

CASE 5800: YATES PET. CORP. FOR SALT
WATER DISPOSAL WELL, EDDY COUNTY, NEW
MEXICO

CASE NO.

5800

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 10, 1976

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Corpora-) CASE
tion for salt water disposal well,) 5800
Eddy County, 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 Lynn Teschendorf, Esq.
Conservation Commission: Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

For the Applicant: Joel M. Carson, Esq.
LOSEE & CARSON, P.A.
Attorneys at Law
300 American Home Building
Artesia, New Mexico

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General Court Reporting Service
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I N D E X

Page

EDDIE MAHFOOD

Direct Examination by Mr. Carson

3

Cross Examination by Mr. Stamets

9

EXHIBIT INDEX

Offered

Admitted

Applicant's Exhibit One, Application

4

12

Applicant's Exhibit Two, Map

5

12

Applicant's Exhibit Three, Diagram. Sketch

6

12

Applicant's Exhibit Four, Log

7

12

Applicant's Exhibit Five, Water Analyses

8

12

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1 MR. STAMETS: We are going to call Case 5800 and
2 then we will take a break and come back for Case 5801.

3 At this time we will call Case 5800.

4 MS. TESCHENDORF: Case 5800, application of Yates
5 Petroleum Corporation for a salt water disposal well, Eddy
6 County, New Mexico.

7 MR. STAMETS: Will the witness please stand and be
8 sworn.

9 (THEREUPON, the witness was duly sworn.)

10 MR. CARSON: Mr. Examiner, my name is Joel Carson,
11 Losee and Carson, Artesia, New Mexico and I appear here for
12 the applicant, Yates Petroleum Corporation. I have one
13 witness, Mr. Eddie Mahfood, who has just been sworn.

14
15 EDDIE MAHFOOD

16 called as a witness, having been first duly sworn, was
17 examined and testified as follows:

18
19 DIRECT EXAMINATION

20 BY MR. CARSON:

21 Q Would you state your name, please?

22 A Eddie Mahfood.

23 Q And, Mr. Mahfood, what is your job?

24 A I'm the Chief Engineer for Yates Petroleum Corpora-
25 tion, Artesia.

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1 Q Are you an engineer by profession?

2 A Yes, sir.

3 Q Have you previously testified before the Commission?

4 A Yes, sir.

5 Q And your qualifications are on file here?

6 A Yes, sir.

7 MR. CARSON: Are his qualifications acceptable?

8 MR. STAMETS: They are.

9 Q (Mr. Carson continuing.) Mr. Mahfood, referring you
10 to what has been marked as Applicant's Exhibit Number One,
11 which is the application to dispose of salt water by injection
12 into a porous formation, could you tell us generally what the
13 purpose of your application is and what you propose to do?

14 A We have a considerable amount of produced water which
15 we need to dispose of and at the present time we are disposing
16 of it in the San Andres formation and it's not moving any
17 oil, it's a new system that it has just been through the
18 formation and is recycled over and over again so we need to
19 get it out of the way and we feel that this proposed injection
20 well would be a good place to dispose of this water.

21 MR. STAMETS: A San Andres disposal well, is that
22 one in the Penasco San Andres?

23 A Yes, sir, we have three, one in the -- we have
24 four, there are two in Eagle Creek and two in Penasco Draw.

25 Q (Mr. Carson continuing.) And where is your

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1 proposed disposal well located, Mr. Mahfood?

2 A In Unit J of Section 21, Township 18 South, Range
3 26 East, which is in the Dayton town site area.

4 Q How much water do you anticipate that you will put
5 into this well each day?

6 A At the present time we are having to dispose of
7 a thousand and fifty barrels a day and this well is capable
8 of moving twenty-six hundred barrels a day.

9 Q At what type pressures?

10 A At six hundred pounds surface pressure.

11 Q Mr. Mahfood, you prepared this Exhibit Number One,
12 did you not?

13 A Yes, sir.

14 Q Now, I'm going to refer you to Applicant's Exhibit
15 Number Two and ask you if that was prepared under your
16 supervision or by you?

17 A Yes, sir, it was.

18 Q Would you tell the Examiner what that Exhibit
19 purports to show?

20 A This is a lease ownership map showing all the
21 wells within the vicinity of the proposed injection well and
22 their ownership. The red star is the proposed disposal well.
23 The circled and colored green, there are ten of these wells
24 which are all Morrow completions in the Atoka Penn and having
25 bottom-hole pressures of five hundred pounds or less.

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1 The green stars are Atoka Penn wells with pressures
2 much in excess of five hundred pounds, some of them are fairly
3 new wells.

4 Q What does the green with the slash marks through
5 it stand for?

6 A Those are wells that have been depleted or watered
7 out and we assume that they are in the same reservoir as the
8 ones in the green circles.

9 Q Mr. Mahfood, referring you to Applicant's Exhibit
10 Number Three, would you explain to the Examiner what that is?

11 A This is a diagrammatic sketch of the proposed
12 injection well. Now, we have depicted that on here showing
13 the casing in the well, the packers, the perforations,
14 the treatment and we are proposing to replace its two inch
15 tubing now in the well with three inch plastic coated tubing
16 and set it in a Guidberson Unit Six unified packer or the
17 equivalent of.

18 We propose to fill the annulus with inhibited fresh
19 water.

20 Q And where is your cement?

21 A The top of the cement in this well is at sixty-two,
22 forty.

23 MR. STAMETS: How was that determined?

24 A By a temperature survey.

25 Q (Mr. Carson continuing.) And where is your packer?

1 A. We propose to set a packer at eighty-nine, fifty,
2 approximately.

3 Q. And at what levels do you propose to dispose of this
4 water?

5 A. All in the Morrow formation. We have perforations
6 from eighty -- on Exhibit One we show the top of the perfora-
7 tions at eighty-nine, eighty-three and the bottom perforations
8 at nine-one, twenty-nine. On Exhibit Three I have the
9 perforations starting at the bottom and coming to the top, so
10 we show perforations at ninety-one, twenty-eight to eighty-nine
11 eighty-three.

12 Q. Okay, they are all shown there on Exhibit Three, are
13 they not?

14 A. Yes.

15 Q. And what type of packer do you propose to use?

16 A. This will more than likely be a Guidberson Unified
17 Packer.

18 Q. Mr. Mahfood, referring you to Applicant's Exhibit
19 Number Four which is a log of this well, was that exhibit
20 prepared by you or under your supervision?

21 A. Yes, sir.

22 Q. Would you explain to the Examiner what that Exhibit
23 purports to show?

24 A. This is a gamma ray neutron log of the proposed
25 disposal well, showing the Morrow zone with perforations. The

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1 perforations are marked in red on this log and we have a
2 few notes there showing the permeability and porosity from
3 core analyses on this formation.

4 Q Referring you to Applicant's Exhibit Number Five,
5 which is a series of water analyses showing typical water
6 samples from the wells in which this water is produced, would
7 you, without going into each one, explain to the Examiner what
8 those analyses purport to show?

9 A We have a typical analysis of this Atoka Penn and
10 several analyses of waters from Eagle Creek, Penasco Draw,
11 Dayton and Canyon formations. The purpose is to show that the
12 waters will be compatible. There will be no blockage or
13 damage to the injection well and the water is too highly
14 mineralized to be disposed of in any other manner than to
15 dispose of it in this formation.

16 MR. STAMETS: Mr. Mahfood, how was the compatibility
17 of the water determined?

18 A We compared the sulphates, the bicarbonates, the
19 carbonates and determined the point at which scaling would begin,
20 where the deposition of solids would occur. We find that the
21 saturations are low enough so this would not happen.

22 MR. STAMETS: Okay.

23 Q (Mr. Carson continuing.) Mr. Mahfood, these
24 water analyses and the opinion of Chemex as to their com-
25 patability, this was all done at your request and you agree

1 with the conclusions, do you not?

2 A Yes, sir.

3 Q Now, Mr. Mahfood, do you believe that the approval
4 of this application will prevent the drilling of unnecessary
5 wells and will otherwise prevent waste and protect correlative
6 rights?

7 A Yes, I do.

8 MR. CARSON: No further questions.

9

10 CROSS EXAMINATION

11 BY MR. STAMETS:

12 Q Mr. Mahfood, was the proposed injection well depleted
13 or watered out in the Atoka Pennsylvanian?

14 A It is at a state of depletion where it is producing
15 only fifty or less MCF per day.

16 Q At what wellhead pressure?

17 A About two hundred and eighty pounds wellhead pressure.

18 Q Did you make any determination as to what kind of
19 reserves would be lost by converting this well to water
20 injection?

21 A No, sir, but we have had requests from other owners
22 in this well to plug and abandon the well because they con-
23 sidered it uneconomical to produce.

24 Q Other working interest owners?

25 A Other working interest owners in this well.

1 Q What is the structural position of the Bob Gushwa
2 Well related to producing wells in the Atoka Pennsylvanian
3 Pool? Is this well lower structurally or on strike?

4 A Yes, it's just lower structurally. If you refer
5 to Exhibit Two you will notice that there are five wells with
6 a strike through them on the southeast side there. There is
7 one encroachment from the southeast and the Bob Gushwa would
8 be just a little bit higher than these wells. The highest
9 wells would be to the northwest.

10 Q Is that Pan American well in the northwest quarter of
11 Section 22, 18, 26 still producing?

12 A Yes, sir, it's making approximately fifty or sixty
13 MCF a day.

14 Q Okay. Have you made any calculations as to how much
15 reservoir you would likely fill up with this water, what area
16 you may be affecting in the Pennsylvanian?

17 A I have taken the cumulative production of these ten
18 wells and come up with a reservoir voidage of forty-four
19 million barrels from the ten wells alone. Now, if you consider
20 the additional five wells that have watered out as far as
21 reservoir voidage -- however, we have had this water encroach-
22 ment so I'm discounting that.

23 Q Fifty-five million barrels and you are going to put
24 in eleven hundred barrels a day?

25 A Yes, sir. It would take a hundred and forty years

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1 to fill that up.

2 Q A hundred and forty years. Okay, that's the figure
3 I was looking for.

4 Have you taken a look at the method of completion or
5 the current status of these closest offset wells in the
6 Pennsylvanian to determine that they won't provide an avenue
7 for this water to escape to other formations, assuming that
8 it should get there?

9 A No, sir, I have not checked this out, except I know
10 all the wells have packers in them and they are cemented real
11 high.

12 Q This is information which the Commission has been
13 requiring in preparation for what we consider the Federal rules
14 to be under the Underground Injection Control Program and I
15 would like to have that information relative to the method of
16 completion or current status of the offset Pennsylvanian wells.

17 A Okay.

18 Q I believe you indicated that this well would take
19 twenty-six hundred barrels a day at four hundred pounds, how
20 did you arrive at that figure?

21 A Last year we treated the Bob Gushwa well at two point
22 seven barrels per minute with twenty-six hundred pound surface
23 pressure down two inch tubing so the minimum at six hundred
24 pounds would be twenty-six hundred barrels a day. I expect
25 it to be more in the neighborhood of three thousand barrels a

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1 day because there was considerable friction loss through the
2 two inch tubing whereas we are proposing three inch tubing
3 for this well.

