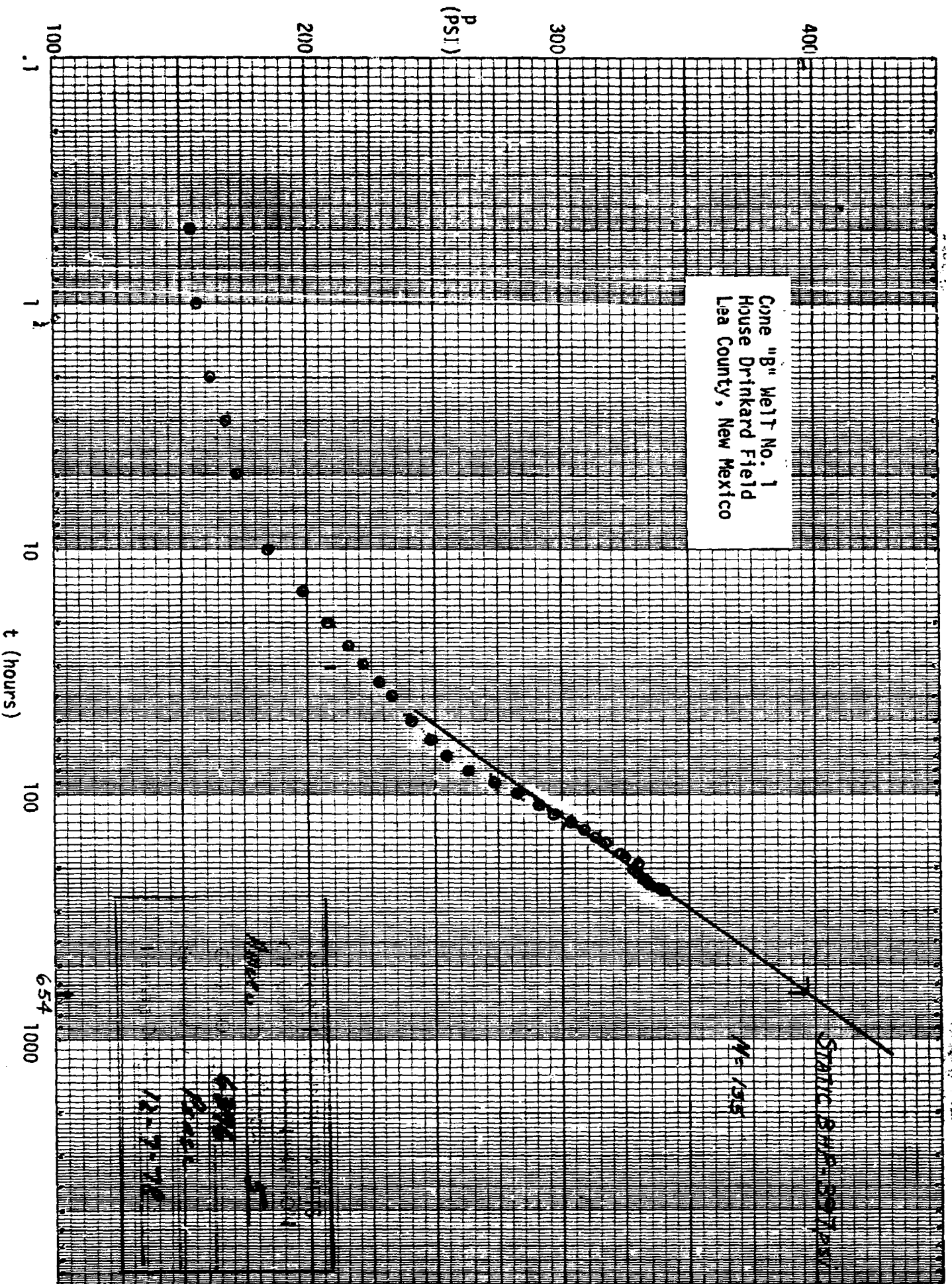
12-7-78



NO. DIVISIONS SEMI-LOGARITHMIC
10 DIVISIONS PER INCH ON SHORT SIDE
FIVE 2-INCH CYCLES ON LONG SIDE



PRINTED IN U.S.A.



