CASE 7204: BASS ENTERPRISES PRODUCTION COMPANY FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO

CASE NO.

7204

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. 7204
Order No. R-6643

APPLICATION OF BASS ENTERPRISES
PRODUCTION COMPANY FOR SALT WATER
DISPOSAL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 25, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 7th day of April, 1981, 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 is the owner and operator of the Federal Legg Well No. 1, located in Unit B of Section 27, Township 22 South, Range 30 East, NMPM, Quahada Ridge Field, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Delaware formation, with injection into the perforated interval from approximately 3820 feet to 3915 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic lined tubing installed in a packer set at approximately 3700 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a pressure limiting device or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 765 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Delaware formation.

(7) That the operator should notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(9) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Bass Enterprises Production Company, is hereby authorized to utilize its Federal Legg Well No. 1, located in Unit B of Section 27, Township 22 South, Range 30 East, NMPM, Quahada Ridge Field, Eddy County, New Mexico, to dispose of produced salt water into the Delaware formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3700 feet, with injection into the perforated interval from approximately 3820 feet to 3915 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a pressure limiting device or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 765 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Delaware formation.

(4) That the operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
25 March 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Bass Enterprises Production Company for salt water disposal, Eddy County, New Mexico

CASE 7204

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Ernest L. Padilla, Esq.
Legal Counsel 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

I N D E X

E X H I B I T S

MR. NUTTER: We'll call next Case Number 7204.

MR. PADILLA: Application of Bass Enterprises Production Company for salt water disposal Eddy County, New Mexico.

MR. COFFIELD: Mr. Examiner, I'm Conrad Coffield, with the Hinkle Law Firm in Midland, Texas, appearing on behalf of the applicant, and I have one witness.

(Witness sworn.)

JACK R. GEVECKER

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

DIRECT EXAMINATION

BY MR. COFFIELD:

Q. Mr. Gevercker, would you please state your name, address, occupation, and employer?

A. My name is Jack R. Gevecker.

MR. NUTTER: Will you spell that, please?

A. G-E-V-E-C-K-E-R.

MR. NUTTER: Thank you.

A. Box 2760, Midland, Texas, 79701. I'm a Senior Petroleum Engineer with Bass Enterprises Production Company.

Q. Are you familiar with Bass' application in this case, Mr. Gevecker?

A. Yes, I am.

Q. And are you familiar with the property and the proposed injection well involved here?

A. Yes, I am.

Q. Have you previously testified before the Division as a petroleum engineer, and if so, were your qualifications accepted?

A. Yes, they were.

MR. NUTTER: Mr. Examiner, do you have any other questions of this witness?

MR. NUTTER: No, sir, Mr. Gevecker is qualified.

Q. Mr. Gevecker, would you please state what it is that Bass seeks by this application?

A. Bass Enterprises seeks permission to dispose of produced salt water by injection into the Delaware formation through the interval 3820 to 3915 in the Federal Legg No. 1 Well, located in Unit B, Section 27, Township 22 South, Range 30 East, of Eddy County, New Mexico.

Q. Will you refer to what we've marked here as Exhibit One, Mr. Gevecker, and please explain to the Examiner what that shows?

A. Exhibit One is a map of the area surrounding the proposed injection well, located in Unit B of Section 27. The Bass acreage is highlighted in yellow and includes all depths.

Other lease owners are indicated on each lease.

The two circles on the map have radii of 1/2 mile and 2 miles. Please note that no other well lies within the 1/2 mile radius of the well and only 2 wells lie within the two mile radius, those being the James Ranch Unit No. 12, located in Unit G, Section 21, operated by Bass, and James Ranch Unit No. 11, located in Unit E, Section 36, operated by Belco.

The wavy line outlines the R-111-A potash area, which lies basically south and west of the border.

The bright orange line is the west outside border of the Waste Isolation Pilot Project, or the WIPP area, which lies to the east of that line.

Bass at one time had this acreage. It was condemned by the WIPP project. Bass has returned the

title of the land back to the United States. We no longer have title to that land.

Q. All right, Mr. Gevecker, relative to this particular well, would you give the Examiner just a brief history of this proposed injection well?

A. The Federal Legg No. 1 was spudded in July 10th, 1953, and drilled to a total depth of 15,845 feet. An intermediate string of 9-5/8ths casing was set at 9025 feet and cemented with 2590 sacks of cement, using a DV tool at 6352 feet. The top of the cement by temperature survey is 2840 feet. 9 cores and 5 DST's show the formations below 9025 feet to be nonproductive. These formations include the Wolfcamp, Strawn, Atoka, Morrow, Devonian, and Fusselman. Cement plugs were set in the open hole and the well plugged back to the Delaware where it was completed through perforations at 6112 to 18 feet on May 11th, 1954. It potentialed for 68 barrels of oil, plus 203 barrels of water, plus 43 Mcf per day.

The well continued to produce until being plugged and abandoned on December 22nd, 1967. Cumulative production was 24,939 barrels of oil.

Q. Mr. Gevercker, next we have Exhibit Two and Two-A. Would you please explain these exhibits?

A. Okay. Exhibits Two and Two-A are the

gamma ray neutron and electrical log, respectively, of the Federal Legg No. 1. On the large scale of the log is marked the top of the Delaware at 3758 feet, the proposed injection interval, and the top of the Bone Springs at 7533 feet.

Q. Next we have exhibits marked Three and Three-A. Likewise, would you explain these?

A. Exhibit Three is a diagrammatic sketch of the Federal Legg No. 1, showing its current condition. Please note that cement was properly circulated on all casing strings in order to protect all fresh water sands and other formations from possible communication.

Exhibit Three-A is a diagrammatic sketch of the well, showing the proposed installation for converting this well to salt water disposal. For simplicity this sketch only shows the wellbore from the surface to the first plug below the proposed injection interval.

Q. Mr. Gevecker, would you please now explain how it is you propose to re-enter and convert this well to salt water disposal?

A. Bass proposes to re-enter and convert the well to disposal in the following manner:

One, drill out the surface plug and retainer at 254 feet.

Two, continue to drill out and dress

off the cement plug below the proposed injection interval. The estimated top of the cement plug is 5000 feet.

Three, Pressure test the casing to 2500 feet psi, which is 0.5 psi per foot gradient at the plugback TD and 43-1/2 percent of the casing burst pressure.

Four, perforate the Delaware sand from 3820 to 3860 and 3880 to 3915 feet.

Five, go in the hole with a tension packer on 2-3/8ths internally plastic coated tubing to 3700 feet.

Six, prior to setting packer we will load the hole with inhibited fresh water, then set the packer at 3700 feet.

Seven, We'll acidize the well with approximately 4000 gallons of 15 percent hydrochloric acid.

And eight, hook up the wellhead and commence injecting.

Q. All right, Mr. Gevecker, now I think there are two or three things here you could cover together. Again, would you please give the name of the formation and the perforated interval, and also state the kind of fluid that will be disposed of and give the sources of fluid, and finally, what is the anticipated volume expected to be disposed?

A. Bass intends to dispose of the water

in the Delaware formation through perforations 3820 to 60, and 3880 to 3915 feet.

We plan to dispose of produced salt water from the Atoka formation of Bass' James Ranch Unit No. 12, located in Unit B, Section 21, Township 22 South, Range 30 East.