4 Q Recent Commission orders have limited surface
5 pressure to no more than two tenths of a pound per foot of depth
6 which in this case would be eighteen hundred pounds. Is that
7 an acceptable limit for this well?

8 A Yes.

9 Q Also we have required risers on the wells so that
10 it will assist Commission personnel in taking periodic
11 Bradenhead surveys to determine there is no leakage. I take
12 it that will be acceptable?

13 A That will be acceptable.

14 MR. STAMETS: Are there any other questions of the
15 witness? He may be excused.

16 (THEREUPON, the witness was excused.)

17 MR. STAMETS: Is there anything further in this case?

18 MR. CARSON: Nothing further.

19 MR. STAMETS: The case will be taken under advisement
20 and we will take a fifteen minute recess.

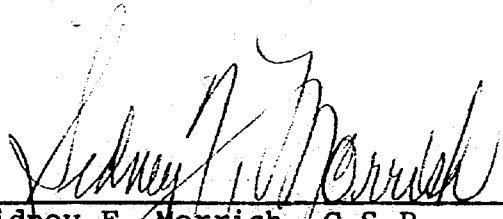
21 MR. CARSON: I would ask that Applicant's Exhibits
22 One through Five be admitted.

23 MR. STAMETS: Applicant's Exhibits One through Five
24 will be admitted.

25 (THEREUPON, Applicant's Exhibits One through
Five were admitted into evidence.)

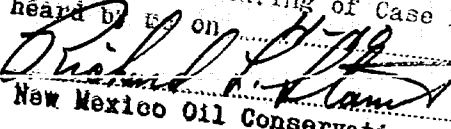
REPORTER'S CERTIFICATE

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, C.S.R.

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Phone (505) 982-9212

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 5800
heard by me on 4-7-76 1976
, Examiner
New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

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



DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO
December 6, 1976

STATE GEOLOGIST
EMERY C. ARNOLD

Mr. Joel Carson
Losee & Carson
Attorneys at Law
Post Office Box 239
Artesia, New Mexico 88210

Re: CASE NO. 5800
ORDER NO. R-5322

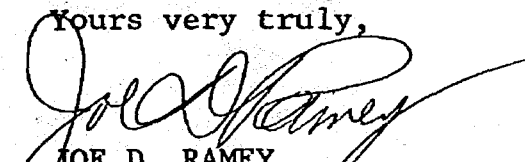
Applicant:

Yates Petroleum Corporation

Dear Sir:

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

Yours very truly,


JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC X
Artesia OCC X
Aztec OCC

Other

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. 5800
Order No. R-5322

APPLICATION OF YATES PETROLEUM
CORPORATION FOR SALT WATER DISPOSAL
WELL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 10, 1976, at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this 30th day of November, 1976, 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, Yates Petroleum Corporation, is the owner and operator of the Bob Gushwa Well No. 1, located in Unit J of Section 21, Township 18 South, Range 26 East, NMPM, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Morrow formation, with injection into the perforated interval from approximately 8,983 feet to 9,129 feet.

(4) That the injection should be accomplished through 3-inch plastic lined tubing installed in a packer set at approximately 8,950 feet; that the casing-tubing annulus should be filled with an inert fluid; 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; and that the well should be equipped to facilitate the periodic testing of the annular space between production and surface casing.

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Case No. 5800
Order No. R-5322

(5) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 1800 psi.

(6) 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.

(7) 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.

(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, Yates Petroleum Corporation, is hereby authorized to utilize its Bob Gushwa Well No. 1, located in Unit J of Section 21, Township 18 South, Range 26 East, NMPM, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, to dispose of produced salt water into the Morrow formation, injection to be accomplished through 3-inch tubing installed in a packer set at approximately 8,950 feet, with injection into the perforated interval from approximately 8,983 feet to 9,129 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; 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; and that the casing-casing annulus shall be equipped with a riser to facilitate periodic testing of the bradenhead for pressure or fluid production.

(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 1800 psi.

(3) 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.

-3-

Case No. 5800
Order No. R-5322

(4) 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 or any other evidence of fluid migration from the injection well and shall take such steps as may be timely and necessary to correct such failure or leakage.

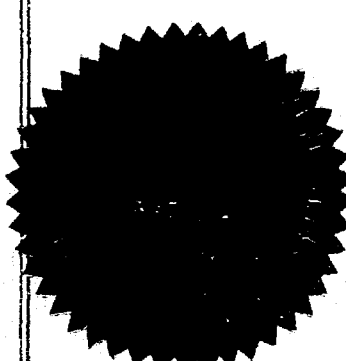
(5) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules, and Regulations.

(6) 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

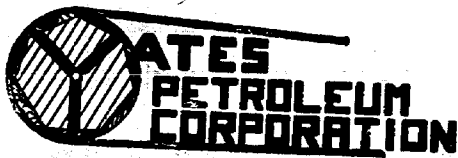


Emery C. Arnold
EMERY C. ARNOLD, Member

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

S E A L

dr/



YATES BUILDING - 207 SOUTH 4TH ST.
ARTESIA, NEW MEXICO - 88210

S. P. YATES
PRESIDENT
MARTIN YATES, III
VICE PRESIDENT
JOHN A. YATES
VICE PRESIDENT
B. W. HARPER
SEC. - TREAS.

NOV 23 1976
OIL CONSERVATION COMM.

November 22, 1976

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

ATTENTION: R. L. Stamets

Re: Case 5800, Application for
Salt Water Disposal, Atoka Penn

Dear Sir:

Herewith are diagrammatic sketches of wells in the Atoka Penn in the same state of depletion as the proposed disposal well, Bob Gushwa Gas Com #1. Please note that all the wells have packers on the tubing near the Morrow perforations, all have 1400 feet of cement or more above the Morrow pay, all have 2" valves on bradenhead and only two requiring risers.

The writer believes that a condition exists where active wells in the same reservoir as our Bob Gushwa can be checked for entry in their wellbore of fluid injected into our disposal well.

If additional information is needed, please advise.

Thank you.

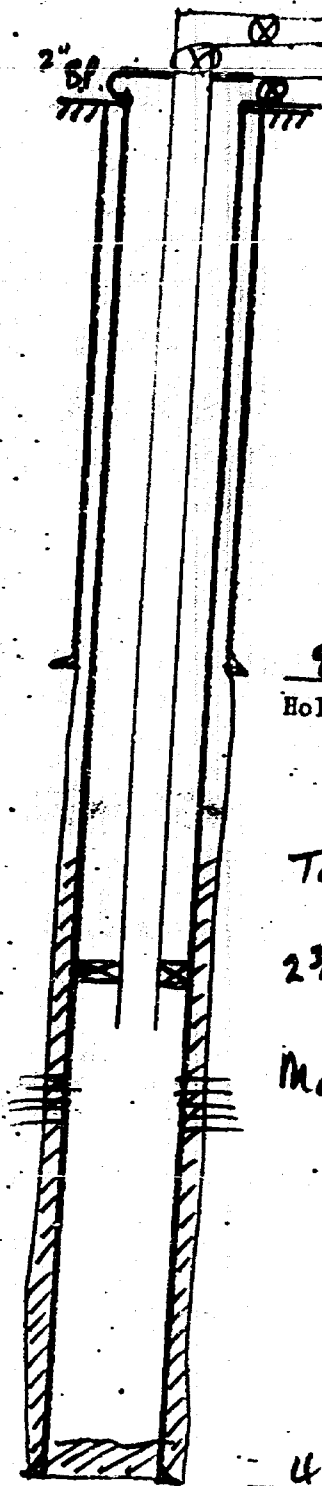
Yours very truly,

YATES PETROLEUM CORPORATION

By: Eddie M. Mahfood
Eddie M. Mahfood
Petroleum Engineer

EMM:jg
Encl.

FIELD	Atoka Penn	OPERATOR	M.W.J	DATE Inspected	11-19-76
LEASE	Hondo LFE	WELL No	1	LOCATION	P-19-18S-26E, Eddy Co.



2" gate valve, closed.

8 7/8" casing set at 1291' with 1410 sx of _____ cement
Hole size _____"

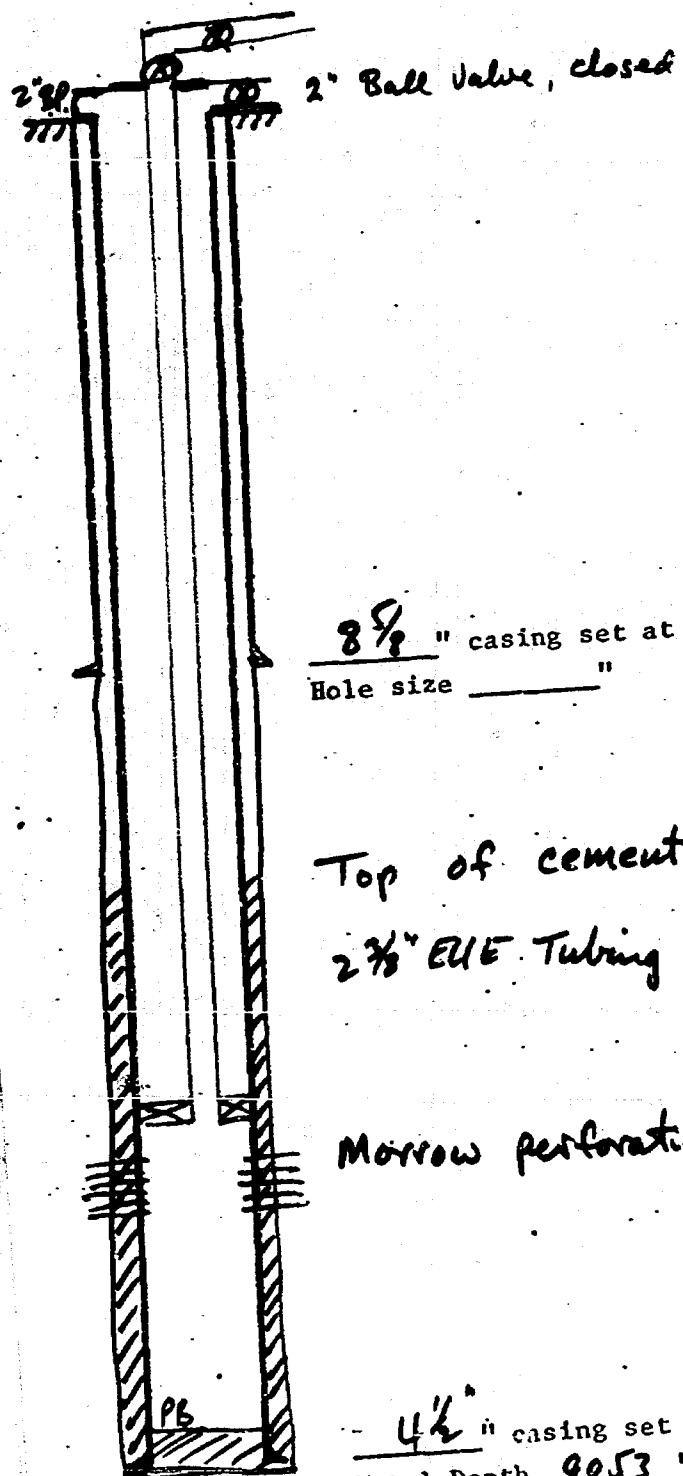
Top of cement @ 7450'

