

CASE 6981: BASS ENTERPRISES PRODUCTION Co.
COMPANY FOR A SPECIAL GAS-OIL RATIO LIMITATION,
EDDY COUNTY, NEW MEXICO

CONTINUE

TO

AUGUST 20

Case No.

6981

Application

Transcripts

Small Exhibits

ETC



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

September 12, 1930

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

Re: CASE NO. 6981
ORDER NO. R-6464

Applicant:

~~Bass Enterprises 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 OCD _____ x
Artesia OCD _____ x
Aztec OCD _____

Other _____

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
20 August 1980

EXAMINER HEARING

IN THE MATTER OF:

Application of Bass Enterprises Pro-
duction Company for a special gas-
oil ratio limitation, Eddy County,
New Mexico.

CASE
6981

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

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

For the Applicant:

Conrad E. Coffield, Esq.
HINKLE LAW FIRM
P. O. Box 3580
Midland, Texas

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Phone (505) 435-7409

I N D E X

JACK R. GEVECKER

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Applicant Exhibit Eight, Analysis 9

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MR. STAMETS: Call Case 6981.

MR. PADILLA: Application of Bass Enterprises Production Company for a special gas/oil ratio limitation, Eddy County, New Mexico.

MR. COFFIELD: Conrad Coffield, with the Hinkle Law Firm in Midland, Texas, appearing on behalf of the applicant.

I have one witness to be sworn.

(Witness sworn.)

JACK R. GEVECKER

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

DIRECT EXAMINATION

BY MR. COFFIELD:

Q. Mr. Gevecker, would you please for the record state your name, address, occupation, and employer?

A. My name is Jack Gevecker. I'm a Senior Production Engineer with Bass Enterprises Production Company, Box 2760, Midland, Texas.

Q. Mr. Gevecker, have you previously testified before the Division as a petroleum engineer?

A. Yes, I have.

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1 Q And were your qualifications made a matter
2 or record and accepted by the Division?

3 A Yes, they were.

4 Q Are you familiar with Bass' application
5 in this particular case?

6 A Yes, I am.

7 Q And likewise are you familiar with the
8 property involved and the well?

9 A Yes, sir, I am.

10 MR. COFFIELD: Do you have any other
11 questions of this witness?

12 MR. STAMETS: The witness is considered
13 qualified.

14 Q Mr. Gevecker, what is it that Bass seeks
15 by this particular application?

16 A Bass Enterprises seeks to amend the pool
17 rules in the Palmillo-Bone Springs Pool by increasing the GOR
18 limit from 200-to-1 up to 8000-to-1. The only well in this
19 field is Bass' Merchant State No. 1, located in Unit H, Section
20 1, Township 19 South, Range 28 East of Eddy County, New
21 Mexico.

22 Q Okay, go now to what we've marked as Ex-
23 hibit Number One and explain that exhibit to the Examiner,
24 please.

25 A Exhibit One is a land plat centered on

1 the Merchant State No. 1. The acreage outlined in yellow is
2 on the plat is the Bass acreage in the area. The brown arrow
3 points the location of the Merchant State No. 1 in Unit H of
4 Section 1.

5 The 40-acre Bone Springs proration unit
6 is outlined in green, which is Unit H of Section 1.

7 The offset operators to this proration
8 unit are Northern Natural Gas to the east and Amoco to the
9 southeast.

10 The red dot denotes Redfern Development
11 Corporation's well in Unit M, Section 36, Township 18 South,
12 Range 28 East. This well was the discovery well for this
13 field. The well was perforated in the same relative pay inter-
14 val as our Merchant State No. 1. I should point out on this
15 land plat, also, that other deep offset wells did not encounter
16 the Bone Springs interval. These are Bass' Palmillo State
17 No. 1, located in Unit J, Section 1, Township 19 South, Range
18 28 East, and Amoco's State "ER" No. 1, located in Unit G, Sec-
19 tion 6, Township 19 South, Range 28 East. These wells are
20 designated as a green dot.

21 These wells were used in order to define
22 our Bone Springs reservoir.

23 Q Okay, Mr. Gevecker, next we have exhibits
24 marked Exhibit Two and Two-A. Would you please explain those
25 to the Examiner?

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2 pensated neutron formation density and duolateral logs and
3 Micro SFL logs on the Merchant State No. 1. The formation
4 tops of the Bone Springs, as well as other intervals, are
5 shown on the logs along with the Bone Springs and the Morrow
6 perforations.

7 Q Next we've got Exhibit Number Three, Mr.
8 Gevecker. Would you please explain that exhibit?

9 A Exhibit Number Three is a wellbore diagram
10 showing the current installation of the well. The Morrow
11 formation has been perforated and tested with an absolute open
12 flow of 955 Mcf per day with no water or condensate.

13 It is currently shut-in by means of an
14 Otis RN plug in the "X" nipple at 10,988 feet, and a bridge
15 plug at 6606 feet.

16 The Bone Springs has been potentialled for
17 478 barrels of oil a day, plus 336 barrels of water, plus 900
18 Mcf per day.

19 Q Okay, next we have Exhibit Four. Would
20 you please explain that exhibit?

21 A Okay. Exhibit Four is a table of the
22 production history based on well tests from the Merchant
23 State No. 1. As can be seen, we produced the well in early
24 November, 1979, and shut it in to obtain a 72-hour pressure
25 build-up. We repeated this again in late January and early

1 February, shutting it in for 72-hour pressure build-up.

2 The well was then produced for about a
3 1-month period from May the 20th to June the 25th, and a 72-hour
4 pressure build-up was taken. These three points were used in
5 our material balance equation.

6 I would like to point out on this exhibit
7 also, that the choke size and the tubing pressure that is
8 associated with our production, the small choke size and the
9 high tubing pressure.

10 Q Okay. Next would you explain, please,
11 Exhibit Number Five?

12 A Exhibit Number Five is the production
13 history from Redfern Development Corporation's Marathon State
14 No. 1, the only other well that had been in the Palmillo-
15 Bone Springs Field.

16 This well began production in December of
17 1965 and made 2481 barrels of oil and 16,350 Mcf before being
18 plugged in September of 1966. Please notice on this exhibit
19 the high GORs above 10,000 associated with this oil well.

20 Q Mr. Gevecker, have you studied any other
21 Bone Springs field in the area?

22 A Yes, I have. Exhibits Numbers Six and
23 Seven are the only two Bone Springs producers in Eddy County
24 with recent production history.

25 Exhibit Number Six is Coquina's Wagner

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1 Federal No. 2, located in Section 2, Township 20 South, Range
2 27 East.

3 Exhibit Number Seven is Penroc Oil Com-
4 pany's Allied "B" Communitized No. 1, located in Section 1
5 of Township 20 South, Range 27 East.

6 These two wells have similar oil and gas
7 production histories. The Oil Conservation Commission -- let
8 me back up.

9 The wells have similar production histories
10 in their oil, water, and GOR histories; however, the Oil
11 Conservation Commission considers the Wagner Federal No. 2
12 to be a gas well and Penroc's Allied "B" Communitized No. 1
13 to be an oil well.

14 Q What's the current status, Mr. Gevecker,
15 of the subject well?

16 A Okay. Currently this well is producing
17 from the Bone Springs with the Morrow shut-in. The original
18 allowable for this well on 40-acre spacing was 142 barrels
19 of oil per day. It has since been penalized due to a high
20 GOR to 43 barrels of oil per day.

21 This well is capable of top allowable oil
22 production. The last test, as shown on the previous exhibit
23 here, on June the 25th, 1980, was 110 barrels of oil per day,
24 plus 35 barrels of water per day, plus 822 Mcf per day, with
25 a 1520 pound tubing pressure on a 10/64ths choke.

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1 Q Mr. Gevecker, what studies have you done
2 to determine the original oil in place and reservoir drive
3 mechanism?

4 A As mentioned earlier, we have produced
5 the Bone Springs and obtained three shut-in bottom hole pres-
6 sures following a 72-hour build-up. The data was then applied
7 to material balance equation for a solution gas drive reservoir.
8 These calculations show the oil in place for the reservoir to
9 be approximately 2.5 million barrels and that the reservoir
10 is volumetric. The well was perforated at the top of the pay
11 and produced a yellow-green 42.5 degree API gravity crude,
12 with a GOR below 2000 initially, indicating no gas cap was
13 present.

14 The declining bottom hole pressure indi-
15 cates there is no active water drive.

16 These three facts point to a solution gas
17 drive reservoir. Published data has shown that ultimate re-
18 covery by this drive mechanism is not rate dependent, meaning
19 that the well will recover the same volume of oil whether it's
20 produced at 42 barrels of oil a day or 142 barrels of oil per
21 day.

22 Q The last exhibit we have here, Mr. Gevecker,
23 is labeled Exhibit Eight. Would you please explain that ex-
24 hibit?

25 A Exhibit Eight is an oil/water/gas analysis

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1 of the fluid taken from the well. The ASTM distillation of
2 the oil shows this to be a crude oil and not a condensate.