We anticipate the volume to be 110 barrels of water per day initially.

Q. Mr. Gevecker, would you propose to use this well for disposal of other ... other salt water at some point?

A. Yes, sir, we would, if it became necessary.

Q. So would you propose also to be authorized administratively to seek the authority of the Commission to dispose of additional salt water into this well?

A. Yes.

Q. All right. Do you anticipate encountering any pressure while injecting or will the well take water by gravity, and also, do you have the necessary equipment to inject under pressure, and finally, will the tubing casing annulus be open or do you expect to have a pressure gauge on the annulus?

A. We do anticipate encountering pressure

while injecting, but only estimated to be 200 to 300 pounds maximum, well below the 0.2 psi per foot gradient.

We do plan to be equipped to inject under pressure. The tubing casing annulus will be filled with an inhibited fresh water and open to the atmosphere so that any tubing or packer leak can be noticed.

Q. Mr. Gevecker, you have stated that the anticipated pressure is well below the guideline that is observed by the Division. I assume that you are requesting that the order be sufficiently broad to permit you to inject up to that guideline?

A. Yes, we are.

Q. Is that correct? Mr. Gevecker, do you have a water sample from the producing well and does it show any incompatibilities with a typical connate Delaware water?

A. Yes, we do have a water sample of the Atoka water from James Ranch Unit No. 12.

I direct your attention to Exhibit Four. This exhibit is a tabulation of the water analysis from James Ranch Unit No. 12 Atoka, and two typical Delaware wells, being the Big Eddy Unit Nos. 47 and 49, located in Section 35, Township 21 South, Range 28 East in Eddy County. An independent lab has made these analyses and commented on the water's compatibilities.

Please note that they do not find the waters to be incompatible.

Q. Mr. Gevecker, you have stated that there are two wells within a 2-mile radius of this Federal Leggs No. 1 Well. Would you please discuss these and in particular comment on their casing and cementing programs, as shown on Exhibits Five and Five-A, which I ask you to discuss, as well as the cross section shown as Exhibit Six?

A. The closest offset is Bass' James Ranch Unit No. 12, located in Section 21. This well lies 6800 feet, or 1.29 miles, northwest.

Exhibit Five is a diagrammatic sketch of the well. Please note intermediate string of 9-5/8ths casing, set at 3729 feet with cement circulated to the surface.

By log correlation, the casing depth at 3729 correlates to below the bottom perf at 3915 feet of the proposed injection well, meaning that the Delaware disposal zone in James Ranch Unit 12 is completely cased and cemented off, preventing any communication between wells.

The only other well within the two mile radius is Belco's James Ranch Unit No. 11, located 10,528 feet to the south -- southeast in Section 36.

Technically speaking, the surface location is 32 feet inside the two mile radius; however, the bottom hole location of the 10-3/4 inch intermediate casing

is only two feet inside the two mile radius.

Exhibit Five-A is a diagrammatic sketch of this well.

Please notice Exhibit Six. Exhibit Six is a cross section from the James Ranch Unit 12 through the Federal Legg No. 1, to the James Ranch Unit No. 11. Please note that the 10-3/4 casing of the James Ranch Unit No. 11, that is set at 3839 feet, correlates to approximately 25 feet above the top perf of 3820 of the proposed injection well.

Q. Does the location of this proposed salt water disposal well lie within the R-111-A potash area?

A. Yes, it does. I'd like to point out that the proposed disposal well, the Federal Legg No. 1, was spudded in 1953. The R-111 area was outlined November 9th, 1951 and later amended on March 25th, 1975 to R-111-A.

Q. How do you propose to propose to protect the interval where potash might be found?

A. Bass does not intend to drill a new well. We plan to re-enter into this wellbore.

As shown on Exhibits Three and Three-A, there are two strings of casing through the intervals that may or may not contain potash, and one of these casing strings has cement circulated behind it.

Q. Mr. Gevecker, is it your opinion that

P. O. BOX 1468
MONAHANS, TEXAS 79756
PHONE 943-3234 OR 563-1040

Martin Water Laboratories, Inc

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 38114
SAMPLE RECEIVED As listed
RESULTS REPORTED 3-4-81

TO: Mr. Jack Gevecker
P.O. Box 2760, Midland, Texas

COMPANY Bass Enterprises Production Co. LEASE As listed
FIELD OR POOL 1. & 2. Indian Flats 3. & 4. Wildcat
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Eddy STATE New Mexico
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Produced (Delaware) water - taken from Big Eddy Unit #47, 4-22-77
NO. 2 Produced (Delaware) water - taken from Big Eddy Unit #49, 4-22-77
NO. 3 Recovered (Atoka) water - taken from James Ranch Unit #12, 12-22-80
NO. 4 Recovered (Atoka) water - taken from James Ranch Unit #12, 12-23-80

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0900	1.1022	1.0555	1.0553
pH When Sampled				
pH When Received	7.65	7.9	5.85	6.57
Bicarbonate as HCO_3	66	246	222	322
Supersaturation as $CaCO_3$	0	38		
Undersaturation as $CaCO_3$	-	-		
Total Hardness as $CaCO_3$	21,000	28,000	15,900	16,000
Calcium as Ca	5,280	8,000	5,200	5,200
Magnesium as Mg	1,895	1,944	705	729
Sodium and/or Potassium	46,649	51,544	23,652	22,264
Sulfate as SO_4	2,108	1,597	43	46
Chloride as Cl	85,223	98,006	47,583	45,452
Iron as Fe	6.2	4.8	94.4	89.7
Barium as Ba			0	0
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	141,221	161,337	77,405	74,013
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	120	0.0	0.0
Resistivity, ohms/m at 77° F.	0.074	0.066	0.114	0.118
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: Letter of recommendation attached.

Form No. 3

By Waylan C. Martin

Waylan C. Martin, M. A.

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

Martin Water Laboratories, Inc.
WATER CONSULTANTS SINCE 1953
BACTERIAL AND CHEMICAL ANALYSES

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

March 4, 1981

Mr. Jack Gevecker
Bass Enterprises Production Co.
P. O. Box 2760
Midland, TX

Subject: Recommendations relative to analysis #38114 (3-4-81), Delaware and Atoka waters in Eddy Co., New Mexico.

Dear Mr. Gevecker:

The attached analyses were carefully studied for possible incompatibilities between the Atoka and Delaware. It is our understanding that the objective is to inject the Atoka water into the Delaware interval, which is much less significant than attempting to combine the waters on the surface.

The only incompatibility encountered is that the Atoka water is carrying a soluble iron and the Delaware water from Big Eddy Unit #49 contains sulfide, therefore resulting in an iron sulfide precipitation. However, the water from well #49 is considered unusual and normally we would expect a "sweet" water from the Delaware such as from well #47. However, we question that this incompatibility is sufficient to prevent the injection of the Atoka water into the Delaware interval. Therefore, in general, we feel that the incompatibility suggested above is not sufficient to prevent the mixing of these two waters by injecting Atoka into the Delaware interval. We have encountered no evidence of any other condition of concern.

Yours very truly,

Waylan C. Martin

WCM/sb

there is any increased jeopardy to the potash deposits by way of using this well as a salt water disposal well?

