

CASE 6104: BETRICE BEDINGFIELD FOR SALT
WATER DISPOSAL, EDDY COUNTY, NEW MEXICO

Case Number

6104

Application

Transcripts.

Small Exhibits

ETR

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 6104
Order No. R-5619

APPLICATION OF BETRICE BEDINGFIELD
FOR SALT WATER DISPOSAL, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 14, 1977, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 17th day of January, 1978, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Betrice Bedingfield, is the owner and operator of the Sunray State Well No. 1, located in Unit E of Section 30 and the Hastie Well No. 8 located in Unit F of Section 18, both in Township 17 South, Range 28 East, NMPM, Empire Yates-Seven Rivers Pool, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said wells to dispose of produced salt water into the Seven Rivers formation, with injection into the open-hole interval from approximately 487 feet to 517 feet in the Sunray State Well No. 1 and from 500 feet to 552 feet in the Hastie Well No. 8.

(4) That in each of said wells the injection should be accomplished through 2-inch plastic lined tubing installed in a packer set within 20 feet of the casing shoe; 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 switch or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 250 psi.

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Case No. 6104
Order No. R-5619

(6) That the Secretary-Director of the Commission should be authorized to administratively grant a higher wellhead injection pressure.

(7) That the operator should notify the supervisor of the Artesia district office of the Commission 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, Betrice Bedingfield, is hereby authorized to utilize her Sunray State Well No. 1, located in Unit E of Section 30 and her Hastie Well No. 8 located in Unit F of Section 18 both in Township 17 South, Range 28 East, NMPM, Empire Yates-Seven Rivers Pool, Eddy County, New Mexico, to dispose of produced salt water into the Seven Rivers formation, injection to be accomplished through 2-inch tubing installed in a packer set within 20 feet of the casing shoe, with injection into the open-hole interval from approximately 487 feet to 517 feet; and 500 feet to 552 feet, respectively.

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 or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 250 psi.

(3) That for good cause shown, the Secretary-Director of the Commission may administratively grant a higher wellhead injection pressure.

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

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Case No. 6104
Order No. R-5619

(5) That the operator shall immediately notify the supervisor of the Commission'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 Commission Rules and Regulations.

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

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

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/

NEIL B. WATSON
FRED A. WATSON

LAW OFFICES
WATSON & WATSON
AMERICAN HOME BUILDING
P. O. DRAWER E
ARTESIA, NEW MEXICO 88210

AREA CODE 505
746-4151 - 746-2201

December 16, 1977

DEC 16 1977

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

ATTENTION: Mr. Richard L. Stamets, Examiner

Dear Mr. Stamets:

Re: Case Number 6104, Application of Betrice
Bedingfield for two salt water disposal
wells

You presided as examiner at the hearing of the captioned case on Wednesday, December 14, 1977. At that hearing I intended to move that the application be corrected to show that the applicant's name is spelled Betrice Bedingfield rather than Beatrice Bedingfield, since I had misspelled her name throughout the application.

You did correct the spelling of Mrs. Bedingfield's name in the Notice and Advertisement, based upon my telephone call to you. However, my notes from the hearing do not indicate whether I did or did not make the motion to correct the application. Accordingly, I am writing this letter so that you will have it for the file and so that any order issued as a result of the hearing will have the correct spelling of Mrs. Bedingfield's name.

I am sorry to cause so much trouble and appreciate your consideration in the matter.

Very truly yours,

Fred A. Watson
Fred A. Watson

FAW:fc

OK
Bk

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

March 7, 1978

Mr. Fred A. Watson
Drawer E
Artesia, New Mexico 88210

Re: Case No. 6104
Order No. R-5619

Dear Mr. Watson:

This is with reference to your letter of February 21, 1978, wherein you request an injection pressure of 300 psi for the two wells involved in the above application.

The charts submitted by Mr. Gray indicate only the possibility that the injection zone fractures at 285 psi. Had the pressure continued to increase then we could be assured that fracture pressure had not been attained.

From the information submitted, the injection pressure is increased from 250 to 275 psi in the two wells mentioned in the above order.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

C
O
P
Y

NEIL B. WATSON
FRED A. WATSON

LAW OFFICES
WATSON & WATSON
AMERICAN HOME BUILDING
P. O. DRAWER E
ARTESIA, NEW MEXICO 88210

AREA CODE 505
746-4151 - 746-2201

February 21, 1978

Stamets

322 1978

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

Dear Mr. Ramey:

Re: NMOCC Case No. 6104,
Order No. R-5619
(Applicant: Betrice Bedingfield)

Applicant in the above case requested authority to convert the Betrice Bedingfield-Hastie No. 8 Well in Unit F (SE $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 18, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, and the Betrice Bedingfield-Sunray State No. 1 Well in Unit E (SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 30, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, to water disposal wells.

The Order, issued January 17, 1978, authorized the conversion of the wells to water disposal wells but limited the wellhead pressure to no more than 250 psi, with the further provision that the Secretary-Director was authorized to administratively grant a higher wellhead injection pressure for good cause shown.

I am now enclosing herewith the original and copy of a letter from Mr. Ralph L. Gray, Petroleum Engineer of Artesia, New Mexico, together with original pressure charts on the Betrice Bedingfield-Hastie No. 8 Well installed for a 24 hour period on February 19, ending February 20, and for an additional day on February 20, ending on February 21. I will let Mr. Gray's letter speak for itself but it indicates his conclusion that fracture pressure was not reached even though the pressure was increased up to a maximum of 285 psi. Both the increase and the decrease appear to be charted as very gradual and smooth without any undue change in the slope of the curve.

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It is hereby requested on behalf of applicant, Betrice Bedingfield, that an Administrative Order be granted permitting the operator to inject water up to a pressure of 300 psi in the Hastie No. 8 Well and the Sunray State No. 1 Well, so that the operator will have some flexibility in future operations. Your consideration in this matter will be very much appreciated.

Very truly yours,

Fred A. Watson
Fred A. Watson.

FAW:js
Enc.

cc: Mr. Ralph L. Gray
Petroleum Engineer
P. O. Box 198
Artesia, New Mexico 88210

cc: Mrs. Betrice Bedingfield and
Mr. John Bedingfield
1002 West Dallas
Artesia, New Mexico 88210

RALPH L. GRAY
PETROLEUM ENGINEERING - PRODUCTION
CONSULTANT
P. O. BOX 198
ARTESIA, NEW MEXICO 88210

February 21, 1978

Mr. Fred Watson, Attorney
American Home Security Life Building
Artesia, New Mexico 88210

Re: Case No. 6104
Order No. R-5619

Dear Sir:

On Dec. 14, 1977, we represented Betrice Bedingfield at an Oil Commission hearing in Santa Fe, Case No. 6104, in which we requested permission to utilize her Sunray State well #1 and Hastie well #8 as salt water disposal wells. As part of our testimony, we showed that water could be injected safely up to approximately 350 psi. However, Order No. R-5619 limits the injection pressure to 250 psi.

Water is now being injected into the Hastie well #8, but it is now indicated that approximately 250 psi. is required at this time and the Commission's order does not allow for any increase which will be required in the future.

In order to furnish the Commission with additional information so as to justify a larger injection pressure, we have requested Mr. John Bedingfield to install a recording pressure gauge on the down stream side of the injection pump and record pressures from the time the pump starts up until the pump shuts off and a sizeable pressure decrease occurs. The pump does not run 24 hours a day since the water supply is disposed of in less than 24 hours. In order to encounter higher pressures, the pump was shut down until the water supply tank was full so that a larger than normal quantity of water could be pumped into the formation.

Chart 1 was installed on February 19 and records a 24 hour period, which ended February 20, 1978. We have indicated on this chart the point at which the injection pump was started and at this point, the pressure was approximately 140 psi. You will note the gradual and smooth increase in pressure up to a maximum of 285 psi. and the pump was shut down as marked on the chart, after pumping out the water supply tank. The pressure decreased uniformly and smoothly and reached a pressure of 195 psi. at the point the chart was removed. Chart #2 was installed February 20 and removed on February 21, 1978, in order to show an additional day with the pump shut down. You will note that the pressure continued to decrease uniformly and reached a minimum of 115 psi. which concluded the test.

Mr. Fred Watson, Attorney
February 21, 1978
Page 2.

We believe these two charts indicate without a doubt that fracture pressure was not reached since a change in the slope of the curve would have been noted at fracture pressure.

It is suggested that you contact the Oil Commission and request an Administrative Order which will permit the operator to inject water up to a pressure of 300 psi., so he will have some flexibility in **his** future operations.

Sincerely,

Ralph L. Gray
RALPH L. GRAY

RLG:lw

Encls.

RALPH L. GRAY
PETROLEUM ENGINEERING - PRODUCTION
CONSULTANT
P. O. BOX 198
ARTESIA, NEW MEXICO 88210

February 21, 1978

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Artesia, New Mexico 88210

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February 21, 1978
Page 2.

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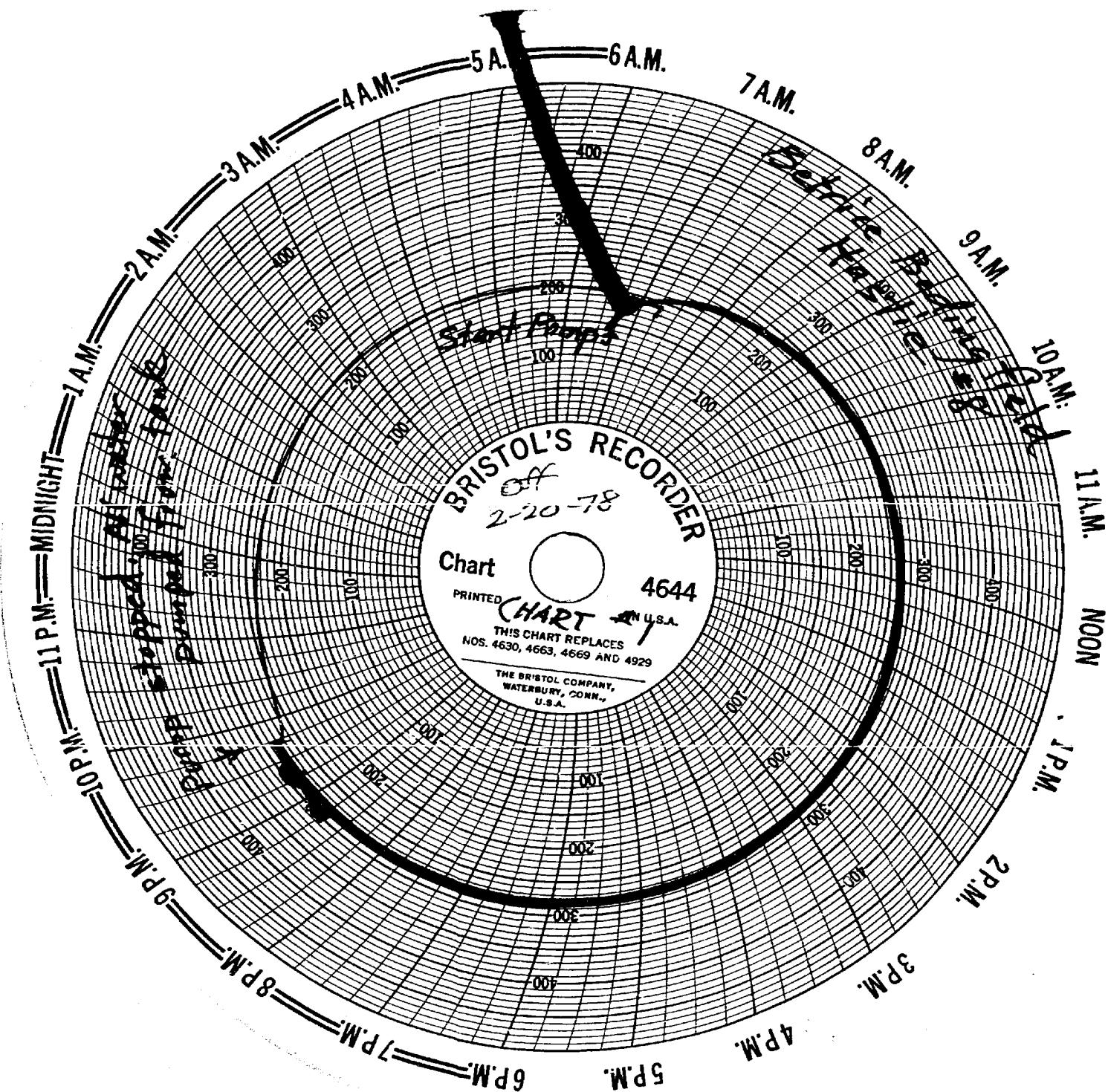
It is suggested that you contact the Oil Commission and request an Administrative Order which will permit the operator to inject water up to a pressure of 300 psi., so he will have some flexibility in his future operations.

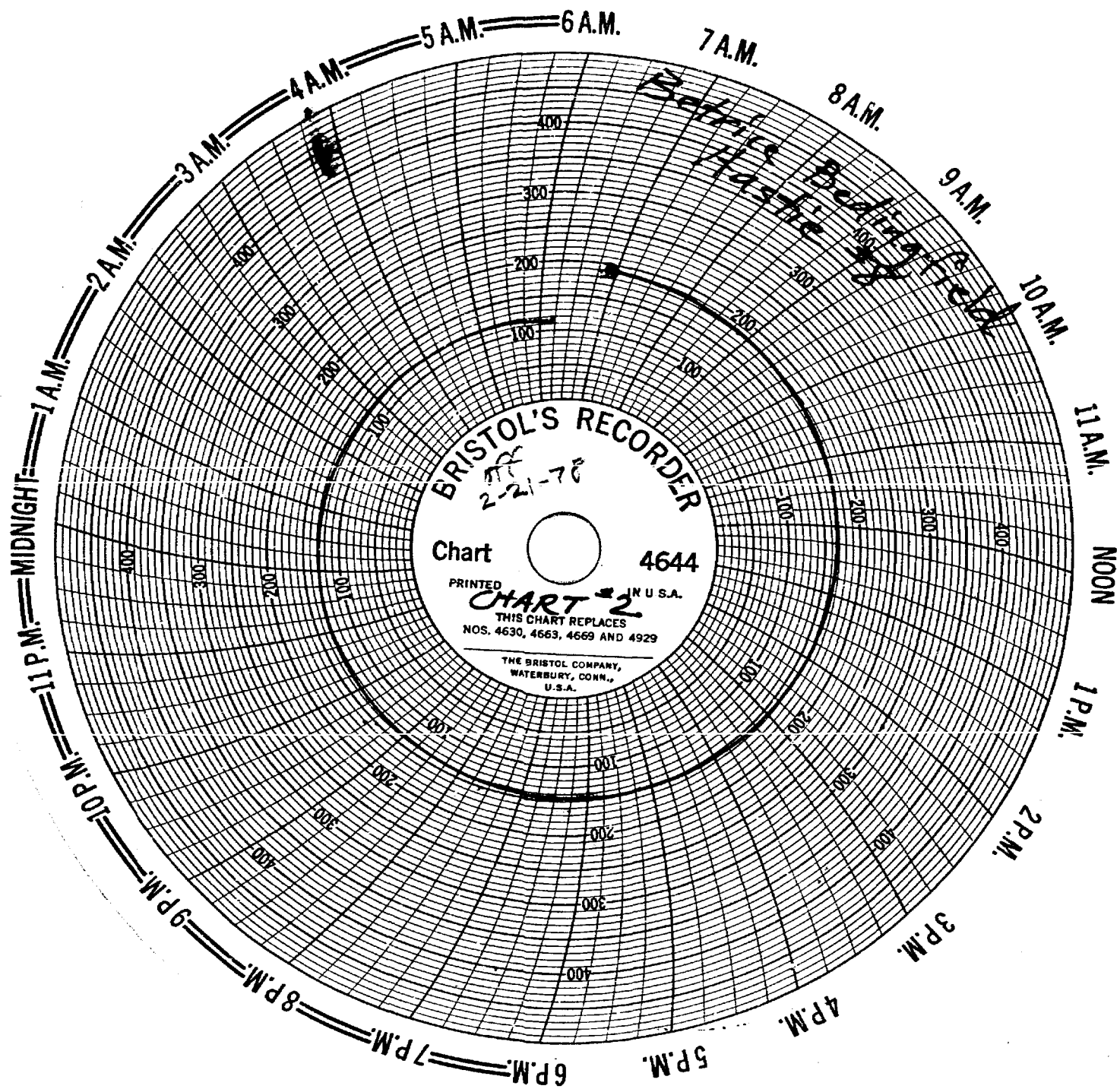
Sincerely,

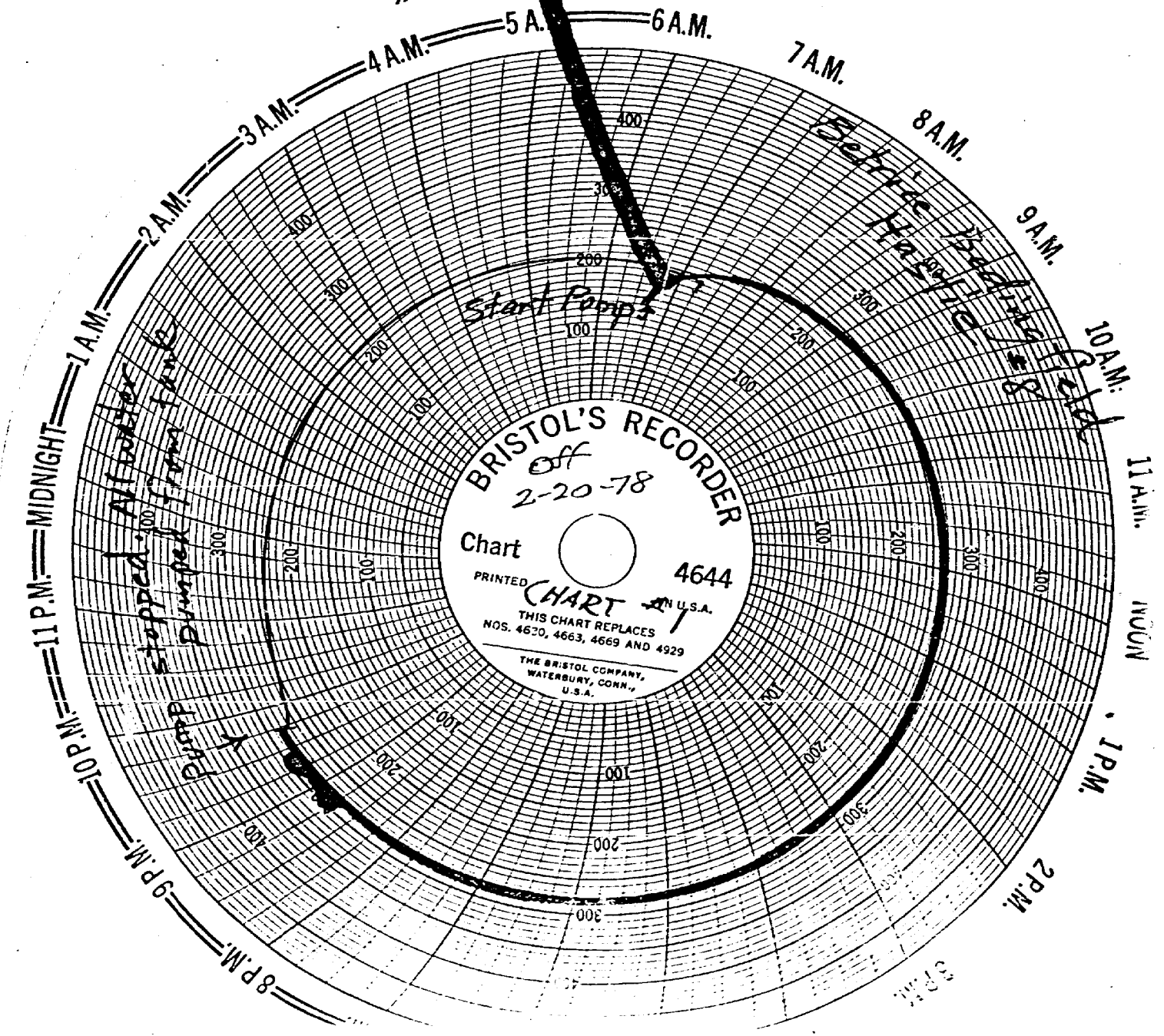
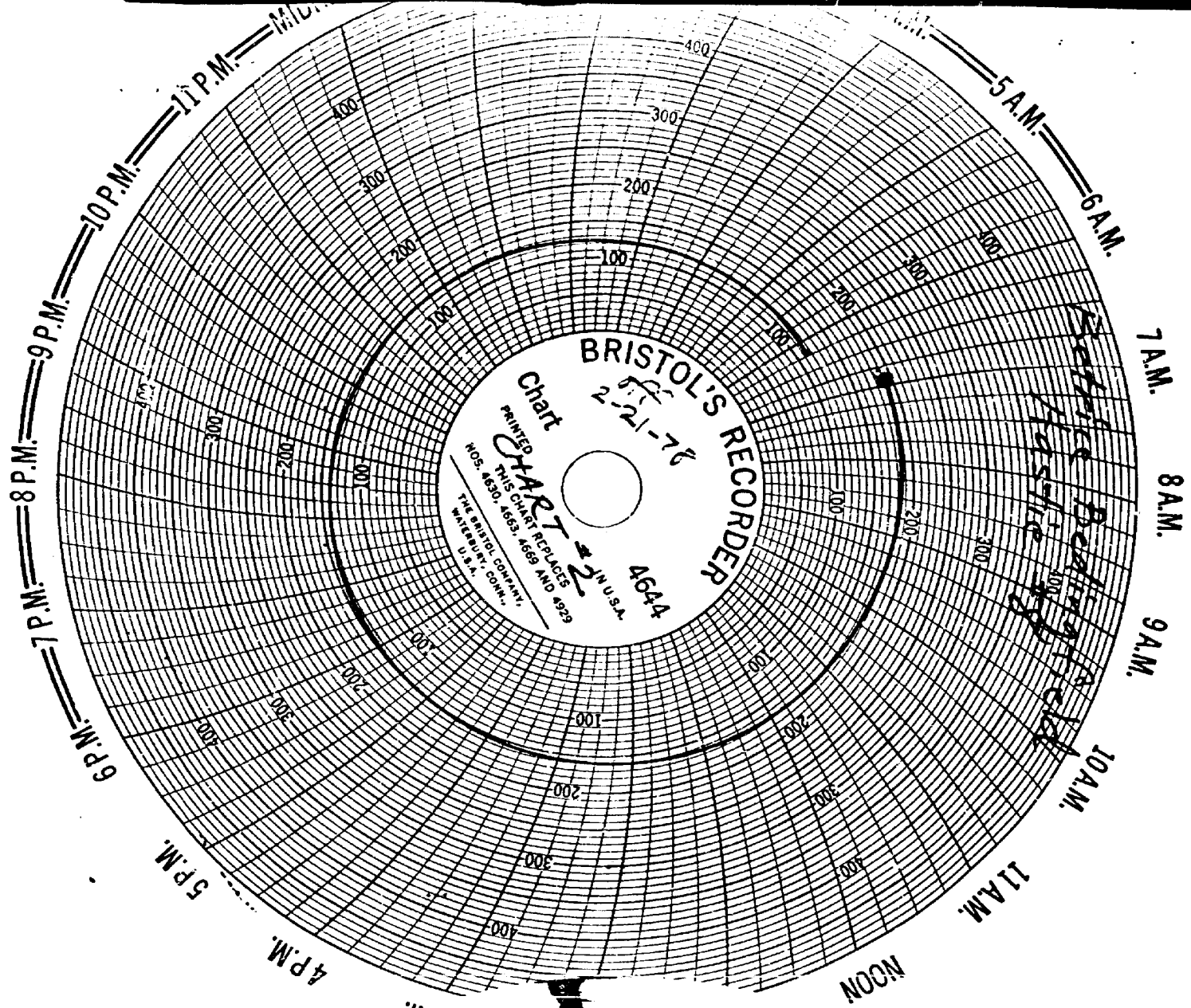
Ralph L. Gray
RALPH L. GRAY

RLG:lw

Encls.







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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
December 14, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Betrice Bedingfield) CASE
for salt water disposal, Eddy County,) 6104
New Mexico.)