3 Q What studies have you done on the relative
4 economics of this particular project?

5 A Okay. Increasing the GOR to 8000 indi-
6 cates more favorable economics. Bass is convinced that a
7 higher GOR will propose -- will pose no fiscal waste on the
8 reservoir. We're not asking for an increase in oil allowable,
9 though the well is capable of producing in excess of 142 bar-
10 rel a day allowable. We're asking for an increase in GOR
11 so that the well may be produced at or near the top allowable.

12 The cost to drill and complete a single
13 Bone Springs producer is approximately \$350,000. A well
14 producing top allowable at 142 barrels of oil per day with an
15 8000 GOR will pay out in approximately .35 years.

16 A 43 barrel of oil per day well with a
17 2000 GOR, as we have right now, will pay out in approximately
18 1.65 years. Therefor, given the same ultimate recovery, the
19 non-penalized allowable will pay out 1.3 years sooner than
20 the penalized allowable, meaning our money is tied up for an
21 extra 1.3 years, a year and three to four months longer under
22 the penalized situation.

23 Q Mr. Gevecker, were these Exhibits One
24 through Eight prepared by you or under your supervision?

25 A Yes, they were.

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1 Q And in your opinion will the increase in
2 GOR which you've asked for in this particular application,
3 prevent economic waste and protect correlative rights?

4 A Yes, it will.

5 MR. COFFIELD: Mr. Examiner, I move the
6 admission of Exhibits One through Eight.

7 MR. STAMETS: These exhibits will be ad-
8 mitted.

9 MR. COFFIELD: I have no other questions
10 of Mr. Gevecker on direct examination.

11
12 CROSS EXAMINATION

13 BY MR. STAMETS:

14 Q Mr. Gevecker, have you made any estimates
15 of the reservoir size in this case?

16 A Yes, we have. Based on the 2.5 million
17 barrels of oil in place that we calculated as mentioned earlier
18 and given a homogeneous reservoir of the size of constant
19 pay thickness we see in our Merchant State No. 1, we estimate
20 the reservoir to be 160 acres.

21 Q So there's a good chance this will be the
22 only well ever completed in that one.

23 A Yes.

24 Q Exhibit Number Eight, you indicated demon-
25 strates that this is a crude oil as opposed to condensate.

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1 Could you elaborate on that, specifically what on Exhibit
2 Eight --

3 A Okay.

4 Q -- demonstrates that view?

5 A Okay, on Exhibit Eight, if you would turn
6 to the oil analysis, that refers to the ASTM distillation,
7 it's the first or probably second page.

8 Q Okay, it's the first one.

9 A First page, okay. There were certain
10 guidelines that one can go by in looking at analysis such as
11 this to determine whether or not it's an oil or condensate.

12 One of the first things would be the ini-
13 tial boiling point. If the initial boiling point were below
14 120 you would be in area that might be considered condensate.
15 This is 120, which is right on the lower border, or the start
16 of going from condensate to a crude oil.

17 The second thing would be the percent,
18 if you'll look on the left side of the page, the volume per-
19 cent recovered at the different temperatures. At 550 degrees
20 we have 60 percent recovery.

21 On a condensate this number would be
22 potentially higher.

23 And also down at the bottom of the page,
24 you see the percent fractions of what was recovered, gasoline,
25 naptha, kerosine, and fuel oil. On a condensate you wouldn't

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1 have almost 41 percent fuel oil. You would -- it would be a
2 much cleaner type of fluid, whereas a crude will have this
3 fuel oil left in it; condensate would not.

4 Q What was the original reservoir pressure?

5 A The initial reservoir pressure was 2957.

6 Q And you have a recent pressure?

7 A The last pressure that was taken indicated
8 the reservoir pressure to be 2729.

9 And this was -- this last pressure was
10 taken in July of 1980 when the well was shut-in.

11 Q I presume you have some other pressures
12 taken, as well.

13 A Yes, as mentioned, we produced the well
14 for approximately a week and got the 72-hour build-up and
15 again in late January, early February, 72-hour build-up, and
16 then again in July.

17 Okay, do you want these pressures corres-
18 poinding with --

19 Q No, I just -- I just curious to see if
20 you did have those.

21 So you plotted those out to see what sort
22 of a recovery you're getting per pound of pressure drop.
23 Is it a uniform rate of recovery or is it varying as the
24 pressure declines?

25 A I haven't -- as far as a productivity

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1 index type of thing where barrels of recovery per psi drop,
2 I have not worked that out.

3 I have plugged my numbers into material
4 balance equations to estimate the oil in place to get an ul-
5 timate recovery.

6 At the first two pressure points my mater-
7 ial balance equations came out very, very close for calculating
8 oil in place.

9 My third point was approximately half of
10 the first two points, but in looking at my data I recovered
11 less than half a percent of the total oil in place, yet I'm
12 trying to extrapolate how much is there, so I'm still very
13 early in the life of the well, and I would need to produce
14 it some time longer and get another point and see where that
15 falls in.

16 Q What's the bubble point pressure for this
17 well?

18 A I don't have that.

19 Q How difficult would that be to ascertain
20 at some point in the future?

21 A I believe a recombined sample, I'm
22 getting a sample of the crude. I'm not sure, you know, how
23 to say how difficult it will be, just, you know, getting
24 the --

25 Q You hadn't intended to get a bubble point

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1 pressure, apparently.

2 A No, we had not at this point.

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

5 Anything further in this case?

6 The case will be taken under advisement.

7
8 (Hearing concluded.)
9

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

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. 6981 heard by me on 8-22-80 1980.
Richard D. Lane, Examiner
Oil Conservation Division

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13 to be an oil well.

14 Q What's the current status, Mr. Gevecker,
15 of the subject well?

16 A Okay. Currently this well is producing
17 from the Bone Springs with the Morrow shut-in. The original
18 allowable for this well on 40-acre spacing was 142 barrels
19 of oil per day. It has since been penalized due to a high
20 GOR to 43 barrels of oil per day.

21 This well is capable of top allowable oil
22 production. The last test, as shown on the previous exhibit
23 here, on June the 25th, 1980, was 110 barrels of oil per day,
24 plus 35 barrels of water per day, plus 822 Mcf per day, with
25 a 1520 pound tubing pressure on a 10/64ths choke.

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Phone (505) 455-7409

1 Q Mr. Gevecker, what studies have you done
2 to determine the original oil in place and reservoir drive
3 mechanism?

4 A As mentioned earlier, we have produced
5 the Bone Springs and obtained three shut-in bottom hole pres-
6 sures following a 72-hour build-up. The data was then applied
7 to material balance equation for a solution gas drive reservoir.
8 These calculations show the oil in place for the reservoir to
9 be approximately 2.5 million barrels and that the reservoir
10 is volumetric. The well was perforated at the top of the pay
11 and produced a yellow-green 42.5 degree API gravity crude,
12 with a GOR below 2000 initially, indicating no gas cap was
13 present.

14 The declining bottom hole pressure indi-
15 cates there is no active water drive.

16 These three facts point to a solution gas
17 drive reservoir. Published data has shown that ultimate re-
18 covery by this drive mechanism is not rate dependent, meaning
19 that the well will recover the same volume of oil whether it's
20 produced at 42 barrels of oil a day or 142 barrels of oil per
21 day.

22 Q The last exhibit we have here, Mr. Gevecker,
23 is labeled Exhibit Eight. Would you please explain that ex-
24 hibit?

25 A Exhibit Eight is an oil/water/gas analysis

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1 of the fluid taken from the well. The ASTM distillation of
2 the oil shows this to be a crude oil and not a condensate.

3 Q What studies have you done on the relative
4 economics of this particular project?

5 A Okay. Increasing the GOR to 8000 indi-
6 cates more favorable economics. Bass is convinced that a
7 higher GOR will propose -- will pose no fiscal waste on the
8 reservoir. We're not asking for an increase in oil allowable
9 though the well is capable of producing in excess of 142 bar-
10 rel a day allowable. We're asking for an increase in GOR
11 so that the well may be produced at or near the top allowable.

12 The cost to drill and complete a single
13 Bone Springs producer is approximately \$350,000. A well
14 producing top allowable at 142 barrels of oil per day with an
15 8000 GOR will pay out in approximately .35 years.

16 A 43 barrel of oil per day well with a
17 2000 GOR, as we have right now, will pay out in approximately
18 1.65 years. Therefor, given the same ultimate recovery, the
19 non-penalized allowable will pay out 1.3 years sooner than
20 the penalized allowable, meaning our money is tied up for an
21 extra 1.3 years, a year and three to four months longer under
22 the penalized situation.

23 Q Mr. Gevecker, were these Exhibits One
24 through Eight prepared by you or under your supervision?

25 A Yes, they were.

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1 Q And in your opinion will the increase in
2 GOR which you've asked for in this particular application,
3 prevent economic waste and protect correlative rights?

4 A Yes, it will.

5 MR. COFFIELD: Mr. Examiner, I move the
6 admission of Exhibits One through Eight.

7 MR. STAMETS: These exhibits will be ad-
8 mitted.

9 MR. COFFIELD: I have no other questions
10 of Mr. Gevecker on direct examination.

11 CROSS EXAMINATION

12 BY MR. STAMETS:

13 Q Mr. Gevecker, have you made any estimates
14 of the reservoir size in this case?

15 A Yes, we have. Based on the 2.5 million
16 barrels of oil in place that we calculated as mentioned earlier,
17 and given a homogeneous reservoir of the size of constant
18 pay thickness we see in our Merchant State No. 1, we estimate
19 the reservoir to be 160 acres.