A. No, there is no jeopardy to the potash area.

Q. Will there by any hydrocarbons in the wellbore?

A. No, there will not be.

Q. In your opinion, Mr. Gevecker, is the well cased and cemented in such a manner that there will be no danger to oil, gas, or fresh water reservoirs or aquifers, or any potential mineral deposits which might be encountered by the well?

A. That is correct.

Q. Were these Exhibits One through Six prepared by you or under your supervision?

A. Yes, they were.

Q. And will Bass notify the Commission of the date of commencement of the injection operation, keep accurate records, and report monthly to the Commission the volumes of fluid injected, and if injected under pressure, the injection pressures?

A. Yes, we will.

Q. Is it your opinion that the approval of Bass' application in this case is in the interest of con-

servation, and the prevention of waste?

A. Yes, it is.

MR. COFFIELD: Mr. Examiner, I would move the admission of Exhibits One through Six, and I have no other questions of Mr. Gevecker on direct examination.

MR. NUTTER: Exhibits One through Six will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Gevecker, now when the well was originally drilled all those lower formations were dry and it was plugged back to 6100 and something and produced.

A. Yes.

Q. What formation was that?

A. That was Delaware, also.

Q. That's lower Delaware.

A. Lower Delaware.

Q. Now you're going to be disposing in the upper Delware.

A. In the Ramsey and Olds formation of the Delaware.

Q. So you'll be disposing into the upper Delaware formation, then.

A. Yes.

Q. Okay. Now, what is the depth of the potash in this area?

A. The depth, I'm not sure, but in talking with other mines in the area, it's approximately 900 feet to possibly 1200 feet.

Q. Okay, so your 13-3/8ths intermediate casing is set at 3629, so you have 13-3/8ths and also the 9-5/8ths long string set through the potash, is that correct?

A. That is correct.

Q. And cement was circulated behind the 13-3/8ths?

A. Yes.

Q. So you have two strings of pipe and one string of cement in back of that pipe --

A. Yes.

Q. -- through the potash area.

A. Yes.

Q. Okay. Now there's no production from the Delaware within two miles of this well, is there?

A. No, there is not.

Q. So the reason for the hearing today is because you're disposing in the potash area, not because you're disposing in an oil productive area in this zone.

A. That is correct.

MR. NUTTER: Are there any further questions of Mr. Gevecker? He may be excused.

Did you have any other witness, Mr. Coffield?

MR. COFFIELD: No, sir, this was all.

MR. NUTTER: Do you have anything further to offer?

MR. COFFIELD: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7203?

We'll take the case -- or 7204? We'll take the case under advisement.

(Hearing concluded.)

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 CSR.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7204 heard by me on 3/25 1981.

_____, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
25 March 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Bass Enterprises Production Company for salt water disposal, Eddy County, New Mexico.

CASE 7204

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

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Santa Fe, New Mexico 87501

For the Applicant: Conrad E. Coffield, Esq.
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I N D E X

JACK R. GEVECKER

E X H I B I T S

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MR. PADILLA: Application of Bass Enterprises Production Company for salt water disposal Eddy County, New Mexico.

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BY MR. COFFIELD:

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MR. NUTTER: Will you spell that, please?

A. G-E-V-E-C-K-E-R.

MR. NUTTER: Thank you.

A. Box 2760, Midland Texas, 79701. I'm a Senior Petroleum Engineer with Bass Enterprises Production Company.

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A. Yes, I am.

Q. Have you previously testified before the Division as a petroleum engineer and if so, were your qualifications accepted?

A. Yes, they were.

MR. NUTTER: Mr. Examiner, do you have any other questions of this witness?

MR. NUTTER: No, sir Mr. Gevecker is qualified.

Q. Mr. Gevecker, would you please state what it is that Bass seeks by this application?

A. Bass Enterprises seeks permission to dispose of produced salt water by injection into the Delaware formation through the interval 3820 to 3915 in the Federal Legg No. 1 Well, located in Unit B, Section 27, Township 22 South, Range 30 East, of Eddy County, New Mexico.

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title of the land back to the United States. We no longer have title to that land.

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And eight, hook up the wellhead and commence injecting.

Q. All right, Mr. Gevecker, now I think there are two or three things here you could cover together. Again, would you please give the name of the formation and the perforated interval and also state the kind of fluid that will be disposed of and give the sources of fluid, and finally, what is the anticipated volume expected to be disposed?

A. Bass intends to dispose of the water

in the Delaware formation through perforations 3820 to 60, and 3880 to 3915 feet.

We plan to dispose of produced salt water from the Atoka formation of Bass' James Ranch Unit No. 12, located in Unit B, Section 21, Township 22 South, Range 30 East.

We anticipate the volume to be 110 barrels of water per day initially.

Q. Mr. Gevecker, would you propose to use this well for disposal of other -- other salt water at some point?

A. Yes, sir, we would, if it became necessary.

Q. So would you propose also to be authorized administratively to seek the authority of the Commission to dispose of additional salt water into this well?

A. Yes.

Q. All right. Do you anticipate encountering any pressure while injecting or will the well take water by gravity, and also, do you have the necessary equipment to inject under pressure, and finally, will the tubing casing annulus be open or do you expect to have a pressure gauge on the annulus?

A. We do anticipate encountering pressure

while injecting, but only estimated to be 200 to 300 pounds maximum, well below the 0.2 psi per foot gradient.

We do plan to be equipped to inject under pressure. The tubing casing annulus will be filled with an inhibited fresh water and open to the atmosphere so that any tubing or packer leak can be noticed.

Q. Mr. Gevecker, you have stated that the anticipated pressure is well below the guideline that is observed by the Division. I assume that you are requesting that the order be sufficiently broad to permit you to inject up to that guideline?

A. Yes, we are.

Q. Is that correct? Mr. Gevecker, do you have a water sample from the producing well and does it show any incompatibilities with a typical connate Delaware water?

A. Yes, we do have a water sample of the Atoka water from James Ranch Unit No. 12.

I direct your attention to Exhibit Four. This exhibit is a tabulation of the water analysis from James Ranch Unit No. 12 Atoka, and two typical Delaware wells, being the Big Eddy Unit Nos. 47 and 49 located in Section 35, Township 21 South, Range 28 East in Eddy County. An independent lab has made these analyses and commented on the water's compatibilities.

Please note that they do not find the waters to be incompatible.

Q Mr. Gevecker, you have stated that there are two wells within a 2-mile radius of this Federal Leggs No. 1 Well. Would you please discuss these and in particular comment on their casing and cementing programs, as shown on Exhibits Five and Five-A, which I ask you to discuss, as well as the cross section shown as Exhibit Six?

A The closest offset is Bass' James Ranch Unit No. 12, located in Section 21. This well lies 6800 feet, or 1.29 miles, northwest.

Exhibit Five is a diagrammatic sketch of the well. Please note intermediate string of 9 5/8ths casing, set at 3729 feet with cement circulated to the surface.

By log correlation, the casing depth at 3729 correlates to below the bottom perf at 3915 feet of the proposed injection well, meaning that the Delaware disposal zone in James Ranch Unit 12 is completely cased and cemented off, preventing any communication between wells.

The only other well within the two mile radius is Belco's James Ranch Unit No. 11 located 10 528 feet to the south -- southeast in Section 36.

Technically speaking, the surface location is 32 feet inside the two mile radius; however, the bottom hole location of the 10-3/4 inch intermediate casing

is only two feet inside the two mile radius.