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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

For the Applicant: Fred A. Watson, Esq.
WATSON & WATSON
Attorneys at Law
P.O. Drawer E
Artesia, New Mexico

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General Court Reporting Service
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501
Phone (505) 982 9212

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 Phone (505) 982-9212

1 MR. STAMETS: The hearing will please come to order.
 2 At this time we will please call Case Number 6104.

3 MS. TESCHENDORF: Case 6104, application of
 4 Betrice Bedingfield for salt water disposal, Eddy County,
 5 New Mexico.

6 MR. WATSON: The applicant will have one witness,
 7 Mr. Grey, the engineer. We have, also, with us Mr. John
 8 Bedingfield who is the manager but not an engineer. He manages
 9 the property for Betrice and we can have him either sworn --
 10 we don't plan on presenting him unless the Commission has a
 11 question.

12 MR. STAMETS: Might as well have both men stand and
 13 be sworn at this time just in case.

14 (THEREUPON, the witnesses were sworn.)

15 MR. WATSON: I am Fred A. Watson, Watson & Watson,
 16 Artesia, New Mexico, Attorneys, representing the applicant.

17
 18 RALPH L. GREY
 19 was called as a witness by the applicant, and having been
 20 first duly sworn, testified upon his oath as follows, to-wit:

21
 22 DIRECT EXAMINATION

23 BY MR. WATSON:

24 Q State your name and your residence, sir?

25 A Ralph L. Grey, Artesia, New Mexico.

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1 Q And what do you do, Mr. Grey?

2 A I am a consulting engineer.

3 Q Particularly, a Petroleum Engineer?

4 A Petroleum Engineer.

5 Q Have you testified before this Commission before and
 6 had your qualifications made a matter of record?

7 A Yes, sir.

8 MR. WATSON: Are the witness' qualifications known
 9 and acceptable to the Commission?

10 MR. STAMETS: They are.

11 Q (Mr. Watson continuing.) All right. Now, you have
 12 before you what has been marked as Exhibit Number One to this
 13 application. But first, let me ask you what the purpose of
 14 the application is?

15 A The purpose of the application is to receive permission
 16 to convert the Bedingfield Hastie Well No. 8 and the Sunray State
 17 Well No. 1 to water disposal wells and to use them for this
 18 purpose.

19 These wells are located in the Empire Yates Seven
 20 Rivers Pool.

21 Q Now, you have before you what has been marked as
 22 Exhibit Number One, Applicant's Exhibit Number One, and would
 23 you describe what that exhibit depicts?

24 A Exhibit Number One is a map of the general area and
 25 this shows the ownership and it shows the location of the

1 wells.

2 The Bedingfield Hastie lease occupies the north --
3 northwest quarter of Section 18, Township 17 South, Range 28
4 East, and this is indicated on the map by the yellow border.

5 The Sunray State lease is located in Section 30
6 and it is divided into two forty acre tracts. One, being
7 the southwest quarter of the northwest quarter and the other
8 being the southwest quarter of the southwest quarter of
9 Section 30.

10 These leases are also bordered with the yellow
11 coloring.

12 This map also shows the proposed water disposal wells
13 by the red arrows and the Hastie Well No. 8, of course, is
14 in the southeast quarter of the northwest quarter of Section
15 18.

16 The Sunray State No. 1 Well shows the arrows and
17 it is located in the southwest quarter of the northwest quarter
18 of Section 30.

19 Q There was a map filed with the application and you
20 were furnished a copy. Did you find a discrepancy between
21 the maps that you prepared for this exhibit and the map that
22 accompanied the application?

23 A Yes. The original map showed a dry hole located
24 approximately twenty-three hundred feet from the south and
25 east lines of Section 18.

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1 In reviewing the well data sheets which have been
2 designated Exhibit Two which were prepared by someone else
3 in Artesia I couldn't find a sheet on these dry holes. So,
4 I went to the Commission office and looked through their
5 records and according to the Commission records there is no
6 well at such a location.

7 So, I presume that the map had been plotted erroneously
8 and we have erased the location of that well from this second
9 map which we show at the hearing.

10 Q In other words, the well which you have deleted from
11 the map that is now going to be offered as Exhibit One was
12 in the northwest quarter of the southeast quarter of Section
13 18, apparently?

14 A Right.

15 Q And you found no record of any well there?

16 A No. We couldn't find any Commission records at all
17 on that well.

18 Q Then, these exhibits were prepared by you, this
19 Exhibit Number One, was prepared by you or at your direction?

20 A Yes.

21 Q You also have now before you what has been marked
22 Exhibit Two which is rather a voluminous tabulation and will
23 you describe for the Commission what that is?

24 A Well, Exhibit Number Two is a tabulation of certain
25 well data which the Commission has previously requested in

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1 one of their memoranda for hearings relating to exceptions
2 to the injection pressure gradients of point two pounds
3 per square inch -- foot of depth.

4 Q Is that a tabulation of well information according
5 to your view of it? A tabulation of well information of
6 all wells which penetrate the zone involved herein within one
7 half mile of each of these two wells?

8 A Yes, sir.

9 Q And does it also include schematics of plugged
10 wells within one half mile of each of these two wells?

11 A Yes.

12 Q And did you review what these tabulations and
13 schematics which have been marked collectively as Exhibit
14 Number Two?

15 A Yes. I have reviewed these. Although I didn't
16 prepare them I reviewed them and in looking over the schematic
17 drawings of the dry holes I couldn't see anything really
18 unusual about them.

19 Most of them are different in some respects. Each
20 well is plugged a little differently because of the particular
21 condition but most of them have cement plugs and in some the
22 casing was left in the hole.

23 As far as I could tell they were typical plugging
24 procedures that were probably approved by the state.

25 Q In other words, then, in accordance of the rules

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1 and regulations at the particular time that they were
2 plugged?

3 A That's true.

4 Q You saw nothing extra-ordinary about them?

5 A No.

6 Q Moving on, then, to Exhibit Number Three will you
7 describe for the Commission what that exhibit is?

8 A Exhibit Number Three is a schematic diagram of the
9 proposed water injection well, Hastie No. 8, and this well
10 was drilled to a total depth of five hundred and fifty-two
11 feet. Pay was encountered at five hundred twenty-eight to
12 five hundred and forty feet. Seven inch casing was set at
13 five hundred feet with twenty-five sacks. The estimated top
14 of the cement behind the casing is at one hundred and sixty-
15 five feet from the surface.

16 It is proposed to run fiberglass tubing and set it
17 at approximately four hundred and ninety feet with a packer
18 for an injection string.

19 Q Was that exhibit, Exhibit Number Three, prepared
20 by you?

21 A Yes, sir.

22 Q Now, would you please look at what has been marked
23 as Applicant's Exhibit Number Four?

24 A Exhibit Number Four is a diagrammatic sketch of the
25 proposed water injection well, the Bedingfield Sunray State

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1 No. 1, and it was drilled to a total depth of five hundred
2 and seventeen feet. Pay was encountered at four hundred
3 ninety-four to five hundred and seventeen feet. Seven inch
4 casing was set at four hundred eighty-seven feet with one
5 hundred and eighty sacks and the cement circulated to the
6 surface.

7 It is proposed to run an injection string of fiber-
8 glass tubing to approximately four hundred and seventy-seven
9 feet and set a packer at that point.

10 Q Mr. Grey, can you give the Examiner and the Commission
11 some general information on the conditions in the area where
12 these two proposed disposal wells will be located?

13 A Yes. All is produced from the Seven Rivers limestone
14 at the depth of approximately five hundred feet. In the case
15 of the applicant's two leases, the Hastie and the Sunray State
16 leases, the total daily oil production from these leases is
17 approximately five and a half barrels of oil per day and
18 fifty-six barrels of water a day.

19 It is anticipated that the Hastie No. 8 will handle the
20 most water and that this probably will be in the range, say,
21 from forty to eighty barrels of water per day. It is anticipated
22 that the injection pressures will probably be within the range
23 of two hundred to three hundred and fifty P.S.I.

24 It is obvious that this is a marginal lease and, of
25 course, under these conditions the operator could not support

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1 large expenses for water disposal.

2 Q Such as trucking to another location?

3 A Yeah, any type of expense that was significant.

4 Q Would not be economically justified?

5 A That's right.

6 Q I'll ask you to examine Exhibit Number Five and ask
7 you to describe for the Commission what that exhibit depicts
8 or consists of?

9 A Service companies who are in the fracturing business
10 work with various formulas and Exhibit Five shows a typical
11 formula used by one of these treating companies to determine
12 the fracturing pressure of a particular job.

13 This formula is $P_{sub F} = P_{sub I} + P_{sub H}$
14 $H = P_{sub SG} \times D$. And the meaning of these terms,
15 $P_{sub F}$, means fracturing pressure in P.S.I. $P_{sub SG}$ is
16 fracturing pressure gradient in terms of pounds per foot.
17 P equals F and P -- and $P_{sub I}$ is the instantaneous shut in
18 pressure and $P_{sub H}$ is the hydrostatic pressure in P.S.I

19 And by obtaining certain information from some of
20 these jobs such as instantaneous shut in pressure by using this
21 formula they can determine within fairly close limits what the
22 fracturing pressure limits will be on the other wells.

23 Q Did you personally obtain this, the information, that
24 is on this formula exhibit, Exhibit Number Five, from one of
25 the companies?

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Phone (505) 982-9212

1 A Yes.

2 Q And it is one that is in use?

3 A Yes.

4 Q Now, turning to Exhibit Number Six would you please
5 describe for the Commission what that exhibit consists of?

6 A Exhibit Number Six was furnished by the same treating
7 company and it is a summation of field data that was obtained
8 on six different jobs, wells that were treated in the Seven
9 Rivers formation. All of these wells were located in Section
10 28 approximately two miles to the east of the applicant's
11 lease.

12 Exhibit Six shows the instantaneous shut in pressures
13 and the depth of the well and the fracture gradient in pounds
14 per square inch of depth.

15 I might add that the average instantaneous shut in
16 pressure for these six examples was five hundred and seventy-
17 five P.S.I. The average fracture gradient was one point one
18 eight P.S.I. per foot of depth.

19 Q All right, sir. Referring to both Exhibits Five and
20 Six what do they show are indicated to you?

21 A Well, from the formula that was presented and from
22 other data that was secured on these other jobs we have
23 corrected the instantaneous shut in pressure and the expected
24 fracture pressure from the seven hundred and fifty foot depth
25 of these other wells to the five hundred foot depth of the

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1 applicant's and the results that the expected frack pressure
2 in the area of the applicant's leases would be approximately
3 five hundred and ninety P.S.I.

4 Also the instantaneous shut in pressure would be
5 expected to be three hundred and forty P.S.I.

6 Then, I might add that these formulas do not take
7 into consideration friction pressures because each operator
8 uses different size of pipe and tubing and so forth. So, the
9 friction pressure has to be added to what the formula shows
10 to get the actual pressure.

11 So, if we have an instantaneous shut in pressure of
12 three hundred and forty P.S.I. and we add a little friction
13 to it, why, we are looking at something like three hundred and
14 fifty pounds per square inch as a safe pressure.

15 I might comment a little bit on what this instantaneous
16 shut in pressure is. I am sure most of you know but during
17 the process of fracking the formation is being fracked at
18 a certain pressure and then at the end of the treatment the
19 pump is shut down and the flow of fluid is shut down and
20 immediately the pressure drops from whatever the frack pressure
21 was down to a lower figure and has a tendency to stabilize
22 at that lower pressure for a period of time.

23 So, that is what we call instantaneous shut in
24 pressure. The significance, I think, of the instantaneous
25 shut in pressure is that you are certainly not fracturing at

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1 this lower pressure. You are below frack pressure.

2 Q Have you made inquiry of the operator-manager of
3 the operator as to what permission ought to be sought under
4 this application as to pressure for injection?

5 A Well, my calculations show that a safe injection
6 pressure would be three hundred and fifty P.S.I. I asked
7 Mr. Bedingfield if he could live with it and he said that he
8 thought that they could.

9 Q Mr. Grey, can you describe from your own personal
10 knowledge and experience a case where water has been injected
11 at pressures substantially higher than the point two P.S.I.
12 per linear foot of depth that is now in the Commission memo
13 where the injection was at higher pressures than that and
14 there was not harmful water breakthrough?

15 A Yes, I think I can quote a rather typical condition
16 of water flooding. The Winsor Oil Company operates a small
17 water flood project in the Square Lake Pool which they
18 designated as the Giflor D-11 project and this is located
19 in Section 11, 17 South, 30 East, and the depth of the pay
20 is approximately three thousand feet.

21 Water injection was started in July of 1974, and
22 the present average injection pressure is fifteen hundred and
23 thirty-three P.S.I. But there is a maximum pressure of sixteen
24 hundred P.S.I. on this lease.

25 So, the surface injection pressure per foot of depth

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1 is based on this maximum pressure of sixteen hundred pounds
2 and is point five-three P.S.I. per foot of depth.

3 Of course, this is substantially higher between
4 -- between three and four times higher -- from what the point
5 two pounds per foot as designated by the Commission.

6 Now, the cumulative water injected to November 1st,
7 1977, in this project was four hundred and six thousand four
8 hundred and ninety-two barrels.

9 The primary oil production was two hundred and
10 thirty-six thousand five hundred and eighty barrels. So,
11 you can see that the amount of injection is approaching double
12 what the primary oil production was.

13 So, this is a significant amount of water injection
14 and Winsor drilled an offset well to the present water flood
15 and this new well was completed in Unit E of Section 11 on
16 October 12, 1977.

17 So, it is a very recently drilled -- new well. And
18 in the process of drilling there were no high pressure water
19 flows encountered at all. There is no evidence of any
20 unusual straight water flows.

21 So, I think this tends to show that this figure of
22 point five three pounds per square inch per foot of depth
23 is certainly a safe pressure and it doesn't say how much
24 higher you can safely go except there are some offsetting wells
25 to the Winsor flood that are injecting water at a much

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1 higher pressure.

2 So, I would consider this point five-three as a
3 rather conservative, low, safe pressure.

4 Q Have you made any inquiry or investigation as to
5 whether there is any potable water in the area of the two wells
6 involved in this application?

7 A Yes. There is no evidence of any water that is of
8 good enough character to use for either domestic or cattle
9 use.

10 There are some shallow water zones that have a water
11 with a very high gip content and some of the water have a high
12 salt content.

13 But I have no record or information and I have talked
14 to people that are familiar with the area and I have no
15 information at all that there is any potable water present
16 in the area.

17 Q In other words no source of potable water to be
18 damaged as far as you know?

19 A Right.

20 Q Well, just to summarize, Mr. Grey, is it your opinion
21 that the evidence which you have collected and examined and
22 testified to supports a conclusion that the strata in which
23 the fluid will be injected here has a fracture gradient which
24 would support the three hundred and fifty pounds per square
25 inch requested under this application?

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1 A I think that the exhibits presented and the testimony
2 presented indicates that the proposed injection pressure of
3 three hundred and fifty P.S.I. is a safe pressure and certainly
4 well under the frack pressure.

5 Q And you have personally prepared Applicant's Exhibits
6 One, Three, Four, Five and Six and have examined Applicant's
7 Exhibit Two which is the tabulation of well information?

8 A Yes, sir.

9 MR. WATSON: Might I address one question to Mr.
10 Bedingfield as to Exhibit Two? It is more or less a mechanical
11 exhibit and we hired someone in Artesia to prepare that from
12 the records of the Commission.

13 MR. STAMETS: Okay, but let's finish up with Mr.
14 Grey, first?

15 MR. WATSON: Well, I was preparing to move the
16 introduction of these.

17 MR. STAMETS: We can introduce the exhibits after-
18 wards.

19 MR. WATSON: All right, pass the witness.

20 MR. STAMETS: Any questions of the witness?

21

22

CROSS EXAMINATION

23 BY MR. STAMETS:

24 Q We are getting so much information with these cases
25 now that it is hard for the Examiner to sit here and digest it

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1 and ask questions that occasionally should be asked at a
2 hearing.

3 I have been going through Exhibit Number Two and
4 thus far what I have seem to have found is that all of
5 those wells, at least, in Section 18, which have been plugged
6 and might be suspect are at least one producing well away
7 from the injection well.

8 Does that seem to be the case?

9 In other words, there is an intervening well between
10 the injection well and the dry holes?

11 A Oh, yes, that's true.

12 Q So, the water will be injected into the producing
13 horizon, is that correct?

14 A Yes.

15 Q And it would be intercepted by the producing well
16 before it reached the plugged hole?

17 A Yes, that's true.

18 Q What are the producing wells on this lease now? Are
19 all of those which are identified on Exhibit Number One with a
20 circle all producing or are some of those shut in?

21 A It is my understanding that there are eight wells
22 active.

23 Q Perhaps Mr. Bedingfield could answer that and that
24 will be fine.

25 Now, you indicated that there will be fiberglass

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1 tubing in the Hastie No. 8 and the same configuration in the
2 Sunray No. 1?

3 A Yes.

4 Q And will the annulus be loaded in those wells?

5 A Mr. Bedingfield, was it your plan to put some type
6 of inert --

7 MR. BEDINGFIELD: Well, I haven't thought of it
8 but it -- if it would --

9 MR. STAMETS: You would be willing to put some type
10 of inert material in the casing that would protect against
11 corrosion?

12 MR. BEDINGFIELD: Yes.

13 MR. STAMETS: And leave it open or gauge it to
14 determine if it was leaking?

15 MR. BEDINGFIELD: Yes.

16 Q (Mr. Stamets continuing.) Will the water availability
17 and the equipment at the location be such that the applicant
18 could conduct a step rate test on these injection wells?

19 A I suppose that you would have to do that with some
20 type of a water meter in the line at some place and probably
21 that could be done.

22 I think that early in the injection life you are
23 filling up void spaces, principally, and I don't know that
24 you would get a good representative test until some later
25 time when you had essentially filled up the void space around

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1 the well bore there.

2 Q On Exhibit Number Four it shows seven inch casing
3 at four hundred and eighty-seven feet and one hundred and
4 eighty sacks and cement was circulated to the surface.

5 That figures out about roughly three feet for each
6 sack of cement. Would that be a good rule of thumb figure
7 to use?

8 A Well, I would guess from the amount of cement used
9 that -- that they had a substantial amount of cement -- do you
10 recall?

11 MR. BEDINGFIELD: Well, I couldn't answer that
12 because we didn't drill these wells.

13 A But I would judge from the amount of cement that was
14 used or the depth that they probably had an excess of cement
15 circulated out. But that's just judgment --

16 Q Did you make any estimates on the probable -- I see
17 here that you estimated that twenty-five sacks would fill up to
18 one hundred and sixty-five feet?

19 A Yes. That's using just the pit size.

20 Q Is that a calculated one hundred percent fill up?

21 A Yes.

22 Q What do you think might be a reasonable estimate of
23 fill up in that area?

24 A Well, there is no salt section open. I think this is
25 all Seven Rivers formation. You don't have any cave-ins or any

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1 large cavities.

2 So, I think it would be larger than pit size but
 3 nothing real large.

4 Q So, maybe seventy percent fill up or greater would
 5 not be unreasonable?

6 A I don't think that would be unreasonable.

7 MR. STAMETS: Any other questions of this witness?

8 He may be excused.

9 (THEREUPON, the witness was excused.)

10 MR. STAMETS: I believe you wanted to put Mr.

11 Bedingfield on for --

12 MR. WATSON: For the one exhibit. Could I just ask
 13 him from his seat?

14 MR. STAMETS: Yes. If you would ask him to identify
 15 himself.

16
 17 JOHN BEDINGFIELD

18 was called as a witness by the applicant, and having been
 19 first duly sworn, testified upon his oath as follows, to-wit:

20
 21 DIRECT EXAMINATION

22 BY MR. WATSON:

23 Q You are John Bedingfield, is that correct?

24 A I am John Bedingfield and I look after oil properties
 25 for my mother, Betrice Bedingfield.

1 Q Did you have me employ Mrs. Maye Morgan in Artesia
2 who does this on an independent basis to check all of the
3 New Mexico Oil Conservation Commission's records there and
4 prepare a tabulation of the wells and the schematics?

5 A Yes.

6 Q At your direction we had that done?

7 A Yes.

8 MR. WATSON: The applicant would move the admission
9 of Exhibits One through Six, inclusive.

10 MR. STAMETS: The exhibits will be admitted.
11 Any questions of Mr. Bedingfield?

12 MR. RAMEY: One question, Mr. Bedingfield, what did
13 it cost you to have this exhibit prepared -- just curious?

14 A Well, I really don't know. I haven't seen the bill
15 on it.

16 MR. WATSON: You are talking particularly about the
17 well exhibits, Mr. Ramey?

18 MR. RAMEY: Yes.

19 MR. WATSON: Four dollars an hour and it was quite
20 reasonable.

21 MR. RAMEY: You don't have a total figure?

22 MR. WATSON: I can't remember, John --

23 MR. BEDINGFIELD: Well, you turned it into my mother
24 and she --

25 MR. WATSON: I think it was four dollars times

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1 twenty-four hours.

2 MR. RAMEY: I was just curious what the federal
3 regulations are costing these days.

4 MR. WATSON: I am sorry to say that this one didn't
5 cost very much because the lady is very fast and very neat.

6 That is the applicant's case.

7 MR. STAMETS: Anything further in this case? The
8 case will be taken under advisement.

9 (THEREUPON, the witness was excused and
10 the case was concluded.)
11
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REPORTER'S CERTIFICATE

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

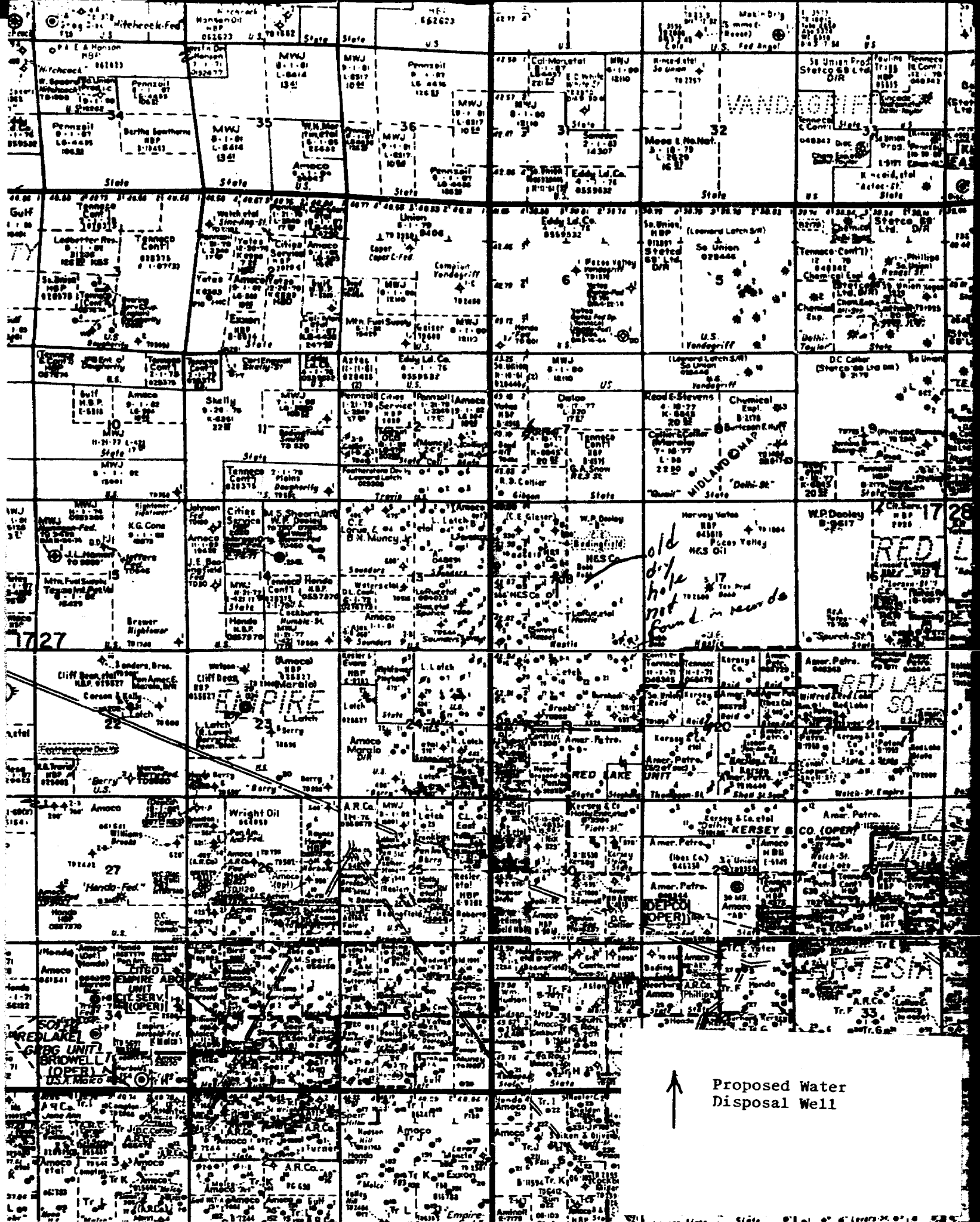
Sidney F. Morrish
Sidney F. Morrish, C.S.R.