20 Q So there's a good chance this will be the
21 only well ever completed in that one.

22 A Yes.

23 Q Exhibit Number Eight, you indicated demon-
24 strates that this is a crude oil as opposed to condensate.
25

1 Could you elaborate on that, specifically what on Exhibit
2 Eight --

3 A Okay.

4 Q -- demonstrates that view?

5 A Okay, on Exhibit Eight, if you would turn
6 to the oil analysis, that refers to the ASTM distillation,
7 it's the first or probably second page.

8 Q Okay, it's the first one.

9 A First page, okay. There were certain
10 guidelines that one can go by in looking at analysis such as
11 this to determine whether or not it's an oil or condensate.

12 One of the first things would be the ini-
13 tial boiling point. If the initial boiling point were below
14 120 you would be in area that might be considered condensate.
15 This is 120, which is right on the lower border, or the start
16 of going from condensate to a crude oil.

17 The second thing would be the percent,
18 if you'll look on the left side of the page, the volume per-
19 cent recovered at the different temperatures. At 550 degrees
20 we have 60 percent recovery.

21 On a condensate this number would be
22 potentially higher.

23 And also down at the bottom of the page,
24 you see the percent fractions of what was recovered, gasoline,
25 naptha, kerosine, and fuel oil. On a condensate you wouldn't

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1 have almost 41 percent fuel oil. You would -- it would be a
2 much cleaner type of fluid, whereas a crude will have this
3 fuel oil left in it; condensate would not.

4 Q What was the original reservoir pressure?

5 A The initial reservoir pressure was 2957.

6 Q And you have a recent pressure?

7 A The last pressure that was taken indicated
8 the reservoir pressure to be 2729.

9 And this was -- this last pressure was
10 taken in July of 1980 when the well was shut-in.

11 Q I presume you have some other pressures
12 taken, as well.

13 A Yes, as mentioned, we produced the well
14 for approximately a week and got the 72-hour build-up and
15 again in late January, early February, 72-hour build-up, and
16 then again in July.

17 Okay, do you want these pressures corre-
18 poinding with --

19 Q No, I just -- I just curious to see if
20 you did have those.

21 So you plotted those out to see what sort
22 of a recovery you're getting per pound of pressure drop.
23 Is it a uniform rate of recovery or is it varying as the
24 pressure declines?

25 A I haven't -- as far as a productivity

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1 index type of thing where barrels of recovery per psi drop,
2 I have not worked that out.

3 I have plugged my numbers into material
4 balance equations to estimate the oil in place to get an ul-
5 timate recovery.

6 At the first two pressure points my mater-
7 ial balance equations came out very, very close for calculating
8 oil in place.

9 My third point was approximately half of
10 the first two points, but in looking at my data I recovered
11 less than half a percent of the total oil in place, yet I'm
12 trying to extrapolate how much is there, so I'm still very
13 early in the life of the well, and I would need to produce
14 it some time longer and get another point and see where that
15 falls in.

16 Q What's the bubble point pressure for this
17 well?

18 A I don't have that.

19 Q How difficult would that be to ascertain
20 at some point in the future?

21 A I believe a recombined sample. I'm
22 getting a sample of the crude. I'm not sure, you know, how
23 to say how difficult it will be, just, you know, getting
24 the --

25 Q You hadn't intended to get a bubble point

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1 pressure, apparently.

2 A No, we had not at this point.

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

5 Anything further in this case?

6 The case will be taken under advisement.

7
8 (Hearing concluded.)
9

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREPY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

SALLY W. BOYD, C.S.R.

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Santa Fe, New Mexico 87501
Phone (505) 455-7409

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

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. 6981
Order No. R-6464

APPLICATION OF BASS ENTERPRISES
PRODUCTION COMPANY FOR A SPECIAL
GAS-OIL RATIO LIMITATION, EDDY
COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on August 20, 1980, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 10th day of September, 1980, 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, Bass Enterprises Production Company, seeks, as an exception to Rule 506 of the Division Rules and Regulations, a limiting gas-oil ratio of 8,000 cubic feet of gas per barrel of oil for the Palmillo-Bone Spring Pool, Eddy County, New Mexico.

(3) That the reservoir characteristics of the subject pool justify the establishment of a gas-oil limitation of 8,000 cubic feet of gas per barrel of liquid hydrocarbons.

(4) That in order to afford to the owners in the Palmillo-Bone Spring Pool the opportunity to economically produce their just and equitable share of the oil and gas in the subject pool and for this purpose to use their just and equitable share of the reservoir energy, a limiting gas-oil ratio of 8,000 cubic feet of gas per barrel of liquid hydrocarbons should be established for the pool.

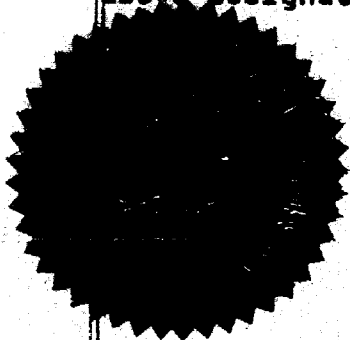
-2-
Case No. 6981
Order No. R-6464

IT IS THEREFORE ORDERED:

(1) That effective September 1, 1980, the limiting gas-oil ratio in the Palmillo-Bone Spring Pool, Eddy County, New Mexico, shall be 8,000 cubic feet of gas for each barrel of liquid hydrocarbons produced; that, effective September 1, 1980, each proration unit in the Palmillo-Bone Spring Pool shall produce only that volume of gas equivalent to 8,000 multiplied by the top unit allowable for the pool.

(2) 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.



SEAL

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Ramey
JOE D. RAMEY
Director

fd/

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

EXAMINER HEARING

IN THE MATTER OF:

Application of Bass Enterprises Pro-
duction Company for a special gas/oil
ratio limitation, Eddy County, New
Mexico.

CASE
6981

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

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

For the Applicant:

SALLY W. BOYD, C.S.R.
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Santa Fe, New Mexico 87501
Phone (505) 435-7409

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MR. STAMETS: Call next Case 6981.

MR. PADILLA: Application of Bass Enterprises Production Company for a special gas-oil ratio limitation, Eddy County, New Mexico.

MR. STAMETS: At the request of the applicant, this case will be continued to the August 20th Examiner Hearing.

(Hearing concluded.)

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Phone (505) 455-7409

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

SALLY W. BOYD, C.S.R.

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Phone (505) 435-7409

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. _____, heard by me on _____ 19____.

_____, Examiner
Oil Conservation Division

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

EXAMINER HEARING

IN THE MATTER OF:

Application of Bass Enterprises Pro-
duction Company for a special gas/oil
ratio limitation, Eddy County, New
Mexico.

CASE
6981

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

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

For the Applicant:

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MR. PADILLA: Application of Bass Enterprises Production Company for a special gas-oil ratio limitation, Eddy County, New Mexico.

MR. STAMETS: At the request of the applicant, this case will be continued to the August 20th Examiner Hearing.

(Hearing concluded.)

SALLY W. BOYD, C.S.R.

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd C.S.R.

SALLY W. BOYD, C.S.R.

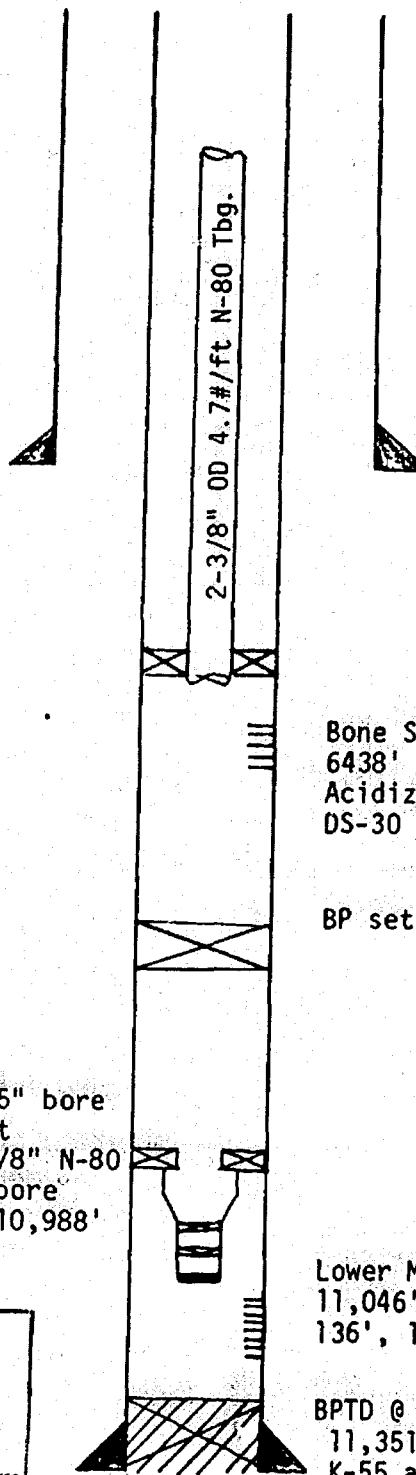
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I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6981 heard by me on 7-23 19 80.
Richard R. Lamm, Examiner
Oil Conservation Division

EXHIBIT NO. 3
BASS ENTERPRISES PRODUCTION CO.
MERCHANT STATE NO. 1
PALMILLO (BONE SPRINGS) FIELD
EDDY COUNTY, NEW MEXICO

Wellbore Diagram

Elev: 3384.4' GL
3403' KB



3234' - 8-5/8" OD 32#/ft and
24#/ft K-55 ST&C Casing

T/Otis MH-2 Pkr @ 6388'

Bone Springs perfs (-1/3/79)
6438' - 6461' (5 holes) w/1 JSPF
Acidized w/2000 gals 15% NE acid
DS-30 (11/7/79).