CONE "B" WELL NO. 1

HOUSE DRINKARD FIELD

BOTTOM HOLE PRESSURE BUILDUP TEST

Cumulative Production: 215,973 BO 426 MMCF (1/78)

Date Well Completed: July, 1950

Latest Producing Rate: 11 BOPD Trace BOPD 41.5 MCFD

WELL DATA

Net Thickness, $h = 47$ ft

Porosity, $\phi_{avg} = 9\%$

Water Saturation, $S_{w,avg} = 25\%$

Viscosity, μ in cp

Oil = .88

Gas = .012

Volume Factors, B

$B_o = 1.22$

$B_g = 10.7$

Drainage Radius, r_e

$$r_e = \sqrt{\frac{(40 \text{ acres}) 43560}{\pi}} = 745 \text{ ft}$$

System Compressibility, $C_t \text{ PSI}^{-1} = S_o C_o + S_w C_w + S_g C_g + C_{rock}$

$$C_t = [.6(10 \times 10^{-6})] + [.15 \left(\frac{1}{400}\right)] + 5 \times 10^{-6}$$

$$C_t = 3.86 \times 10^{-4} \text{ PSI}^{-1}$$

INTERWELL Kh ; TOTAL MOBILITY $\left(\frac{K}{\mu}\right)t$

$$K_{oh} = \frac{162.6 Q_o \mu_o B_o}{M} = \frac{162.6 (11) (.88) (1.22)}{135} = 14.22 \quad K_o = 0.3$$

$$K_{gh} = \frac{162.6 (Q_g \text{ total} - Q_o R_s) \mu_g B_g}{M} = \frac{162.6 [41.5 - 11(.29)] (.012) 10.7}{135} = 5.92 \quad K_g = .13$$

$$\left(\frac{K}{\mu}\right)t = \frac{K_o}{\mu_o} + \frac{K_g}{\mu_g} = \frac{0.3}{.88} + \frac{0.13}{.012} = 11.17$$

AVERAGE RESERVIOR PRESSURE

$$\text{Extrapolation Time, hrs} = 379 \phi C_t r_e^2 \left(\frac{\mu}{k}\right)t$$

$$= 379 (.09)(3.86 \times 10^{-4})(745^2) \frac{1}{11.17}$$

$$t = 654 \text{ hrs.}$$

$$\text{At } t = 654 \text{ hrs, } P = 397 \text{ PSI}$$

$$\text{Avg Reservoir Pressure} = 397 \text{ PSI}$$

HALLIBURTON DIVISION LABORATORY
 HALLIBURTON SERVICES
 MIDLAND DIVISION
 HOBBS, NEW MEXICO 88240
 LABORATORY WATER ANALYSIS

No. W78-887To Amoco Production CompanyDate 10-9-78Drawer ALevelland, Texas

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____

Date Rec. 10-6-78Well No One B #2

Depth _____

Formation _____

County _____

Field _____

Source _____

	<u>10-5-78 6 PM</u>	<u>10-6-78 6 PM</u>	
Resistivity _____	<u>0.048 @ 74° F.</u>	<u>0.050 @ 74° F.</u>	
Specific Gravity _____	<u>1.183</u>	<u>1.175</u>	
pH _____	<u>7 6.4</u>	<u>6.4</u>	
Calcium (Ca) _____	<u>9,000</u>	<u>12,500</u>	*MPL
Magnesium (Mg) _____	<u>Nil</u>	<u>Nil</u>	
Chlorides (Cl) _____	<u>170,000</u>	<u>162,000</u>	
Sulfates (SO ₄) _____	<u>2,200</u>	<u>2,300</u>	
Bicarbonates (HCO ₃) _____	<u>145</u>	<u>160</u>	
Soluble Iron (Fe) _____	<u>90</u>	<u>90</u>	