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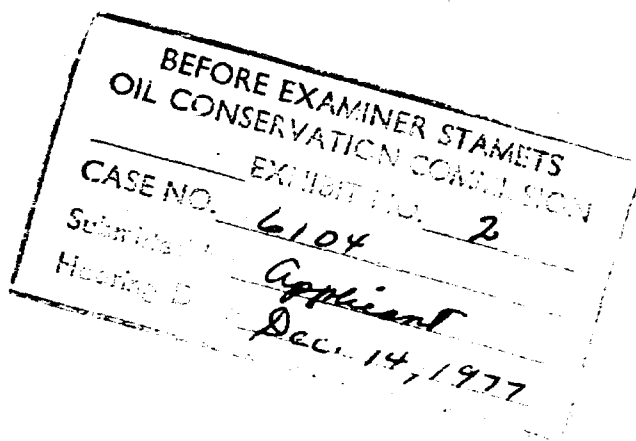
I do hereby certify that the foregoing is
a true and correct record of the hearing
the transcript of which is attached to this
hearing is on page 1104
Richard L. Blum
New Mexico Oil Conservation Commission

Other _____



Sec 18 Twn17S Rge28ETABULAR SUMMARY OF WELLS

Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval (To Top of Pay)	
<u>Batrice Bedinafield</u>						
Hastie #8 2310/N 2379/W #045818A	9-15-50	552		7" @ 500' w/25sx.	528	
Hastie #1 2310/N 330/W #045818A	2-22-50	509		7" @ 499' w/25sx.	505	
Hastie #2 2310/N 1735/W #045818A	3-23-50	534'		7" @ 495' w/25sx.	512'	Well Temp. Abnd. 1-6-65
Hastie #3 2310/N 1075/W #045818A	4-15-50	515'		7" @ 460' w/25sx.	482-495'	
Hastie #5 1650/N 1743/W #045818A	6-22-50	521'		7" @ 475' w/25sx.	518'	
Hastie #6 990/N 1650/W #045818A	7-20-50	530'		7" @ 484' w/25sx.	487'	
Hastie #9 1650/N 990/W #045818A	11-4-50	516'		7" @ 435' w/25sx.	489'	
Hastie #10 1650/N 330/W #045818A	12-16-50	510'		7" @ 473' w/25sx.	480'	



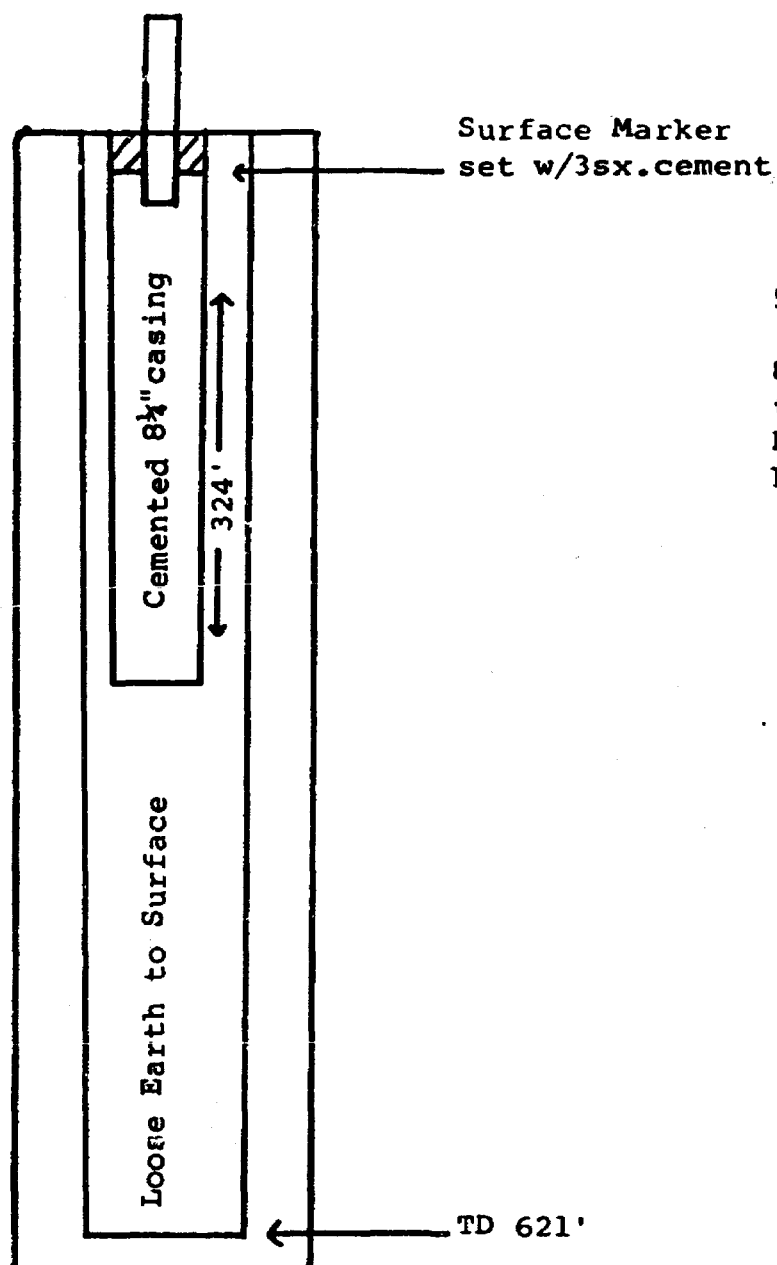
Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
<u>Sec 18 Twn17S Rge28 cont.:</u>						
<u>George E. Bobb</u>						
Hastie #3 375/N 460/W #026431A	12-23-25	621'	8 1/4" @ 324 w/ ? 6 5/8" @ 440 w/ ?	5 3/16" @ 440' w/cem. cap		P&A 5-26-32 (schematic attached) 1-5
<u>Wm. P. Dooley</u>						
Hastie #1 1650/S 2310/E #045818B	11-17-49	547'		7" @ 538' w/25sx.	541'	
Hastie #2 1650/S 990/W #045818B	12-7-49	590'		7" @ 541' w/20sx.	556'	
Hastie #3 330/S 990/E #045818B	12-29-49	618'		7" @ 593 w/25sx.	597'	
<u>C.E. Geisler</u>						
Hastie #11 #045818A 990/N 2310/W	1-29-56	560'		5 1/4" @ 504' none		P&A 10-18-62 (schematic attached) 2-5
<u>H & S Oil Co.</u>						
Hastie #13 990/S 1737/W #045818A	2-1-46	580'		7" @ 540' w/25sx. 11'	568'	
Hastie #15 330/S 990/W #045818A	6-30-53	587'		7" @ 530' w/25sx.	564'-571'	Well SI since 10-17-63
<u>A.H. Hoyer</u>						
Hastie #10 2310/S 330/W #045818A	6-22-51	555'		7" @ 500' w/15sx. circ.	420'	P&A 6-22-51 (schematic attached) 3-5

George E. Bobb

Hastie #3

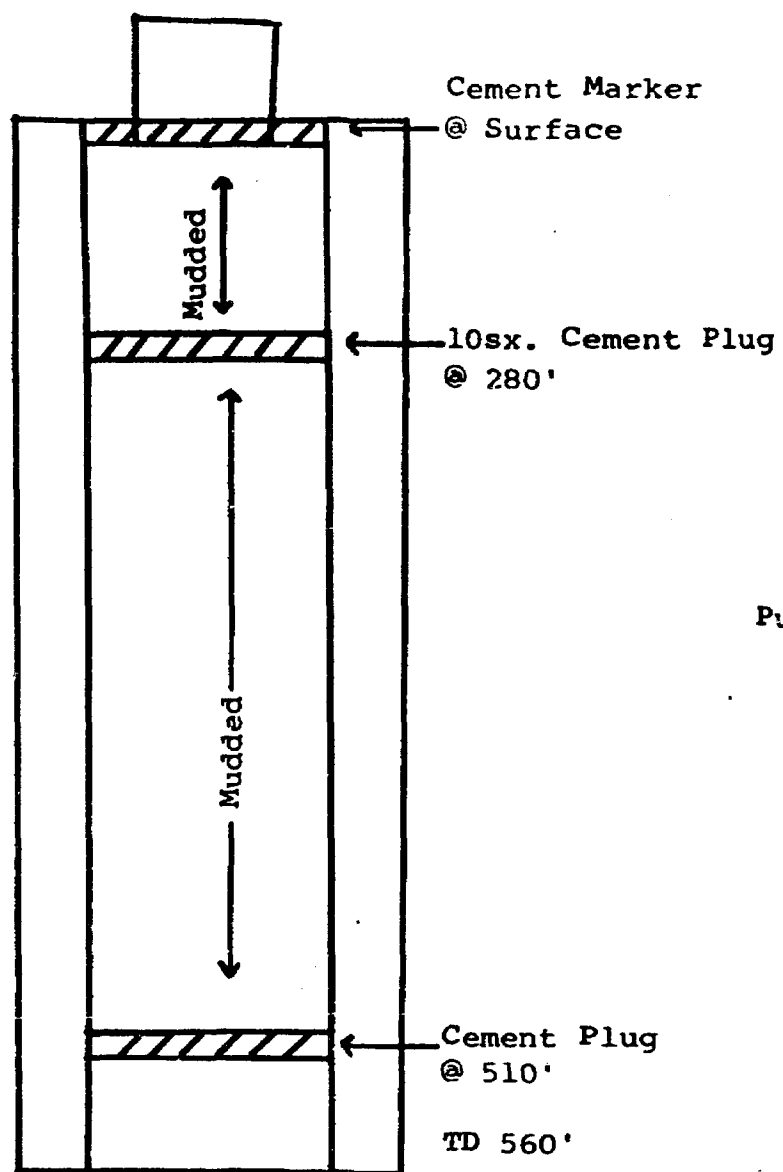
375/N 460/W

P&A 5-26-32



5 3/16" & 6 5/8" casing-pulled

8 1/4" casing was cemented from shoe
to surface, could not pull.
Hole was completed, filled from
bottom to surface with loose earth.



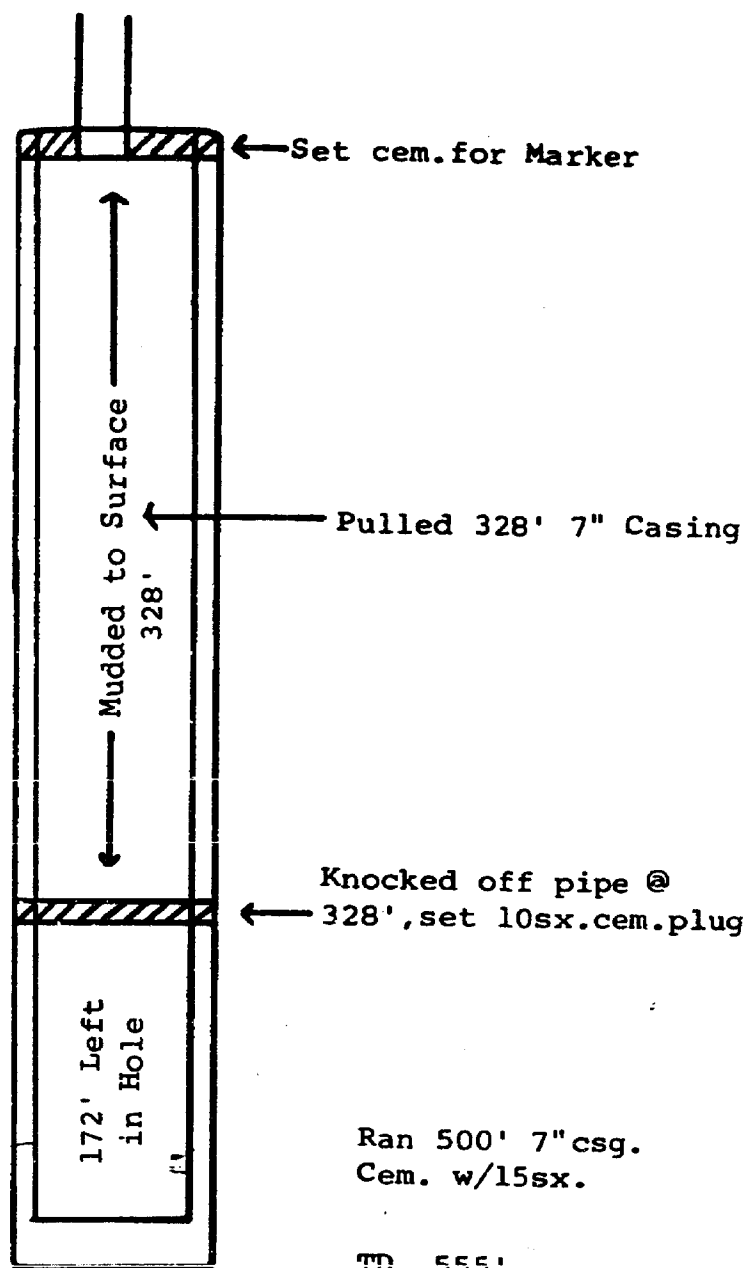
C.E. Geiser
Hastie #11
990/N 2310/W
P&A 10-18-62

Pulled 504' 5 1/2" Casing

Cement Plug
@ 510'

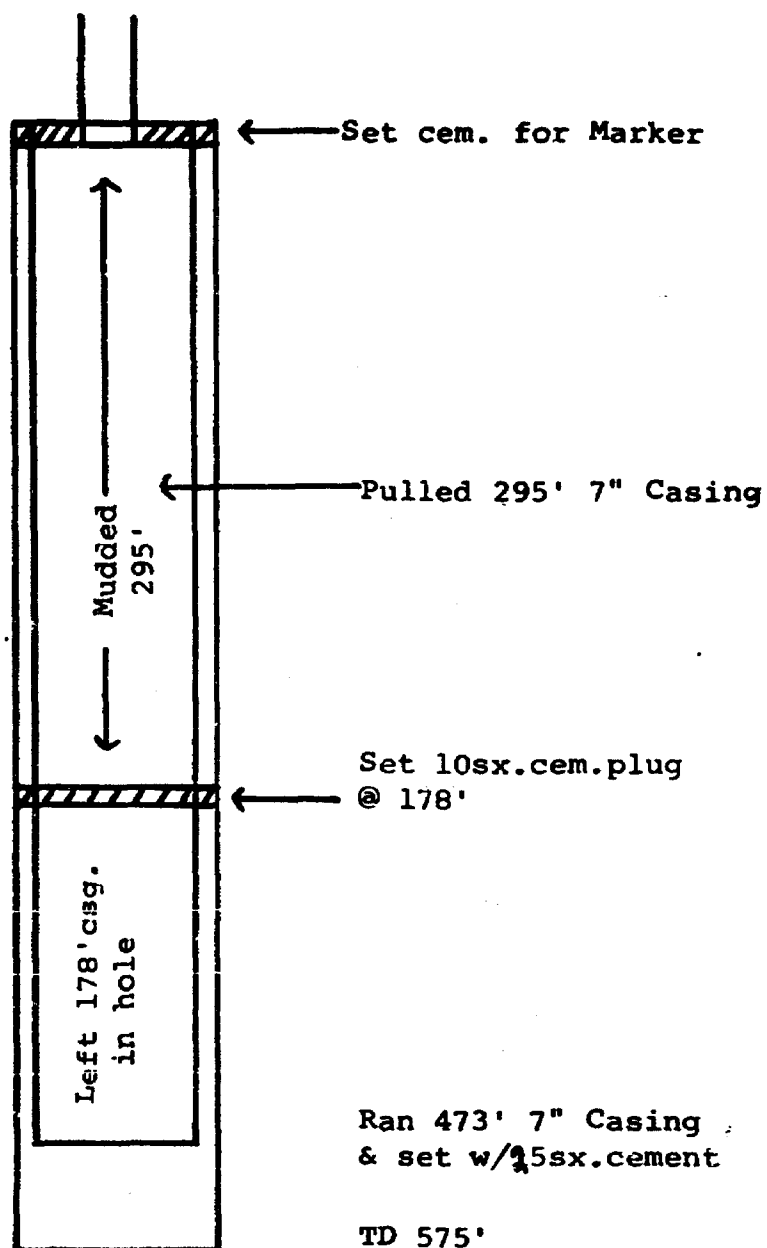
TD 560'

A.H. Hover
Hastie #10
2310/S 330W
P&A 6-22-51

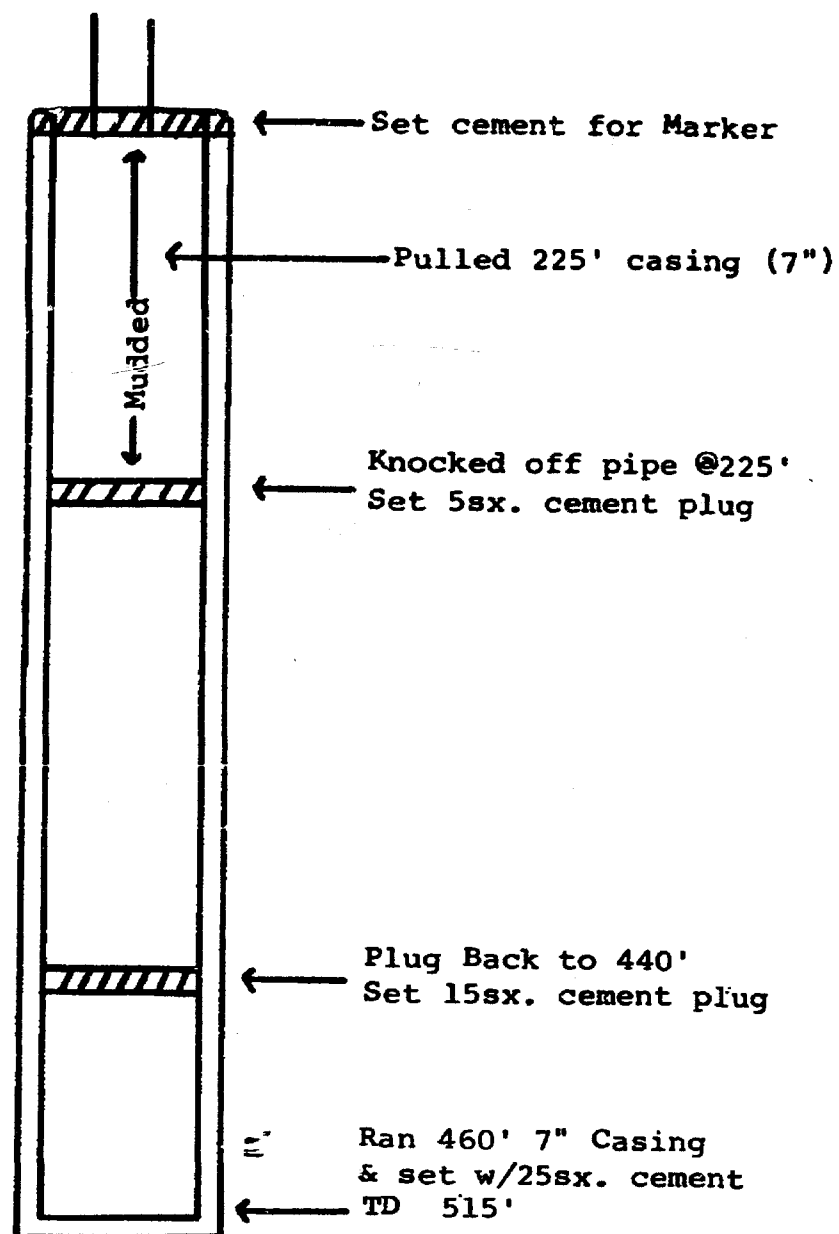


Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
<u>Sec 18 Twp17S Rge28E cont.1</u>						
<u>A.H. Hoyer</u>						
Hastie #11 2310/S 1650W #045818A	11-19-50	575'		7"@473' w/25sx.		P&A 6-8-51 (schematic attached) #4-S
<u>Nunn & Gelsner</u>						
Hastie #4 990/N 330/W #045818A	5-15-50	515'		7"@460' w/25sx.	481'	P&A 4-16-51 (schematic attached) #5-S
Hastie #7 990/N 990/W #045818A	8-21-50	524'		7"@475' w/25sx.	dry hole	P&A 8-19-50 No plugging reports filed.
<u>C.E. LaRue & B.N. Muncy</u>						
Hastie #1 1980/S 1980/W #045818A	(new well) Spd. 2-8-77		8 5/8"@312 circ.125sx.	4 1/2"@1825' circ.300sx.		
<u>Paul Slayton</u>						
Hastie #1 1650/S 2310/W #045818A	6-2-51	564'		?	552'-564'	SI for WIM in 1965 (no further information is available)
Hastie #4 1120/S 330/W #045818A	10-26-40	539'		5 3/16"@483' w/25sx.	516'-520' 527'-532'	Temp.Abnd.
Hastie #5 1520/S 200/W #045818A	2-18-41	532'		5 3/16"@462' w/20sx.	510'-522'	Temp.Abnd.
Hastie #6 990/S 960/W #045818A	1-15-45	560'		7"@520' w/20sx.	553'-560'	
Hastie #7 1650/S 990/W #045818A	6-16-45	544'		7"@528' w/20sx.	533'	

A.H. Hover
Hastie #11
2310/S 1650/W
P&A 6-8-51

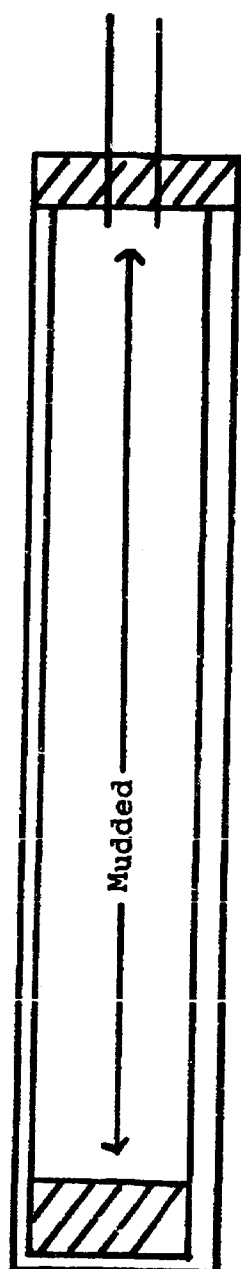


Nunn & Geiser
Hastie #4
990/N 330/W
P&A 4-16-51



Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
<u>Sec 18 Twn17S Rge28E cont.1</u>						
<u>Paul Slayton</u>						
Hastie #8 340/S 340/W #045818A	12-8-45	558'		7" @ 524' w/25sx.	404'-408'	
Hastie #9 2310/S 1000/W #045818A	10-14-50	540'		7" @ 488" w/25sx.	?	
Hastie #14 1650/S 1737/W #045818A	3-7-46	561'		5" @ 527' w/25sx.	545'-560'	
<u>Sec 7 Twn17S Rge28E</u>						
<u>B.N. Muncy Jr.</u>						
Gibson #1 330/S 330/W #064087	1-6-50	498'		7" @ 404' w/25sx.	468'	PSA 3-16-71 (schematic attached) #6-S
<u>Sec 12 Twn17S Twn27E</u>						
<u>Leonard Latch</u>						
Travis #5 990/S 1650/E #025603	1-26-51	446'		7" @ 420' w/25sx.	436'	Temp. Abnd.
Travis #4 990/S 2310/E #025603	12-10-50	443'		7" @ 416' w/25sx.	440'	Temp. Abnd.
Travis #3 330/S 990/E #025603	11-16-50	454'		7" @ 435' w/25sx.	450'	WTW (SI)