Exhibit Five-A is a diagrammatic sketch of this well.

Please notice Exhibit Six. Exhibit Six is a cross section from the James Ranch Unit 12 through the Federal Legg No. 1, to the James Ranch Unit No. 11. Please note that the 10-3/4 casing of the James Ranch Unit No. 11, that is set at 3839 feet, correlates to approximately 25 feet above the top perf of 3820 of the proposed injection well.

Q. Does the location of this proposed salt water disposal well lie within the R-111-A potash area?

A. Yes, it does. I'd like to point out that the proposed disposal well, the Federal Legg No. 1, was spudded in 1953. The R-111 area was outlined November 9th 1951 and later amended on March 25th, 1975 to R-111-A.

Q. How do you propose to propose to protect the interval where potash might be found?

A. Bass does not intend to drill a new well. We plan to re-enter into this wellbore.

As shown on Exhibits Three and Three-A, there are two strings of casing through the intervals that may or may not contain potash, and one of these casing strings has cement circulated behind it.

Q. Mr. Gevecker, is it your opinion that

there is any increased jeopardy to the potash deposits by way of using this well as a salt water disposal well?

A. No, there is no jeopardy to the potash area.

Q. Will there by any hydrocarbons in the wellbore?

A. No, there will not be.

Q. In your opinion, Mr. Gevecker, is the well cased and cemented in such a manner that there will be no danger to oil, gas, or fresh water reservoirs or aquifers, or any potential mineral deposits which might be encountered by the well?

A. That is correct.

Q. Were these Exhibits One through Six prepared by you or under your supervision?

A. Yes, they were.

Q. And will Bass notify the Commission of the date of commencement of the injection operation, keep accurate records, and report monthly to the Commission the volumes of fluid injected, and if injected under pressure, the injection pressures?

A. Yes, we will.

Q. Is it your opinion that the approval of Bass' application in this case is in the interest of con

servation, and the prevention of waste?

A. Yes, it is.

MR. COFFIELD: Mr. Examiner I would move the admission of Exhibits One through Six, and I have no other questions of Mr. Gevecker on direct examination.

MR. NUTTER: Exhibits One through Six will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Gevecker, now when the well was originally drilled all those lower formations were dry and it was plugged back to 6100 and something and produced.

A. Yes.

Q. What formation was that?

A. That was Delaware, also.

Q. That's lower Delaware.

A. Lower Delaware.

Q. Now you're going to be disposing in the upper Delaware.

A. In the Ramsey and Olds formation of the Delaware.

Q. So you'll be disposing into the upper Delaware formation, then.

A. Yes.

Q. Okay. Now, what is the depth of the potash in this area?

A. The depth, I'm not sure, but in talking with other mines in the area, it's approximately 900 feet to possibly 1200 feet.

Q. Okay, so your 13-3/8ths intermediate casing is set at 3629, so you have 13-3/8ths and also the 9-5/8ths long string set through the potash, is that correct?

A. That is correct.

Q. And cement was circulated behind the 13-3/8ths?

A. Yes.

Q. So you have two strings of pipe and one string of cement in back of that pipe -

A. Yes.

Q. -- through the potash area.

A. Yes.

Q. Okay. Now there's no production from the Delaware within two miles of this well, is there?

A. No, there is not.

Q. So the reason for the hearing today is because you're disposing in the potash area, not because you're disposing in an oil productive area in this zone.

A That is correct.

MR. NUTTER: Are there any further questions of Mr. Gevecker? He may be excused.

Did you have any other witness Mr. Coffield?

MR. COFFIELD: No, sir, this was all.

MR. NUTTER: Do you have anything further to offer?

MR. COFFIELD: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 7203?

We'll take the case -- or 7204? We'll take the case under advisement.

(Hearing concluded.)

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 CSR.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7294 heard by me on 3/25 1981.

_____, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

CASE 7200: Application of Estoril Producing Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Belco Fed. Well No. 1 located in Unit O of Section 15, Township 23 South, Range 34 East, to produce gas and gas liquids from the Strawn and Morrow formations, Antelope Ridge Field, thru parallel strings of tubing.

CASE 7201: Application of Layton Enterprises, Inc. for a unit agreement, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Todd Lower San Andres Unit Area, comprising 3256 acres, more or less, of Federal and State lands in Township 7 South, Ranges 35 and 36 East.

CASE 7202: Application of Layton Enterprises, Inc. for a waterflood project, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the San Andres formation thru 4 injection wells located in Sections 30, 31 and 32 of its Todd Lower San Andres Unit in Township 7 South, Range 36 East.

CASE 7203: Application of Southern Union Exploration Co. of Texas for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Susco Bough "C" Unit area, comprising 2560 acres, more or less, of State lands in Township 10 South, Range 33 East.

CASE 7204: Application of Bass Enterprises Production Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the interval from 3820 feet to 3915 feet in its Federal Legg Well No. 1 in Unit B of Section 27, Township 22 South, Range 30 East, Quahada Ridge Field.

CASE 7205: Application of Supron Energy Corporation for a non-standard gas proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard Blanco Mesaverde gas proration unit comprising the NE/4 of Section 35, Township 31 North, Range 12 West, to be dedicated to a well to be drilled at a standard location thereon.

CASE 7183: (Continued from March 11, 1981, Examiner Hearing)

Application of Flag-Redfern Oil Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Osudo St. Com Well No. 2 at an unorthodox location 990 feet from the North and East lines of Section 18, Township 20 South, Range 36 East, North Osudo-Morrow Gas Pool.

CASE 7206: Application of Mobil Producing Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Devonian formation through perforations from 12,212 feet to 12,218 feet and the open hole interval from 12,240 feet to 12,555 feet in its Santa Fe Pacific Well No. 3 in Unit M of Section 26, Township 9 South, Range 36 East, Crossroads Field.

CASE 7207: Application of Mobil Producing Inc. for lease commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the commingling of Vacuum Grayburg-San Andres production from the State J and State II leases in Section 22, Township 17 South, Range 34 East.

CASE 7208: Application of Gulf Oil Corporation for the amendment of pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of the White City-Pennsylvanian Gas Pool Rules to provide for 320-acre spacing rather than 640 acres with well locations specified as being at least 1650 feet from the end boundary and 660 feet from the side boundary of the proration unit.