Remarks: _____

BEFORE EXAMINER'S SIGNATURES
 OIL CONCENTRATION DIVISION

Amoco Division No. 6Case No. 6396Submitted by PerseHearing Date 12-7-78

*Milligrams per liter

Respectfully submitted,

Analyst, Brewer

cc: _____

HALLIBURTON COMPANY

By W. L. Brewer

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W78-950To Amoco Production CompanyDate 10-27-78Drawer ALevelland, Texas 79336

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____ Date Rec. 10-27-78Well No. As Marked Depth _____ Formation DrinkardCounty Lea Field _____ Oil Center _____ Source _____

	<u>Cone A-1</u>	<u>Cone B-1</u>	
Resistivity _____	<u>0.068 @ 74° F.</u>	<u>0.065 @ 74° F.</u>	
Specific Gravity _____	<u>1.118</u>	<u>1.121</u>	
pH _____	<u>6.3</u>	<u>6.3</u>	
Calcium (Ca) _____	<u>15,800</u>	<u>18,500</u>	<u>*MPL</u>
Magnesium (Mg) _____	<u>Nil</u>	<u>Nil</u>	
Chlorides (Cl) _____	<u>106,000</u>	<u>109,000</u>	
Sulfates (SO ₄) _____	<u>1,500</u>	<u>1,400</u>	
Bicarbonates (HCO ₃) _____	<u>270</u>	<u>220</u>	
Soluble Iron (Fe) _____	<u>Nil</u>	<u>10</u>	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

cc:

By W. L. Brewer

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISSION, RESULTING FROM SUCH REPORT OR ITS USE.

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W78-951To Anoco Production CompanyDate 10-27-78Drawer ALevelland, Texas

This report is the property of Halliburton Company and neither it nor any part thereof nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management; it may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Company.

Submitted by _____

Date Rec. 10-27-78Well No. As Marked

Depth _____

Formation DrinkardCounty Lea

Field _____

Oil Center _____

Source _____

	House C-1	State U #1	
Resistivity _____	0.076 @ 74° F.	0.070 @ 74° F.	
Specific Gravity _____	1.109	1.116	
pH _____	6.4	6.3	
Calcium (Ca) _____	15,000	18,000	*MPL
Magnesium (Mg) _____	N11	N11	
Chlorides (Cl) _____	97,000	104,000	
Sulfates (SO ₄) _____	1,400	1,600	
Bicarbonates (HCO ₃) _____	280	270	
Soluble Iron (Fe) _____	60	N11	

Remarks: _____

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc: _____

HALLIBURTON COMPANY

By C. L. Brewer

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE, WHETHER IT BE TO ACT OR OMISION, RESULTING FROM SUCH REPORT OR ITS USE.

12-7-78

6392, 6401, 6402, 6403 Cont'd
6393. Tex & Kendrick

6394 - RLS & Tex
~~6394~~ Guy Buell, Dave Burleson EPNG
Riber & S Wheeler Cities Serv
Emergency Order 12-1-78

? Rule 3 GS
R1620-T no order

6395 Sumner Buell
Jim B ~~at~~ Henry

NSP Indian Basin S/2 Sec 9

6396 Guy Buell
Jim Pearson

? Why GOR limit VS unrestricted allow.
Gas well

? What pool is Sec 6

? How Old House Drinker

? What is pay interval old pool

would expect 3000 psi BHP

only got 2000, Drainage or Test down

6398 Joel Carson TOEG

Tom Kellehin Hanagan

Charles Cookman Geo M. Hunt TOG

BS W Michigan

76ms Geo

X Tom 1 1/2 yr Tesaco Mapping Morrow for 500

? std. loc. no closer than ~~1650~~ ~~1650~~

1650

could locate new well at 1650

* is acreage less than 6' sd not productive

anything NE of 6' line on Ex³ contained
? mid-Morrow not only prospective pay

Sal P. Jarno Dist Res Engr
U Miss 73 Rolle BS Engr
Amoco Hobbs - Andrews Dlg-Rch
WF July 78 joined T O G

X Tom

Nan But 75% depleted, does not
feel penalizing production is appropriate.