B.N. Muncy Jr.
Gibson #1
330/S 330/W
P&A 3-16-71



Set 10' cement plug

No casing pulled

Ran 404' of 7" Casing
Set w/25sx. cement

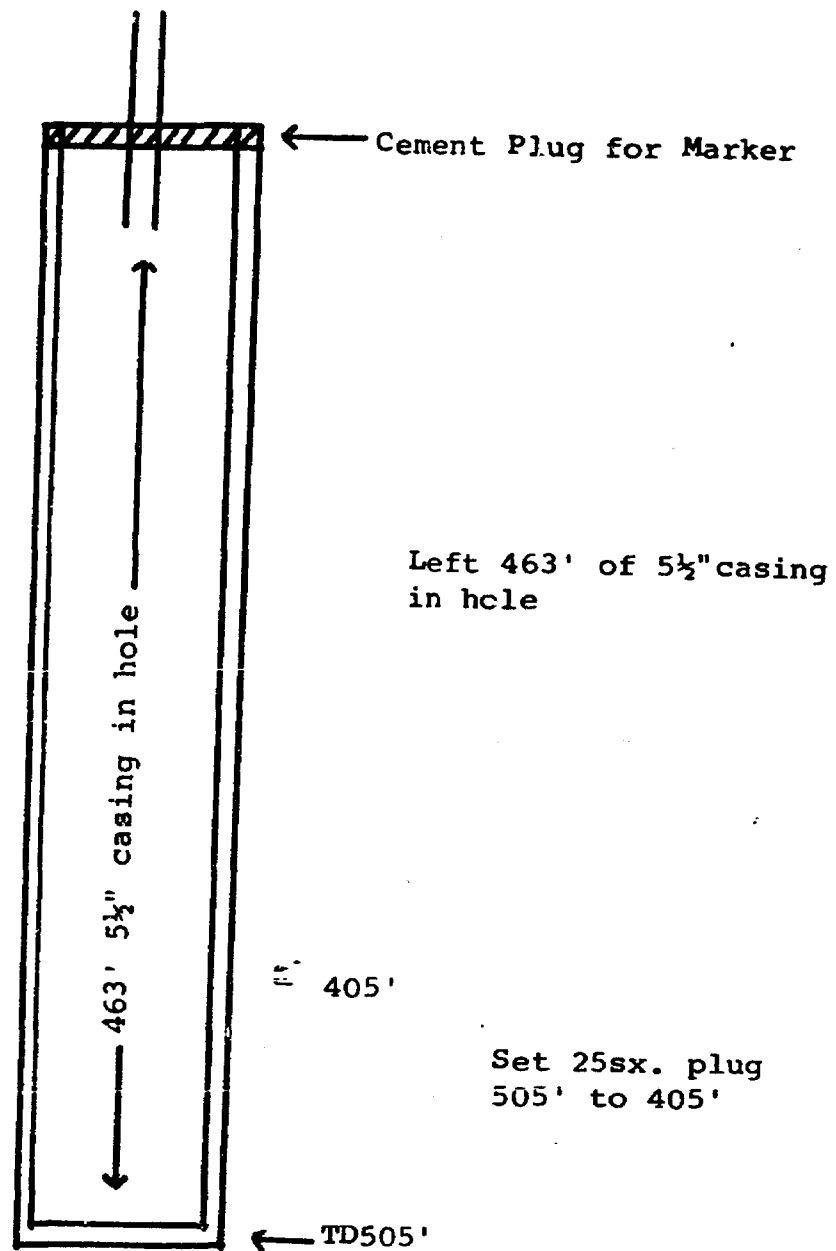
TD

Set 100sx. cement plug @ TD
TD 498'

Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
<u>Sec 12 Twn17S Rge 27E</u>						
<u>Leonard Latch</u>						
Travis #2 330/S 1650/E #025603	10-18-50	453'		7"@432' w/25sx.	449'-452'	WIW
Travis #1 330/S 2310/E #025603	9-29-50	440'		7"@412' w/25sx.	436-439'	WIW
Travis #6 990/S 990/E #025603	3-6-51	469'		7"@430' w/25sx.	444'-469'	Temp. Abnd.
<u>Sec 13 Twn17S Rge 27E</u>						
<u>R.D. Collier</u>						
Saunders #5 330/N 1650/W #02931	6-19-50	457'		7"@392' w/25sx.		Well abandoned 10-24-50 (no plugging report filed)
<u>P.B. English</u>						
Saunders #3 1650/N 330/W # ?	9-14-39	553'		5 3/16"@465' w/25sx.		There is no further information on this well in the files.
<u>C.E. LaRue & B.N. Muncy</u>						
Saunders #9 660/S 660/E #064023	9-25-76	2553'	8 5/8"@300' 150sx.circ.	4 1/2"@1900' 125sx.	1638'-1784'	
<u>Leonard Latch</u>						
Saunders A #10 2310/N 1650/E #048491A	1955	505'		5 1/2"@463' w/25sx.		PeA 11-8-65 (schematic attached) #7-S
Saunders A #9 2310/N 330/E #048491A	1956	561'		5 1/2"@464' w/75sx.		Temp. Abnd.

Leonard Latch
Saunders A #10
2310/N 1650/E

P&A 11-8-65



Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
<u>Sec 13 Twn17S Rge27E cont.:</u>						
<u>Leonard Latch</u>						
Saunders A #2 330/N 190/E #048491	9-2-49	479'		7" @ 418' w/20sx.		WIM Temp. Abnd.
Saunders A #3 330/S 2310/W #048491	1-17-50	454'		7" @ 402' w/50sx.		Temp Abnd.
Saunders A #4 990/N 1650/E #048491	4-16-50	465'		5" @ 440/ 50sx.	447'	
Saunders A #5 1650/N 330/E #048491	6-22-50	488'		5" @ 457' w/20sx.	477'-488'	Temp. Abnd.
Saunders A #6 1650/N 1065/E #048491	9-13-50	488'		5½" @ 441' 30sx.	478'-482'	
Saunders A #7 330/N 1650/E #048491	12-20-50	463'		7" @ 419' w/30sx.	435'-438' 450'-453'	Temp. Abnd.
Saunders A #8 1650/N 2310/E #048491	10-12-55	474'		5½" @ 446' w/75sx.	446'	Temp. Abnd.
Saunders B #1 990/N 990/E #048491	8-24-50	490'		5½" @ 455' w/20sx.	460'-464' 470'-473' 487'-490'	
Saunders B #2 990/N 330/E #048491	8-24-50	490'		5½" @ 455' w/20sx.	460'-464' 470'-473' 487'-490'	Temp. Abnd.

Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
Sec 13 Twn17S Rge27E cont.:						
N.M. Steel Products						
Saunders #1 1650/N 990/E #048491	12-6-49	492'		5 1/2" @ 441' w/50sx.		P&A (no date given) (schematic attached) #8-S
Simms & Reese Oil Co.						
Saunders #8 1650/S 990/E #064023	1953	550'?		5" (30 lengths) w/25sx.	?	P&A (no date given) P&A report filed: Cement w/5s, covered Seven Rivers and additional 10' of hole, mudded the rest.
Paul Slayton						
Saunders #2 990/S 330/E #064023	8-9-39	550'		5 1/2" @ 485' w/10sx. 4" @ 505' w/5sx.	525' - 550'	
Saunders #3 1650/S 330/E #064023	9-27-39	553'		5 1/2" @ 465' w/25sx.	528'	

N.M. Steel Products
Saunders #1
1650/N 990/E

P&A (no date given)

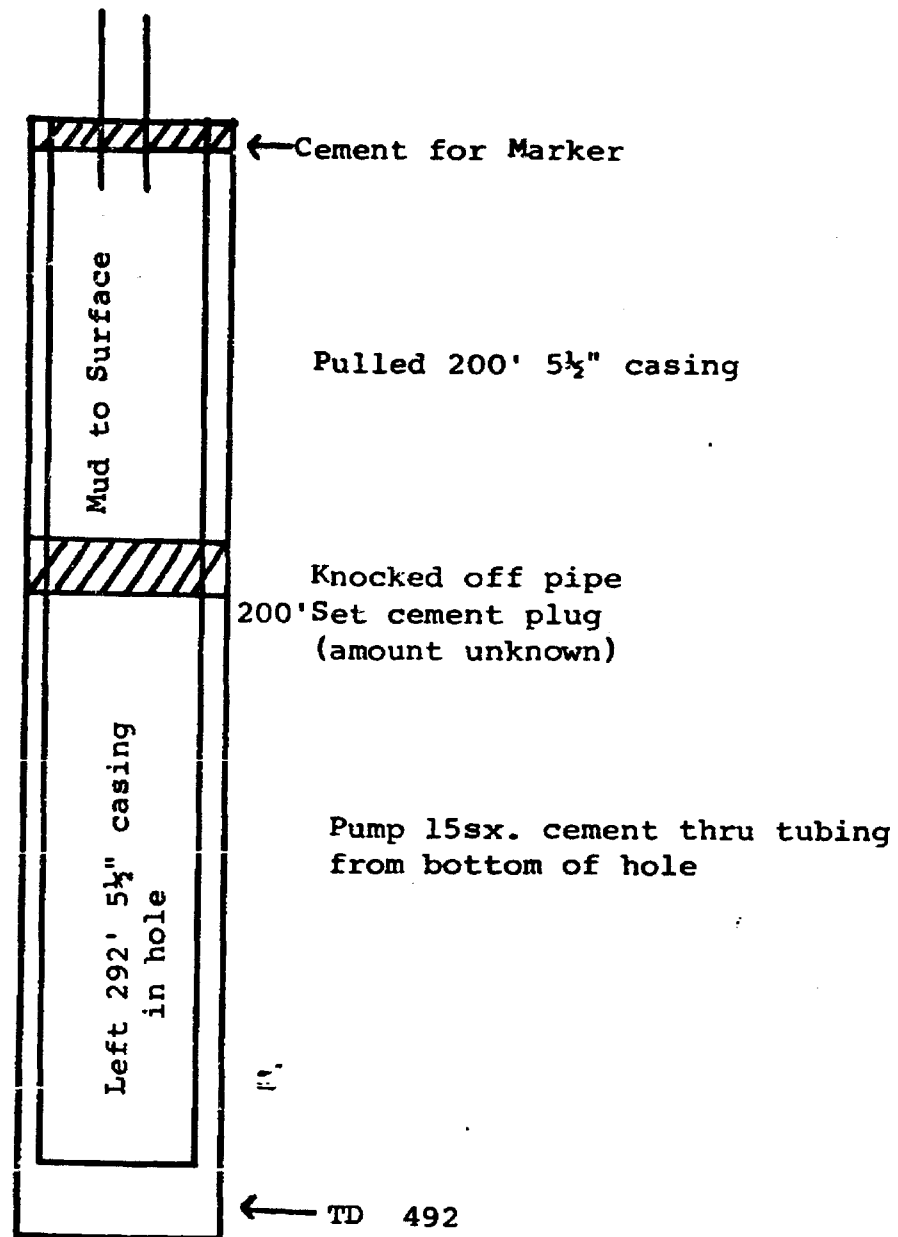
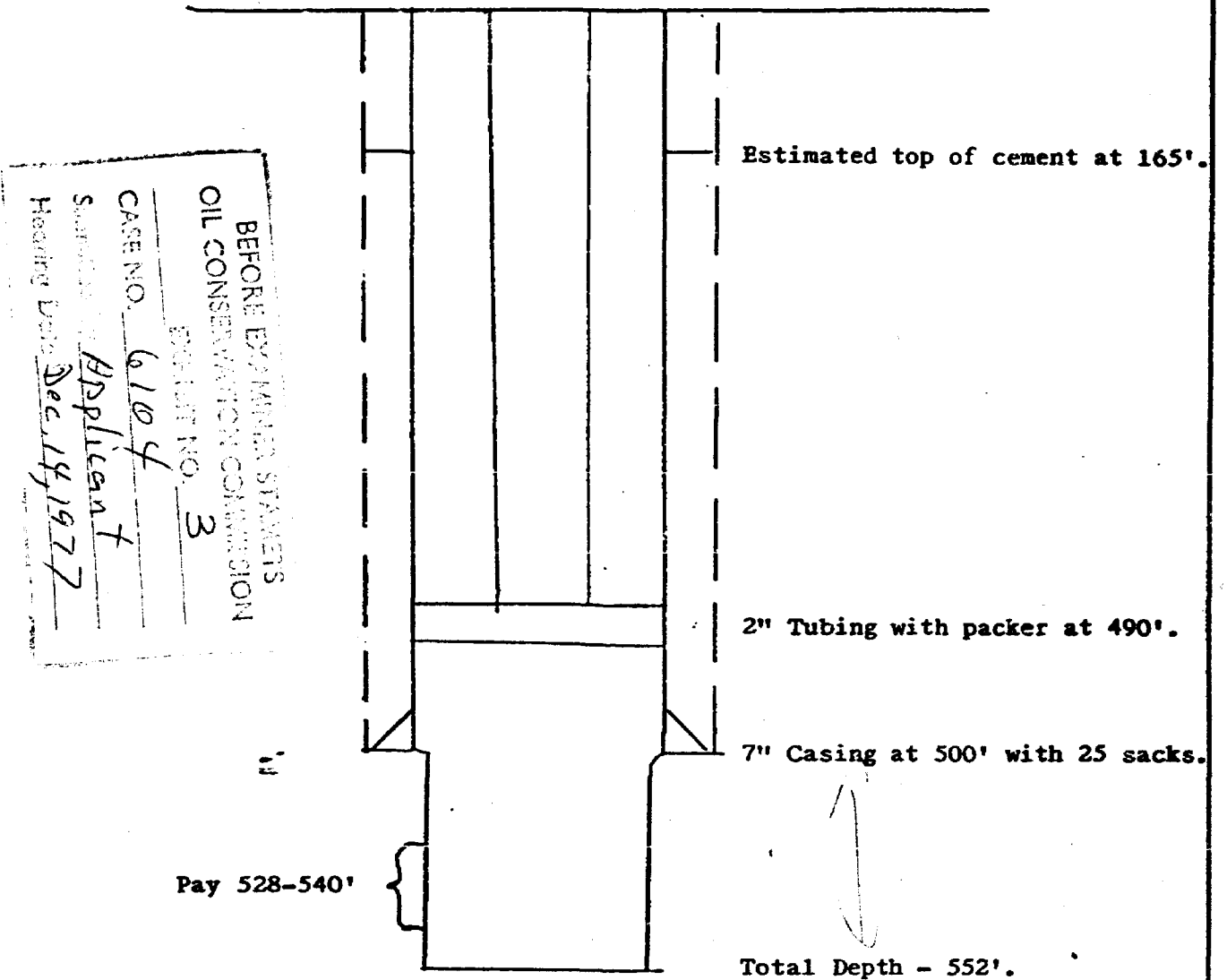


DIAGRAM OF PROPOSED WATER INJECTION WELL

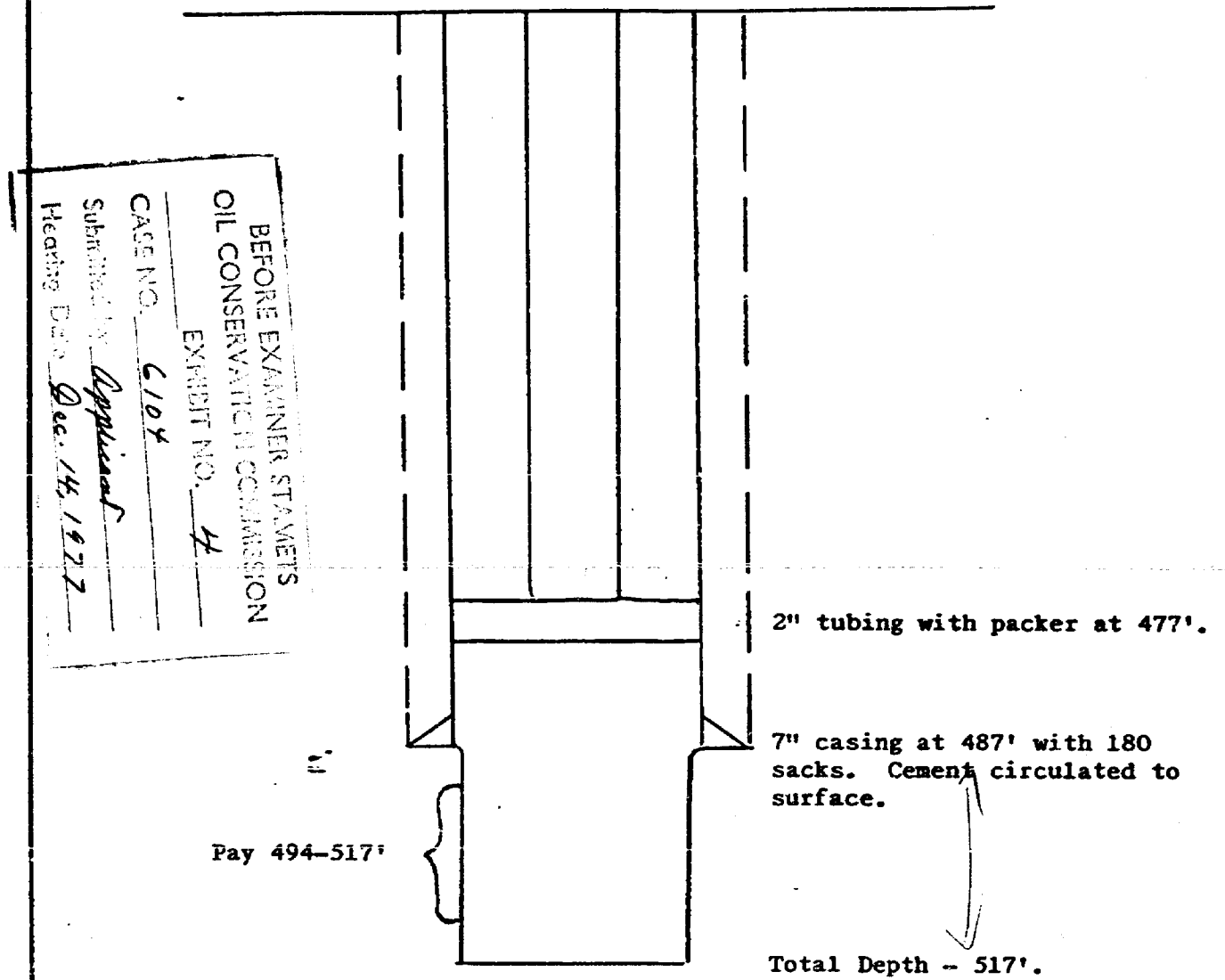
BETRICE BEDINGFIELD - HASTIE #8



RALPH L. GRAY
PETROLEUM ENGINEERING

DIAGRAM OF PROPOSED WATER INJECTION WELL

BETRICE BEDINGFIELD - SUNRAY STATE #1



RALPH L. GRAY
PETROLEUM ENGINEERING

F O R M U L A S

$$1) \quad P_F = P_i + P_h = P_{FG}D$$

$$\therefore P_{FG} = \frac{P_i + P_h}{D}$$

P_F = Fracturing pressure, PSI

P_{FG} = Fracturing pressure gradient, PSI/foot

D = Depth, feet (use middle perforations)

P_i = Pressure, instantaneous, PSI (ISEP)

P_h = Pressure, hydrostatic, PSI

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
EXHIBIT NO. 5
CASE NO. 6104
Submitted by Applicant
Hearing Date Dec. 14, 1977

D A T AExample 1

ISIP = 500
Depth = 750
Frac Gr. = 1.1

Example 2

ISIP = 800
Depth = 780
Frac Gr. = 1.46

Example 3

ISIP = 700
Depth = 768
Frac Gr. = 1.34

Example 4

ISIP = 600
Depth = 750
Frac Gr. = 1.234

Example 5

ISIP = 450
Depth = 860
Frac Gr. = 0.96

Example 6

ISIP = 400
Depth = 715
Frac Gr. = 0.99

All wells are in Sec 28 T17s. R28 E
Formation: Seven Rivers and/or Artesia Seven Rivers

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

EXHIBIT NO. 6

CASE NO. 6104

Submitted by Applicant

Hearing Date Dec. 14, 1977

Dockets Nos. 1-78 and 2-78 are tentatively set for hearing on January 4 and 18, 1978. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - DECEMBER 14, 1977

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

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

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

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

CASE 6101: Application of Gulf Oil Corporation for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Nopal Draw Unit Area comprising 1920 acres, more or less, of Federal and Fee lands in Township 21 South, Range 25 East, Eddy County, New Mexico.

CASE 6102: Application of Transocean Oil, Inc., for a unit agreement, Catron County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Quemado Unit Area comprising 33,844 acres, more or less, of Federal, State, and Fee lands in Township 2 North, Ranges 15, 16, and 17 West, Catron County, New Mexico.

CASE 6103: Application of Getty Oil Company for expansion of its Fren Seven-Rivers Waterflood Project and 28 dual completions, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Fren Seven-Rivers Waterflood Project by injection of water into the Seven-Rivers formation thru 32 wells in its Getty Unit Area, Township 17 South, Range 31 East, Eddy County, New Mexico, 28 of which wells would be dual completions in the Fren Seven-Rivers Pool and the Grayburg-Jackson Pool.

CASE 6104: Application of Betrice Bedingfield for salt water disposal, Eddy County, New Mexico, Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Seven Rivers formation thru the open-hole interval from 487 feet to 517 feet in her Sunray State Well No. 1 and from 500 feet to 552 feet in her Hastie Well No. 8, located in Unit E of Section 30 and Unit F of Section 18, respectively, both in Township 17 South, Range 28 East, Empire Yates-Seven Rivers Pool, Eddy County, New Mexico.

CASE 6105: Application of Mewbourne Oil Company for creation of an associated gas pool and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the reclassification of the Querecho Plains-Queen Oil Pool as an associated pool and approval of a 120-acre non-standard gas proration unit comprising the E/2 SE/4 of Section 22 and the NW/4 SW/4 of Section 23, both in Township 18 South, Range 32 East, Lea County, New Mexico, to be dedicated to its Federal "F" Well No. 1 located in Unit L of said Section 23.

CASE 6106: Application of Mesa Petroleum Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp formation underlying the E/2 of Section 31, Township 15 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6108: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Bradshaw IY Com Well No. 1 to be located 660 feet from the South and West lines of Section 35, Township 17 South, Range 26 East, Kennedy Farms Field, Eddy County, New Mexico, the S/2 of said Section 35 to be dedicated to the well.

CASE 6109: Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Burton Flat-Morrow and North Burton Flat-Wolfcamp production in the wellbore of its Stonewall EP State Well No. 1 located in Unit F of Section 30, Township 20 South, Range 28 East, Eddy County, New Mexico.

CASE 6110: Application of Yates Petroleum Corporation for downhole commingling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Kennedy Farms-Morrow and Kennedy Farms-Atoka production in the wellbore of its Caffall FD Com Well No. 1 located in Unit O of Section 15, Township 17 South, Range 26 East, Eddy County, New Mexico.



DIRECTOR
JOE D. RAMEY

OIL CONSERVATION COMMISSION

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

LAND COMMISSIONER
PHIL R. LUCERO



STATE GEOLOGIST
EMERY C. ARNOLD

Memo No. 6-77

NOTICE! NOTICE! NOTICE!

TO ALL OPERATORS FROM JOE D. RAMEY, SECRETARY-DIRECTOR

THIS IS A FINAL REMINDER THAT ALL EXISTING ONE-WELL AND BLANKET PLUGGING BONDS MUST BE REPLACED BY NEW BONDS ON THE REVISED FORMS PRIOR TO JANUARY 1, 1978.

This requirement is in accordance with Commission Order No. R-5432 entered May 24, 1977.

The most recent reminder of this requirement was sent to all operators by OCC Memorandum No. 5-77 dated October 17, 1977, and explained that if replacement bonds are not on file and approved by the deadline date, operators will be required to shut in all producing, drilling, and injection wells.

Response to the requirement for replacement bonds has been less than adequate. At this writing, there still remain more than one thousand bonds which have not yet been replaced, and there is less than one month before the deadline.

This is the final reminder that will be sent to operators to replace existing bonds by January 1, 1978, or face the shutting in of wells.