2 3/8" EUE Tubing in packer @ 8937'; btm of tbg @ 9072'

Narrow perforations - 8992-9020, 9056-9069

4 1/2" casing set at 9124' with 300 sx of _____ cement
Total Depth 9124' Hole size 7 7/8"

FIELD	Atoka Penn	OPERATOR	Read & Stevens	DATE Inspected	11-19-76
LEASE	Irene Brainard Gas Co	WELL No	1	LOCATION	E-20-185-26E, Eddy Co



8 7/8 " casing set at 1225' with 500 sx of _____ cement
Hole size _____ "

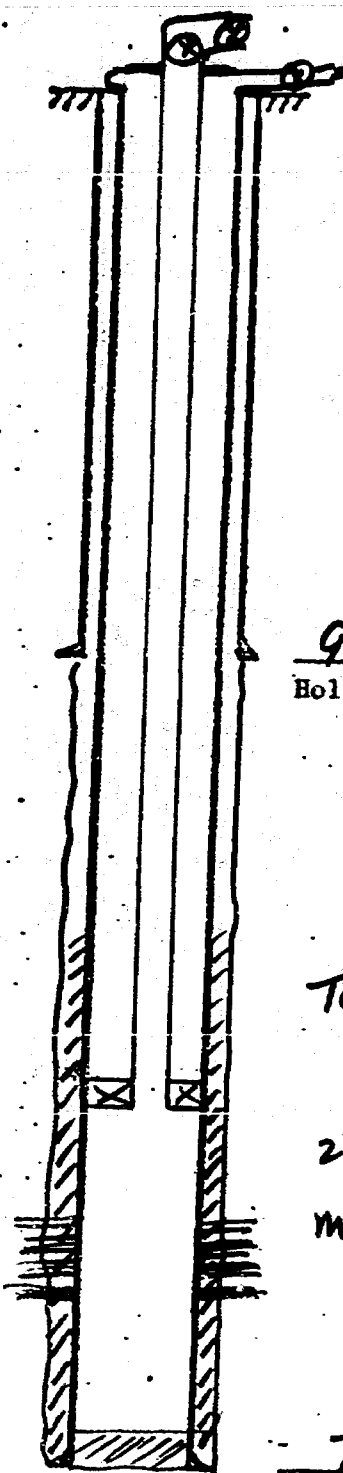
Top of cement @ 7360'

2 7/8 " EUE Tubing landed in Baker model FA pkr @ 8800'

Morrow perforations 8900-8944

4 1/2 " casing set at 9052' with 300 sx of Incor-Pog cement
Total Depth 9053' Hole size 7 7/8 "

FIELD	Atoka Penn	OPERATOR	Marathon	DATE Inspected	11-17-76
LEASE	Ethel V. Noel	WELL NO.	1	LOCATION	P-20-18S-26E Sddy 6



2" Flanged Valve w/ tapped bull plug & 1/4" Valve open to hq-csg annulus

9 3/4" casing set at 1237' with _____ sx of _____ cement
Hole size _____"

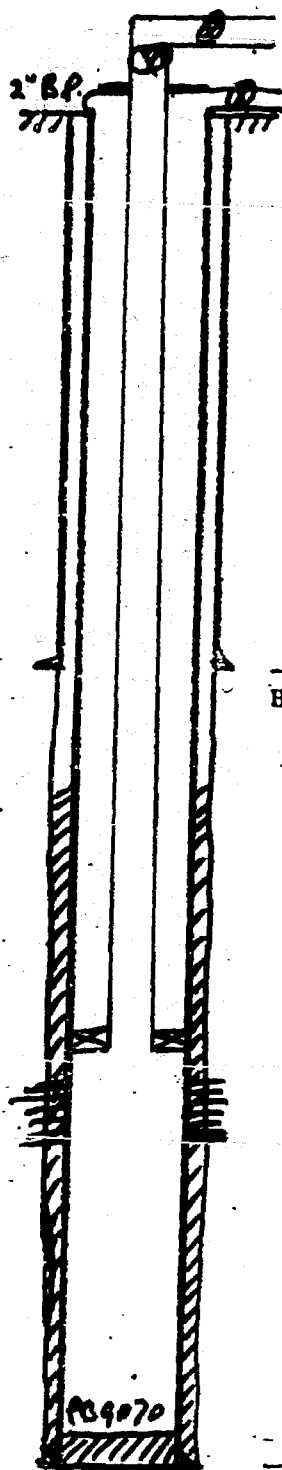
Top of cement @ 7295' by Temperature survey

2 3/8" EUE Tubing in packer @ 8400'

Marrow perforations 8992-9001, 9006-9020, 9029-9042,
and 9090-9100.

7" casing set at 9155' with 275 sx of ^{Trim-inferno} 29.9% cement
Total Depth 9157' Hole size 8 3/4"

FIELD	Atoka Penn	OPERATOR	Yata Petroleum	DATE	Inspected 11-19-76
LEASE	Dayton Townsite	WELL NO.	1	LOCATION	Unit G-21-18s-265, Eddy Co.



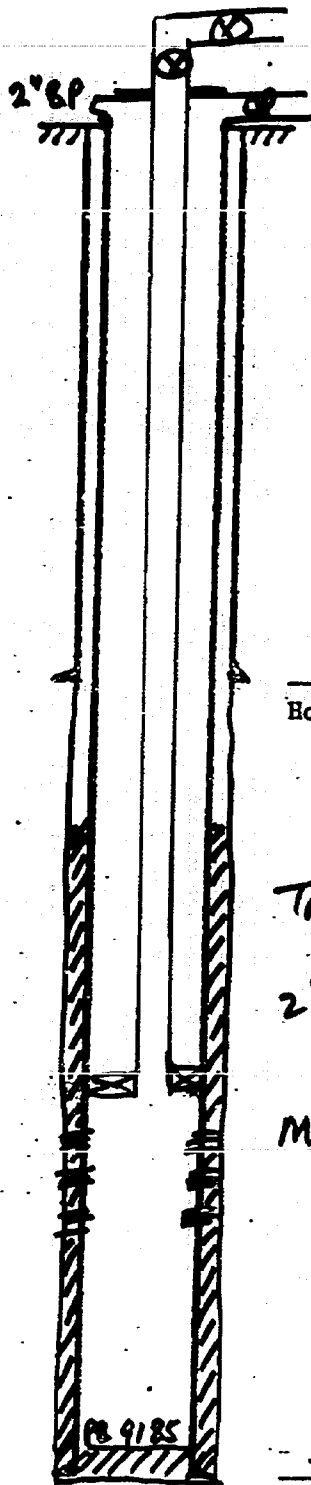
2" gate valve w/ tapped bull plug & 1/4" valve, 2" valve closed

8 7/8" casing set at 1226' with 400 sx of cement
Hole size _____"

Top of cement @ 6490 by temperature survey
2 3/4" EUE Tubing on packer @ 8950'
Morrow perforations 8978-8992 w/ 56 holes

5 1/2" casing set at 9145' with 600 sx of ~~Thin-Inferno~~ cement
Total Depth 9145' Hole size 7 7/8"

FIELD	Atoka Penn	OPERATOR	Yates Petroleum	DATE	Inspected 11-19-76
LEASE	Len Mayer Gas Com	WELL No	1	LOCATION	



2" gate valve w/ tapped bull plug & 1/2" valve, valves covered with fill in cellar at time of inspection, but will install riser.

8 7/8" casing set at 1255' with 400 sx of cement
Hole size _____"

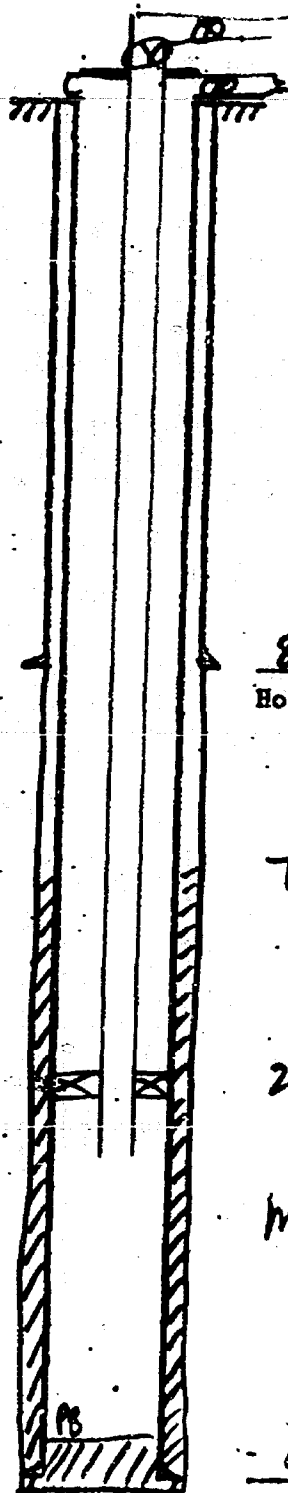
Top of cement @ 6540' by temperature survey

2 3/8" EUE tubing on packer @ 8907' (Baker double-grip).

Marrow perforations 9009-9017, 9098-9106, 9158-9172

5 1/2" casing set at 9225' with 600 sx of Prim-Sulfur cement
Total Depth 9225' Hole size 7 7/8"

FIELD	Atoka Penn	OPERATOR	Amoco	DATE Inspected	11-19-76
LEASE	Lee "C" Gas Com	WELL NO	1	LOCATION	E-22-18S-26E, Eddy Co



2" gate valve w/ tapped bull plug & pres. gauge (frogs on 250psi)

8 5/8" casing set at 1276' with _____ sx of _____ cement
Hole size _____"