~~2000~~ 2979' 640 acre drainage radius

No top allow wells in pool

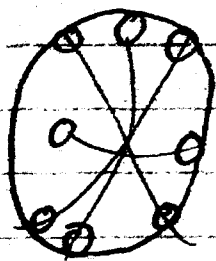
Direct Tom

Hugh Hanagan
Field apparently fully developed
Not more than 20% acres
in Section 18 would be productive
less than 100 acres

There are zones behind pipe in offset
wells that could produce which might
be drained by the well at the NSL

~~Clarify testimony on Nan But pay~~

? Should restrict prod w/ af
based on Net drain - loc or acreage



Less than 100 acres productive
would also like to see odd
restriction due to NSL

Re direct Cookman

2/ 6399 Joel Carson

Risk Factor. Cookman
200%

Doyle Suro Landman V O &
NW NW subject to litigation, if fed's
loose they need to have non
locatable heirs pooled.

? What attempts made

? How many people in lot 1 { 4 children
16 heirs located

\$ 1980 drly

\$ 335 prod Reter

6397

George Hunter

Western Oil Prod

Tom Kella hin

George direct

Admin Notice

R3161 are 3492

Roy McKay Pres McKay Oil Producers

200% risk

\$ 2520 drly } notes

\$ 292 prod

100-120 days to produce

? Need to qualify McKay

? Whose name on C-101 Western

1969 - Sun Oil Co Landman

Pubco

Petro Grande 1973, drilled 50 Worried Wells
in S E N. M. B

Direct Tom Kellahan
John Scott (Sally) Alcorn
Development Geo
BS & Engr 50 Oll. Thru the WTA-UM
Indpt 60s then 72 BTA Dev Geo

dry 7700 + Getty Well in Sec 10

BTA not joining, waiting on Getty well in 10
would show it ~~is~~ in likely hood of
good well in 4 is 30% or 70%
penalty recommended not over 60%

Participated w/ Gulf in Sec 5 well
dry.

? what is pay, ~~bar~~, delta, channel
Top LS - others shoreline

? What drilled 1st, 2nd, 3rd.

6400 Joel Carson

Harvey Yater Jr pres

worked Cable Tool rigs, UTA, Low School

Selma Andrews Trust to be pooled, each s.d

0.78125% Republic Nat Bank Dallas

Interests under all tracts the same

? How long to start & drill all

\$1900.68 dry

\$245.23 prod

Risk

Would like
to start some
this year

3 wells one after the other

prior to March 30 2 more

" " May 31, 1979 2 more

17 days to drill - 10 days to complete

10 days for bank to decide.
~~reduce~~

Charles Joy 200 % Risk factor
parasitic 5-7 %

6404 Tony Kellahin
John P. Hawk's Area Land Mgr
1139 ME T&AM

160-acre NSP

all WI owners signed up.

ORI only pooled

Joseph M Martin area res engr.
BS Rolla

6405 Bert Muncy
Mine in area shut down

est TD 3500 premier

Surface to top of soft 550-600
circ

Prod string set, will run enough to
circ

John Burleson, Mining super GS

No safety problem

Some water flow in Seven Rivers

Notify of water flow.

BEFORE THE OIL CONSERVATION DIVISION
STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION)
OF AMOCO PRODUCTION COMPANY FOR)
POOL CREATION AND CONTRACTION,)
LEA COUNTY, NEW MEXICO.)

Case No. 6396

ENTRY OF APPEARANCE

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

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

By 

P. O. Drawer 700
Roswell, New Mexico 88201

Attorneys for Amoco Production Company

ATWOOD, MALONE, MANN & COOTER
A PROFESSIONAL ASSOCIATION
LAWYERS

JEFF D. ATWOOD [1963-1960]
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

December 4, 1978

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

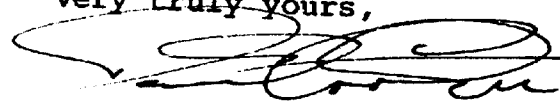
RE: Examiner Hearing December 7, 1978
Case No. 6396

Dear Mr. Ramey:

Please file the enclosed Entry of Appearance in
Case No. 6396.