JDR/DSN/jr

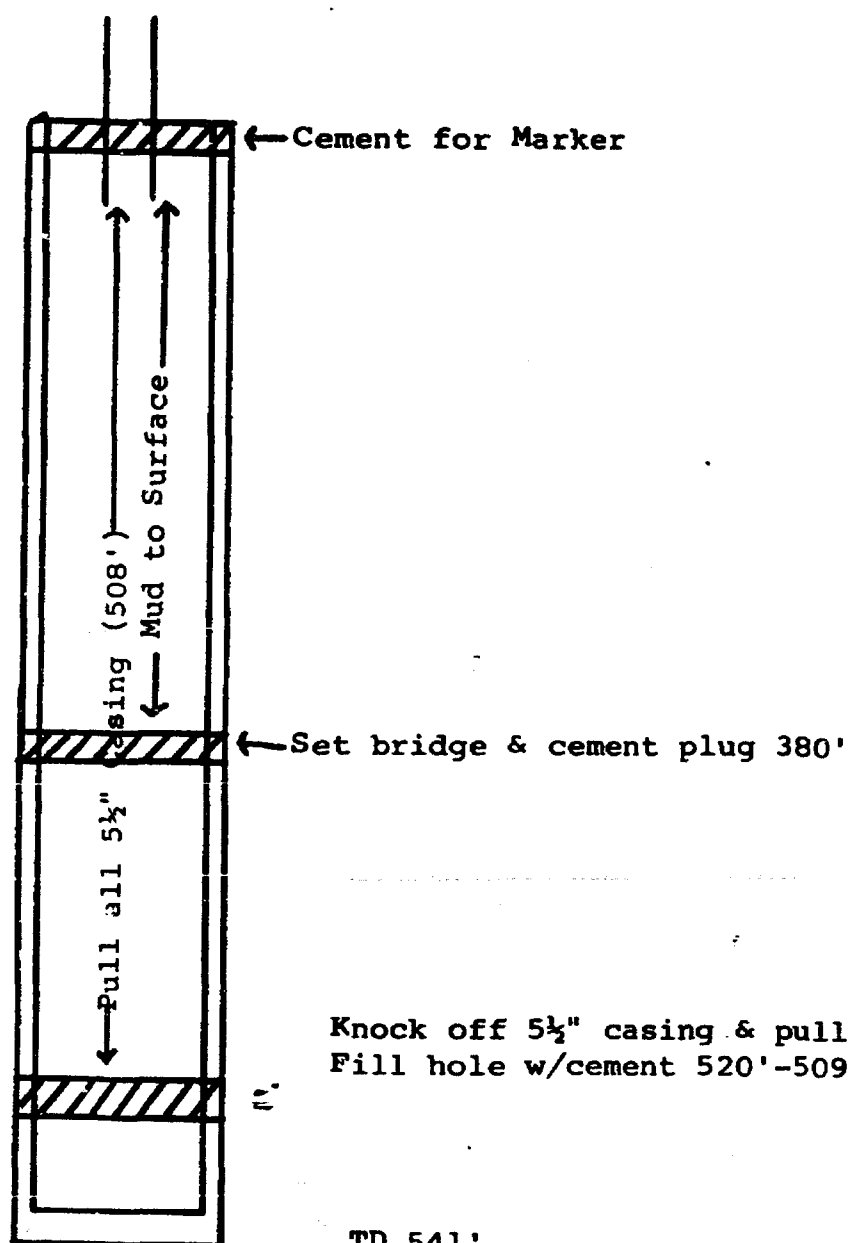
December 2, 1977

TABULAR SUMMARY OF WELLS

Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval (To Top of Pay)	
<u>Sec 30 Twp17S Rge28E</u>						
<u>Bettrice Beddingfield</u>						
Sunray St. #1 1650/N 470/W	7-29-52	529'		7" @ 487' w/180sx.	494' 513'	
#B-11593						
Sunray St. #2 1650/N 990/W	3-14-54	549'	8 5/8" @ 325' mudded	?	505'	
#B-11593						
<u>W.D. Cunningham</u>						
Guins St. #1 1650/N 430/W	3-22-42	541'		5 1/2" @ 508' w/12sx.	513	P&A 6-8-43 (schematic attached)
#B-5306						#1-S
<u>Cunningham & Plover</u>						
State #1 330/N 330/W	8-27-41	420'		7" @ 385' mudded	400'	P&A 8-10-43 (schematic attached)
#B-5306						#2-S
State #2 990/N 450/W	10-20-41	514'		5 1/2" @ 420' w/ ?	436'	P&A 8-10-43 (schematic attached)
#B-5306						#3-S
<u>John Gallagher</u>						
Delhi State #1 650/N 410/W	1-17-52	510'		7" @ 396' w/30sx.	394' 488'	P&A 9-27-61 (schematic attached)
#E-259-1						#4-S
Delhi State #3 2310/N 1650/W	3-23-53	564'		7" @ 512' w/30sx.	512'	P&A 9-18-61 (schematic attached)
#B-11538						#5-S
Delhi State #4 2970/N 1650/W	11-15-52	532'		7" @ 511' mudded	527'	P&A 9-25-61 (schematic attached)
#B-11538						#6-S
<u>A.H. Hover</u>						
State B #2 2310/S 2310/E	9-25-41	553'		7" @ 482' mudded	(nothing more has ever been filed on this well)	
#B-4918						
<u>Kersey & Co.</u>						
Red Lake Premier Sand Ut. Tr. #1 #10	10-19-45	1827'	10" @ 15' w/50sx.	7" @ 1647' w/50sx.	1740'	
#B-11538			8 1/2" @ 575' mudded			

W.D. Cunningham
Guinns St. #1
1650/N 430/W

P&A 6-8-43



Knock off 5 1/2" casing & pull
Fill hole w/cement 520'-509'

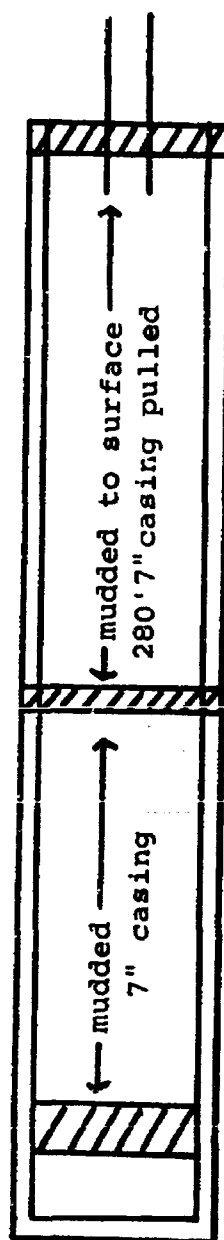
TD 541'

Cunningham & Ployhar

State #1

330/N 330/W

P&A 8-10-43



Cement for Marker

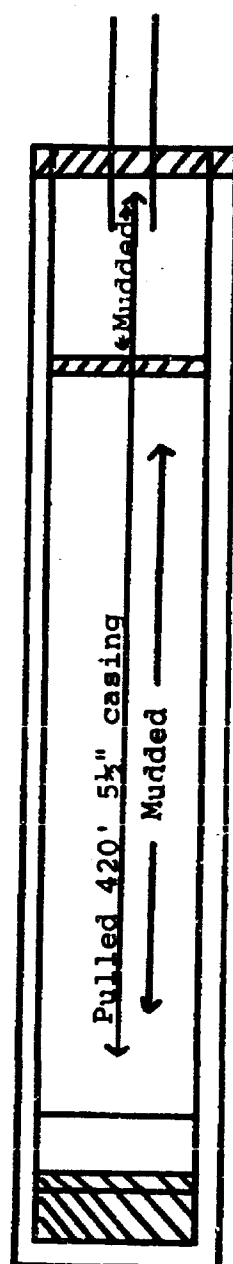
Knock off & pull 280' of 7" casing
Set bridge & cement plug

Fill hole from 420' to 380'
with cement

TD 420'

Cunningham & Ployhar
State #2
990/N 450/W

P&A 8-10-43



Cement for Marker

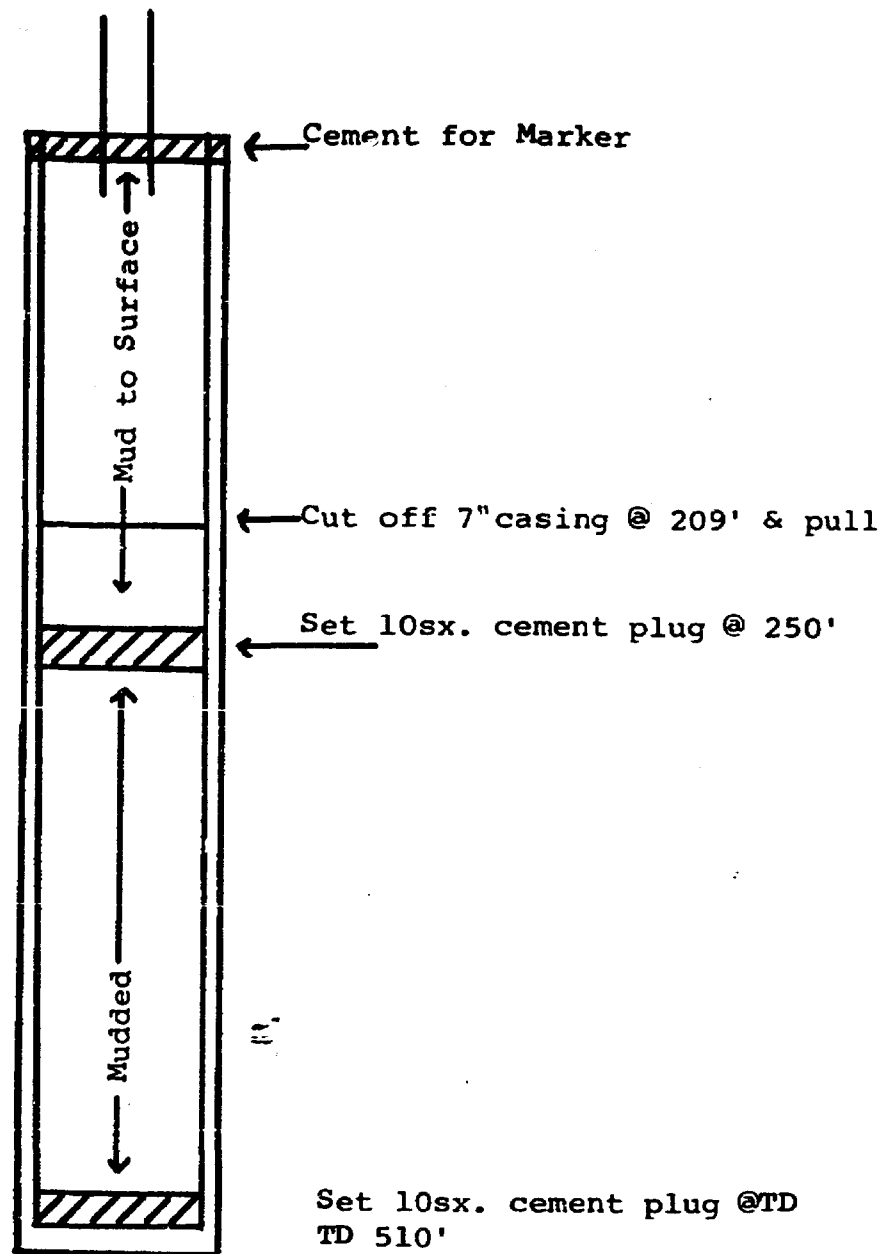
Set bridge & cement plug

Knock off 5½" casing & pull 420'
Fill hole w/cement 514' to 475'

TD 514'

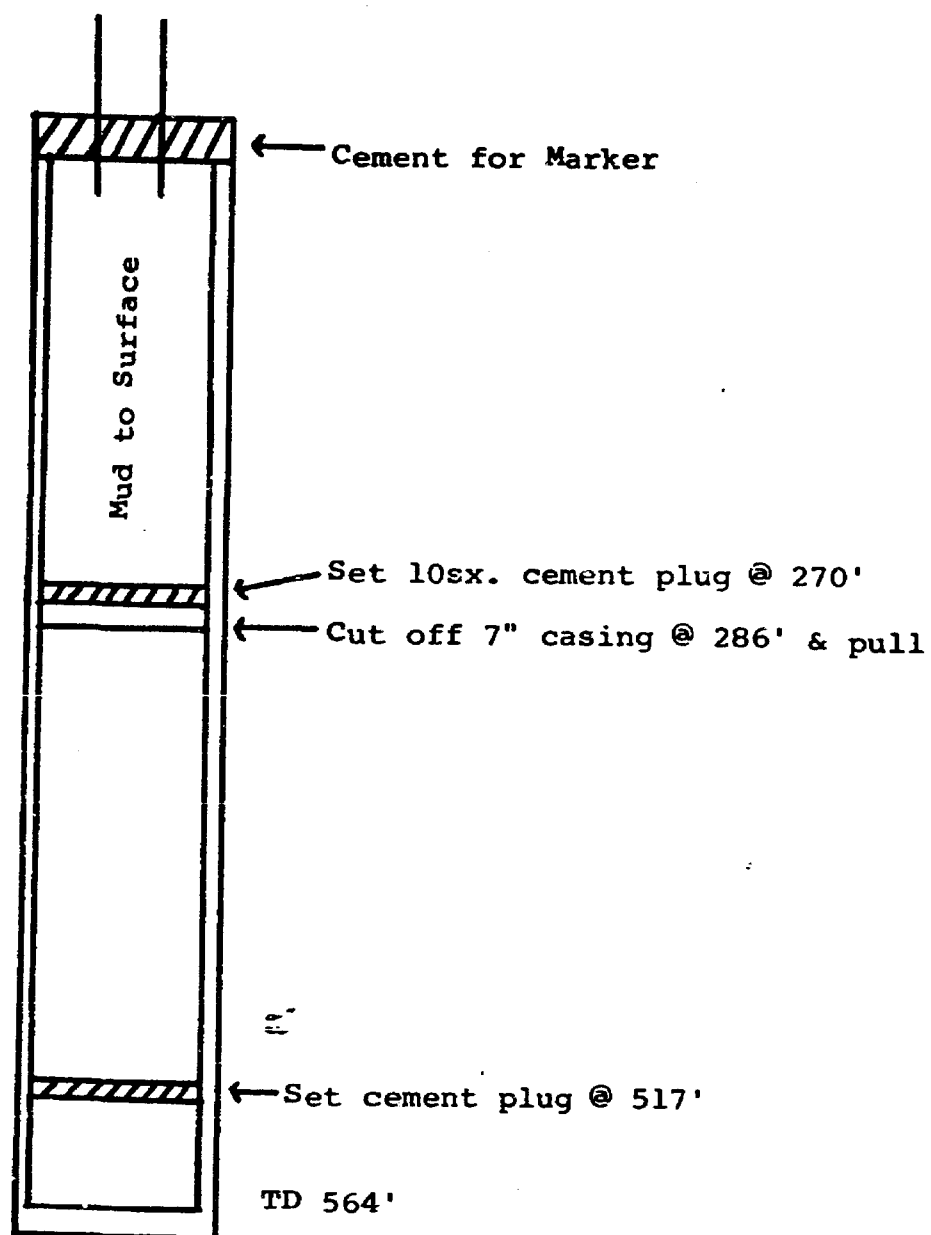
John Gallagher
Delhi State #1
650/N 410/W

P&A 9-27-61



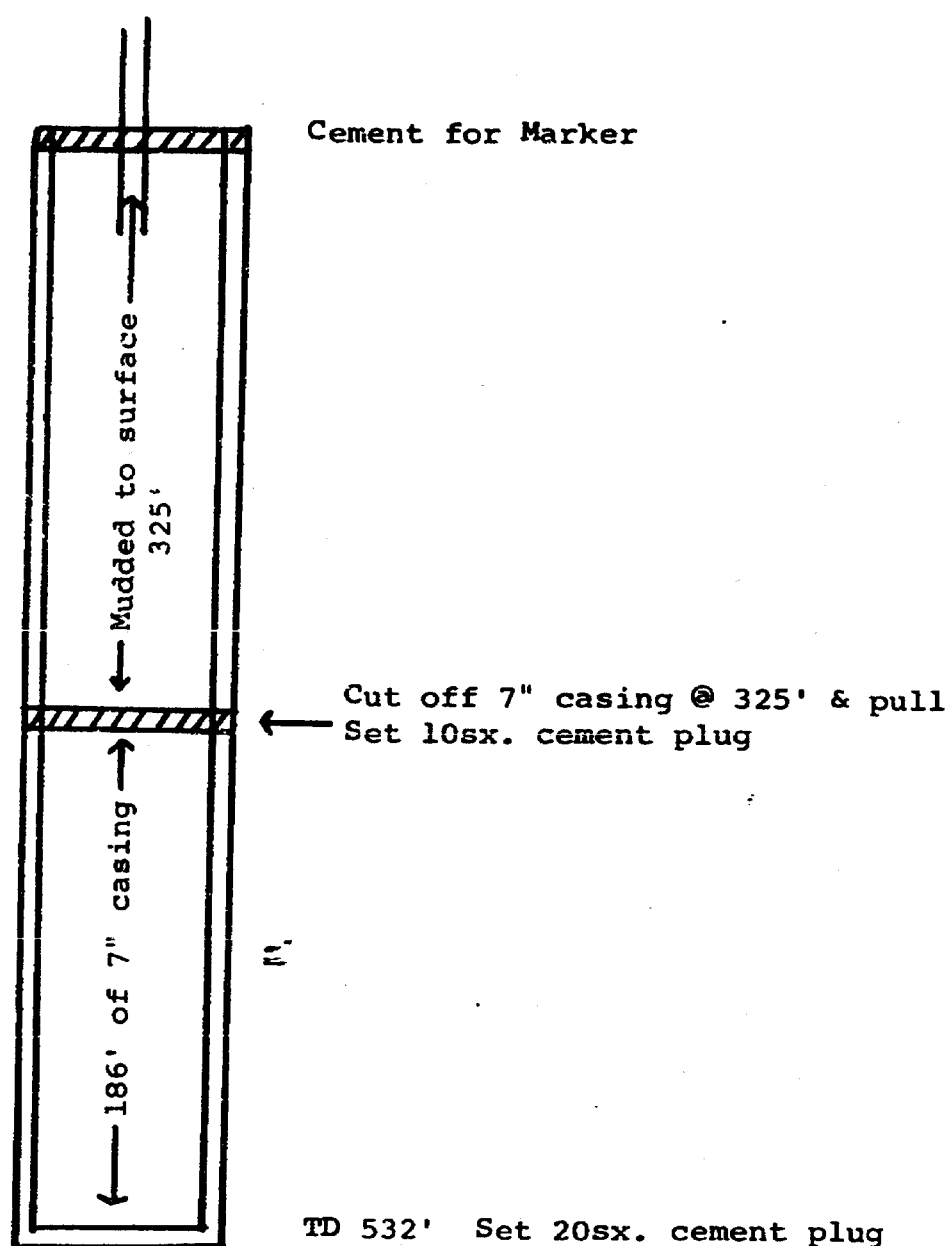
John Gallagher
Delhi State #3
2310/N 1650/W

P&A 9-18-61



John Gallagher
Delhi State #4
2970/N 1650/W

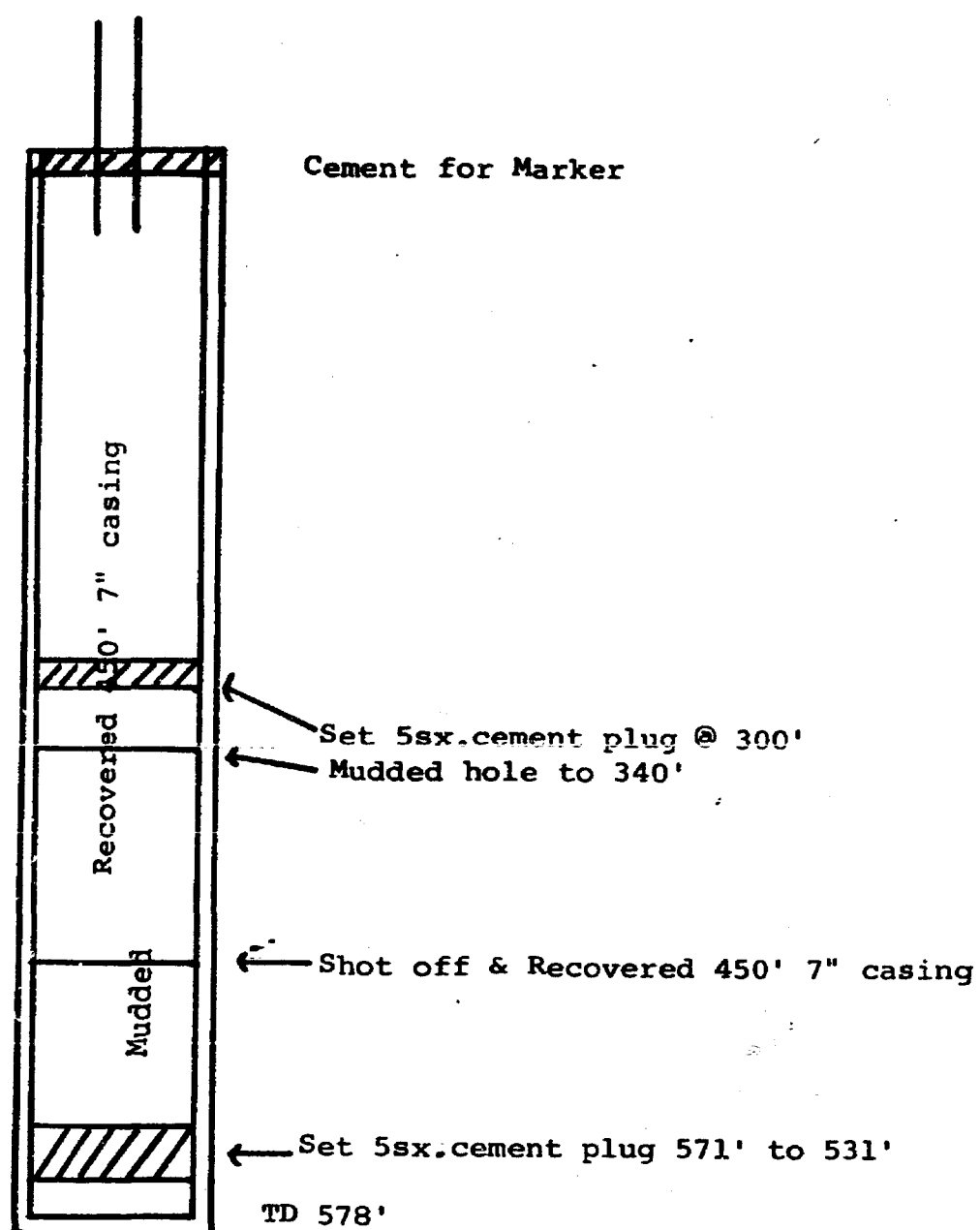
P&A 9-25-61



Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
<u>Sec 30 Twn17S Rge28E cont.:</u>						
<u>Kersey & Co.</u>						
Red Lake Premier	12-31-45	1871'	8 1/2" @ 465'	7" @ 1665'	1773'	
Sand Ut. Tr. 5 #1			w/50sx.	w/50sx.		
330/N 330/E						
#B-5084						
<u>McNutt Oil & Ref. Co.</u>						
State #2	1-9-42	575'		8" @ 392'		PSA (inc plugging report never filed)
?				w/5sx.		
#B-8814						
<u>Plover & McNutt</u>						
Shufflebarger #1	9-17-41	578'		7" @ 540'		PSA 10-31-43 (schematic attached)
1650/N 990/E				w/25sx.		#7-S
#B-8814						
<u>Otis A. Roberts</u>						
Humberger #1	10-14-42	523'		5 1/2" @ 503'		PSA 10-14-42 (schematic attached)
1650/N 1980/W				w/10sx.		#8-S
#B-5084						
<u>E.E. Scannell et al</u>						
State A #2	4-19-46	1800'				PSA 6-3-46 (schematic attached)
2310/S 2310/E						#9-S
#B-4918						
<u>Otis A. Roberts</u>						
Humberger #1-F	3-28-42	523'		5 1/2" @ 503'		PSA 10-25-42 (schematic attached)
1650/N 1980/W				w/10sx.		#10-S
#B-5084						
<u>E.E. Scannell et al</u>						
State A #2	4-19-46	1800'				PSA 4-19-46 (schematic attached)
2310/S 2310/E			pulled			#11-S
#B-4918						
<u>Sec 19 Twn17S Rge28E</u>						
<u>Nay Hightower</u>						
Potoroff X	2-3-44	485'		7" @ 450'	470'-475'	PSA 12-13-47 (schematic attached)
35C/S 310/W				w/2sx.		#12-S
#703						
<u>A.H. Hoyer</u>						
Aregood St. #1	3-8-43	528'		7" @ 385'	dry hole	PSA 3-12-43 (schematic attached)
330/N 1650/W				w/5sx.		#13-S
#703						