CASE 7129: (Continued from February 25, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the N/2 of Section 28, Township 28 North, Range 8 West, 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 7169: (Continued from February 25, 1981, Examiner Hearing)

Application of Koch Exploration Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Dakota formation underlying the S/2 of Section 22, Township 28 North, Range 8 West, 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.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

April 9, 1981

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

Re: CASE NO. 7204
ORDER NO. R-6643

Applicant:

~~Baco Enterprises Production~~ Company

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

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

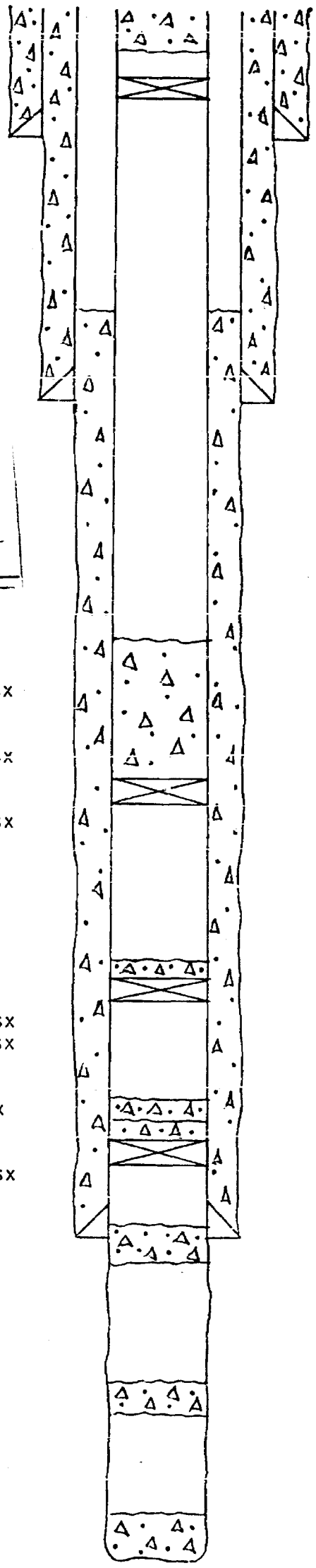
Other

CURRENT STATUS
FEDERAL LEGG NO. 1
UNIT B, SEC. 27, T22S, R30E
QUAHADA RIDGE (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
CASE NO. 7204

EXHIBIT 3

Completed 5/54
Plugged 12/67

KB 3309'



150 sx plug 0-130'
Retainer @254'

20" 94# H-40 csg set
@426' w/700 sx
cmt circ

TOC 2840' by temp. survey

13-3/8" 68#+74# csg set
@3629' w/3350 sx
DV tool @2472'
cmt circ

Est. TOC 5000'
300 sx plug

Perf 6082', squeeze w/100 sx

Perf 6112-18, frac'd
Perf 6130', squeeze w/100 sx

Perfs 6112-18

Retainer @6124'

Perf 7188', squeeze w/100 sx

Spot 30 sx plug 7190-7234

Perf 7218-26', frac'd

Retainer @7234'

Perf 7252', squeeze w/100 sx
Perf 7426', squeeze w/100 sx
Spot 30 sx plug 7420-63'
Perf 7456-60', frac'd
Perf 7470, squeeze w/100 sx
Spot 30 sx plug 7468-7512'
Perf 7500-04', frac'd
Perf 7530', squeeze w/100 sx

Retainer @7518'

9-5/8" 40#+47# csg set
@9025' w/2590 sx
DV tool @6352'

Centralizers 3578', 4818',
6336', 6368', 7098', 9006'

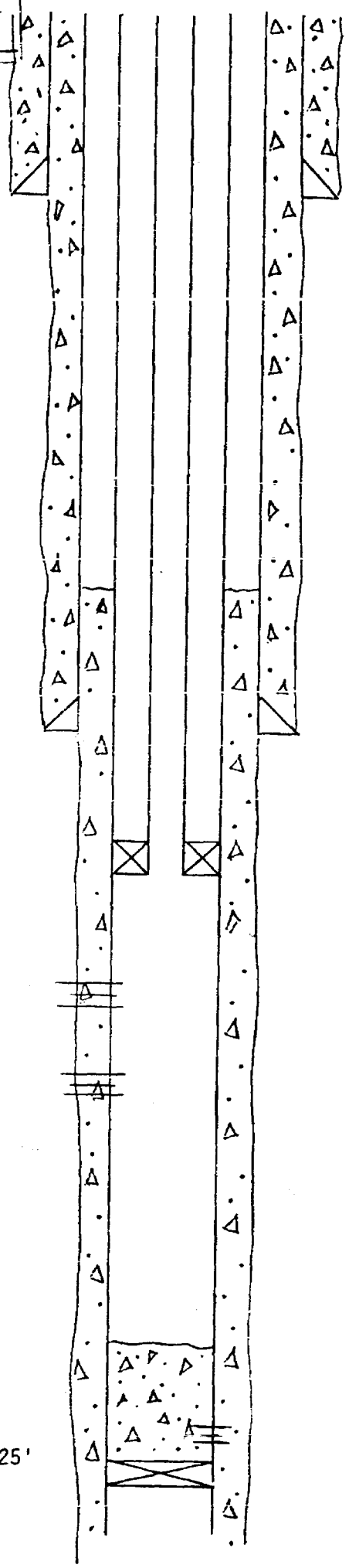
100 sx plug 8790-9050'

75 sx plug 12,430-625'

100 sx plug 15,590-850'

15,845' Total Depth

PROPOSED INSTALLATION
FEDERAL LEGG NO. 1
UNIT B, SEC. 27, T22S, R30E
QUAHADA RIDGE (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
CASE NO. 7204
EXHIBIT 3A



DF 3309'

20", 94#/ft, H-40 casing set @426' w/700 sx cmt circ

TOC by temp survey 2840'

13-3/8" 68+74#/ft, J-55 casing set @3629' w/3350 sx, DV tool @2472' cmt circ

2-3/8" 4.7#/ft J-55 IPC tubing

Baker Lok-Set packer set @3700'

Proposed perfs — 3820-60'
3880-3915'

300 sx cmt plug
Est TOC @5000'

perfs 6112-18'

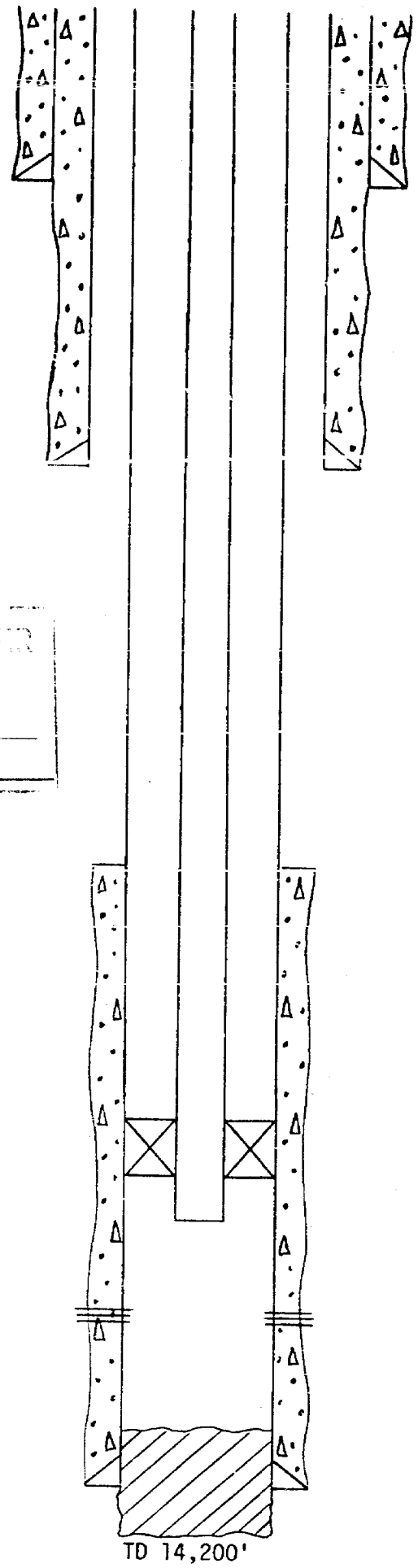
9-5/8" 40+47#/ft casing set @9025' w/2590 sx, DV tool @6352', centralizers @3578, 4818, 6336, 6368, 7098, 9006'

retainer @6124'