Thank you and with regards, I am

Very truly yours,



Paul Cooter

PC/le

Encl.

cc: Guy Buell, Esq.
w/encl.

Dockets Nos. 40-78 and 41-78 are tentatively set for hearing on December 20, 1978 and January 3, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - THURSDAY - DECEMBER 7, 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:

- CASE 6392:** In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Corlune Grace, The Travelers Indemnity Company, and all other interested parties to appear and show cause why the Indian Hills Com. Well No. 1 located in Unit J of Section 8, Township 21 South, Range 24 East, Eddy County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.
- CASE 6393:** In the matter of the hearing called by the Oil Conservation Division on its own motion to consider the amendment of Rule 104 F of the Division Rules and Regulations to provide for the administrative approval of the unorthodox location of wells drilled within secondary recovery or pressure maintenance projects.
- CASE 6394:** In the matter of the hearing called by the Oil Conservation Division on its own motion to consider the adoption of an administrative procedure and Forms C-132 and C-132-A, all for the purpose of making wellhead price ceiling category determinations under the Natural Gas Policy Act of 1978.
- CASE 6395:** Application of David Fasken for pool contraction and pool extension, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the Indian Basin-Morrow Gas Pool by the deletion therefrom of Section 9, Township 21 South, Range 24 East, Eddy County, New Mexico, and the extension of the Cemetery-Morrow Gas Pool to include the aforesaid Section 9.
- CASE 6396:** Application of Amoco Production Company for pool creation and contraction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the House Drinkard oil pool by the deletion therefrom of the NE/4 and E/2 SE/4 of Section 12 and the E/2 NE/4 of Section 13, both in Township 20 South, Range 38 East, and the W/2 of Section 7 and the NW/4 of Section 18, Township 20 South, Range 39 East, and the creation of a new gas pool for Lower Drinkard production in the NE/4 of Section 12, Township 20 South, Range 38 East, all in Lea County, New Mexico.
- CASE 6397:** Application of Western Oil Producers, Inc. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying all of Section 4, Township 24 South, Range 35 East, Cinta Roja-Morrow Gas Pool, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6398:** 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 for the Wolfcamp and Pennsylvanian formations of its State Com Well No. 1, to be located 660 feet from the South and West lines of Section 18, Township 21 South, Range 26 East, Catclaw Draw Field, Eddy County, New Mexico, all of said Section 18 to be dedicated to the well in the Morrow formation.
- CASE 6399:** Application of Texas Oil & Gas Corporation for compulsory pooling, 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 32, Township 18 South, Range 27 East, Eddy County, New Mexico, to be dedicated to a well to be drilled 710 feet from the North line and 2330 feet from the West line of said section. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6400:** Application of Coronado Exploration Corporation for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying each of the following 40-acre tracts: SW/4 SW/4 Section 7; SW/4 SW/4 Section 8; SW/4 SE/4 Section 18; NW/4 NW/4 Section 19; and NW/4 NW/4 Section 20, all in Township 10 South, Range 28 East, Race Track-San Andres Pool, Chaves County, New Mexico. Also the NE/4 NE/4 Section 28, Township 10 South, Range 28 East, LE Ranch-San Andres Pool, Chaves County, and the SW/4 NE/4 Section 15, Township 11 South, Range 28 East, East Chisum-San Andres Pool, Chaves County. Each of the aforesaid 40-acre tracts would comprise a drilling unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered, with respect to each of the above described drilling units and well, will be the cost of drilling and completing the 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 each well and a charge for risk involved in drilling each well.