BP set at 6606'

10,940' - T/Otis WB pkr w/2.75" bore
10' - 3-1/2" ID N-80 pup joint
3-1/2" x 2-3/8" X-0; 8' x 2-3/8" N-80
pup w/Otis X-Nipple w/1.875" bore
w/1.791" ID w/Otis RN plug @ 10,988'

Lower Morrow Perfs
11,046', 1048', 11,129', 131', 132', 134',
136', 137'

BPTD @ 11,312'
11,351' - 5-1/2" OD; 15.5#/ft and 17#/ft
K-55 and 17#/ft N-80 LT&C Casing.
Cemented w/1100 sxs TOC @ 6000'.

BEFORE EXAMINER SIGNATURES
OIL CONSERVATION DIVISION

EXHIBIT NO. 3

CASE NO. 6981

Submitted by Bass

Hearing Date 8/20/80

EXHIBIT NO. 4
BASS ENTERPRISES PRODUCTION CO.
MERCHANT STATE NO. 1
PALMILLO (BONE SPRINGS) FIELD
EDDY COUNTY, NEW MEXICO

	BO	BW	MCF	GOR	CHOKE	TBG PRESS
Nov. 4, 1979	1	20	0	0		
5	SI	SI				
6	46	9	46 est	1000		
7	127	127	127 est	1000		200
8	SI	SI				
9	38	71	181	4763		820
10	232	58	315	1358	20/64	670
11	526 est	131 est	936	1779	22/64	730
12	164 est	41 est	234	1427	21/64	800

Shut In 72 hr PBU

Shut In

Jan. 27, 1980	43	27	180	4186	12/64	
28	177	68	180	1017	14/64	1100
29	66	190	588	8909	20/64	1100
30	SI	SI				
31	429	159	1240	289	23/64	1370
Feb. 1, 1980	327	130	1425	4357	20/64	1380
2	550	500	1660	3018	20/64	1420
3	190	45	333	1752	8/64	1600
4	85	39	495	5823	8/64	1600
5	46	19	236	5130	8/64	1600

72 hr PBU

Mar - Shut In
Apr - Shut In

May 20, 1980	231	99	708	3064	16/64	1480
25	287	66	938	3268	14/64	1260
26	85	44	257	3023	9/64	1350
27	79	28	257	3253	9/64	1350
28	68	22	257	3779	9/64	1340
29	71	24	250	3521	9/64	1400
30	286	79	822	2874	14/64	1420
31	269	79	769	2858	14/64	1420

June 1 - Shut In

2	132	66	550	4167		1500
3	118	57	89	4992	12/64	1540
4	148	75	579	3966	12/64	1540
5	176	61	579	3290	14/64	1460
6	184	90	579	3147	14/64	1360

BEFORE EXAMINER STAFFS
OIL CONSERVATION DIVISION
EXHIBIT NO. 4184

CASE NO. 6981

Submitted by Bass

Hearing Date 8/20/80

MERCHANT STATE NO. 1
Page 2

	BO	BW	MCF	GOR	CHOKE	TBG PRESS
June 7	165	71	887	5376	12/64	1510
8	181	63	900	4972	12/64	1510
9	165	79	847	5133	12/64	1550
10	155 est	85 est	934 est	6026	12/64	
11	154	90	1009	6552	12/64	1540
12	107	63	882	8243	10/64	1540
13	123	63	897	7293	10/64	1550
14	110	50	822	7473	10/64	1550
15	104	52	822	7904	10/64	1550
16	57	52	822	14421	10/64	1520
17	99	55	822	8303	10/64	1550
18	121	66	822	6793	10/64	1550
19	110 est	66 est	800 est	7273	10/64	
20	101	66	810	8020	10/64	1500
21 Shut In						
22 Shut In						
23	107	35	822	7682	10/64	1520
24	110	35	822	7473	10/64	1520
25 Shut In						

July 1-31, 1980 Shut In

TOTAL	7148	3415	29030	4061		
-------	------	------	-------	------	--	--

EXHIBIT NO. 5
 PRODUCTION HISTORY
 PALMILLO (BONE SPRINGS) FIELD
 REDFERN DEVELOPMENT CORP.
 MARATHON STATE NO. 1
 EDDY COUNTY, NEW MEXICO

	OIL	GAS	GOR
DEC, 1965	1035	---	---
JAN, 1966	270	1,700	6,296
FEB	253	2,300	9,090
MAR	174	2,600	14,942
APR	142	2,100	14,788
MAY	128	1,900	14,843
JUN	117	1,600	13,675
JUL	178	2,100	11,797
AUG	97	1,100	11,340
SEP	<u>87</u>	<u>950</u>	<u>10,919</u>
TOTAL	2,481	16,350	

BEFORE EXAMINER STATEMENTS
 OIL CONSERVATION DIVISION
 EXHIBIT NO. 5
 CASE NO. 6981
 Submitted by Bass
 Hearing Date 8/20/60

WAGNER FEDERAL #2
COQUINA, OPERATOR
AVALON (BONE SPRINGS) FIELD
SECTION 2, T-20-S, R-27-E
EDDY COUNTY, NEW MEXICO

BEFORE THE NEW MEXICO
OIL COMMISSION

Case No. 6981
Submitted by Boss

Hearing Date 8/20/80

1977 OIL GAS

June	---	237	---
July	160	6,682	41,763
August	41	5,530	134,878
September	8	5,139	642,375
October	43	2,505	58,256
November	40	3,023	75,575
December	35	2,991	85,457

1978

January	30	2,221	74,033
February	9	1,814	201,556
March	103	2,468	23,961
April	39	2,185	56,026
May	32	1,948	60,875
June	26	2,264	87,077
July	31	2,511	81,000
August	29	2,237	77,138
September	28	1,842	65,786
October	33	1,549	46,939
November	21	1,902	90,571
December	41	1,514	36,927

1979

January	33	1,965	59,545
February	32	1,712	53,500
March	29	1,394	48,069
April	24	1,899	79,125
May	19	1,777	93,526
June	25	925	37,000
July	25	1,668	66,720
August	26	1,990	76,538
September	21	1,715	81,667
October	20	1,371	68,550
November	20	1,064	53,200
December	82	1,377	16,793

1980

January	26	1,376	52,923
February	19	984	51,789
March	26	780	30,000
April	18	1,150	63,889
May	35	1,186	33,886

ALLIED B COMM. #1
 PENROC OIL CO.
 PENLON (BONE SPRINGS) FIELD
 SECTION 1, T-20-S, R-27-E
 EDDY COUNTY, NEW MEXICO

BEFORE EXAMINER STATEMENTS
 OIL COMMISSION DIVISION

EXHIBIT 7

CASE NO. 6981

Submitted by Ross

Hearing Date 8/20/80

	OIL	GAS	Hearing Date
<u>1978</u>			
April	153	2,417	15,797
May	84	1,057	12,583
June	67	475	7,090
July	66	521	86,833
August	20	246	12,300
September	---	472	---
October	88	5,234	59,477
November	90	2,255	25,056
December	---	915	---
<u>1979</u>			
January	119	1,815	15,252
February	58	5,732	98,828
March	102	1,727	16,931
April	76	7,158	94,184
May	---	80	---
June	28	436	15,571
July	---	1,207	---
August	---	66	---
September	13	2,227	171,308
October	50	1,934	38,680
November	27	1,479	54,778
December	81	1,231	15,198
<u>1980</u>			
January	21	---	---
February	49	1,987	40,551
March	54	1,223	22,648
April	14	243	17,357
May	63	1,466	23,270



Petroleum Analytical Laboratory Service

P. O. BOX 2988

Midland, Texas 79702

PHONE 563-2628 - 694-6712

OIL ANALYSIS REPORT

TO Bass Enterprises
Box 2760
Midland, Tx. 79702
Attn: John Rogers

DATE November 13, 1979
DATE REC'D. 11-10-79
SAMPLE NO. 14061
COMPANY NO. _____

Sample Designation API Gravity, Total Sulfur, ASTM Distillation, Viscosity, Paraffin Content
Source Merchant State #1 Section 1- Township 19 S. - Range 28E (Eddy Cnty. N. Mex.)