JAMES RANCH UNIT NO. 12
UNIT G, SEC. 21, T22S, R30E
UNDESIGNATED (ATOKA) FIELD
EDDY COUNTY, NEW MEXICO
CASE NO. 7204
EXHIBIT 5

CAOF 5093 MCFD

Waiting on pipeline connection



KB 3180'

13-3/8" 48#/ft H-40 casing set @540' w/500 sx cmt circ

9-5/8" 36#/ft J-55 casing set @3729' w/1975 sx cmt circ

TOC by temp. survey 9590'

2-3/8" 4.7#/ft N-80 tubing

Otis MH-2 packer set @12,423'

Perfs (Atoka) 12,665-12,672'
Acidized w/200 gals 10% acetic acid and 2000 gals 7-1/2% MS acid

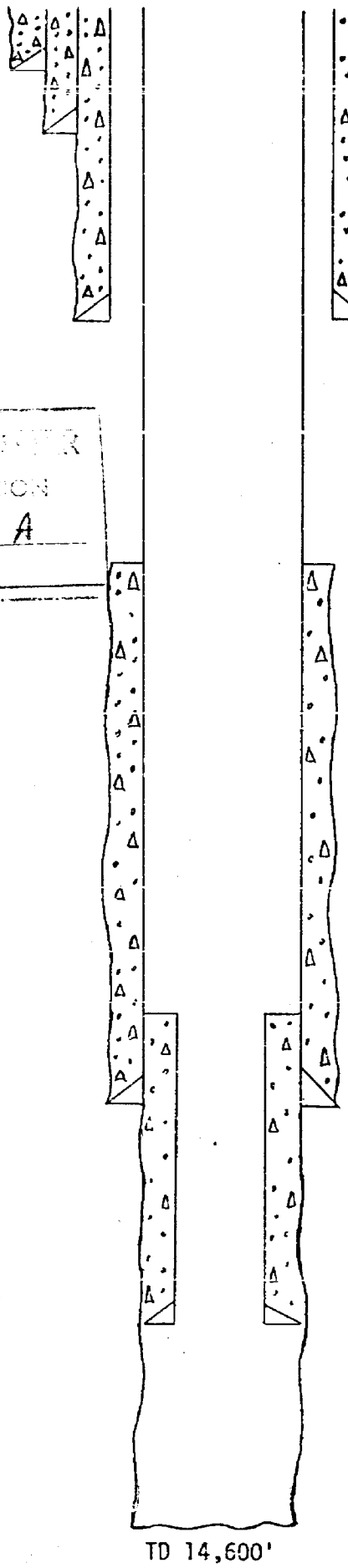
PBTD 14,110'

5-1/2" 17#/ft S-95 and N-80 casing set @14,155' w/1330 sx

TD 14,200'

JAMES RANCH UNIT NO. 11
UNIT E, SEC. 36, T22S, R30E
EDDY COUNTY, NEW MEXICO
CASE NO. 7204

EXHIBIT 5A



KB 3324'

30" surface pipe set @30'

16" casing set @450' w/750 sx cmt circ

10-3/4" casing set @3839' w/2300 sx cmt circ

TOC (by CBL) 6040'

7-5/8" 33.7#/ft N-80 and S-95* casing set @11,933' w/1040 sx

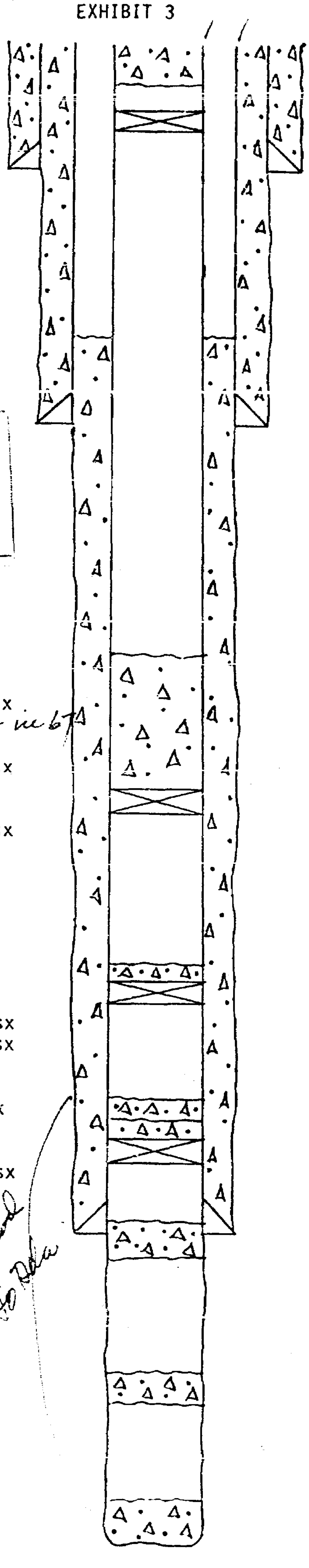
5" liner set @13,881' w/350 sx

TD 14,600'

*N-80 csg (0-7985')
S-95 csg (7985-11,933')

CURRENT STATUS
FEDERAL LEGG NO. 1
UNIT B, SEC. 27, T22S, R30E
QUAHADA RIDGE (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
CASE NO. 7204

EXHIBIT 3



Completed 5/54
Plugged 12/67
KB 3309'
150 sx plug 0-130'
Retainer @254'
20" 94# H-40 csg set
@426' w/700 sx
cmt circ
TOC 2840' by temp. survey
13-3/8" 68#+74# csg set
@3629' w/3350 sx
DV tool @2472'
cmt circ
Est. TOC 5000'
300 sx plug
Perf 6082', squeeze w/100 sx
completed as Delaware producer P&A in 67
Perf 6112-18, frac'd
Perf 6130', squeeze w/100 sx
Perfs 6112-18
Retainer @6124'
Perf 7188', squeeze w/100 sx
Spot 30 sx plug 7190-7234
Perf 7218-26', frac'd
Retainer @7234'
Perf 7252', squeeze w/100 sx
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Perf 7456-60', frac'd
Perf 7470, squeeze w/100 sx
Spot 30 sx plug 7468-7512'
Perf 7500-04', frac'd
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Retainer @7518'
9-5/8" 40#+47# csg set
@9025' w/2590 sx
DV tool @6352'
100 sx plug 8790-9050'
Centralizers 3578', 4818',
6336', 6368', 7098', 9006'
non-prod
PB to Dela
75 sx plug 12,430-625'
100 sx plug 15,590-850'
15,845' Total Depth

BEFORE EXAMINER
OIL CONSERVATION DIVISION
Bass EXHIBIT NO. 3
CASE NO. 7204

PROPOSED INSTALLATION
FEDERAL LEGG NO. 1
UNIT B, SEC. 27, T22S, R30E
QUAHADA RIDGE (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
CASE NO. 7204
EXHIBIT 3A

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION
BASS EXHIBIT NO. 3A
CASE NO. 7204

Open at surf

DF 3309'

20", 94#/ft, H-40 casing set @426' w/700 sx cmt circ

loaded w/ inhibited fluid

TOC by temp survey 2840'