- CASE 6401:** Application of Southland Royalty Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Mesaverde production within the wellbore of its Jicarilla 101 Well No. 1 located in Unit A of Section 1, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.
- CASE 6402:** Application of Southland Royalty Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Gallup and Dakota production within the wellbore of its Jicarilla 101 Well No. 2 located in Unit M of Section 12, Township 26 North, Range 4 West, Rio Arriba County, New Mexico.
- CASE 6403:** Application of Consolidated Oil & Gas, Inc. for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Basin Dakota and Blanco Mesaverde production within the wellbore of its O'Shea Well No. 1 located in Unit K of Section 3, Township 31 North, Range 13 West, San Juan County, New Mexico.
- CASE 6404:** Application of Sun Production Company for compulsory pooling, non-standard gas proration unit, and an unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Eumont Gas Pool underlying the SE/4 of Section 35, Township 19 South, Range 35 East, Lea County, New Mexico, to form a non-standard 160-acre proration unit to be dedicated to a well to be drilled at an unorthodox location 810 feet from the South line and 2030 feet from the East line of said section. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6405:** Application of LaRue and Muncy for exception to Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its Federal FR Well No. 1 located in Unit I of Section 15, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed in the following manner: set surface casing and circulate cement; eliminate salt protection string; and do not circulate cement on production casing.

no
Address
Remark

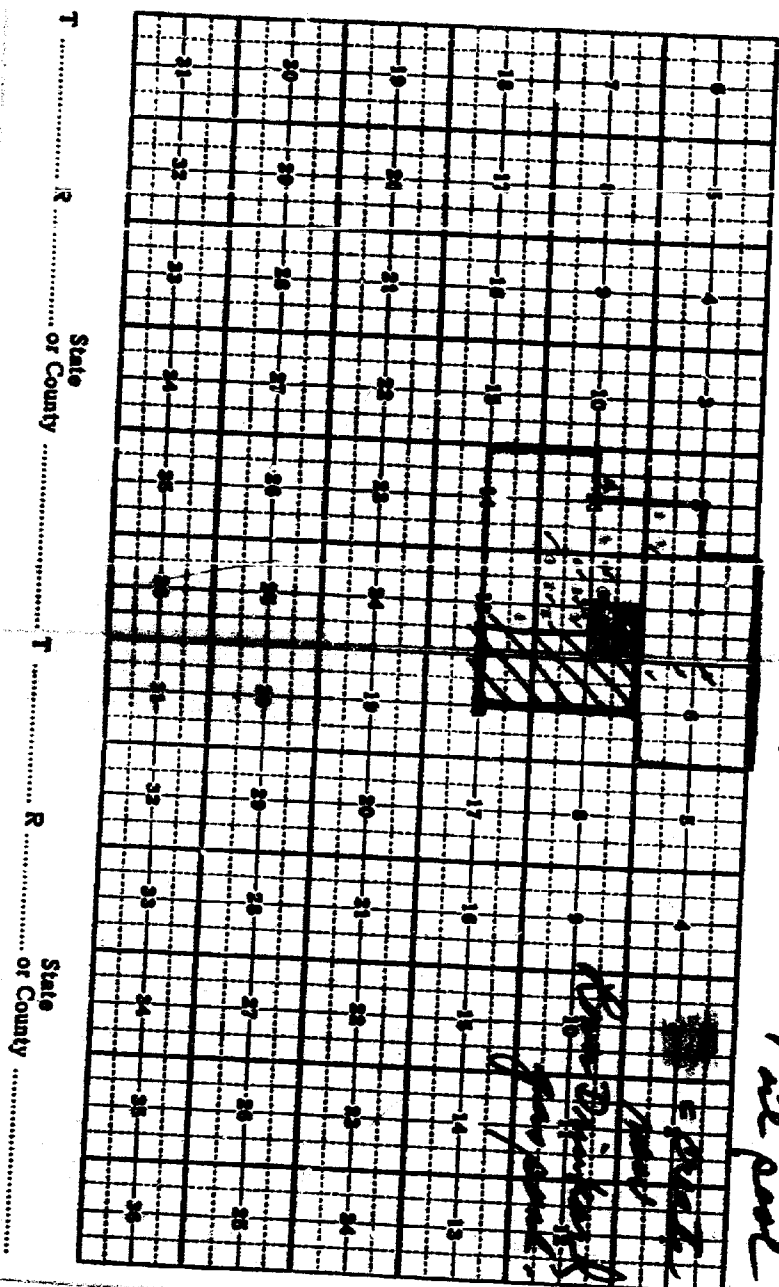
Ph.