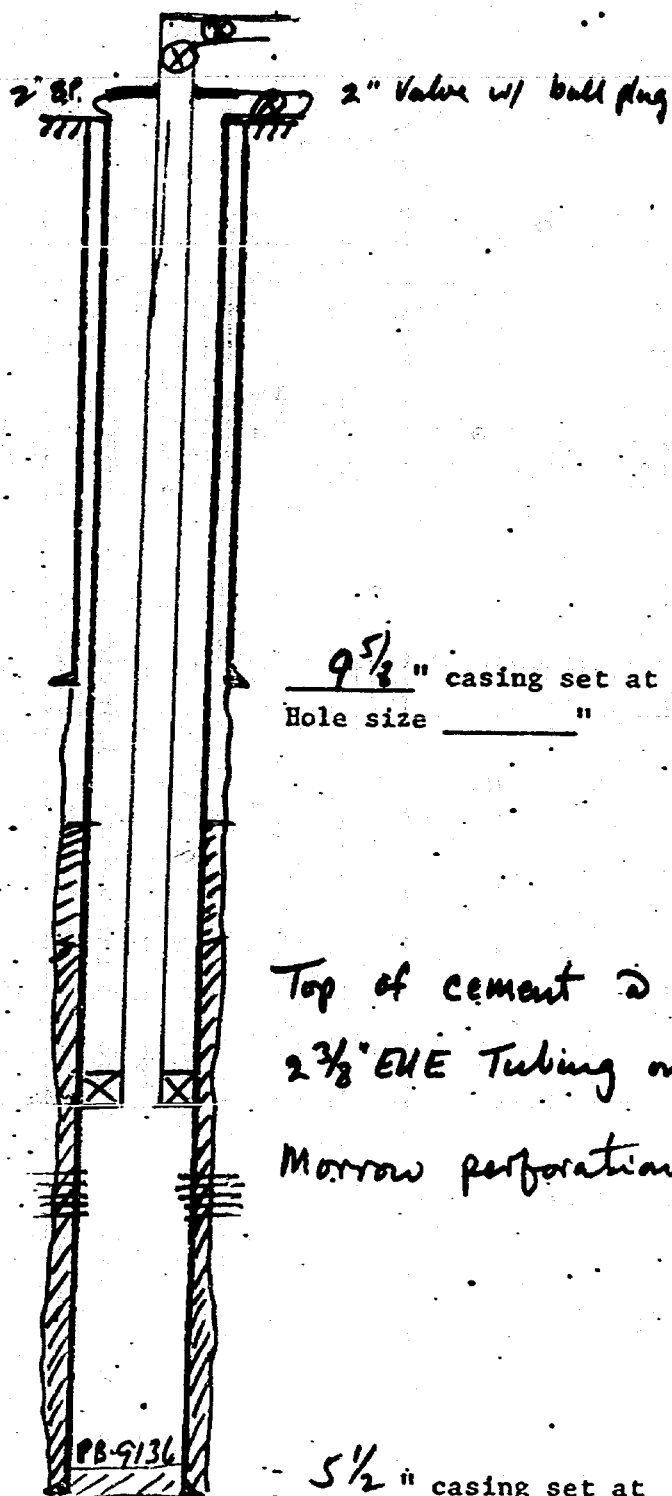
Top of cement @ 6650 by temp. survey

2 3/8" EHE Tubing on pkr @ 8949, btm of tbg @ 8990

Morrow perforations 9003-9025' w/ 4/8t.

4 1/2" casing set at 9380' with 525 sx of _____ cement
Total Depth 9416' Hole size 7 7/8"

FIELD	Atoka Penn	OPERATOR	Marathon	DATE Inspected	11-17-26
LEASE	Arndquist Est.	WELL NO	1	LOCATION	F-29-185-26E, Eddy Co.



9 5/8" casing set at 2009' with 1450 sx of _____ cement
Hole size _____"

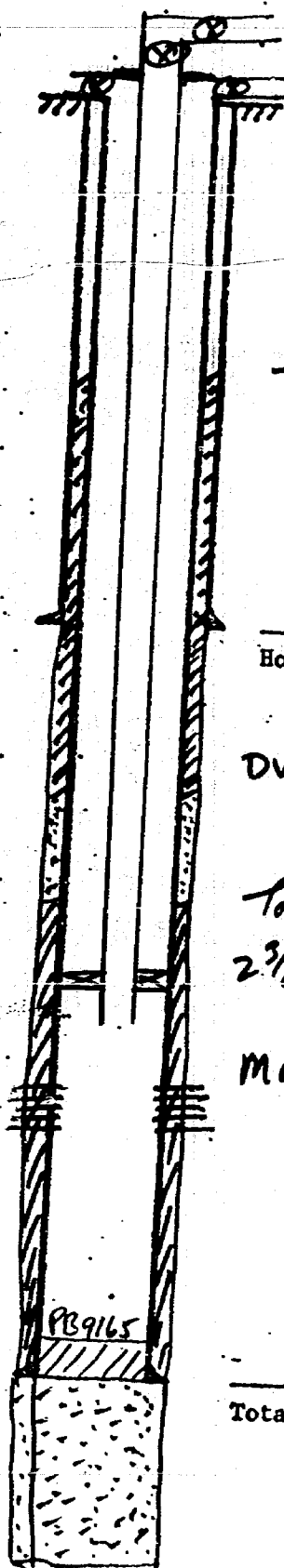
Top of cement @ 7700' by temp. survey

2 3/8" EHE Tubing on packer @ 9012'

Morrow perforations 9060-9120', 2/ft.

5 1/2" casing set at 9177' with 225 sx of Trim-inferno 3 1/2 gal cement
Total Depth 9178' Hole size 7 7/8"

FIELD	Atoka Penn	OPERATOR	Marathon	DATE Inspected	11-17-76
LEASE	Ralph Nix	WELL NO	1	LOCATION	J-29-135-26E, Eddy Co.



2-2" Valves on Bradenhead, closed.

Top of cement @ 500' by temp. survey

9 7/8" casing set at 1507' with 1050 sx of _____ cement
Hole size _____"

DV tool @ 2938' w/ 450 sv

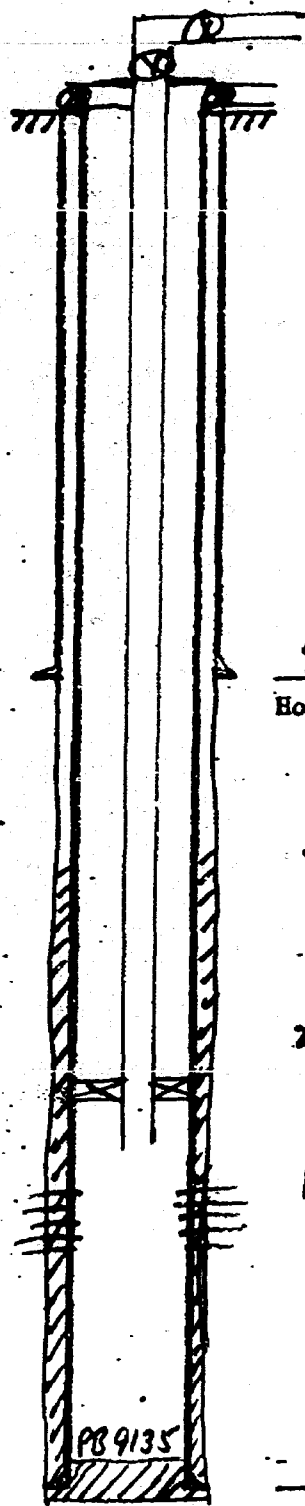
Top of cement @ approx 6200'

2 3/8" Tubing on packer @ 9040'; btm of Hg @ 9087'

Marrow perforations @ 9070-9115'

7" casing set at 9218' with 420 sx of Trin. in Leno cement
Total Depth 10190' Hole size 8 3/4"

FIELD	Atoka Penn	OPERATOR	Marathon	DATE Inspected	11-17-76
LEASE	Guy Nickerson "A"	WELL NO.	1	LOCATION	A-30-18S-26E, Edley Co



2" valve, buried, needs riser.

8 7/8" casing set at 2002' with 1360 sx of _____ cement
Hole size _____"

Top of cement @ 6350'

2 1/2" EUE Tubing on packer @ 8880', btm of tbg @ 8897'

Morrow perforations 8912-9076

5 1/2" casing set at 9178' with 495 sx of Trin-Inferno cement
Total Depth 9200' Hole size 7 7/8"

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Yates Petroleum Corporation		ADDRESS 207 So. 4th, Artesia, NM 88210	
LEASE NAME Bob Gushwa	WELL NO. 1	FIELD Atoka Penn	COUNTY Eldy
LOCATION UNIT LETTER J WELL IS LOCATED 1650 FEET FROM THE South LINE AND 1650 FEET FROM THE East LINE, SECTION 21 TOWNSHIP 18S RANGE 26E NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	8 5/8"	1175	450
INTERMEDIATE			
LONG STRING	5 1/2"	9229	600
TUBING	3"	8950	NAME, MODEL AND DEPTH OF TUBING PACKER Guiberson UNI-V or Baker Model R
NAME OF PROPOSED INJECTION FORMATION Morrow		TOP OF FORMATION 8983	BOTTOM OF FORMATION 9129
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES Perforations	PROPOSED INTERVAL(S) OF INJECTION 8983-9129
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Producer Natural Gas		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 8983-85, 9021-26, 9033-35, 9051-69, 9118-29			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 1110		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA 3580	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 550	MINIMUM 5000	MAXIMUM 5000	OPEN OR CLOSED TYPE SYSTEM Closed
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes		IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	
APPROX. PRESSURE (PSI) 600		NATURAL WATER IN DISPOSAL ZONE Yes	
ARE WATER ANALYSES ATTACHED? Yes		ARE WATER ANALYSES ATTACHED? Yes	
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Yates Petroleum Corp. 207 So. 4th St., Artesia, NM 88210			
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Yates Petroleum Corp. 207 So. 4th St., Artesia, NM 88210			
Amoco Production Co. Box 1725 West Bldg, Midland, TX 79701			
Mobil Oil Corp., Box 633 Wall Towers West Midland, TX 79701			
BEFORE EXAMINERS OIL CONSERVATION COMMISSION CASE NO. 5800 Submitted by Applicant Hearing Date _____			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?	SURFACE OWNER X		THE NEW MEXICO STATE ENGINEER X
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?	PLAY OF AREA X		DIAGRAMMATIC SKETCH OF WELL X
	ELECTRICAL LOG X		

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Eddie M. Mahfood
(Signature)

Eddie M. Mahfood Engineer
(Title)

9-21-76
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

[illegible]

Diagrammatic Sketch of Proposed Injection Well

Bob Gushwa Com No. 1, 1650/S 1650/E Sec 21-18s-26E, Eddy Co.

Ground Elevation: 3373' = 3382' KB

Spudded... 1-13-61

TD Reached. 2-20-61

Completed: 3-14-61

ACFP: 30 mm cfpd

Re-worked: June 1974

Top of San Andres @ 902'

Base of Water @ 1110'

Tbg Annulus w/ 2" Valve, plug & gauge

10" x 8 1/2" Bradenhead

8 1/2" csg cmtd to surface

11" hole to 1175' KB

8 1/2" 24" J-55 @ 1175' KB cmtd w/ 500 ss

Mud in casing-hole annulus.

Top of cement @ 6240' KB

Proposed: 3" Plastic-coated tubing
on Guiberson UHM-V Pkr (or equivalent)
set at approx 8950' KB, annulus loaded
w/ inhibited fresh water.

Top of Atoka @ 8693' KB

Top of Morrow @ 8966' KB

Perf 9052-9069, flowed 2200 mcf per
Ttd 1000g, 15% @ 11550 g. c.i. flowed 3700 mcf
SEF 3500" 20/40 in 28980g. oil, 11P-6000 mi

Perf 9118-9129 - Untreated

ACFP - 30 mm cfpd.