13-3/8" 68+74#/ft, J-55 casing set @3629' w/3350 sx, DV tool @2472' cmt circ

2-3/8" 4.7#/ft J-55 IPC tubing

Baker Lok-Set packer set @3700'

Proposed perfs — 3820-60'
3880-3915'

300 sx cmt plug
Est TOC @5000'

perfs 6112-18'

9-5/8" 40+47#/ft casing set @9025' w/2590 sx, DV tool @6352', centralizers @3578, 4818, 6336, 6368, 7098, 9006'

retainer @6124'

P. O. BOX 1468
MONAHANS, TEXAS 79756
PHONE 943-3234 OR 563-1040

Martin Water Laboratories, Inc

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

RESULT OF WATER ANALYSES

LABORATORY NO. 38114

TO: Mr. Jack Gevecker
P.O. Box 2760, Midland, Texas

SAMPLE RECEIVED As listed

RESULTS REPORTED 3-4-81

COMPANY Bass Enterprises Production Co. LEASE As listed

FIELD OR POOL 1. & 2. Indian Flats 3. & 4. Wildcat

SECTION ___ BLOCK ___ SURVEY ___ COUNTY Eddy STATE New Mexico

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Produced (Delaware) water - taken from Big Eddy Unit #47, 4-22-77

NO. 2 Produced (Delaware) water - taken from Big Eddy Unit #49, 4-22-77

NO. 3 Recovered (Atoka) water - taken from James Ranch Unit #12, 12-22-80

NO. 4 Recovered (Atoka) water - taken from James Ranch Unit #12, 12-23-80

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0900	1.1022	1.0555	1.0553
pH When Sampled				
pH When Received	7.65	7.9	5.85	6.57
Bicarbonate as HCO_3	66	246	222	322
Supersaturation as $CaCO_3$	6	38		
Undersaturation as $CaCO_3$	–	–		
Total Hardness as $CaCO_3$	21,000	28,000	15,900	16,000
Calcium as Ca	5,280	8,000	5,200	5,200
Magnesium as Mg	1,895	1,944	705	729
Sodium and/or Potassium	46,649	51,544	23,652	22,264
Sulfate as SO_4	2,108	1,597	43	46
Chloride as Cl	85,223	98,006	47,583	45,452
Iron as Fe	6.2	4.8	94.4	89.7
Barium as Ba			0	0
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	141,221	161,337	77,405	74,013
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	120	0.0	0.0
Resistivity, ohms/m at 77° F.	0.074	0.066	0.114	0.118
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: Letter of recommendation attached.

BEFORE EXAMINER
OIL CONSERVATION DIVISION
BASS EXHIBIT NO. 4
CASE NO. 7704

Form No. 3

By Waylan C. Martin, M. A.

Martin Water Laboratories, Inc.
WATER CONSULTANTS SINCE 1953
BACTERIAL AND CHEMICAL ANALYSES

P. O. BOX 1468
MONAHANS, TEXAS 79756
PH. 943-3234 OR 563-1040

709 W. INDIANA
MIDLAND, TEXAS 79701
PHONE 683-4521

March 4, 1981

Mr. Jack Gevecker
Bass Enterprises Production Co.
P. O. Box 2760
Midland, TX

Subject: Recommendations relative to analysis #38114 (3-4-81), Delaware and Atoka waters in Eddy Co., New Mexico.

Dear Mr. Gevecker:

The attached analyses were carefully studied for possible incompatibilities between the Atoka and Delaware. It is our understanding that the objective is to inject the Atoka water into the Delaware interval, which is much less significant than attempting to combine the waters on the surface.

The only incompatibility encountered is that the Atoka water is carrying a soluble iron and the Delaware water from Big Eddy Unit #49 contains sulfide, therefore resulting in an iron sulfide precipitation. However, the water from well #49 is considered unusual and normally we would expect a "sweet" water from the Delaware such as from well #47. However, we question that this incompatibility is sufficient to prevent the injection of the Atoka water into the Delaware interval. Therefore, in general, we feel that the incompatibility suggested above is not sufficient to prevent the mixing of these two waters by injecting Atoka into the Delaware interval. We have encountered no evidence of any other condition of concern.

Yours very truly,

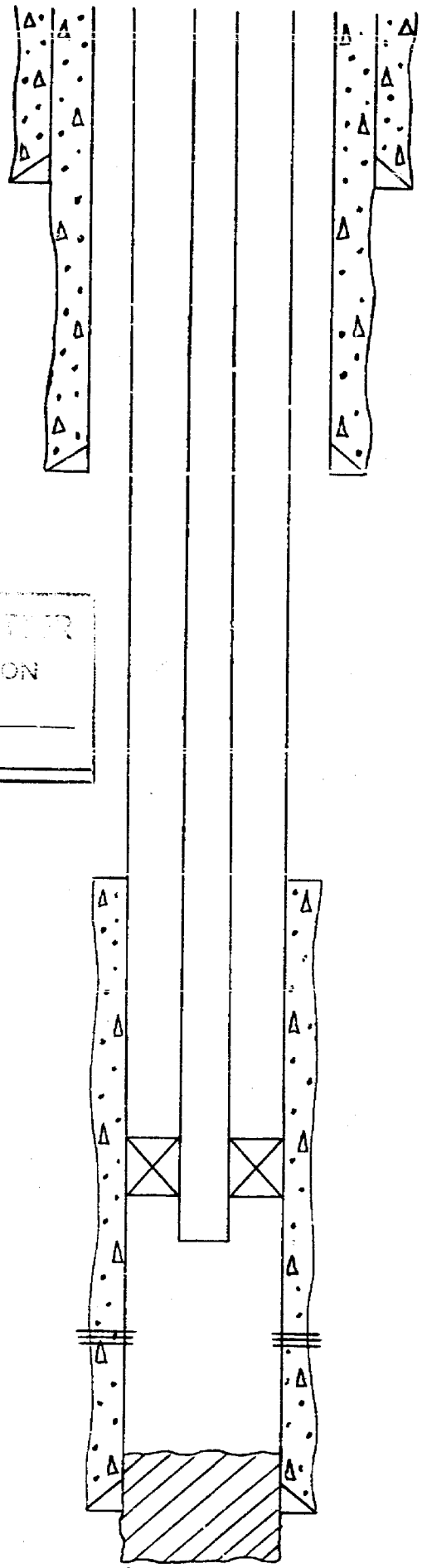
Waylan C. Martin

WCM/sb

JAMES RANCH UNIT NO. 12
UNIT G, SEC. 21, T22S, R30E
UNDESIGNATED (ATOKA) FIELD
EDDY COUNTY, NEW MEXICO
CASE NO. 7204
EXHIBIT 5

CAOF 5093 MCFD

Waiting on pipeline connection



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9-5/8" 36#/ft J-55 casing set @3729' w/1975 sx cmt circ

TOC by temp. survey 9590'

2-3/8" 4.7#/ft N-80 tubing

Otis MH-2 packer set @12,423'