RESULTS OF ANALYSIS	
ASTM - Distillation	*API Gravity @ 60° F: <u>42.5</u>
Barometric Pressure, mm Hg: <u>692.8</u>	Viscosity @ 100° F: _____ cp <u>2.0</u> cs <u>32.7</u> S.U.S.
Initial Boiling Point: _____	Viscosity @ _____° F: _____ cp _____ cs _____ S.U.S.
Temperature, °F: <u>120</u>	Total Sulfur (Lamp) Weight %: _____
Vol. % Recovered	(Bomb) Weight %: <u>1.99</u>
<u>5</u>	Reid Vapor Pressure, Lbs: _____
<u>10</u>	Flash Point _____°F:
<u>20</u>	Fire Point _____°F:
<u>30</u>	Pour Point _____°F
<u>40</u>	Basic Sediments and Water, %: _____
<u>50</u>	Neutralization Number, mgKOH/gm: _____
<u>60</u>	
<u>70</u>	
<u>80</u>	
<u>90</u>	
<u>97</u>	
% Residue <u>2.0</u>	% Paraffin Content - <u>1.43</u>
% Loss <u>1.0</u>	
% Total Recovery: <u>100.0</u>	
Fractions Vol. % <u>3.0</u>	
Gasoline <u>45.4</u>	
Naphtha <u>5.5</u>	
Kerosene <u>5.4</u>	
Fuel Oil <u>40.7</u>	
Total <u>100.0</u>	

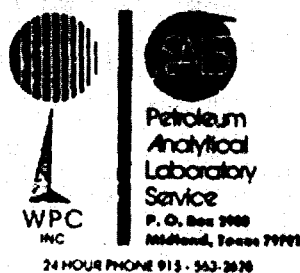
Remarks:

BEFORE EXAMINER STAMPS
OIL CONSERVATION DIVISION
EXHIBIT NO. <u>8</u>
CASE NO. <u>6981</u>
Submitted by <u>Bass</u>
Hearing Date <u>8/20/80</u>

Copies To: Inv. 5cc Bass Enterprises, Attn: John Rogers, Box 2760, Midland, Tx.

Joe R. Janson
ANALYSIS BY:

Air Monitoring
Complete Gas Service
Consulting Chemists
Corrosion Fatigue Testing
Pollution Control
Water Analysis



NO. 11993
RUN No.
DATE OF RUN
DATE SECURED 11/18/79

A SAMPLE OF MERCHANT STATE #1
SECURED FROM BASS ENTERPRISES
AT MIDLAND, TEXAS SECURED BY PAIS GARY PUTMAN
SAMPLING CONDITIONS PRESS. TEMP. TIME DATE

FRACTIONAL ANALYSIS
@ 14.696 & 60 DEG. F.

	MOL %	WT. %	LIQ %	CALC. SP. GR.	0.7653	PROPANE CALC.	G.P.M.	1.537
CARBON DIOXIDE	4.21			CALC. A.P.I.		BUTANES CALC.	G.P.M.	0.707
AIR	1.20			CALC. MOL. WT.		PENTANES PLUS.	G.P.M.	0.358
NITROGEN				Calc. Vapor Press.		ETHANE CALC.	G.P.M.	3.076
OXYGEN	0.53			SP. GR. C +		TOTAL	G.P.M.	
H ₂ S	73.77			MOL. WT. C +		B.T.U./CU. FT.		
METHANE	11.54	3.076	6PM	VAP. PRESS. C +		DRY BASIS		1207
ETHANE	5.60	1.537		GAL/# MOL. C +		WET BASIS		1186
PROPANE	0.66	0.216		CF/GAL C +		26# PRODUCT		0.509
ISO-BUTANE	1.56	0.491		LB/GAL C +		12# PRODUCT		0.356
N-BUTANE	0.32	0.117		26.0 R.V.P. Gasoline		% BUTANES INCLUDED		
ISO-PENTANE	0.33	0.118		EXCESS C4s		Sulfur Analysis (Gr./100 Cu.Ft.)		
N-PENTANE	0.16	0.067		EXCESS C3		HYDROGEN SULFIDE @Test		319.06 gr/100CF
HEXANES	0.12	0.056		EXCESS C2		MERCAPTANS Conditions		* by tutwiler
HEPTANES				14.0 R.V.P. Gasoline		SULFIDES		
				EXCESS C4's		RESIDUAL SULFUR		
				EXCESS C3		Moisture Content, #/MM Cu. Ft.		
				EXCESS C2				
				12.0 R.V.P. Gasoline				
				EXCESS C4's				
				EXCESS C3				
				EXCESS C2				

TOTAL 100.00 5.674

RUN BY BARNETT CHECKED BY DAWSON APPROVED BY James L. Barnett

ADDITIONAL DATA AND REMARKS

NOTE: Mole% Corrected for Temperature and Pressure

COPIES TO: nv. 5cc Bass Enterprises, Attn: John Rogers, Box 2760, Midland, Tx.



Petroleum Analytical Laboratory Service

P. O. BOX 2988

Midland, Texas 79702

PHONE 563-2628 - 694-6712

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company		John Rogers	Sample No.	Date Recd.
Bass Enterprises		Midland, Tx.	14063	11-10-79
Field	Legal Description	Range 28 E	County or Parish	Date Sampled
	Sec. 1 - Twnship 19S-		Eddy	11-10-79
Lease or Unit	Well	Depth	Formation	Water, B/D
Merchants State	#1			
Type of Water (Produced, Supply, etc.)	Formation	Sampling Point	Sampled By	
			PALS GARY PUTMAN	

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	71,233.3	3097.1
Calcium, Ca	3,100.0	155.0
Magnesium, Mg	814.0	67.8
Barium, Ba		

ANIONS

Chloride, Cl	115,126.5	3243.0
Sulfate, SO ₄	3,114.0	64.9
Carbonate, CO ₃	0.0	0.0
Bicarbonate, HCO ₃	732.0	12.0

Total Dissolved Solids (calc.)
194,119.8

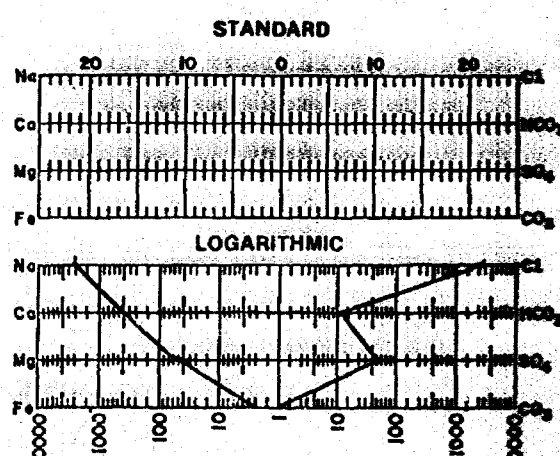
Iron, Fe (total) 3.8
Sulfide, as H₂S

REMARKS & RECOMMENDATIONS:

OTHER PROPERTIES

pH	7.1
Specific Gravity, 60/60 F.	
Resistivity (ohm-meters) 77°F.	0.0443
Total Hardness, as CaCO ₃ mg/l	11,100.0
Total Alkalinity, as CaCO ₃ mg/l	600.0
Supersaturation, as CaCO ₃ mg/l	

WATER PATTERNS — me/l



COPIES TO: Inv. 5cc Bas Enterprises, Attn: John Rogers, Box 2760, Midland, Tx.

Joe R. Hansen
ANALYSIS BY:

EXHIBIT NO. 3
BASS ENTERPRISES PRODUCTION CO.
MERCHANT STATE NO. 1
PALMILLO (BONE SPRINGS) FIELD
EDDY COUNTY, NEW MEXICO

Wellbore Diagram

Elev: 3384.4' GL
3403' KB

T/Otis MH-2 Pkr @ 6388'

10,940' - T/Otis WB pkr w/2.75" bore
10' - 3-1/2" ID N-80 pup joint
3-1/2" x 2-3/8" X-O; 8' x 2-3/8" N-80
pup w/Otis X-Nipple w/1.875" bore
w/1.791" ID w/Otis RN plug @ 10,988'

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION

EXHIBIT NO. 3

CASE NO. 6981

Submitted by Bass

Hearing Date 8/20/80

2-3/8" OD 4.7#/ft N-80 Tbg.

3234' - 8-5/8" OD 32#/ft and
24#/ft K-55 ST&C Casing

Bone Springs perfs (-1/3/79)
6438' - 6461' (5 holes) w/1 JSPF
Acidized w/2000 gals 15% NE acid
DS-30 (11/7/79).

BP set at 6606'

Lower Morrow Perfs
11,046', 048', 11,129', 131', 132', 134',
136', 137'

BPTD @ 11,312'
11,351' - 5-1/2" OD; 15.5#/ft and 17#/ft
K-55 and 17#/ft N-80 LT&C Casing.
Cemented w/1100 sxs TOC @ 6000'.