W/O 6174:

Perf 9118-28/11 jets, 9057-67/11 jets, 9018-26/32 jet
8983-85/2 jets, total w/ 1000g. 15% MISA

5 1/2" 15.5" J-55 @ 9229' KB cmtd w/ 600 ss

7 1/2" hole to 9260' TD

BEFORE EXAMINER STAMET
OIL CONSERVATION COMMISSION

EXP PBTD: 9173' KB

CASE NO

5850

Submitted

App

Hearing Date

Exhibit

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS



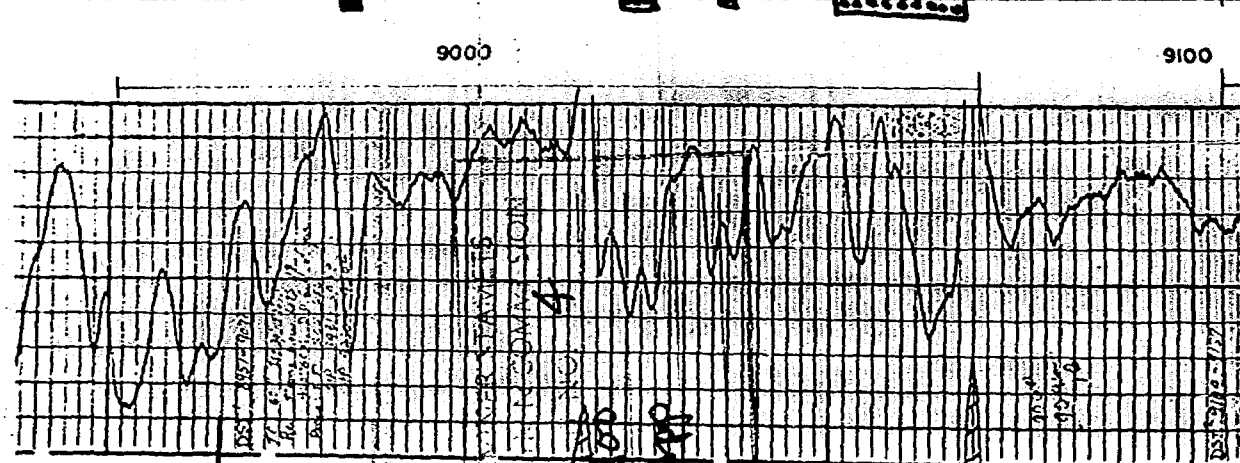
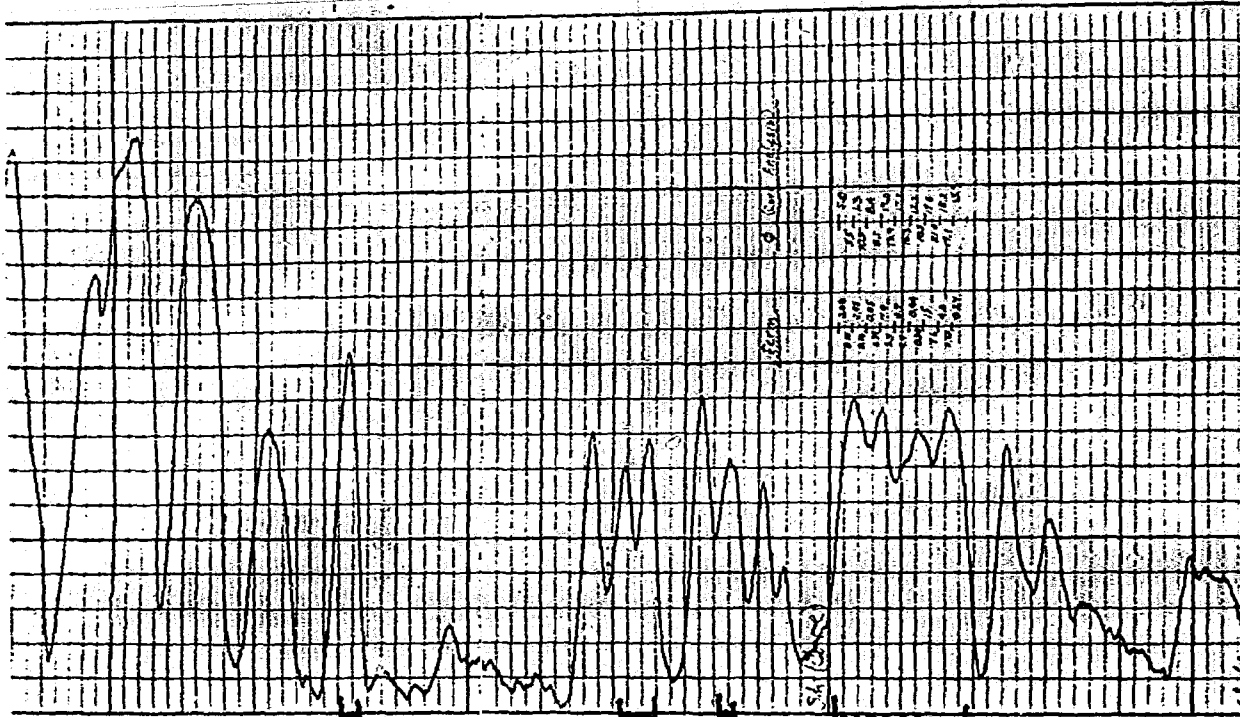
Handwritten notes:
 11-11-61
 11-11-61
 11-11-61

COUNTY FIELD or LOCATION WELL COMPANY	ATOKA PENN	COMPANY	YATES PETROLEUM CORPORATION
	BOB GUSHWA #1	YATES BROTHERS GEOLOGICAL FILE	
	ATOKA PENN	WELL	BOB GUSHWA #1
	EDDY	COUNTY	EDDY
	NEW MEXICO	STATE	NEW MEXICO

Permanent Datum: GROUND LEVEL	Elev.: 3373	Elev. K.B. 3387
Log Measured From K.B.	1 1/2 Ft. Above Perm. Datum	D.F. 3386
Drilling Measured From K.B.		G.L. 3373

Date	2-20-61
Run No.	1
Type Log	GNT-G
Depth—Driller	9231
Depth—Logger	9233
Bottom logged interval	9232
Top logged interval	100
Type fluid in hole	GEL-DR. SCOSE-QUEB.-CAUSTIC SODA OIL
Salinity, PPM Cl.	8000
Density	9.1
Level	FULL
Max rec. temp., deg F.	140
Operating rig time	4 HOURS
Recorded by	HURST
Witnessed by	LANDMERCER

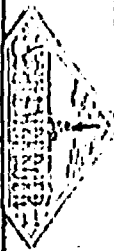
BORE-HOLE RECORD				CASING RECORD			
No.	Size	From	To	Size	Wgt.	From	To
1	11"	SURF	1175	8 5/8		SURF	1175
1	12 7/8	1175	9231				



Handwritten: Morrow

BEFORE EXAMINATION
 OIL CONSERVATION
 CASE NO. 500
 Submitted by
 Hearing Date

SCHLIMBERGER WELL SURVEYING CORPORATION

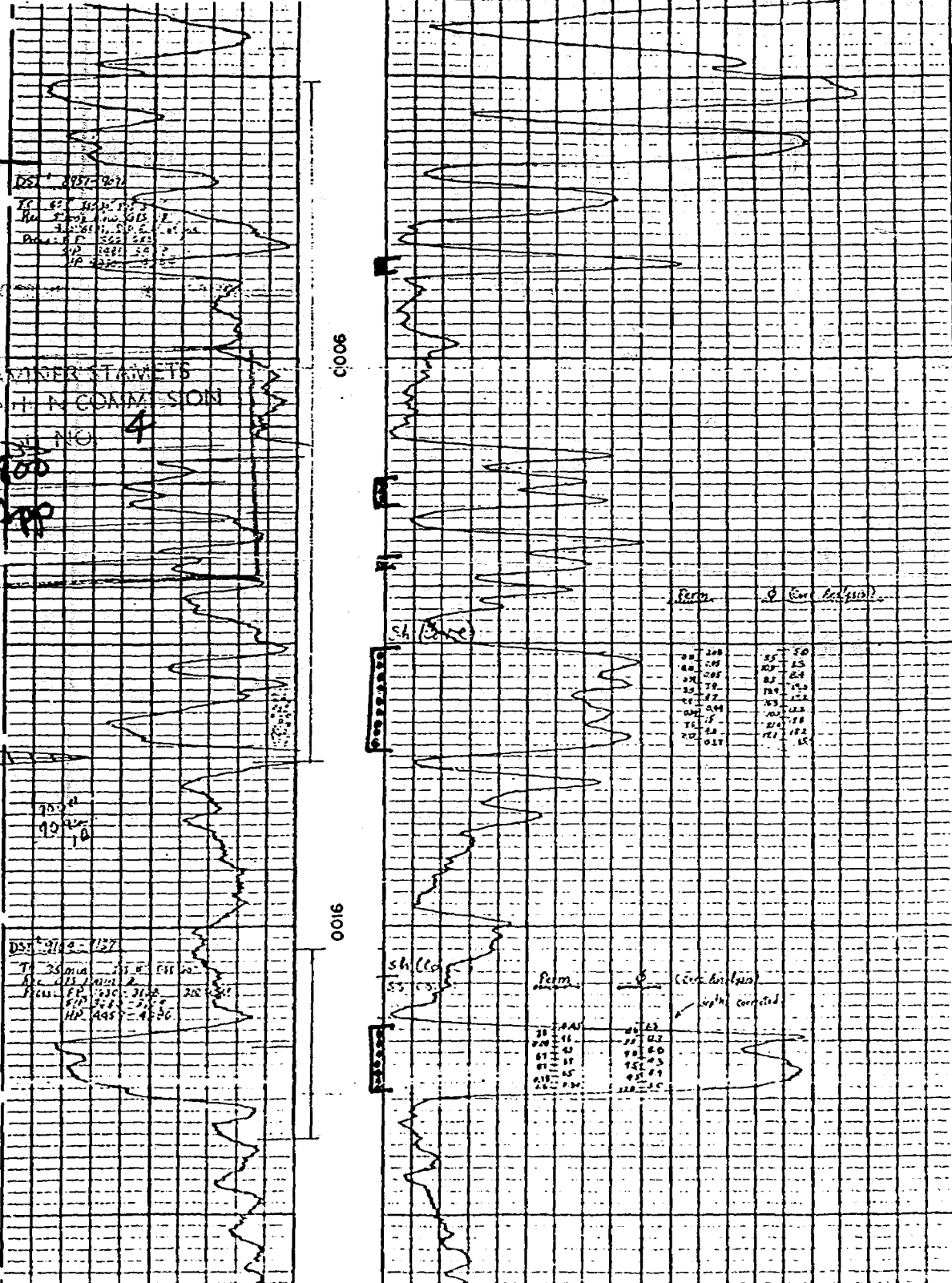


WELL SURVEYING
GEOPHYSICAL
ELECTRIC

COUNTRY INDIA
FIELD ATOKA PENN.
LOCATION BOB GUSHWA #1
WELL BOB GUSHWA #1
FIELD ATOKA PENN.
COUNTY EDDY STATE NEW MEXICO
Location: 1650' FS & EL
Sec. 21 Twp. 18S Rge. 26E
Other Services: IES

Permanent Datum: GEODROID LEVEL Elev. 3473
Log Measured From: 4.2 14 Ft. Above Perm. Datum
Casing Measured From: 7 Elev. K.B. 3387
D.F. 3386
G.L. 3373

Size	2-20-61
RUN No.	1
Tool Joint	GNT-6
Cable	9231
Log	9232
Log	9233
Log	9234
Log	9235
Log	9236
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Log	9499
Log	9500



BEFORE EXAMINER STARTS
OIL CONSERVATION COMMISSION
EXP. NO. 4
CASE NO. 5800
Submitted by APP
Hearing Date

HALLIBURTON RESEARCH AND TESTING LABORATORIES

Lubbock Division Laboratory
Lubbock, New Mexico

MAINTAINED BY HALLIBURTON OIL WELL CEMENTING CO.