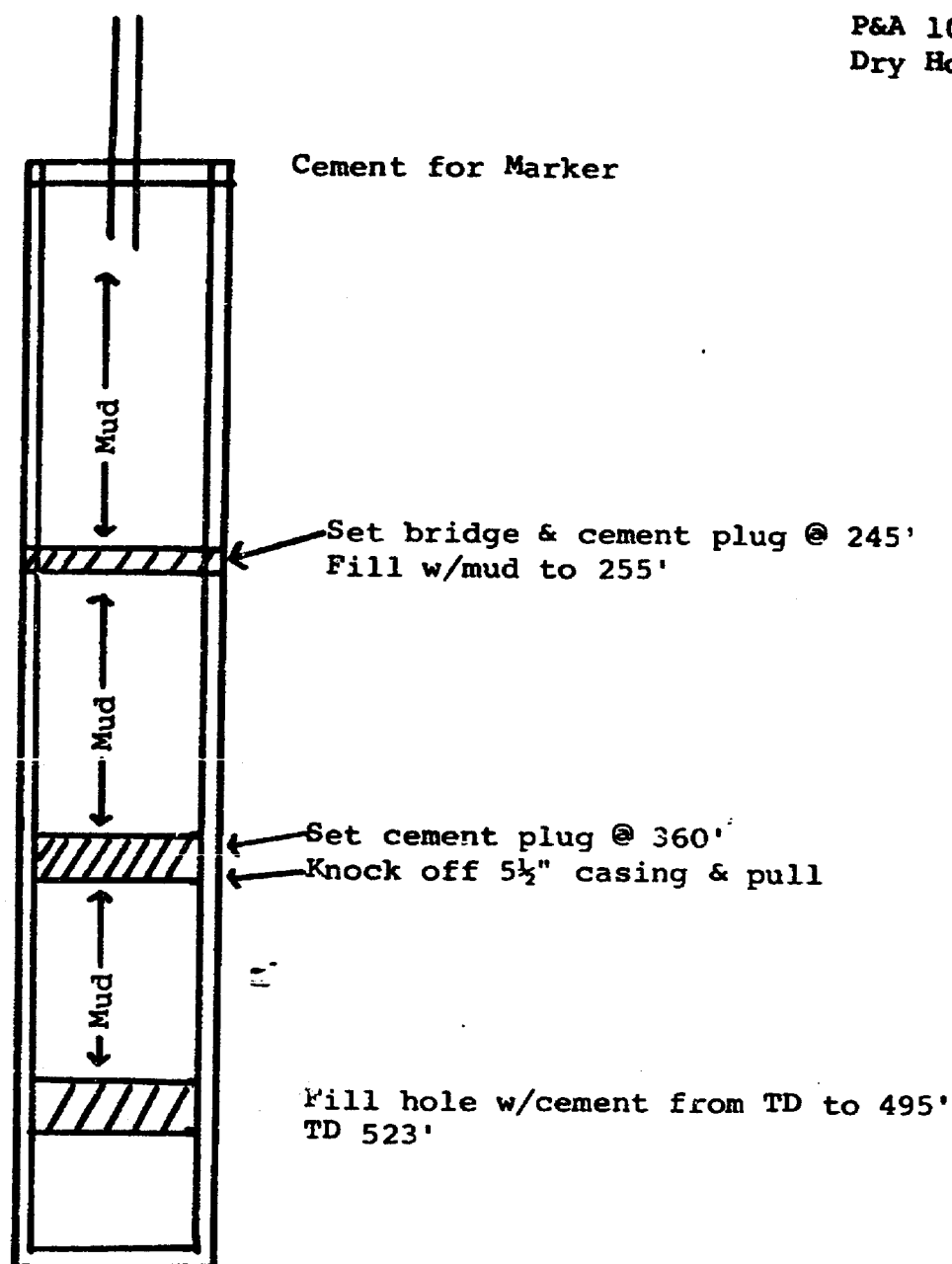
Ployher & McNutt
Shuffbarger #1
1650/N 990/E

P&A 10-31-43



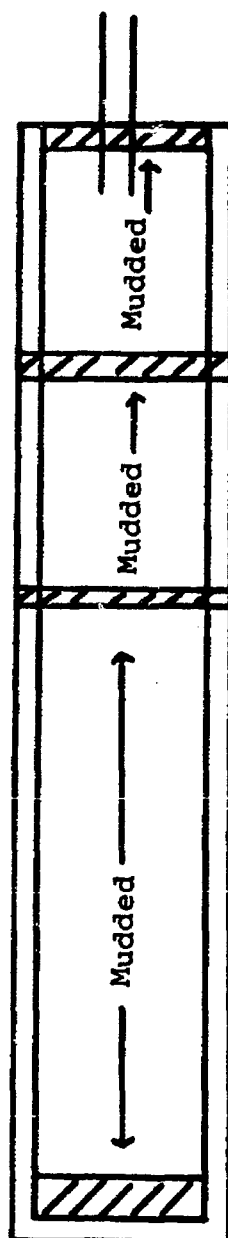
Otis A. Roberts
Humberger #1
1650/N 1980/W

P&A 10-14-42
Dry Hole



E.E. Scannell et al
State A #2
2310/S 2310/E

P&A 6-3-46



5sx. cement cap for marker

Set 5sx. cement plug @ 405'

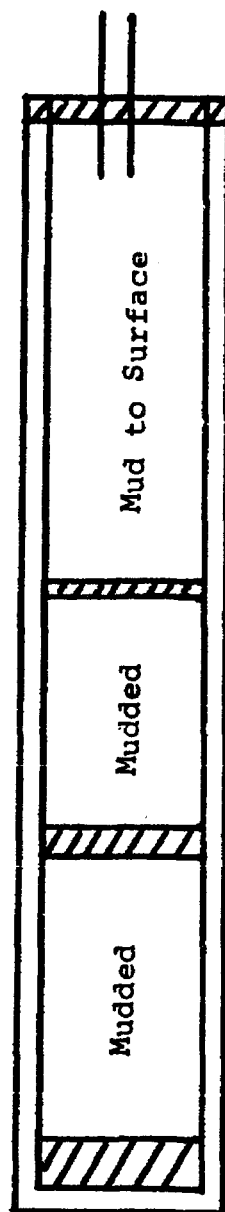
Pulled all Casing

Set 20sx. cement plug
@ 800'

Set 5sx. cement plug from
TD 1800' to 1700'

Otis A. Roberts
Humberger #1-F
1650/N 1980/W

P&A 10-25-42



Cement for Marker

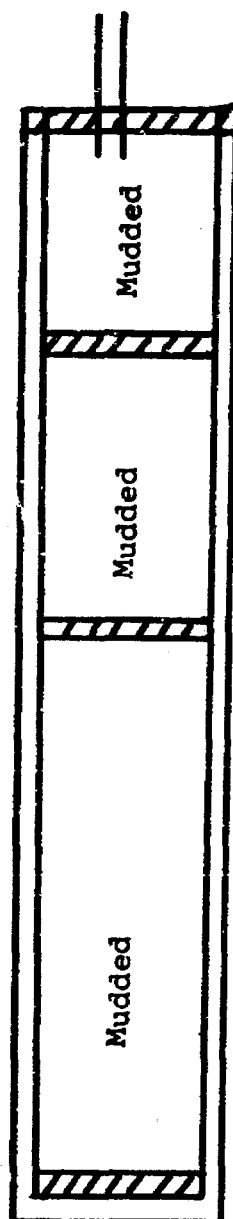
Set cement plug @ 245'

Set cement plug @ 360'.
Knock off & pull 5½" casing

Fill hole w/cement
TD 523' to 495'

E.E. Scannell et al
State A #2
2310/S 2310/E

P&A 1946



Set 5sx. cement cap for marker

Set 5sx. cement plug
@ 405'

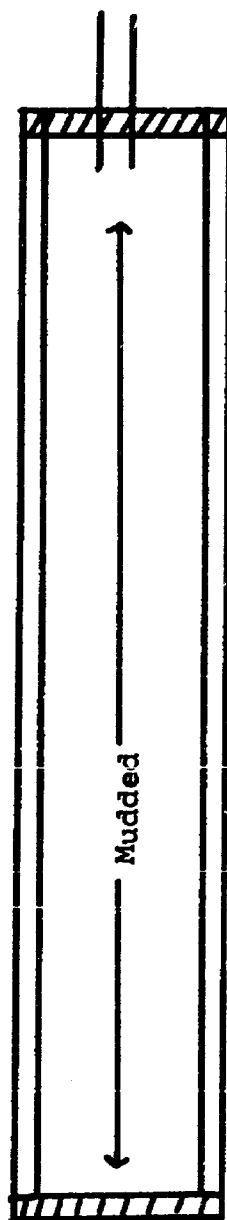
Set 20sx.cement plug
@ 800'

Pulled all Casing

Set 5sx.cement plug from
TD 1800' to 1700'

Nay Hightower
Potoroff X
350/S 310W

P&A 12-13-47

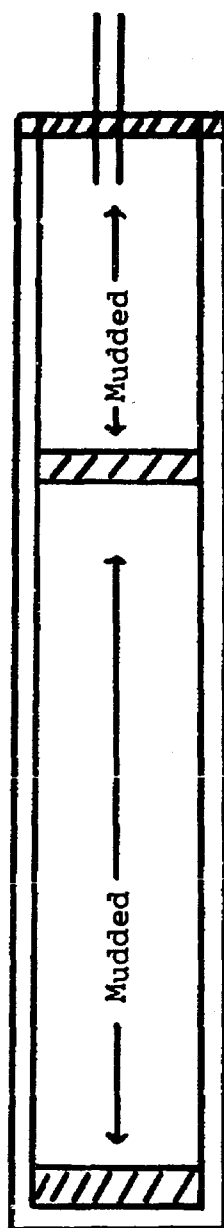


Cement for Marker

Set cement plug
from TD 485' to 475'

A.H. Hover
Aregood St. #1
330/N 1650/W

P&A 3-12-43



Cement for Marker

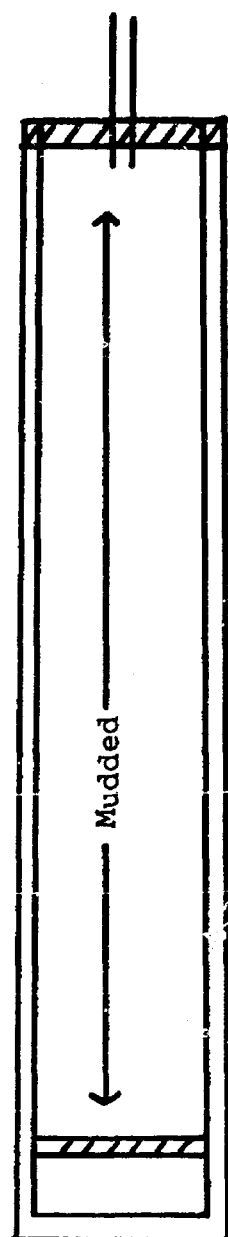
Set 5sx. cement plug
@ 205'

Set cement plug from
TD 528' to 475'

Operator-Lease Well Name & #	Completion Date	Total Depth	Surface Casing	Production Casing	Interval	
<u>Sec 19 Twn17S Rge28E cont.:</u>						
<u>A.A. Hoyer & Nay Hightower</u>						
Pottoroff #1	10-1-41	483'		5 3/16" @ 465' w/6sx.		PSA 1-31-44 (schematic attached) #14-S
#703						
<u>Madden & Hazel</u>						
State #1	2-12-53	496'		pulled		PSA (no date given) (schematic attached) #15-S
280/S 330/W						
#E-6427						
<u>Sec24 Twn17S Rge27E</u>						
<u>East & Gray</u>						
State #1	6-6-41	481'		pulled		PSA 5-2-48 (schematic attached) #16-S
330/N 400/W						PSA 9-23-64 (schematic attached) #17-S
#B-6041	9-20-41	460'		5 1/2" @ 447' w/10sx.		PSA 6-25-48 (schematic attached) #18-S
State #1-A						PSA 1964 (schematic attached) #19-S
330/S 330/E	1945	474'		7" @ 438' w/25sx.		PSA 1964 (schematic attached) #20-S
#B-6041						
State #1-B						
990/S 330/E						
#B-6041						
State #1-X	6-27-49	470'		7" @ 406' w/15sx.		
900/S 900/E						
#B-6041						
State #2-X	6-30-50	470'		7" @ 455' w/40sx.		
875/S 330/E						
#B-6041						
<u>Leonard Latch</u>						
Berry A #16	No information filed on this well.					
990/S 1550/E						
#025527A						
Berry A #26	11-25-55	471'		5 1/2" @ 454' w/75sx.	454'	
330/S 2310/E						
#048679						

A. A. Hover & Nav Hightower
Pottoroff #1
330/N 330/W

P&A 1-31-44



Cement for Marker

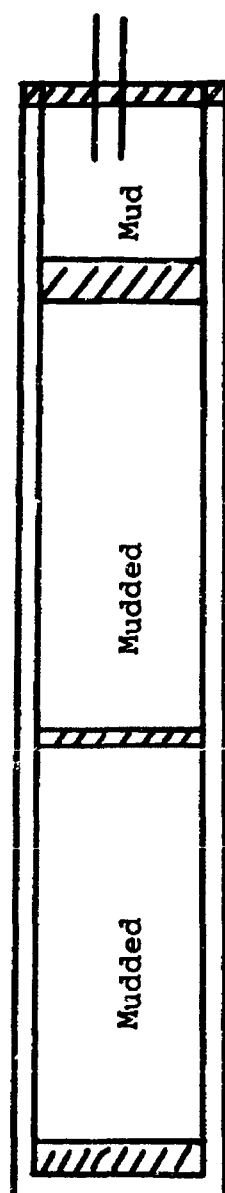
Fill hole from TD 483'
to bottom casing 380'
w/cement

Madden & Hazel

State #1

280/S 330/W

P&A (no date given)



Cement for Marker

Set 10' cement plug to 155'

Pulled 337' of 8 5/8" casing

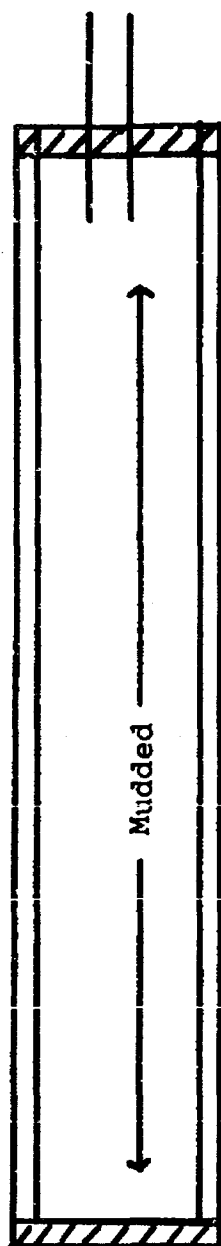
Set 10' cement plug @360'

Cement from TD 496' to 466'

East & Gray
State #1
330/N 400/W

P&A 5-2-48

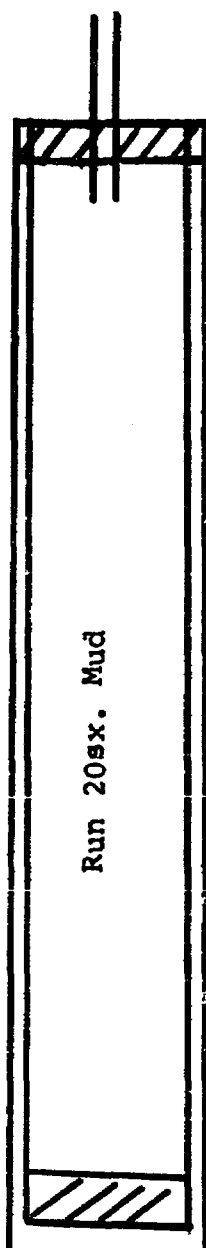
Cement for Marker



Pull all casing 481' (5 3/16")

Cement to bottom of pipe @ 428'
from TD 481

East & Gray
State #1-A
330/S 330/E

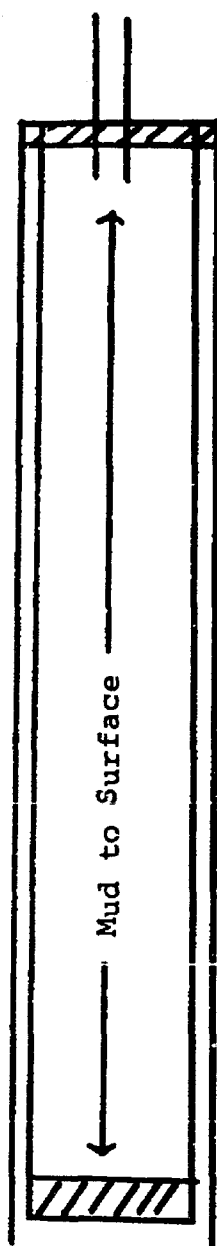


Set 5sx.cement
@ top for Marker

P&A 9-23-64

Set 15sx. cement plug
@ 460'

East & Gray
State #1-B
990/S 330/E



Cement for Marker

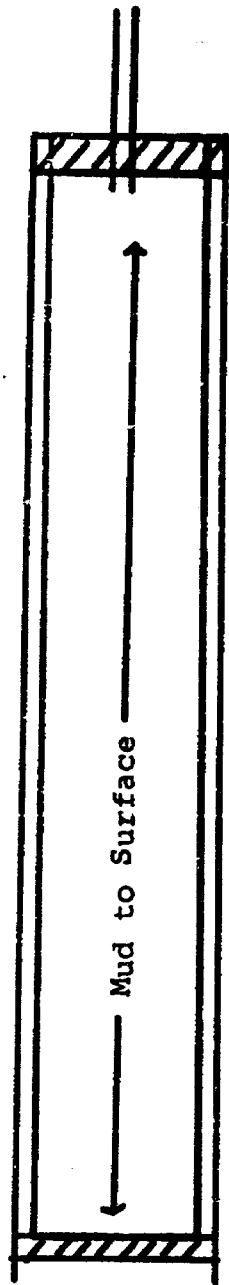
P&A 6-25-48

Set cement plug @ bottom of
pipe to 428'

East & Gray
State #-X
900/S 900/E

5sx.cement plug @
surface for marker

P&A 1964

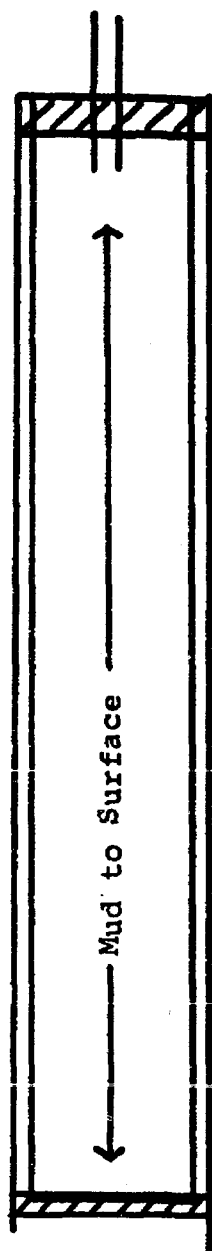


Set 15sx. cement plug @
bottom of hole
TD 470' Casing @406'

East & Gray
State #2-X
875/S 330/E

Cement for Marker

P&A 1964



Set 15sx. cement @ bottom
TD 470' Casing @470'

NEIL B. WATSON
FRED A. WATSON

LAW OFFICES
WATSON & WATSON
AMERICAN HOME BUILDING
P. O. DRAWER E
ARTESIA, NEW MEXICO 88210

AREA CODE 505
746-4151 - 746-2201

November 15, 1977

New Mexico Oil Conservation Commission
Post Office Box 2088
Santa Fe, New Mexico 87501

Gentlemen:

Re: Application of Beatrice Bedingfield to convert
two wells in Eddy County, New Mexico to water
disposal wells as follows:

Beatrice Bedingfield - Hastie No. 8 Well
in SE $\frac{1}{4}$ NW $\frac{1}{4}$ Section 18, Township 17 South,
Range 28 East, N.M.P.M. (U. S. Lease LC 045818(a));


Beatrice Bedingfield - Sunray State No. 1 Well
in Lot 2 (SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 30, Township 17 South,
Range 28 East, N.M.P.M. (State Lease B-11593)

I herewith enclose in triplicate the above described application for two produced water disposal wells, and as shown by the certificate thereon we have furnished information copies of such application to your district office and, since one of the wells is on a federal lease, to the Artesia Field office of the United States Geological Survey.

It will be very much appreciated if you will set down the enclosed application on the next appropriate docket for hearing before a hearing examiner, and please let us know of such setting.

Thanking you in advance for your consideration, I remain

Very truly yours,


Fred A. Watson

FAW:fc
Enclosures

cc: District Office - New Mexico Oil Conservation Commission
Artesia Field Office - United States Geological Survey
Mr. Ralph L. Gray - Petroleum Engineer

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

IN RE: APPLICATION OF BEATRICE BEDINGFIELD
FOR AUTHORITY:

TO CONVERT THE BEATRICE BEDINGFIELD-HASTIE
NUMBER 8 WELL IN SE $\frac{1}{4}$ NW $\frac{1}{4}$ OF SECTION 18,
TOWNSHIP 17 SOUTH, RANGE 28 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO, TO AN INJECTION
WELL AND TO INJECT PRODUCED WATER INTO THE
SEVEN RIVERS FORMATION AT AN APPROXIMATE
DEPTH OF 500 TO 550 FEET AS PRODUCED FROM
SHALLOW WELLS ON UNITED STATES OIL AND GAS
LEASE LC-045818(a) INSOFAR AS SAME COVERS
NW $\frac{1}{4}$ OF SAID SECTION 18; AND

TO CONVERT THE BEATRICE BEDINGFIELD-SUNRAY
STATE NUMBER 1 WELL IN LOT 2 (SW $\frac{1}{4}$ NW $\frac{1}{4}$) OF
SECTION 30, TOWNSHIP 17 SOUTH, RANGE 28
EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, TO
AN INJECTION WELL AND TO INJECT PRODUCED
WATER INTO THE SEVEN RIVERS FORMATION AT AN
APPROXIMATE DEPTH OF 500 TO 550 FEET AS
PRODUCED FROM SHALLOW WELLS ON STATE OF NEW
MEXICO OIL AND GAS LEASE B-11593 INSOFAR
AS SAID LEASE COVERS LOT 2 (SW $\frac{1}{4}$ NW $\frac{1}{4}$) AND
LOT 4 (SW $\frac{1}{4}$ SW $\frac{1}{4}$) OF SAID SECTION 30.

Case No. 6104

A P P L I C A T I O N

COMES NOW Beatrice Bedingfield, and hereby makes
application for authority to convert the Beatrice Bedingfield-
Hastie Number 8 Well located in the SE $\frac{1}{4}$ NW $\frac{1}{4}$ of Section 18, Town-
ship 17 South, Range 28 East, N.M.P.M., Eddy County, New
Mexico to a water injection well to inject produced water into
the Seven Rivers Formation at an approximate depth of 500 to
550 feet as produced from the leased lands operated by appli-
cant; and further to convert the Beatrice Bedingfield-Sunray
State Number 1 Well in Lot 2 (SW $\frac{1}{4}$ NW $\frac{1}{4}$) of Section 30, Township
17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico to

a water injection well and to inject produced water into the Seven Rivers Formation at an approximate depth of 500 to 550 feet as produced from the leased lands operated by applicant, and, in support of said application, applicant states:

1. That applicant is the operator of shallow depths under United States Oil and Gas Lease LC-045818(a) insofar as said oil and gas lease covers NW $\frac{1}{4}$ of Section 18, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico. On said lands there are eight (8) wells, all of which are either producing or have heretofore produced from the Seven Rivers Formation at an approximate depth of 500 to 550 feet. At the present time five (5) of said wells are being produced, two (2) of said wells are temporarily shut down, and applicant seeks authority to convert the remaining well, that is, the Beatrice Bedingfield-Hastie Number 8 Well located in SE $\frac{1}{4}$ NW $\frac{1}{4}$ of said Section 18 to a water injection well for the purpose of disposing of produced water produced from the other wells on said lease and lands. It is proposed to inject such produced water into the Beatrice Bedingfield-Hastie Number 8 Well and back into the Seven Rivers Formation at an approximate depth of 500 - 550 feet for the purpose of disposing of such produced water, rather than to provide for a secondary recovery program. The anticipated volume of water to be injected, based on the amount of water previously produced from the other wells operated by applicant on said lease and lands, is approximately 80 barrels per day.