EXHIBIT NO. 4
BASS ENTERPRISES PRODUCTION CO.
MERCHANT STATE NO. 1
PALMILLO (BONE SPRINGS) FIELD
EDDY COUNTY, NEW MEXICO

	BO	BW	MCF	GOR	CHOKE	TBG PRESS
Nov. 4, 1979	1	20	0	0		
5	SI	SI				
6	46	9	46 est	1000		
7	127	127	127 est	1000		200
8	SI	SI				
9	38	71	181	4763		820
10	232	58	315	1358	20/64	670
11	526 est	131 est	936	1779	22/64	730
12	164 est	41 est	234	1427	21/64	800

Shut In 72 hr PBU

Shut In

Jan. 27, 1980	43	27	180	4186	12/64	
28	177	68	180	1017	14/64	1100
29	66	190	588	8909	20/64	1100
30	SI	SI				
31	429	159	1240	289	23/64	1370
Feb. 1, 1980	327	130	1425	4357	20/64	1380
2	550	500	1660	3018	20/64	1420
3	190	45	333	1752	8/64	1600
4	85	39	495	5823	8/64	1600
5	46	19	236	5130	8/64	1600

72 hr PBU

Mar - Shut In

Apr - Shut In

May 20, 1980	231	99	708	3064	16/64	1480
25	287	66	938	3268	14/64	1260
26	85	44	257	3023	9/64	1350
27	79	28	257	3253	9/64	1350
28	68	22	257	3779	9/64	1340
29	71	24	250	3521	9/64	1400
30	286	79	822	2874	14/64	1420
31	269	79	769	2858	14/64	1420

June 1 - Shut In

2	132	66	550	4167		1590
3	118	57	89	4992	12/64	1540
4	146	75	579	3966	12/64	1540
5	176	61	579	3290	14/64	1460
6	184	90	579	3147	14/64	1360

BEFORE EXAMINER STATEMENTS
OIL CONSERVATION DIVISION

EXHIBIT NO. 4

CASE NO. 6981

Submitted by Bass

Hearing Date 8/20/80

MERCHANT STATE NO. 1
Page 2

	BO	BW	MCF	GOR	CHOKE	TBG PRESS
June 7	165	71	887	5376	12/64	1510
8	181	63	900	4972	12/64	1510
9	165	79	847	5133	12/64	1550
10	155 est	85 est	934 est	6026	12/64	
11	154	90	1009	6552	12/64	1540
12	107	63	882	8243	10/64	1540
13	123	63	897	7293	10/64	1550
14	110	50	822	7473	10/64	1550
15	104	52	822	7904	10/64	1550
16	57	52	822	14421	10/64	1520
17	99	55	822	8303	10/64	1550
18	121	66	822	6793	10/64	1550
19	110 est	66 est	800 est	7273	10/64	
20	101	66	810	8020	10/64	1500
21 Shut In						
22 Shut In						
23	107	35	822	7682	10/64	1520
24	110	35	822	7473	10/64	1520
25 Shut In						

July 1-31, 1980 Shut In

TOTAL	7148	3415	29030	4061		
-------	------	------	-------	------	--	--

EXHIBIT NO. 5
 PRODUCTION HISTORY
 PALMILLO (BONE SPRINGS) FIELD
 REDFERN DEVELOPMENT CORP.
 MARATHON STATE NO. 1
 EDDY COUNTY, NEW MEXICO

	OIL	GAS	GOR
DEC, 1965	1035	---	---
JAN, 1966	270	1,700	6,296
FEB	253	2,300	9,090
MAR	174	2,600	14,942
APR	142	2,100	14,788
MAY	128	1,900	14,843
JUN	117	1,600	13,675
JUL	178	2,100	11,797
AUG	97	1,100	11,340
SEP	<u>87</u>	<u>950</u>	<u>10,919</u>
TOTAL	2,481	16,350	

BEFORE EXAMINER STAMETS
 OIL CONSERVATION DIVISION

EXHIBIT NO. 5

CASE NO. 6981

Submitted by Bare

Hearing Date 8/20/80

WAGNER FEDERAL #2
COQUINA, OPERATOR
AVALON (BONE SPRINGS) FIELD
SECTION 2, T-20-S, R-27-E
EDDY COUNTY, NEW MEXICO

REPORT BY
OIL COMPLETION DIVISION

DATE NO. 6

CASE NO. 6981

Submitted by *Ran*

Hearing Date 8/20/80

	OIL	GAS	GOR
<u>1977</u>			
June	---	237	---
July	160	6,682	41,763
August	41	5,530	134,878
September	8	5,139	642,375
October	43	2,505	58,256
November	40	3,023	75,575
December	35	2,991	85,457

<u>1978</u>			
January	30	2,221	74,033
February	9	1,814	201,556
March	103	2,468	23,961
April	39	2,185	56,026
May	32	1,948	60,875
June	26	2,264	87,077
July	31	2,511	81,000
August	29	2,237	77,138
September	28	1,842	65,786
October	33	1,549	46,939
November	21	1,902	90,571
December	41	1,514	36,927

<u>1979</u>			
January	33	1,965	59,545
February	32	1,712	53,500
March	29	1,394	48,069
April	24	1,899	79,125
May	19	1,777	93,526
June	25	925	37,000
July	25	1,668	66,720
August	26	1,990	76,538
September	21	1,715	81,667
October	20	1,371	68,550
November	20	1,064	53,200
December	82	1,377	16,793

<u>1980</u>			
January	26	1,376	52,923
February	19	984	51,789
March	26	780	30,000
April	18	1,150	63,889
May	35	1,186	33,886

ALLIED B COMM. #1
PENROC OIL CO.
PENLON (BONE SPRINGS) FIELD
SECTION 1, T-20-S, R-27-E
EDDY COUNTY, NEW MEXICO

BEFORE EXAMINED
OIL CONSERVATION DIVISION

EXHIBIT NO. 7

CASE NO. 6981

Submitted by Bass

Hearing Date 8/20/80

	OIL	GAS	GUR
<u>1978</u>			
April	153	2,417	15,797
May	84	1,057	12,583
June	67	475	7,090
July	66	521	86,833
August	20	246	12,300
September	---	472	---
October	88	5,234	59,477
November	90	2,255	25,056
December	---	915	---
<u>1979</u>			
January	119	1,815	15,252
February	58	5,732	98,828
March	102	1,727	16,931
April	76	7,158	94,184
May	---	80	---
June	28	436	15,571
July	---	1,207	---
August	---	66	---
September	13	2,227	171,308
October	50	1,934	38,680
November	27	1,479	54,778
December	81	1,231	15,198
<u>1980</u>			
January	21	---	---
February	49	1,987	40,551
March	54	1,223	22,648
April	14	243	17,357
May	63	1,466	23,270

Petroleum Analytical Laboratory Service

P. O. BOX 2988

Midland, Texas 79702

PHONE 563-2628 • 694-6712

OIL ANALYSIS REPORT

TO Bass Enterprises
Box 2760
Midland, Tx. 79702
Attn: John Rogers

DATE November 13, 1979

DATE REC'D. 11-10-79

SAMPLE NO. 14061

COMPANY NO.

Sample Designation API Gravity, Total Sulfur, ASTM Distillation, Viscosity, Paraffin Content
Source Merchant State #1 Section 1- Township 19 S. - Range 28E (Eddy Cnty. N. Mex.)

RESULTS OF ANALYSIS

ASTM - Distillation
Barometric Pressure, mm Hg: 692.8

*API Gravity @ 60° F: 42.5

Initial Boiling Point: Temperature, °F.
120

Viscosity @ 100 ° F: _____cp 2.0cs 32.7S.U.S.
Viscosity @ _____° F: _____cp _____cs _____S.U.S.

Vol. % Recovered

Total Sulfur (Lamp) Weight %:
(Bomb) Weight %:

5	168
10	196
20	240
30	284
40	348
50	450
60	550
70	622
80	640
90	648
97	648

Reid Vapor Pressure, Lbs:

Flash Point _____ °F

Fire Point

Pour Point _____ °F

Basic Sediments and Water, %:

Neutralization Number, mgKOH/gm:

% Residue	2.0
% Loss	1.0
% Total Recovery:	100.0

% Paraffin Content - 1.43

Fraction's Vol. %	<u>3.0</u>
Gasoline	<u>45.4</u>
Naphtha	<u>5.5</u>
Kerosene	<u>5.4</u>
Fuel Oil	<u>40.7</u>
Total	100.0

BEFORE EXAMINER STAMETS
CIL CONSERVATION DIVISION

EXHIBIT NO. 2

CASE NO. 6981

Submitted by Basu

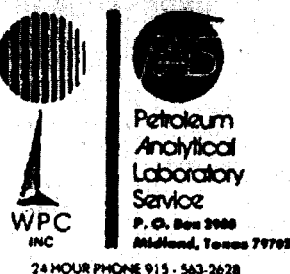
Hearing Date 8/20/80

Remarks:

Copies To: Inv. 5cc Bass Enterprises, Attn: John Rogers, Box 2760, Midland, Tx.

ANALYSIS BY:

Air Monitoring
Complete Gas Service
Consulting Chemists
Corrosion Fatigue Testing
Pollution Control
Water Analysis



NO. 11993
RUN No.
DATE OF RUN
DATE SECURED 11/18/79

A SAMPLE OF MERCHANT STATE #1
SECURED FROM BASS ENTERPRIZES
AT MIDLAND, TEXAS

SECURED BY PALS GARY PUTMAN

SAMPLING CONDITIONS PRESS. TEMP. TIME DATE

FRACTIONAL ANALYSIS

@ 14.696 & 60 DEG. F.