No. WT - 658

WATER ANALYSIS

Date 12/30/59

To Nearburg and Ingram

Box 447

Roswell, New Mex.

Source DUT #5

Well & Lease Henking #2

Location 8 miles so. of Artesia
Sec. 27, T8S, R26E

Formation Fagn.

Depth 9128 - 9130

Specific gravity	1.041
Color (Pt-Co)	clear
pH	6.7
Resistivity	0.147
62 °F	ppm
Chlorides, Cl	32,400
Sulfates, SO ₄	350
Bicarbonates, HCO ₃	915
Calcium, Ca	1850
Magnesium, Mg	210
Iron, Fe	mod(100)
Sodium, Na	18,900
Solubles, H ₂ S	neg.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION

CASE NO. 5860

Submitted App.

Hearing Date

Remarks.

This water appears to be mostly formation water.

ppm equals Parts per million uncorrected or milligrams per liter
* includes Potassium as Na

Laboratory Analyst

Sutton

Respectfully submitted

Halliburton Oil Well Cementing Co.

By

Dave Sutton

ENJAY CHEMICAL COMPANY

Houston Chemical Plant
8230 Stedman, Houston, Texas 77029

April 12, 1973

WATER ANALYSIS



SAMPLE DESCRIPTION: Produced water from Gissler SWD tank (Eagle Creek Field) submitted for routine correlation and stability to CaCO_3 . Sample taken 4-5-73

COMPANY: Yates Petroleum Corporation

STSR NUMBER: #47371

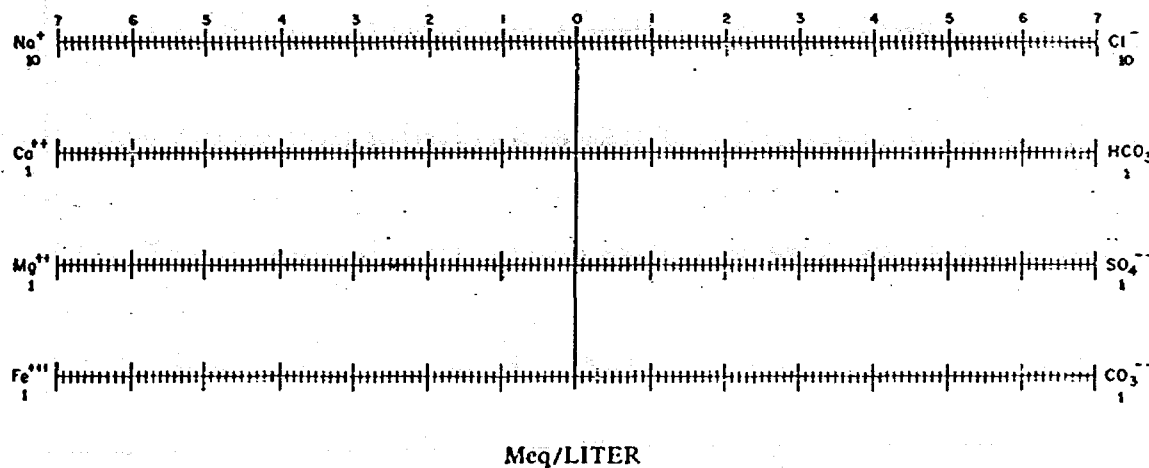
REQUESTED BY: Harold Langen

DATE RECEIVED: 4-9-73

ANALYZED BY: T. C. Crawford

	<u>Mg/L</u>	<u>Meq/L</u>		
Sodium	95,405	4,148.0	pH	7.3
Calcium	2,280	114.0	Specific Gravity at 60 °F.	1.1608
Magnesium	802	66.0	Resistivity, ohms/m @ 77°F.	0.057
Chloride	149,850	4,225.8		<u>Mg/L</u>
Sulfate	4,368	90.9	Oil Content	
Bicarbonate	695	11.4	Organic Matter	
Carbonate	0	0.0	Hydrogen Sulfide	110
Hydroxide	0	0.0	<u>Total Alkalinity, as CaCO_3</u>	570
TOTAL	253,400		<u>Supersaturation, as CaCO_3</u>	65
Dissolved Iron				
Total Iron	0.66	0.0		

WATER PATTERN (Stiff Method)



Remarks:

ENJAY CHEMICAL COMPANY

Houston Chemical Plant
8230 Stedman, Houston, Texas 77029

April 12, 1973
WATER ANALYSIS



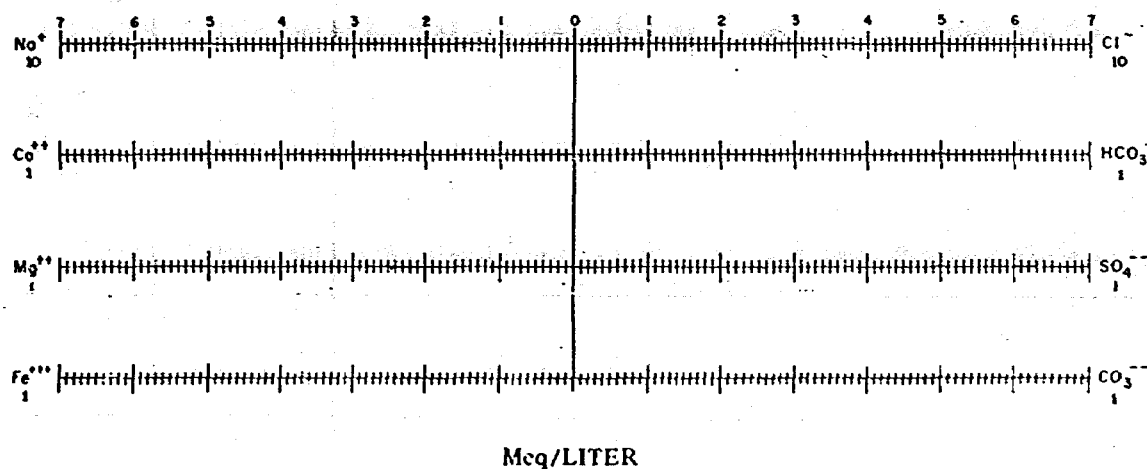
SAMPLE DESCRIPTION: Produced San Andres water from Hornbaker "BA" #2 submitted for routine correlation and stability to CaCO_3 . Sample taken 4-5-73 (Penasco Draw, S.A.)

COMPANY: Yates Petroleum Corporation
STSR NUMBER: #47374
REQUESTED BY: Harold Langen

DATE RECEIVED: 4-9-73
ANALYZED BY: T. C. Crawford

	<u>Mg/L</u>	<u>Meq/L</u>		
Sodium	70,627	3,070.7	pH	7.7
Calcium	3,000	150.0	Specific Gravity at 60 °F.	1.1185
Magnesium	1,094	90.0	Resistivity, ohms/m @ 77° F.	0.066
Chloride	113,630	3,204.4		<u>Mg/L</u>
Sulfate	4,420	91.9	Oil Content	
Bicarbonate	878	14.4	Organic Matter	
Carbonate	0	0.0	Hydrogen Sulfide	350
Hydroxide	0	0.0	<u>Total Alkalinity, as CaCO_3</u>	720
TOTAL	193,649		<u>Supersaturation, as CaCO_3</u>	130
Dissolved Iron				
Total Iron	107	3.8		

WATER PATTERN (Stiff Method)



Remarks:

1342-A

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

MIDLAND DIVISION

LOVINGTON, NEW MEXICO 88260

LABORATORY WATER ANALYSIS

RECEIVED NOV 8 1976
No. W76-735To Yates Petroleum CorporationDate 11-3-76207 S. 4th StreetArtesia, New MexicoATTN: Mr. Mahfood

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

Submitted by _____ Date Rec. 11-3-76Well No. Eads "GA" Depth 16 11-1737 Formation San AndresCounty Sandoval, N. Mex Field Atoka San Andres Source Flowline

Resistivity	<u>0.047 @ 74°F.</u>	
Specific Gravity	<u>1.138</u>	
pH	<u>6.6</u>	
Calcium (Ca)	<u>3,700</u>	<u>*MPL</u>
Magnesium (Mg)	<u>120</u>	
Chlorides (Cl)	<u>129,000</u>	
Sulfates (SO ₄)	<u>3,350</u>	
Bicarbonates (HCO ₃)	<u>535</u>	
Soluble Iron (Fe)	<u>Nil</u>	
_____	_____	_____
_____	_____	_____
_____	_____	_____

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer
cc: _____

HALLIBURTON COMPANY

By

W. L. Brewer
CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

Remarks:

1342-A

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
LOVINGTON, NEW MEXICO

LABORATORY WATER ANALYSIS

No. W73-735To Yates Petroleum CorporationDate 11-26-73207 S. 4th StreetArtesia, New Mexico

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

Submitted by

Date Rec. 11-26-73Well No. Federal CH #2Depth 6800-6960'Formation CanyonCounty EddyField W. Eagle CreekSource DST #2-A

	Sampler	Tool Top	Pit Sample
Resistivity	0.296 @ 66° F.	0.264 @ 66° F.	0.720 @ 66° F.
Specific Gravity	1.033		
pH	8.2		
Calcium (Ca)	5,500		*MPL
Magnesium (Mg)	Nil		
Chlorides (Cl)	25,000	17,500	5,000
Sulfates (SO ₄)	400		
Bicarbonates (HCO ₃)	35		
Soluble Iron (Fe)	Nil		

Top of Recovery @ DST #2 Res. @ 66° F. - 0.401 Chlorides, mml - 9,500
Pit Sample - DST #2 Res. @ 66° F. - 0.720 Chlorides, mml - 5,000

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

cc:

HALLIBURTON COMPANY

By

W. L. Brewer

CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

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

Martin Water Laboratories
WATER CONSULTANTS SINCE 1953
BACTERIAL AND CHEMICAL ANALYSES

406 W. ILLINOIS
MIDLAND, TEXAS 79701
PHONE 683-4521

April 12, 1973

Mr. Harold Langen
Exxon Chemical Company
P. O. Box 2100
Hobbs, New Mexico

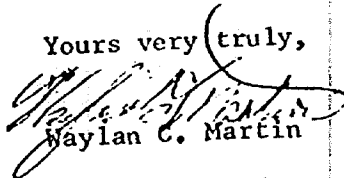
Subject: Recommendations relative to analyses #47371, #47372, #47373 and
#47374 (4-9-73), Yates Petroleum Corp.