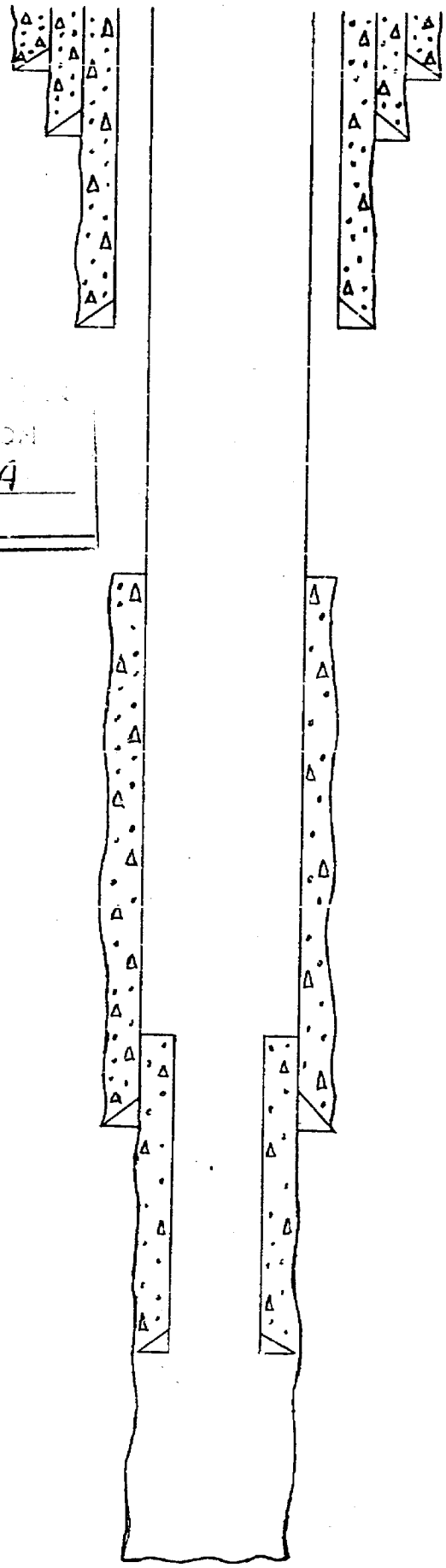
Perfs (Atoka) 12,665-12,672'
Acidized w/200 gals 10% acetic acid and 2000 gals 7-1/2% MS acid

PBTD 14,110'

5-1/2" 17#/ft S-95 and N-80 casing set @14,155' w/1330 sx

JAMES RANCH UNIT NO. 11
UNIT E, SEC. 36, T22S, R30E
EDDY COUNTY, NEW MEXICO
CASE NO. 7204

EXHIBIT 5A



KB 3324'

30" surface pipe set @30'

16" casing set @450' w/750 sx cmt circ

10-3/4" casing set @3839' w/2300 sx cmt circ

TOC (by CBL) 6040'

7-5/8" 33.7#/ft N-80 and S-95* casing set @11,933' w/1040 sx

5" liner set @13,881' w/350 sx

TD 14,600'

*N-80 csg (0-7985')
S-95 csg (7985-11,933')

W. E. BONDURANT, JR.
(1914-1973)

OF COUNSEL
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(806) 372-5569

*NOT LICENSED IN TEXAS

February 26, 1981

Case 7204

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

Re: Bass Enterprises Production Company Application for March 25, 1981 Docket

Dear Dan:

I am transmitting herewith, executed in triplicate, copies of an Application for Salt Water Injection Well in NW¼NE¼ Section 27, Township 21 South, Range 28 East, N.M.P.M., County, New Mexico for Bass Enterprises Production Company

As we have previously discussed, we would appreciate having this case set on the March 25, 1981 docket.

Very truly yours,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

Conrad E. Coffield

CEC:rh
Enclosures

xc: Mr. J. E. Pullig
xc: Mr. Steve Rowland

BEFORE THE OIL CONSERVATION DIVISION OF

THE DEPARTMENT OF ENERGY AND MINERALS

STATE OF NEW MEXICO

APPLICATION OF BASS ENTERPRISES)
PRODUCTION COMPANY FOR SALT)
WATER INJECTION WELL, EDDY COUNTY,)
NEW MEXICO)

Case 7204

APPLICATION

COMES NOW the undersigned as attorney on behalf of Bass Enterprises Production Company and files this written application for hearing to be set on the docket for March 25, 1981. In connection therewith, the undersigned, on behalf of Bass Enterprises Production Company, submits the following data:

1. Name of Applicant: Bass Enterprises Production Company

2. Area Affected by the Order Sought:

Township 22 South, Range 30 East, N.M.P.M.
Eddy County, New Mexico

Section 27: NW¼NE¼
The above being the location of the Federal Legg #1 located 660 feet from the North line and 2,003 feet from the East line of said Section 27

3. General Nature of Order Sought: Applicant seeks to inject produced salt water into the above described well. The formation into which Applicant seeks to inject salt water is the Delaware formation.

4. Other Matters to be Noted in Connection with Order Sought: The proposed perforation interval for the foregoing is 3,820 feet to 3,915 feet beneath the surface.

The above well for which Applicant seeks authority from the Division to inject salt water is located in the Quahada Ridge Field.

DATED this 26th day of February, 1981.

Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By: _____
Conrad E. Coffield
Attorney 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 SALT)
WATER INJECTION WELL, EDDY COUNTY,)
NEW MEXICO)

Case 7204

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Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By: _____
Conrad E. Coffield
Attorney 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 SALT)
WATER INJECTION WELL, EDDY COUNTY,)
NEW MEXICO)

Case 7204

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Respectfully submitted,

HINKLE, COX, EATON,
COFFIELD & HENSLEY

By: _____
Conrad E. Coffield
Attorney for Bass Enterprises
Production Company

ROUGH
dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE NO. 7204

Order No. R- 6643

APPLICATION OF BASS ENTERPRISES
PRODUCTION COMPANY FOR SALT WATER
DISPOSAL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 25, 1981, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of April, 1981, 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, is the owner and operator of the Federal Legg Well No. 1, located in Unit B of Section 27, Township 22 South, Range 30 East, NMPM, Quahada Ridge Field, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Delaware formation, with injection into the perforated interval from approximately 3820 feet to 3915 feet.

(4) That the injection should be accomplished through 2 3/8 -inch plastic lined tubing installed in a packer set at approximately 3700 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge or approved leak detection device should be attached to the annulus in order

to determine leakage in the casing, tubing, or packer.

(5) That the injection well or system should be equipped with a ~~pop-off valve~~ pressure limiting device or acceptable ~~substitute~~ OK which will limit the wellhead pressure on the injection well to no more than 765 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Delaware formation.

(7) That the operator should notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(9) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Bass Enterprises Production Compan is hereby authorized to utilize its Federal Legg Well No. 1, located in Unit B of Section 27, Township 22 South, Range 30 East, NMPM, Quahada Ridge Field, Eddy County, New Mexico, to dispose of produced salt water into the Delaware formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately _____ feet, with injection into the perforated interval from approximately 3820 feet to 3915 feet;

3820
.2
764.0

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak detection device in order to determine leakage in the casing, tubing, or packer.

(2) That the injection well or system shall be equipped with a ~~pop-off valve~~ pressure limiting device or acceptable ~~substitute~~ OK which will limit the wellhead pressure on the injection well to no more than 765 psi.

(3) That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Delaware formation.

(4) That the operator shall notify the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment so that the same may be inspected.

(5) That the operator shall immediately notify the supervisor of the Division's Artesia district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

(6) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(7) 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.