Name
Address
Remark

Ph.

20-59

/// = delete
from the year
oil pool



Amoco Production Co

create:

House - Lower Drinkard Gas Pool

Amoco Cone B#2 Located

G Sec 12, Twp 20 S Rge 38 E
Rear

NE 1/4 Sec 12 corner out of House

Dr
Pool

called in by
John 11/15/78

Application of Amoco Production Co
for pool creation and contraction
Lea County, New Mexico.

and the E/2 NE/4
of Section 13,
both in

Applicant, in the above styled lease, seeks
the contraction of the Hance Drinkard oil
pool by the deletion herefrom of the
NE/4 and E/2 SE/4 of Section 12, Township
20 South, Range 38 East, and the W/2 of Section
7 and the NW/4 of Section 18, Township 20
South, Range 39 East, ~~all in Lea County,~~
~~New Mexico~~, and the creation of a
new gas pool for Lower Drinkard
production in the NE/4 of Section 12,
Township 20 South, Range 38 East, all in
Lea County, New Mexico.



NOV 27 1978
Amoco Production Company

Houston Region
500 Jefferson Building
Post Office Box 3092
Houston, Texas 77001 Santa Fe

J. R. Barnett
Regional Engineering
Manager

November 21, 1978

File: TBM-986.51NM-1237

Re: Request for Hearing
House Pool (Drinkard)
Lea County, N.M.

Department of Energy & Minerals (3)
Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87501

Attention: Mr. Joe D. Ramey

Gentlemen:

Confirming telephone request of November 15, 1978 to Mr. Dan Nutter, Amoco Production Company requests a hearing to consider the contraction of the House Pool (Drinkard) and creation of the Northeast House - Drinkard Pool and House - Lower Drinkard Gas Pool, Lea County, New Mexico.

Specifically, Amoco proposes to delete the following area from the House Pool (Drinkard).

T-20-S R-38-E Sec. 1; SW/4 Sec. 11, NE/4 Sec. 12, N/2 Sec. 14.
T-20-S R-39-E Sec. 6; W/2 Sec. 7, NW/4 Sec. 18.

The Northeast House - Drinkard Pool would cover the SW/4 NW/4, NW/4 SW/4 of Section 6, T-20-S, R-39-E.

The House - Lower Drinkard Gas Pool would cover the NE/4 of Section 12, T-20-S, R-38-E with vertical limits being the completion interval in Amoco's Cone "B" Well No. 2, located in Unit G, Section 12, T-20-S, R-38-E, Lea County, New Mexico.

Attached is a map of the area. Please direct any questions to Mr. Jim Pease, telephone number 713-652-5461.

Yours very truly,

J. R. Barnett

JEP/ym
Attachment

cc: Mr. V. E. Staley - Hobbs
Mr. G. T. Buell - Building

Case 6396

DRAFT

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

dr/

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

CASE NO. 6396

Order No. R- 6225

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR POOL CREATION AND
CONTRACTION, LEA COUNTY, NEW MEXICO.

CL

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 7,
⁷⁸
1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets

NOW, on this _____ day of December, 19 79, the Division
Director, having considered the record and the recommendations of
the Examiner, and being fully advised in the premises,

FINDS:

That the applicant's request for dismissal should be granted.

IT IS THEREFORE ORDERED:

That Case No. 6396 is hereby dismissed.

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

5923 TS

Amby

CASE 6397: WESTERN OIL PRODUCERS, INC.
FOR COMPULSORY POOLING, LEA COUNTY, NEW
MEXICO