2. Further, that applicant is the operator of shallow depths under State of New Mexico Oil and Gas Lease B-11593 insofar as said oil and gas lease covers Lot 2 (SW $\frac{1}{4}$ NW $\frac{1}{4}$) and Lot 4 (SW $\frac{1}{4}$ SW $\frac{1}{4}$) of Section 30, Township 17 South, Range 28 East, N.M.P.M., Eddy County, New Mexico. There are no wells on Lot 4 (SW $\frac{1}{4}$ SW $\frac{1}{4}$) and there are two wells on Lot 2 (SW $\frac{1}{4}$ NW $\frac{1}{4}$) of said Section 30 and applicant seeks authority to convert the Beatrice Bedingfield - Sunray State Number 1 Well located on said Lot 2 to a water injection well for the purpose of disposing of produced water from the Beatrice Bedingfield - Sunray State Number 2 Well also located on said Lot 2 and also for the purpose of disposing of produced water from any shallow well completed in the future on Lot 4 of said Section 30. The Beatrice Bedingfield - Sunray State Number 2 Well is producing from the Seven Rivers Formation and it is proposed to dispose of the produced water by injecting it into the Beatrice Bedingfield - Sunray State Number 1 Well and into the Seven Rivers Formation at an approximate depth of 500 - 550 feet. The anticipated volume of water to be injected is ten (10) barrels per day.

3. That there are no logs available for either the Beatrice Bedingfield - Hastie Number 8 Well or the Beatrice Bedingfield - Sunray State Number 1 Well.

4. Based upon information available to applicant, the pressures necessary to inject the anticipated volumes of produced water into the proposed disposal wells above described

are well below frac pressure, and also below instantaneous shut-in pressures used in treating procedures.

5. That there are attached hereto and made a part hereof the following exhibits, to wit:

Exhibit "1" is a plat showing the Beatrice Bedingfield - Hastie Number 8 Well, indicated by a red arrow, and the lands under the Hastie lease as to which applicant operates the shallow depths outlined in yellow; and, further, showing the Beatrice Bedingfield - Sunray State Number 1 Well indicated by a red arrow, and the lands under the Sunray State Lease as to which applicant operates the shallow depths outlined in yellow. Said plat also shows the location of all other wells within a radius of two miles from each of said proposed injection wells and the depths involved with said wells and said plat indicates the Lessees.

Exhibit "2" is a diagramatic sketch of the proposed conversion of the Beatrice Bedingfield - Hastie Number 8 Well to a water injection well.

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Other exhibits, including tabular summaries of all wells within one-half mile of the two proposed water disposal injection wells and schematics of all plugged and abandoned wells within one-half mile from the two proposed water disposal injection wells will be presented at the hearing on this application.

Applicant hereby requests a hearing before an examiner and requests authority for the conversion of the above named and numbered wells for the injection and disposal of produced water therein and into the Seven Rivers Formation.

WATSON & WATSON

By Fred A. Watson
Attorneys for Applicant
P. O. Drawer E
Artesia, New Mexico 88210

Beatrice Bedingfield
Beatrice Bedingfield,
Applicant

C E R T I F I C A T E

I, Fred A. Watson, one of the attorneys for Beatrice Bedingfield, Applicant under the foregoing application, hereby certify that on this date I furnished copies, by delivering or mailing same, of the foregoing Application complete with copies of the exhibit attached thereto, to the following:

District Office
New Mexico Oil Conservation Commission
P. O. Drawer DD
Artesia, New Mexico 88210

Artesia Field Office
United States Geological Survey
American Home Security Life Insurance Building
Artesia, New Mexico 88210

DATED this 15th day of November, 1977.

Fred A. Watson
Fred A. Watson

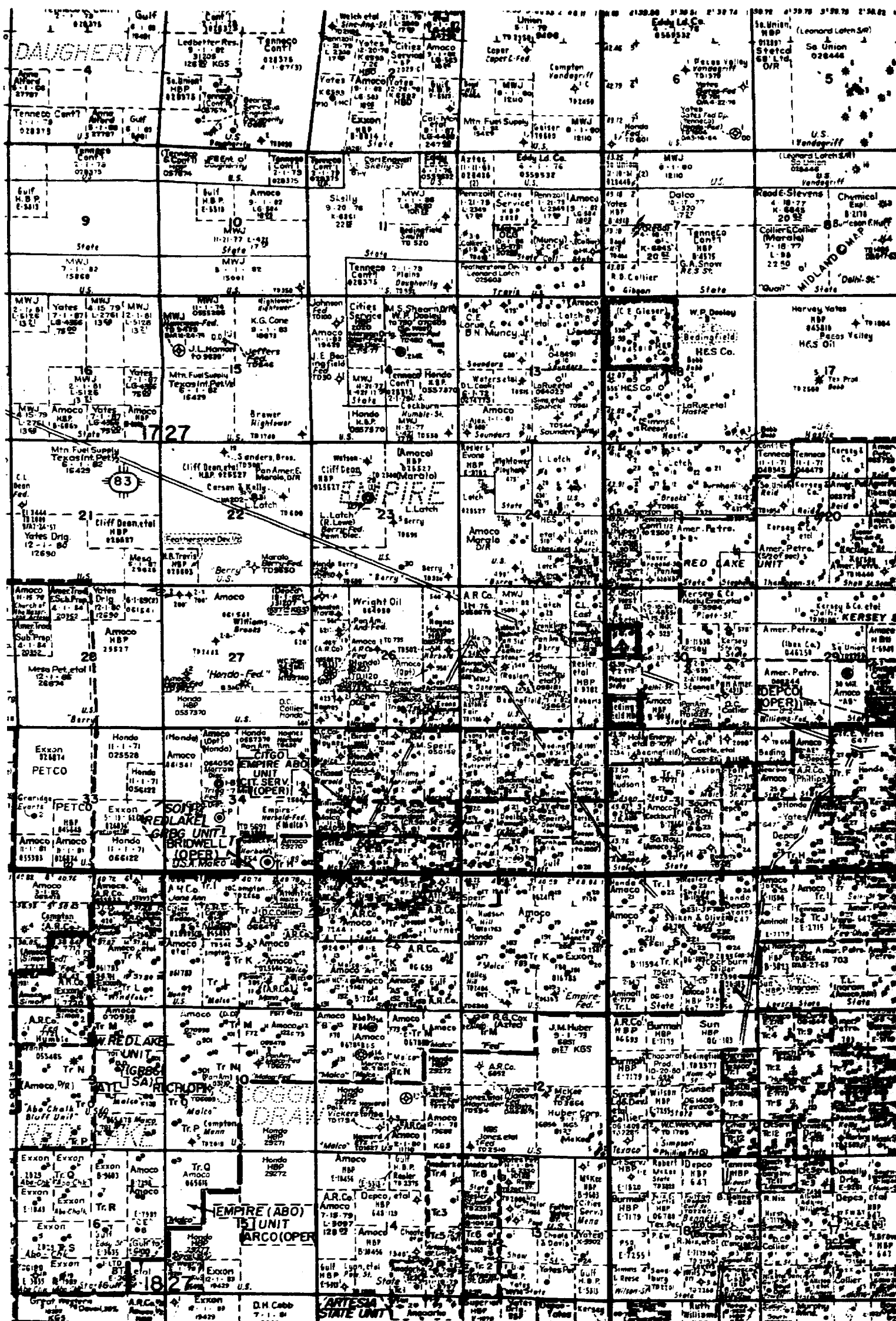
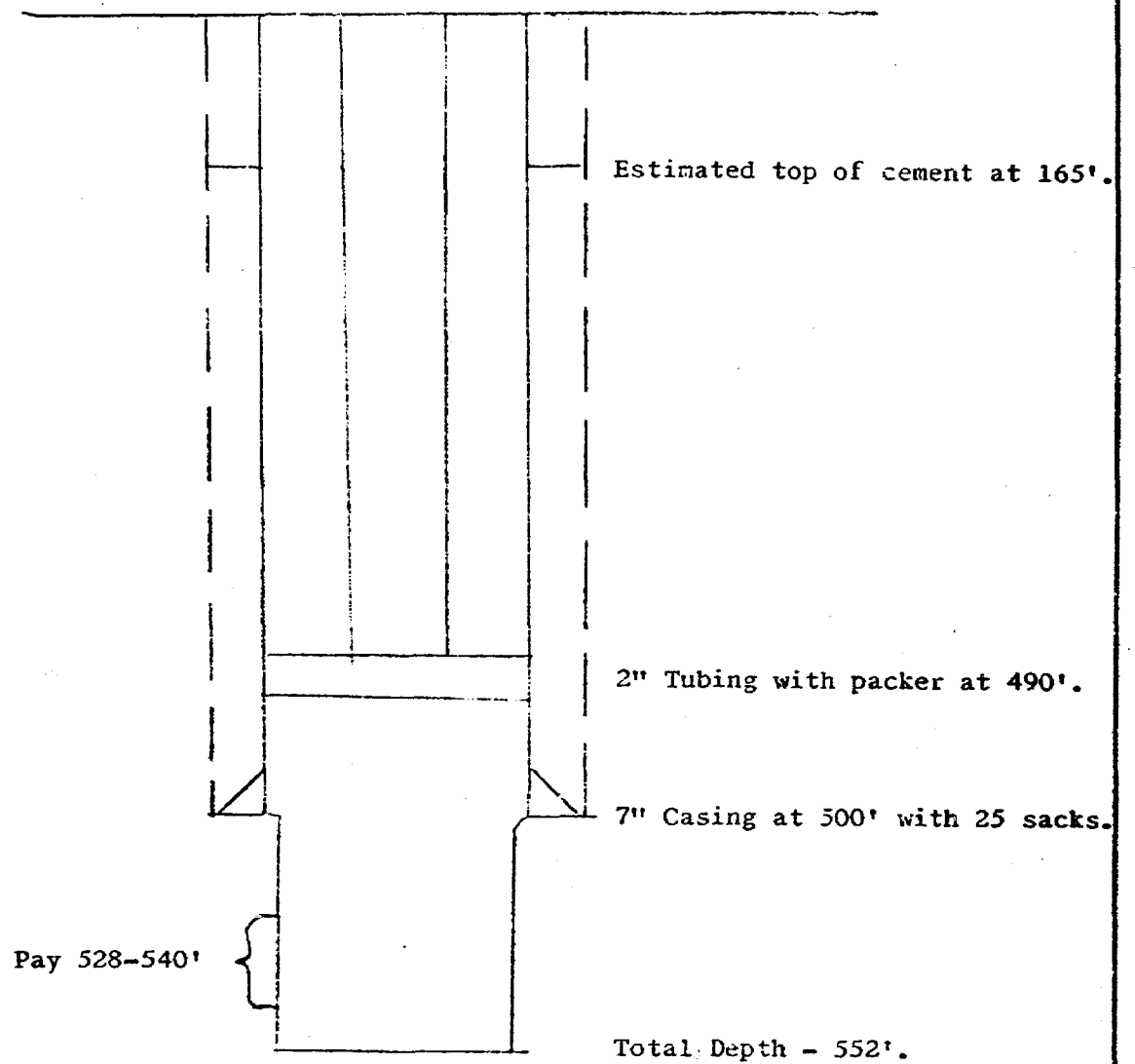


DIAGRAM OF PROPOSED WATER INJECTION WELL

BEATRICE BEDINGFIELD - HASTIE #8

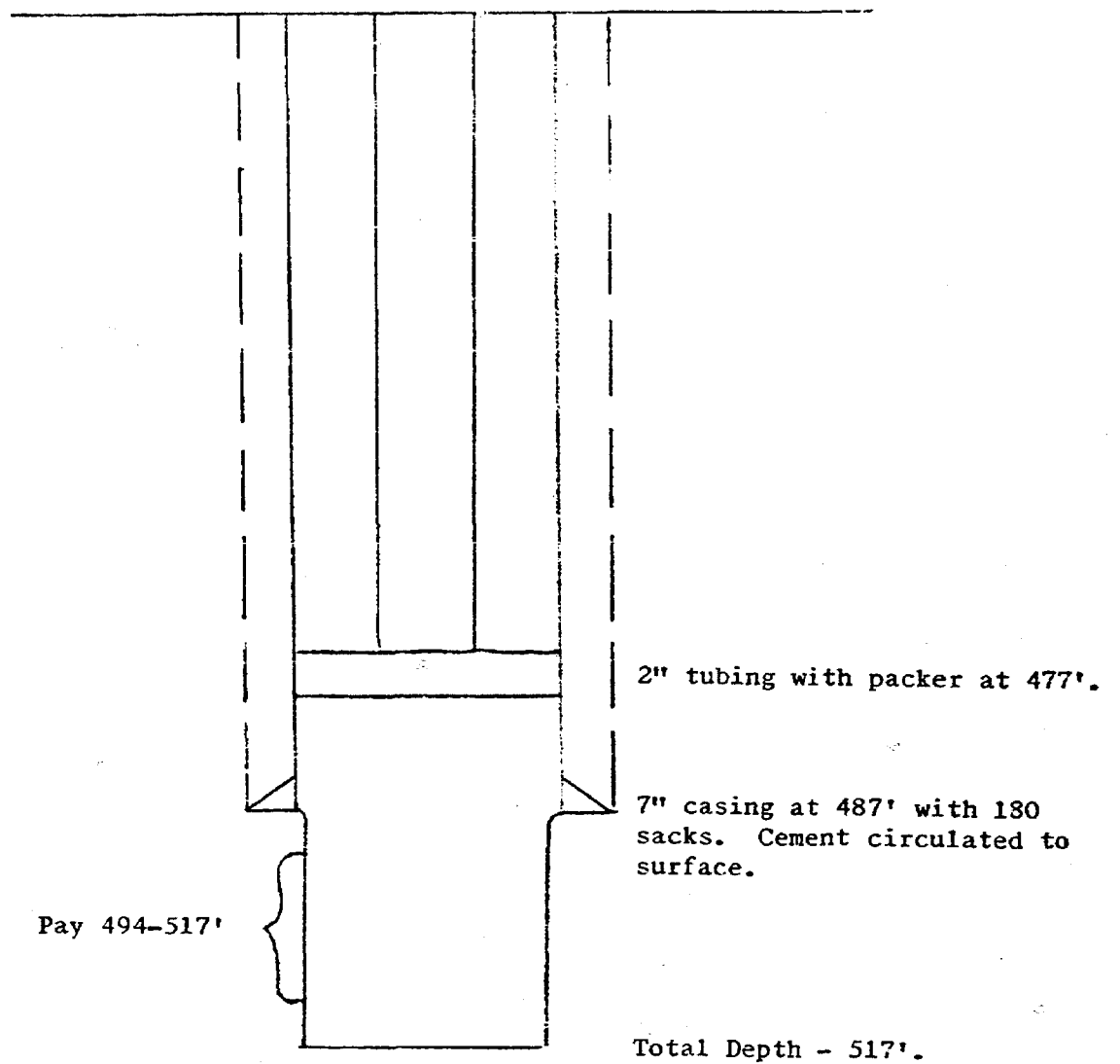


RALPH L. GRAY
PETROLEUM ENGINEERING

EXHIBIT "2"

DIAGRAM OF PROPOSED WATER INJECTION WELL

BEATRICE BEDINGFIELD - SUNRAY STATE #1



RALPH L. GRAY
PETROLEUM ENGINEERING

EXHIBIT "3"

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO

IN RE: APPLICATION OF BEATRICE BEDINGFIELD)
FOR AUTHORITY:)

TO CONVERT THE BEATRICE BEDINGFIELD-HASTIE)
NUMBER 8 WELL IN SE $\frac{1}{4}$ NW $\frac{1}{4}$ OF SECTION 18,)
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EDDY COUNTY, NEW MEXICO, TO AN INJECTION)
WELL AND TO INJECT PRODUCED WATER INTO THE)
SEVEN RIVERS FORMATION AT AN APPROXIMATE)
DEPTH OF 500 TO 550 FEET AS PRODUCED FROM)
SHALLOW WELLS ON UNITED STATES OIL AND GAS)
LEASE LC-045818(a) INsofar AS SAME COVERS)
NW $\frac{1}{4}$ OF SAID SECTION 18; AND)

Case No. 6104

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SECTION 30, TOWNSHIP 17 SOUTH, RANGE 28)
EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO, TO)
AN INJECTION WELL AND TO INJECT PRODUCED)
WATER INTO THE SEVEN RIVERS FORMATION AT AN)
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LOT 4 (SW $\frac{1}{4}$ SW $\frac{1}{4}$) OF SAID SECTION 30.)

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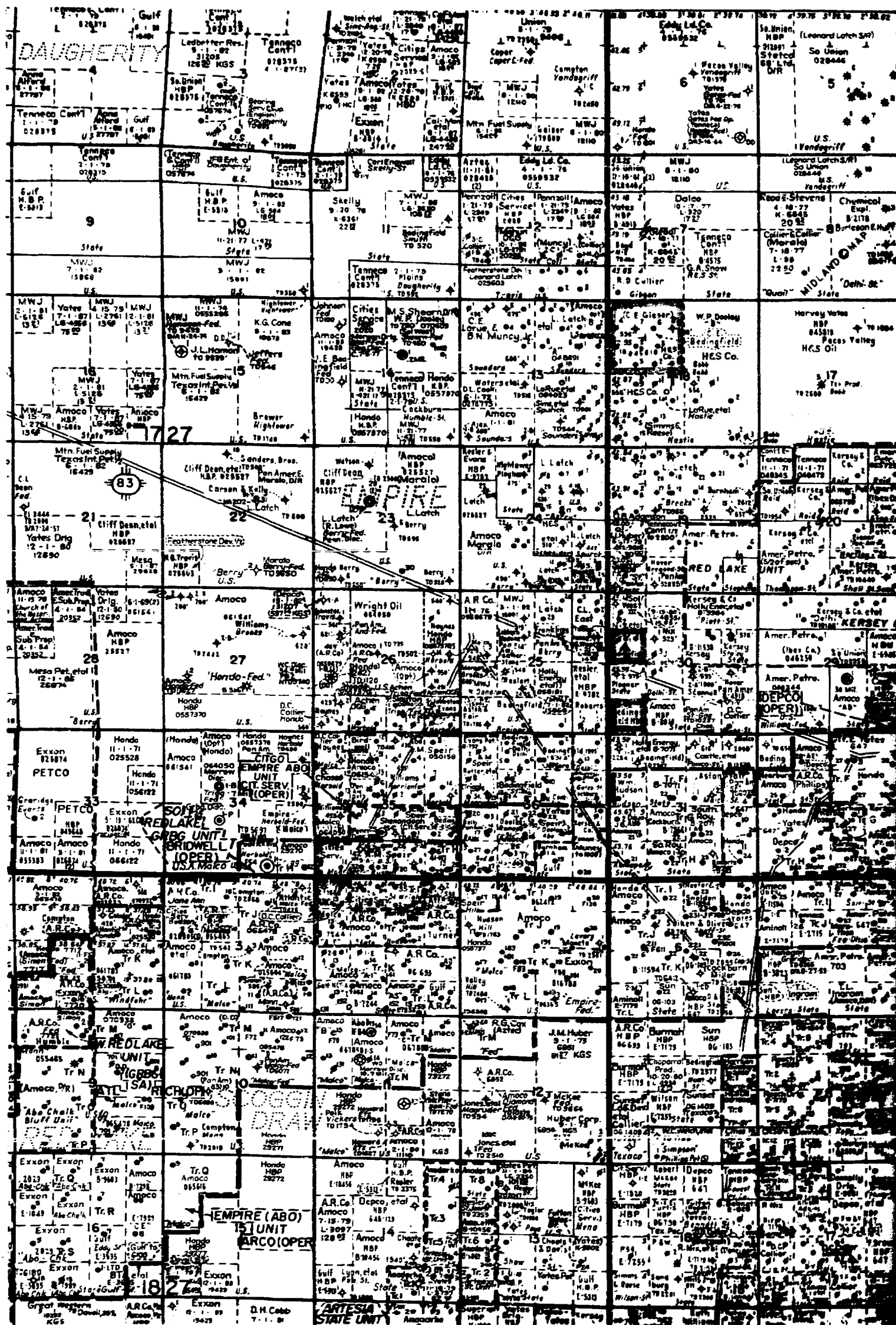
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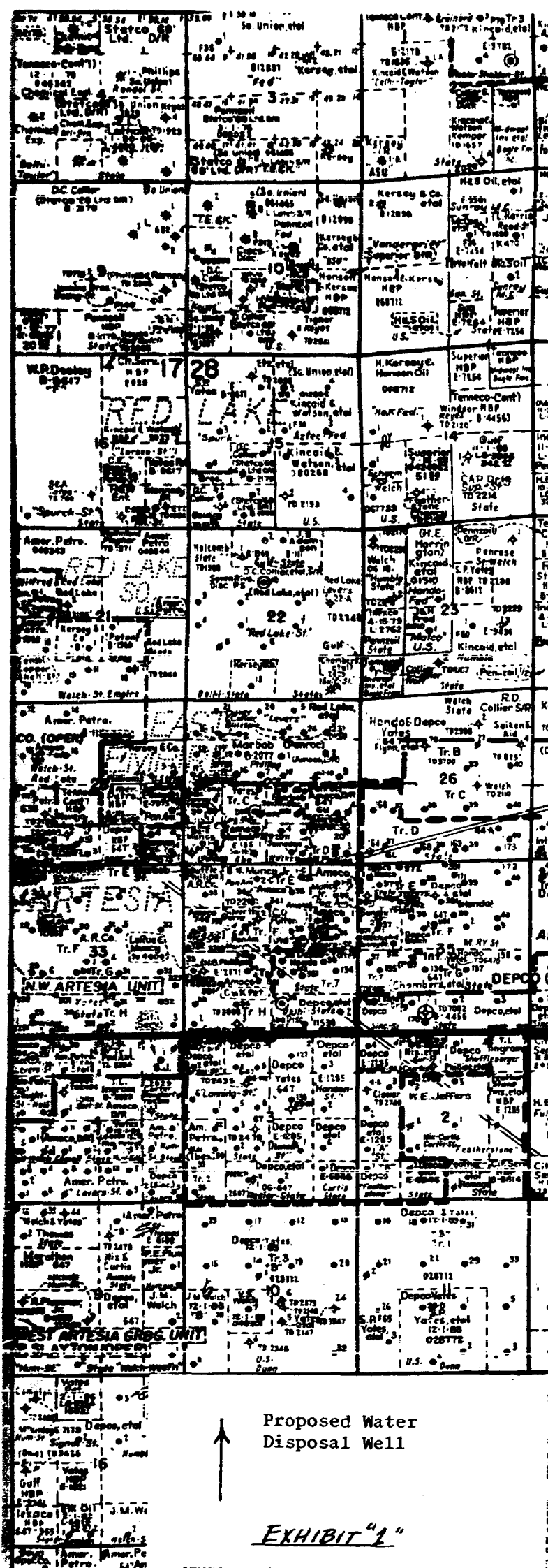
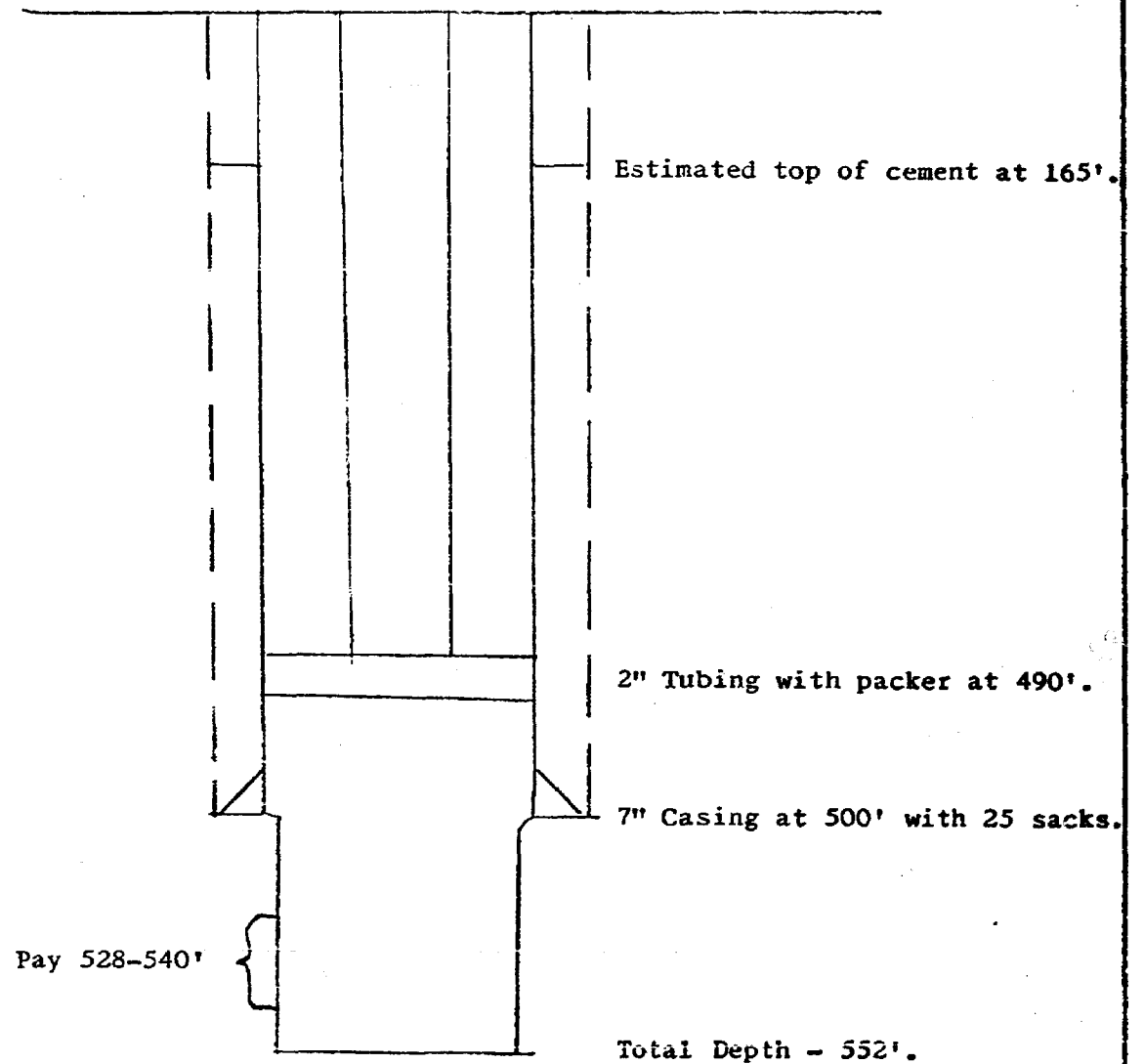