	MOL %	WT. %	LIQ %	CALC. SP. GR.	0.7653	PROPANE CALC.	G.P.M.	1.537
CARBON DIOXIDE	4.21			CALC. A.P.I.		BUTANES CALC.	G.P.M.	0.707
AIR	1.20			CALC. MOL. WT.		PENTANES PLUS.	G.P.M.	0.358
NITROGEN				Calc. Vapor Press.		ETHANE CALC.	G.P.M.	3.076
OXYGEN	0.53			SP. GR. C +		TOTAL	G.P.M.	
H ₂ S	73.77			MOL. WT. C +		B.T.U./CU. FT.		
METHANE	11.54		6PM	VAP. PRESS. C +		DRY BASIS		1207
ETHANE	5.60		3.076	GAL/# MOL. C +		WET BASIS		1146
PROPANE	0.66		1.537	CF/GAL C +		26# PRODUCT		0.509
ISO-BUTANE	1.56		0.216	LB/GAL C +		12# PRODUCT		0.356
N-BUTANE	0.32		0.117	26.0 R.V.P. Gasoline		% BUTANES INCLUDED		
ISO-PENTANE	0.33		0.116	EXCESS C4's		Sulfur Analysis (Gr./100 Cu.Ft.)		
N-PENTANE	0.16		0.067	EXCESS C3		HYDROGEN SULFIDE @Test		319.06 gr/100CF
HEXANES	0.12		0.056	EXCESS C2		MERCAPANS Conditions		* by tutwiler
HEPTANES				14.0 R.V.P. Gasoline		SULFIDES		
				EXCESS C4's		RESIDUAL SULFUR		
				EXCESS C3		Moisture Content, #/MM Cu. Ft.		
				EXCESS C2				
				12.0 R.V.P. Gasoline				
				EXCESS C4's				
				EXCESS C3				
				EXCESS C2				
TOTAL	100.00		5.674					

RUN BY BARNETT CHECKED BY DAWSON APPROVED BY James L. Barnett

ADDITIONAL DATA AND REMARKS

NOTE: Mole% Corrected for Temperature and Pressure

COPIES TO: nv. 5cc Bass Enterprises, Attn: John Rogers, Box 2760, Midland, Tx.



Petroleum Analytical Laboratory Service

P. O. BOX 2988

Midland, Texas 79702

PHONE 563-2628 - 694-6712

API FORM 45-1

API WATER ANALYSIS REPORT FORM

Company		John Rogers	Sample No.	Date Recd.
Bass Enterprises		Midland, Tx.	14063	11-10-79
Field	Legal Description	Range 28 E	County or Parish	Date Sampled
	Sec. 1 - Township 19S-		Eddy	11-10-79
Lease or Unit	Well	Depth	Formation	Water, B/D
Merchants State	#1			
Type of Water (Produced, Supply, etc.)	Sampling Point			Sampled By
Formation				PALS GARY PUTMAN

DISSOLVED SOLIDS

CATIONS	mg/l	me/l
Sodium, Na (calc.)	71,233.3	3097.1
Calcium, Ca	3,100.0	155.0
Magnesium, Mg	814.0	67.8
Barium, Ba		

ANIONS

Chloride, Cl	115,126.5	3243.0
Sulfate, SO ₄	3,114.0	64.9
Carbonate, CO ₃	0.0	0.0
Bicarbonate, HCO ₃	732.0	12.0

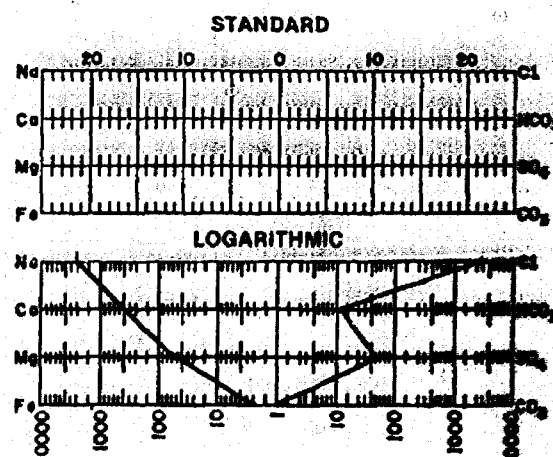
Total Dissolved Solids (calc.)
194,119.8

Iron, Fe (total) 3.8
Sulfide, as H₂S

OTHER PROPERTIES

pH	7.1
Specific Gravity, 60/60 F.	
Resistivity (ohm-meters) 77°F.	0.0443
Total Hardness, as CaCO ₃ mg/l	11,100.0
Total Alkalinity, as CaCO ₃ mg/l	600.0
Supersaturation, as CaCO ₃ mg/l	

WATER PATTERNS — me/l



REMARKS & RECOMMENDATIONS:

COPIES TO: Inv. 5cc Bas Enterprises, Attn: John Rogers, Box 2760, Midland, Tx.

ANALYSIS BY:

CASE 7010: Application of Amoco Production Company for a dual completion, unorthodox well location, and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Myers "B" Federal Well No. 28 at an unorthodox location 330 feet from the South line and 420 feet from the West line of Section 9, Township 24 South, Range 37 East, to produce gas from the Jalmat Gas Pool and oil from the Langlie Mattix Pool, to be simultaneously dedicated in the gas zone with its No. 13 located in Unit L of Section 9.

CASE 7011: (This case will be continued to the September 17, 1980, hearing.)

Application of Amoco Production Company for downhole commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Fruitland and Blanco-Pictured Cliffs production in the wellbores of the following six wells: Elliott "C" No. 1, SE/4 of Section 9, Township 30 North, Range 9 West; Elliott "B" No. 8, NE/4 of Section 10; "A" Nos. 3 and 2, NE/4 and NW/4, Section 11; "D" No. 7, SW/4 of Section 11; and "E" No. 1, NW/4 of Section 14, all in Township 29 North, Range 9 West.

CASE 6981: (Continued from July 23, 1980, Examiner Hearing)

Application of Bass Enterprises Production Company for a special gas-oil ratio limitation, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a special gas-oil ratio limitation of 8000 to one for the Palmillo-Bone Springs Pool.

CASE 7012: Application of Amoco Production Company for an NCPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Atoka formation for its Pardue Farms Gas Com Well No. 1 in Unit C of Section 26, Township 23 South, Range 28 East.

CASE 7013: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating, abolishing, contracting vertical limits, and extending certain pools in Chaves, Lea, and Roosevelt Counties, New Mexico:

(a) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Yates production and designated as the Byers-Yates Gas Pool. The discovery well is Exxon Corporation Bowers A Federal Well No. 37 located in Unit P of Section 30, Township 18 South, Range 38 East, NMPM. Said pool would comprise:

TOWNSHIP 18 SOUTH, RANGE 38 EAST, NMPM
Section 30: SE/4

(b) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the West Jal-Atoka Gas Pool. The discovery well is Getty Oil Company West Jal B Deep Well No. 1 located in Unit H of Section 17, Township 25 South, Range 36 East, NMPM. Said pool would comprise:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 17: E/2

(c) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Saunders-Morrow Gas Pool with special vertical limits defined as being from the top of the Morrow formation at 12,150 feet to the top of the Mississippian at 12,445 feet, as found on the log of the discovery well, the Adobe Oil and Gas Corporation Gray 35 Well No. 1 located in Unit H of Section 35, Township 14 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 14 SOUTH, RANGE 33 EAST, NMPM
Section 35: All

(d) ABOLISH the North Baum-Upper Pennsylvanian Pool in Lea County, New Mexico, described as:

TOWNSHIP 13 SOUTH, RANGE 32 EAST, NMPM
Section 13: SE/4
Section 23: SE/4
Section 24: S/2 and NE/4
Section 25: N/2 and SE/4
Section 26: N/2

TOWNSHIP 13 SOUTH, RANGE 33 EAST, NMPM
Section 18: S/2
Section 19: N/2 and SE/4
Section 20: All

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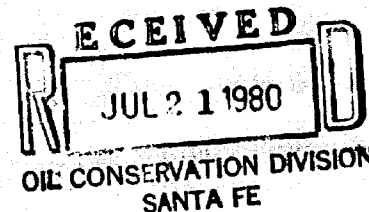
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ONLY ATTYS. EATON, COFFIELD, MARTIN, BOZARTH,
BOHANNON, FINNEY, FOSTER, ALLEN, ALLEN,
SURFORD, BREWER & STONE
LICENSED IN TEXAS

July 16, 1980

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



Re: Case No. 6981 - Bass Enterprises
Production Company, Special
Gas-Oil Ratio Limitation, Eddy
County, New Mexico

Dear Dan:

This will confirm our telephone conversation this afternoon in connection with the above referenced case. We respectfully request that the case be continued until the next Examiner hearing which I understand to be set for August 6.