Dear Mr. Langen:

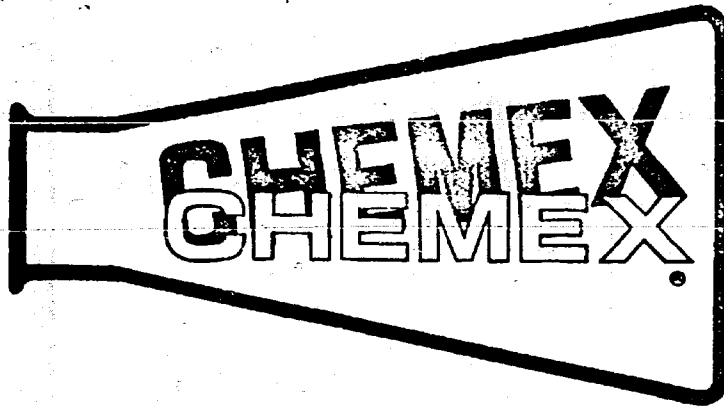
In regard to the attached analytical study, we present the following interpretations for your consideration:

1. In regard to the corrosion problem with Hornbaker BA #2 and Federal AY #1, we have found prominent evidence of the origin. It will be noted that the pH is high in the San Andres water and this greatly reduces the corrosive attack from hydrogen sulfide. However, when it is mixed with Yesso water (Federal AY #1 is obviously mostly Yesso), then an extreme acidic condition exists. It is apparent that the acid influence originates from a low pH water from the Yesso. Therefore, the corrosion from the mixture of these two is the result of a low pH and hydrogen sulfide or an acid-hydrogen sulfide corrosion. When the corrosion inhibitor is being applied, we suspect that the fresh water is greatly accelerating the corrosion rate at that time, but this is very temporary and we question its significance in altering the already very severe corrosion.
2. In studying the above waters, we note that the water from Hornbaker BA #2 has mild calcium carbonate and mild calcium sulfate scaling tendencies. Of course, the calcium carbonate is something that could conceivably have developed enroute to the laboratory, but it existed on receipt of this sample. We find no evidence of any potential scaling from the highly acid Yesso and San Andres mixture.
3. The analysis of the water from Gissler SWD shows a mild calcium sulfate scaling tendency. We would consider the calcium carbonate scaling potential as marginal and doubt that any significant scale is depositing from calcium carbonate. We would expect some slight calcium sulfate scale but this should develop only in the absence of pressure, as this water pressured would not likely deposit any calcium sulfate scale.

Yours very truly,


Waylan C. Martin

WCM/sb



Phone (505) 746-6100
Mobil: (505) 365-2546

P. O. Box 423
Artesia, N. M. 88210
November 8, 1976

Yates Petroleum Company
207 S. 4th
Artesia, New Mexico
88210

Mr. Eddie Mahfood, Engineer

Subject: Samples of water from Gissler SWD, Penasco SWD,
and Canyon formation.

Dear Sir:

I have carefully studied the water analysis of each of the different areas. It is my opinion these waters can be co-mingled and pumped into this formation without fear of blockage to formation. The contents of bicarbonate, carbonate, sulfate and calcaim are reasonably low, and should not combine in sufficient quantities to cause the formation of the common scales.

If I can be of further service, please call on me.

Sincerely,


Fred Jones

Docket No. 31-76

Dockets Nos. 32-76 and 33-76 are tentatively set for hearing on November 23 and December 15, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 10, 1976

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. Mutter, Alternate Examiner:

ALLOWABLE: (1) Consideration of the allowable production of gas for December, 1976, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.

(2) Consideration of the allowable production of gas for December, 1976, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 5796: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Hixon Development Company, National Surety Corporation, and all other interested parties to appear and show cause why the Central Bisti Unit Wells Nos. 41, 46, 47, 49 and 50 located in Units D, I, K, M, and O, respectively, of Section 16, Township 25 North, Range 12 West, Bisti-Lower Gallup Pool, San Juan County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 5798: Application of Exxon Corporation for a unit agreement, Sierra and Dona Ana Counties, New Mexico. Applicant, in the above-styled cause, seeks approval for the Prisor Unit Area comprising 24,910 acres, more or less, of State, Federal, and fee lands in Townships 16 and 17 South, Ranges 1 East and 1 West, Sierra and Dona Ana Counties, New Mexico.

CASE 5799: Application of Gulf Oil Corporation for an unorthodox gas well location and a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 160-acre non-standard proration unit comprising the NE/4 SW/4 and W/2 SE/4 of Section 28 and the NW/4 NE/4 of Section 33, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico, to be dedicated to applicant's J. N. Carson Well No. 9 located at an unorthodox location 1874 feet from the South line and 2086 feet from the West line of said Section 28.

CASE 5809: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard, Tubb, and Blinberry production in the wellbore of its Manda "B" Well No. 1, located in Unit C of Section 28, Township 22 South, Range 37 East, Lea County, New Mexico.

CASE 5800: Application of Yates Petroleum Corporation for salt water disposal well, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Morrow formation through the perforated interval from 8983 feet to 9129 feet in its Bob Gushwa Well No. 1 located in Unit J of Section 21, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico.

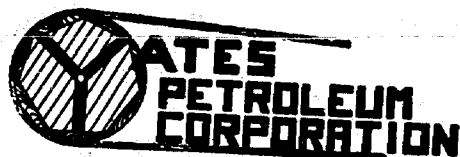
CASE 5801: Application of Atlantic Richfield Company for a non-standard proration unit and simultaneous dedication, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for a 275-acre non-standard gas proration unit comprising the W/2 E/2, N/2 NW/4, and SE/4 NW/4 of Section 19, Township 21 South, Range 36 East, Emort Gas Pool, Lea County, New Mexico, to be simultaneously dedicated to applicant's State 176 Wells Nos. 3 and 6 located, at unorthodox locations in Units J and C, respectively, of said Section 19.

CASE 5802: Application of El Paso Natural Gas Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle South Blanco-Pictured Cliffs and Blanco Mesaverde production in the wellbore of its San Juan 28-7 Unit Well No. 75 located in Unit L of Section 15, Township 28 North, Range 7 West, Rio Arriba County, New Mexico.

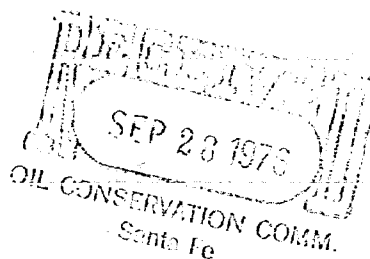
CASE 5803: Application of El Paso Co., Inc., for downhole commingling and simultaneous dedication, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Fruitland and Pictured Cliffs gas production in the wellbore of its Valdez "A" Well No. 1, located in Unit P of Section 24, Township 29 North, Range 11 West, San Juan County, New Mexico. Applicant further seeks approval for the simultaneous dedication of the SE/4 of said Section 24 to said well and its Valdez Well No. 1 located in Unit I of said Section 24.

CASE 5804: Application of Stevens Oil Company for a dual completion, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its O'Brien "C" Well No. 2 located in Unit D of Section 1, Township 9 South, Range 28 East, Chaves County, New Mexico, to produce oil from the San Andres and Devonian formations through parallel strings of tubing.

- CASE 5805: Application of Morris R. Antweil for compulsory pooling and an unorthodox location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Morrow formations underlying the N/2 of Section 3, Township 22 South, Range 26 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at an unorthodox location in Unit G of said Section 3. 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 5806: Application of Anadarko Production Company for two unorthodox well locations, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox locations of its Artesia State Unit Well No. 9-5 to be drilled 1270 feet from the North line and 50 feet from the East line of Section 23 and its Artesia State Unit Well No. 2-3 to be drilled 50 feet from the South line and 1270 feet from the West line of Section 13, both in Township 18 South, Range 27 East, Artesia Queen-Grayburg-San Andres Pool, Eddy County, New Mexico.
- CASE 5797: Application of C&K Petroleum, Inc. for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Dallas Ranch Unit Area comprising 5746 acres, more or less, of State, Federal, and fee lands in Township 9 South, Range 26 East, Chaves County, New Mexico.
- CASE 5807: Application of C&K Petroleum, Inc., for compulsory pooling and a non-standard unit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the N/2 of Section 13, Township 22 South, Range 26 East, South Carlsbad Field, Eddy County, New Mexico, to form a non-standard 336.6-acre unit to be dedicated to a well located 1680 feet from the North line and 1980 feet from the East line of said Section 13. 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 5808: Application of C&K Petroleum, Inc., for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the surface down to and including the Pennsylvanian formation underlying the SE/4 SE/4, NE/4 SE/4, NW/4 SE/4, and SW/4 SE/4 of Section 21, Township 16 South, Range 37 East, Lea County, New Mexico, to form four 40-acre oil proration units, the first to be dedicated to a well to be drilled at a point 660 feet from the South and East line of said Section 21 to test the Strawn formation and each of the others to a well subsequently drilled thereon. Also to be considered will be the cost of drilling and completing said wells 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 wells and a charge for risk involved in drilling said wells.
- CASE 5785: (Continued from October 27, 1976 Examiner Hearing)
- Application of Doyle Hartman for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Seven Rivers-Queen formation underlying the NE/4 NE/4, NW/4 NE/4, SW/4 NE/4, and SE/4 NE/4 of Section 19, Township 24 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico, to form four 40-acre proration units to be dedicated to four oil wells to be drilled at standard locations on said tracts. Also to be considered will be the cost of drilling and completing said wells 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 wells and a charge for risk involved in drilling said wells.
- CASE 5790: Application of Dome Petroleum Corporation for pool creation and assignment of a discovery allowable, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new oil pool for Entrada production and the assignment of approximately 58,770 barrels of oil discovery allowable to the discovery well, being the Federal 21 Well No. 1 located in Unit K of Section 21, Township 20 North, Range 5 West, McKinley County, New Mexico.
- CASE 5776: (Continued from October 27, 1976, Examiner Hearing)
- Application of Continental Oil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its James Ranch Unit Well No. 8 to be drilled at a point 1920 feet from the North line and 660 feet from the West line of Section 31, Township 22 South, Range 31 East, Los Medanos-Morrow Gas Pool, Eddy County, New Mexico, the N/2 of said Section 31 to be dedicated to the well.



YATES BUILDING - 207 SOUTH 4TH ST.
ARTESIA, NEW MEXICO - 88210



Case 5800

S. P. YATES
PRESIDENT
MARTIN YATES, III
VICE PRESIDENT
JOHN A. YATES
VICE PRESIDENT
B. W. HARPER
SEC. - TREAS.

September 22, 1976

Confirmation by 10/19
for hearing on 11/10

SWD ~~11/10~~
Nov. 10

Mr. Joe D. Ramey, Secry-Director
N.M.O.C.C.
P.O. Box 2088
Santa Fe, New Mexico 87501

RE: Salt Water Disposal,
Bob Gushwa #1 Comm
Atoka Penn

Dear Sir:

Herewith is Application to Dispose of Salt Water
into the Morrow formation at a depth of 8983-9129'.
Offset Operators are notified by copy of this application.

Thank you.

Yours very truly,

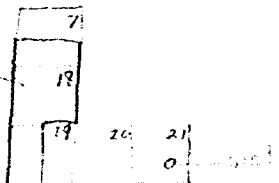
YATES PETROLEUM CORPORATION

Eddie M. Mahfood
Eddie M. Mahfood
Engineer

EMM/pt
Encl.