DIAGRAM OF PROPOSED WATER INJECTION WELL

BEATRICE BEDINGFIELD - HASTIE #8

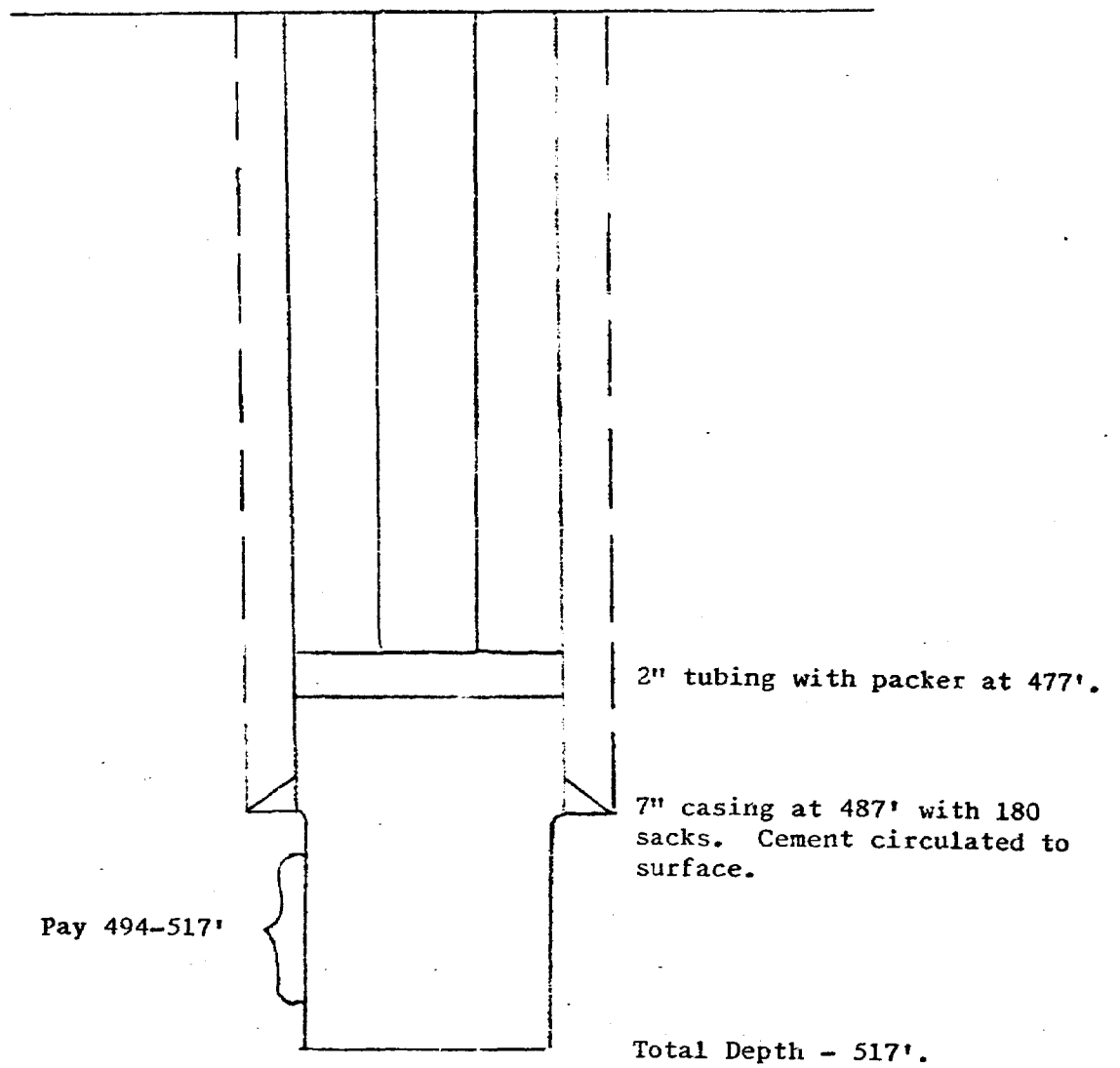


RALPH L. GRAY
PETROLEUM ENGINEERING

EXHIBIT "2"

DIAGRAM OF PROPOSED WATER INJECTION WELL

BEATRICE BEDINGFIELD - SUNRAY STATE #1



RALPH L. GRAY
PETROLEUM ENGINEERING

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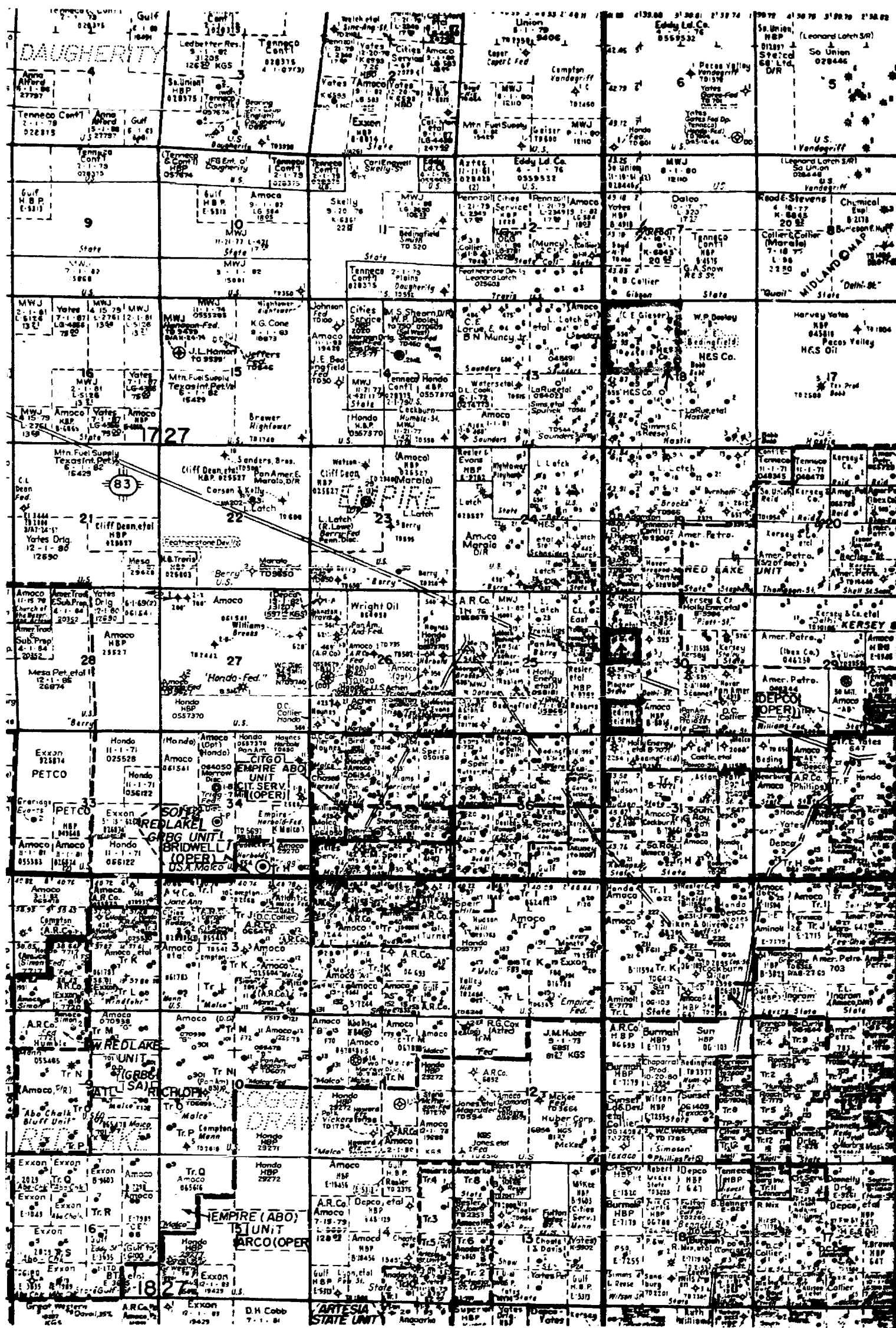
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DATED this 15th day of November, 1977.

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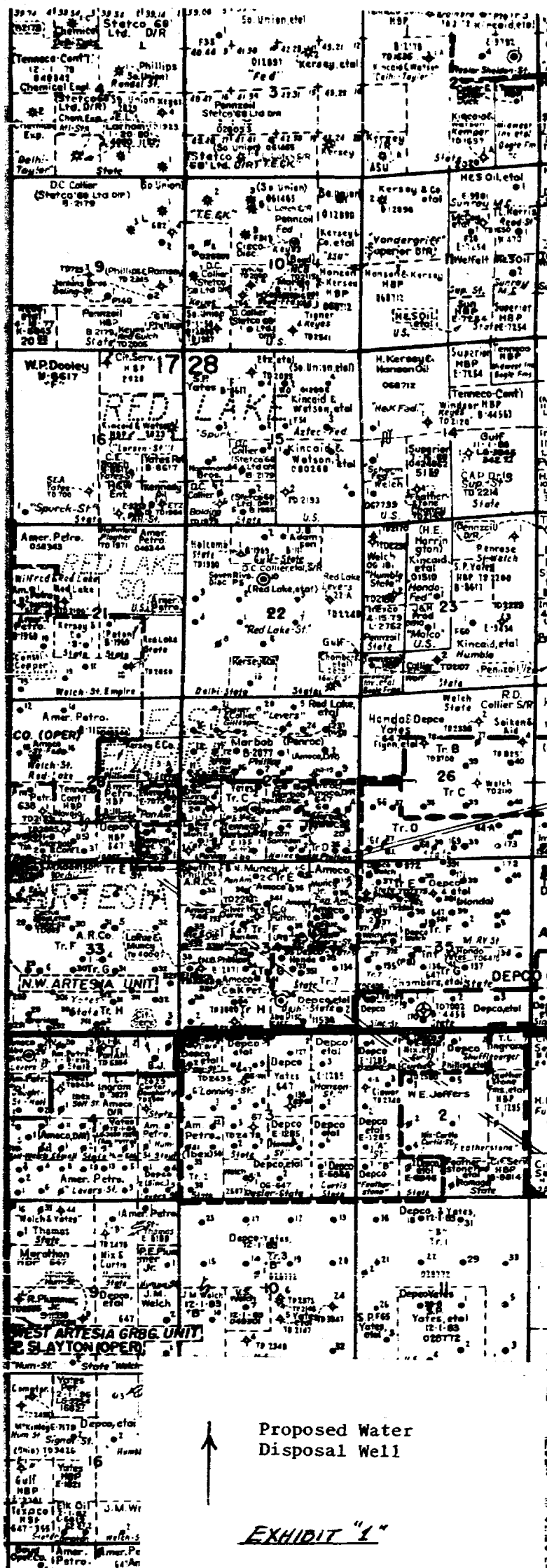
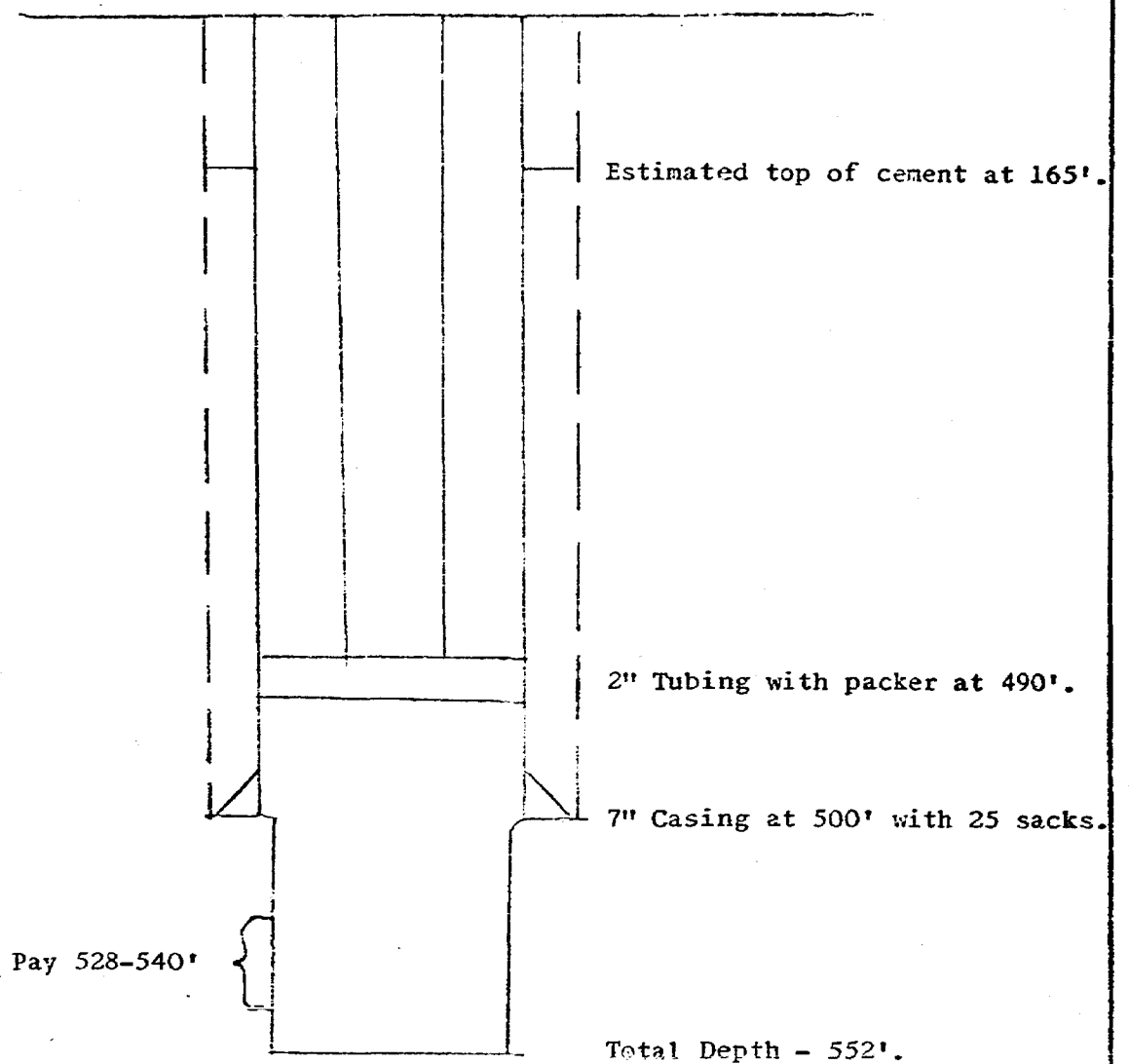


DIAGRAM OF PROPOSED WATER INJECTION WELL

BEATRICE BEDINGFIELD - HASTIE #8

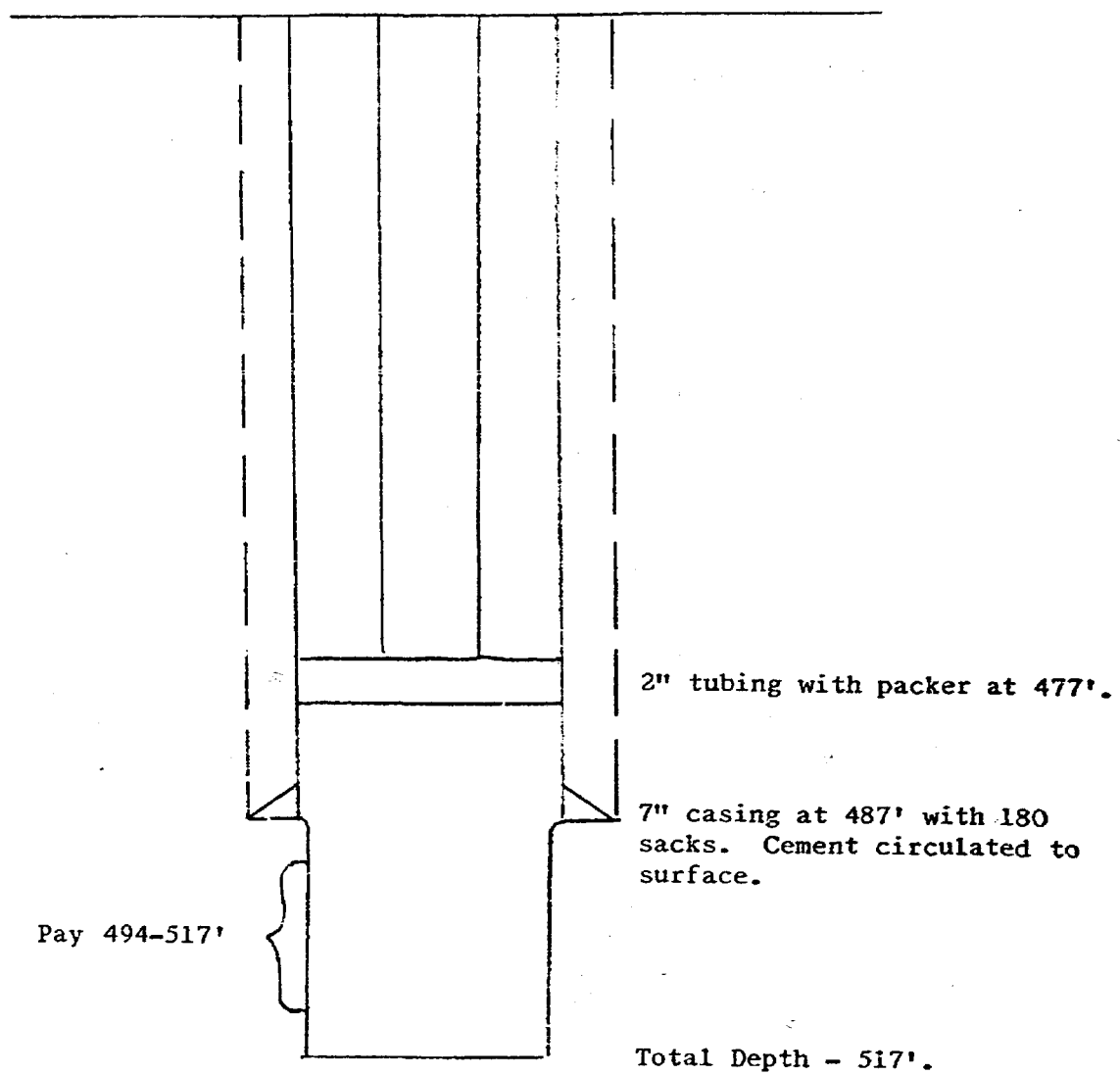


RALPH L. GRAY
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EXHIBIT "2"

DIAGRAM OF PROPOSED WATER INJECTION WELL

BEATRICE BEDINGFIELD - SUNRAY STATE #1



RALPH L. GRAY
PETROLEUM ENGINEERING

EXHIBIT "3"

DRAFT

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 6104

Order No. R- 5619

APPLICATION OF BETRICE BEDINGFIELD FOR
SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on December 14, 1977
at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this day of December, 1977, the Commission,
a quorum being present, having considered the testimony, the
record, and the recommendations of the Examiner, and being fully
advised in the premises,

FINDS:

(1) That due public notice having been given as required by
law, the Commission has jurisdiction of this cause and the subject
matter thereof.

(2) That the applicant, Betrice Bedingfield,
is the owner and operator of the Sunray State Well No. 1

Set under
located in Unit E of Section 30 and the
Hastie Well No 8 located in Unit F
of Section 10, both in Township 17 South,
Range 28 East, NM PM, Empire-Vetos-San Rocio Pool

formation, with injection into the open-hole interval
from approximately 487 feet to 517 feet. ~~in the~~
Sunray State Well No. 1 and from 200 feet to 552 feet in ~~the~~ Hastie Well No. 8.

(4) That the injection should be accomplished through 2
2-inch plastic lined tubing installed in a packer
within 20 feet of the casing shoe;
set at approximately 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

CASE NO. _____

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

(4) That the injection well or system should be equipped with a ^{pressure limiting switch} ~~pop-off valve~~ or acceptable substitute which will limit the wellhead pressure on the injection well to no more than ²⁵⁰ ~~300~~ psi.

Under (5) That ~~the applicant~~ ^{the Secretary - Director of the Commission} should be authorized to administratively grant a higher wellhead injection pressure.

onto the surface.

(8) 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, Betrice Bedingfield, is hereby authorized to utilize ~~her~~ ^{her} Sunray State Well No. 1, located in Unit E of Section 30 / and her Hastie Well No. 8 located in Unit F of Section 10 both in Range 28 East, NMPM, Empire Yates-Seven Rivers Pool, Eddy County, New Mexico, to dispose of produced salt water into the Seven Rivers formation, injection to be accomplished through 2-inch tubing installed in a packer set ^{within 20 feet of the casing shoe,} ~~at approximately~~ feet, with injection into the open-hole interval from approximately 487 feet to 517 feet; and 500 feet to 552 feet, *respectively*.

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 or acceptable substitute which will limit the wellhead pressure on the injection well to no more than ~~700~~²⁵⁰ psi.

(4) That the operator shall notify the supervisor of the Artesia district office of the Commission 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 Commission'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 Commission Rules and Regulations.

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

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

(3) That for good cause shown, the Secretary-Director of the Commission may administratively grant a higher wellhead injection pressure.