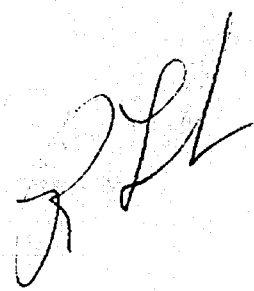
Very truly yours,

HINKLE, COX, EATON,
COFFIELD & HENSLEY


Conrad E. Coffield

CEC:rh

xc: Mr. Steve Rowland
Bass Enterprises Production Co.
Post Office Box 2760
Midland, Texas 79702



- CASE 6975:** Application of Jack Grynberg and Associates for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Rio Felix Unit Area, comprising 7,675 acres, more or less, of Federal, State, and fee lands in Township 14 South, Ranges 24 and 25 East.
- CASE 6976:** Application of R. N. Hillin for an NGPA determination, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir determination in the Wolfcamp formation for a well located 800 feet from the South line and 2000 feet from the East line of Section 34, Township 19 South, Range 28 East.
- CASE 6977:** Application of Benson Mineral Group, Inc. for salt water disposal, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Chacra formation in the interval from 1636 feet to 1743 feet in its Navajo Well No. 1 in Unit F of Section 9, Township 22 North, Range 7 West, Rusty-Chacra Pool.
- CASE 6978:** Application of Benson Mineral Group, Inc. for salt water disposal, Sandoval County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Pictured Cliffs formation in the interval from 800 feet to 963 feet in its Federal Well No. 1 in Unit I of Section 4, Township 21 North, Range 7 West.
- CASE 6979:** Application of Wolfson Oil Company for salt water disposal, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the interval from 4108 feet to 4164 feet in its Mountain-Federal Well No. 1 in Unit G of Section 30, Township 7 South, Range 32 East, Tomahawk-San Andres Pool.
- CASE 6940:** (Continued from June 25, 1980, Examiner Hearing)
Application of Adobe Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down through the Wolfcamp formation underlying the NW/4 SE/4 for oil and the SE/4 for gas, Section 23, Township 20 South, Range 38 East, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.
- CASE 6961:** (Continued from July 9, 1980, Examiner Hearing)
Application of Conoco Inc. for a dual completion and unorthodox well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Meyer A-29 Well No. 11 to be drilled at an unorthodox location 990 feet from the North line and 660 feet from the East line of Section 29, Township 22 South, Range 36 East, to produce gas from the Langley-Devonian and -Ellenburger Pools thru parallel strings of tubing, the E/2 of said Section 29 to be dedicated to the well.
- CASE 6980:** Application of Bass Enterprises Production Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Palmillo State Well No. 1 located in Unit J of Section 1, Township 19 South, Range 28 East, to produce gas from the North Turkey Track-Morrow Pool and oil from an undesignated Wolfcamp pool thru the casing-tubing annulus and tubing, respectively.
- CASE 6960:** (Continued from July 9, 1980, Examiner Hearing)
Application of Bass Enterprises Production Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests down to and including the Strawn formation underlying the S/2 SE/4 of Section 13, Township 16 South, Range 36 East, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.
- CASE 6950:** (Continued from July 9, 1980, Examiner Hearing)
Application of Bass Enterprises Production Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Morrow test well to be drilled 660 feet from the North line and 1980 feet from the East line of Section 4, Township 25 South, Range 31 East, the E/2 of said Section 4 to be dedicated to the well.
- CASE 6981:** Application of Bass Enterprises Production Company for a special gas-oil ratio limitation, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks a special gas-oil ratio limitation of 8000 to one for the Palmillo-Bone Springs Pool.

BEFORE THE OIL CONSERVATION DIVISION OF
THE DEPARTMENT OF ENERGY AND MINERALS
STATE OF NEW MEXICO

APPLICATION OF BASS ENTERPRISES)
PRODUCTION COMPANY FOR AMENDMENT)
OF POOL RULES, EDDY COUNTY,)
NEW MEXICO)

Case 6981

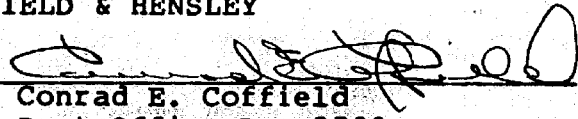
APPLICATION

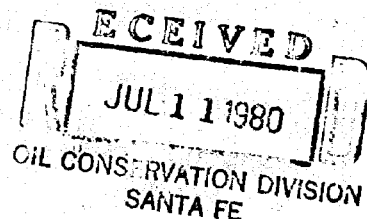
Bass Enterprises Production Company hereby makes application for amendment of pool rules in connection with certain Eddy County, New Mexico lands as follows:

1. Applicant seeks an increase in the authorized gas-oil ratio in the Palmillo Bone Springs field from that currently in existence to 8000 to 1.
2. The increased GOR sought by applicant are to apply to wells currently existing in said pool and especially the BEPCO Merchant State #1 Well located 1980 feet from the North line and 660 feet from the East line of Section 1, Township 19 South, Range 28 East, N.M.P.M., Eddy County, New Mexico.
3. Matters urged by Applicant herein are in the interest of conservation, prevention of waste and protection of correlative rights.
4. Applicant requests that this Matter be heard at the July 23, 1980 Examiner's hearing.

HINKLE, COX, EATON,
COFFIELD & HENSLEY

by:


Conrad E. Coffield
Post Office Box 3580
Midland, Texas 79702
Attorneys for Bass Enterprises
Production Company



BEFORE THE OIL CONSERVATION DIVISION OF
THE DEPARTMENT OF ENERGY AND MINERALS
STATE OF NEW MEXICO

APPLICATION OF BASS ENTERPRISES)
PRODUCTION COMPANY FOR AMENDMENT)
OF POOL RULES, EDDY COUNTY,)
NEW MEXICO)

Case 6981

APPLICATION

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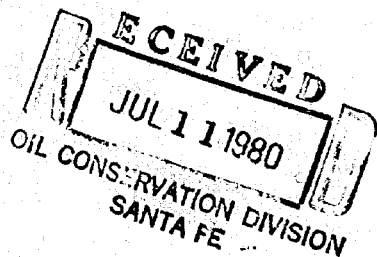
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HINKLE, COX, EATON,
COFFIELD & HENSLEY

by: 

Conrad E. Coffield
Post Office Box 3580
Midland, Texas 79702
Attorneys for Bass Enterprises
Production Company



BEFORE THE OIL CONSERVATION DIVISION OF
THE DEPARTMENT OF ENERGY AND MINERALS
STATE OF NEW MEXICO

APPLICATION OF BASS ENTERPRISES)
PRODUCTION COMPANY FOR AMENDMENT)
OF POOL RULES, EDDY COUNTY,)
NEW MEXICO)

Case 6981


APPLICATION

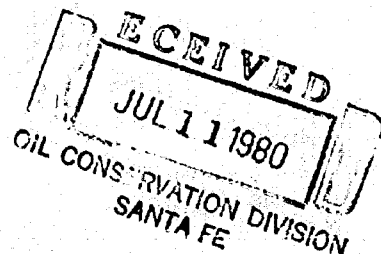
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HINKLE, COX, EATON,
COFFIELD & HENSLEY

by:


Conrad E. Coffield
Post Office Box 3580
Midland, Texas 79702
Attorneys for Bass Enterprises
Production Company



Called in by Harold Hensley
July 11, 1980

Bass Enterprises Production Co.

Allowable Increase

Merchant State #1

1980/N + 660/E

Section 1, T19S, R28E

Palmillo - Bone Springs

ROUGH

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. 6981

Order No. R-6464

APPLICATION OF ~~W. E. C. CORP.~~ ^{Bass Enterprises Production Company} For
A SPECIAL GAS-OIL RATIO LIMITATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on Aug 20
19 80, at Santa Fe, New Mexico, before Examiner RLS.

NOW, on this _____ day of _____, 19____, 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, Bass Enterprises Production
Company, seeks, as an exception to
Rule 506 of the Division Rules and
Regulations, a limiting gas-oil ratio
of 8,000 cubic feet of gas per
barrel of oil for the Palmillo -
Bone Springs Pool, Eddy County,
New Mexico.

(3) That the reservoir characteristics of the subject pool justify the establishment of a gas-oil limitation of ~~8,000~~ 8,000 cubic feet of gas per barrel of liquid hydrocarbons.

(4) That in order to afford to the owners in the *Palmillo - Bone Spring* Pool the opportunity to economically produce their just and equitable share of the oil and gas in the subject pool and for this purpose to use their just and equitable share of the reservoir energy, a limiting gas-oil ratio of 8,000 cubic feet of gas per barrel of liquid hydrocarbons should be established for the pool.

(1) That effective *September 1, 1960* the limiting gas-oil ratio in the *Palmillo - Bone Spring* Pool, Eddy County, New Mexico, shall be 8,000 cubic feet of gas for each barrel of liquid hydrocarbons produced; that, effective *September 1, 1960*, each proration unit in the *Palmillo - Bone Spring* Pool shall produce only that volume of gas equivalent to 8,000 multiplied by the top unit allowable for the pool.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

Emery C. Arnold
EMERY C. ARNOLD, Member

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

S E A L

jr/