CC: State Engineer, Roswell
Amoco Prod., Midland
Mobil Oil, Midland

W. Atoka Morrow



Case 5800

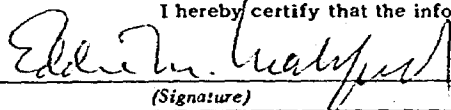
Form C-108,
Revised 12-63

NEW MEXICO OIL CONSERVATION COMMISSION

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Yates Petroleum Corporation		ADDRESS 207 So. 4th, Artesia, NM 88210			
LEASE NAME Bob Gushwa	WELL NO. 1	FIELD Atoka Penn	COUNTY Eddy		
LOCATION UNIT LETTER J ; WELL IS LOCATED 1650 FEET FROM THE South LINE AND 1650 FEET FROM THE East LINE, SECTION 21 TOWNSHIP 18S RANGE 26E NMPM.					
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8 5/8"	1175	450	Surface	Circulated
INTERMEDIATE					
LONG STRING	5 1/2"	9229	600	6240	Temp. Survey
TUBING	3"	8950	NAME, MODEL AND DEPTH OF TUBING PACKER Guiberson UNI-V or Baker Model R		
NAME OF PROPOSED INJECTION FORMATION Morrow		TOP OF FORMATION 8983		BOTTOM OF FORMATION 9129	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLE? Perforations		PROPOSED INTERVAL(S) OF INJECTION 8983-9129	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Producer Natural Gas		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 8983-85, 9021-26, 9033-35, 9051-69, 9118-29					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 1110		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 3580		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA None	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 550	MINIMUM 5000	MAXIMUM 5000	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 600
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes			WATER TO BE DISPOSED OF Yes		
NATURAL WATER IN DISPOSAL ZONE Yes			ARE WATER ANALYSES ATTACHED? Yes		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Yates Petroleum Corp. 207 So. 4th St., Artesia, NM 88210					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Yates Petroleum Corp. 207 So. 4th St., Artesia, NM 88210					
Amoco Production Co. Box 1725 West Bldg, Midland, TX 79701					
Mobil Oil Corp., Box 633 Wall Towers West, Midland, TX 79701					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? SURFACE OWNER X EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL X THE NEW MEXICO STATE ENGINEER X					
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)? PLAT OF AREA X ELECTRICAL LOG X DIAGRAMMATIC SKETCH OF WELL X					

I hereby certify that the information above is true and complete to the best of my knowledge and belief.



(Signature)

Eddie M. Mahfood Engineer

(Title)

9-21-76

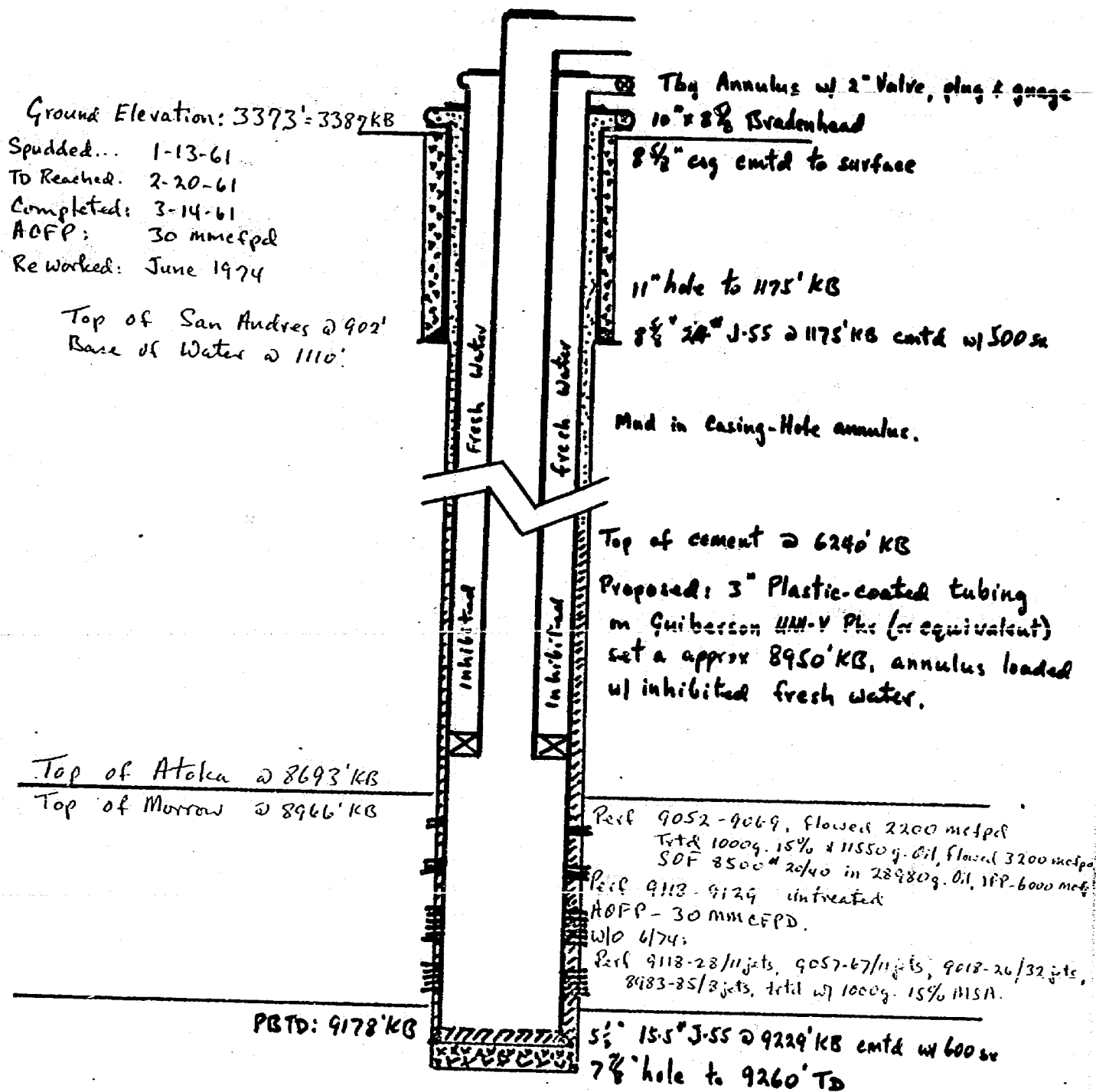
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

[illegible]

Case 5800

Diagrammatic Sketch of Proposed Injection Well
Bob Gushwa Com No. 1, 1650/S 1650/E Sec 21-18S-26E, Eddy Co.



Case 5800

SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

GRUBBANEONS



Gamma-Ray-Neutron

COUNTY EDDY
FIELD of
LOCATION ATOKA PENN
WELL BOB GUSHWA #1
COMPANY YATES PETR. CORP.

COMPANY YATES PETROLEUM CORPORATION

YATES BROTHERS
GEOLOGICAL FILE

WELL BOB GUSHWA #1

FIELD ATOKA PENN

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FS & EL

Other Services:
IES

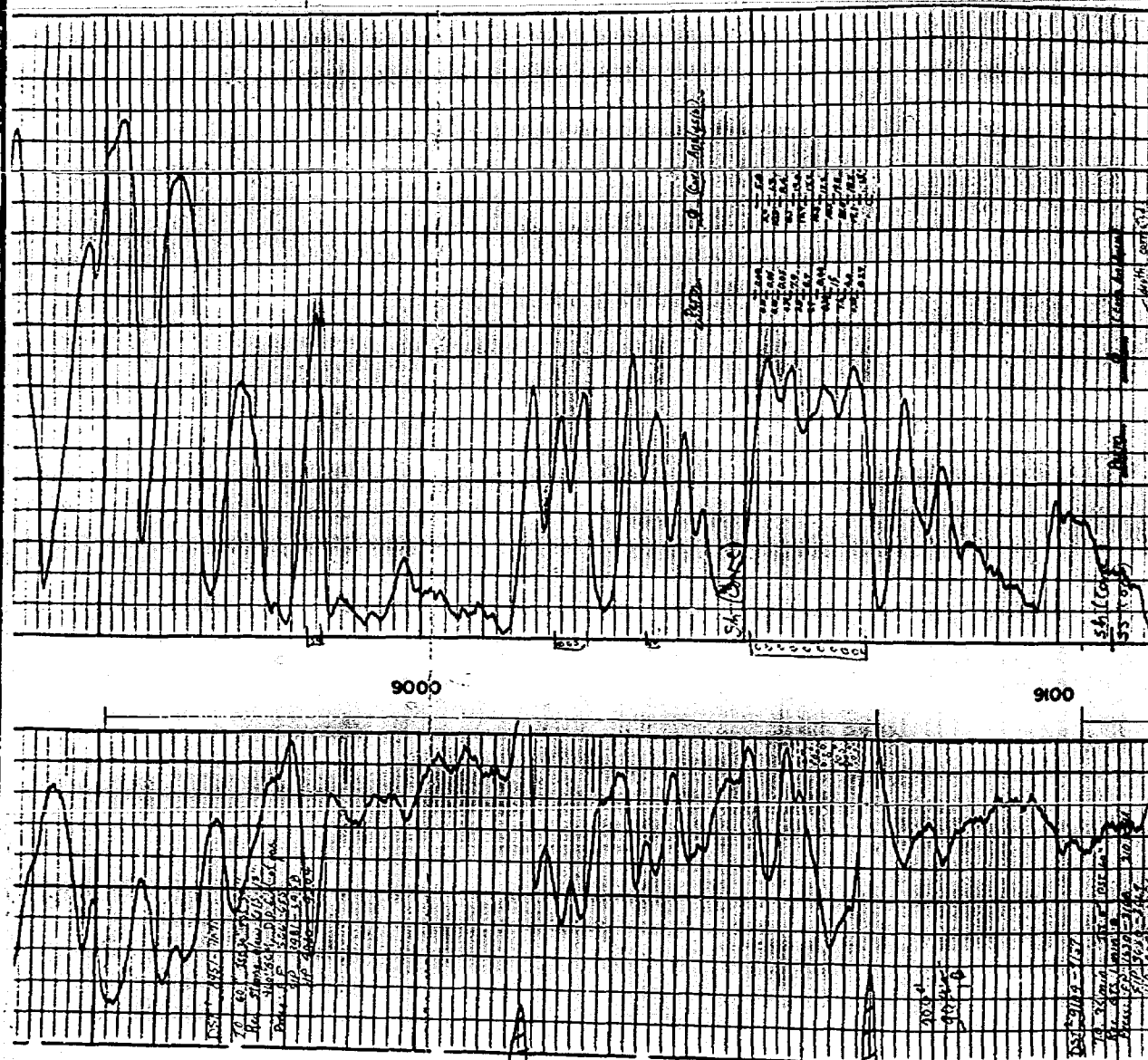
Sec. 21 Twp. 18S Rge. 26E

Permanent Datum: GROUND LEVEL; Elev.: 3373
Log Measured From K.B., 14 Ft. Above Perm. Datum
Drilling Measured From K.B.

Elev. K.B. 3387
D.F. 3386
G.L. 3373

Date 2-20-61
Run No. 1
Type Log GNT-G
Depth-Driller 9231
Depth-Logger 9233
Bottom logged interval 9232
Top logged interval 100
Type fluid in hole GEL-DRISCOSE-QUEB.-CAUSTIC SODA OIL
Salinity, PPM Cl. 8000
Density 9.1
Level FULL
Max rec. temp., deg F. 140
Operating rig time 4 HOURS
Recorded by HURST
Witnessed by LANDENBERGER

BORE-HOLE RECORD				CASING RECORD			
Run	Bit	From	To	Size	Wgt.	From	To
1	11"	SURF	1175	8 5/8		SURF	1175
1	7 7/8	1175	9231				



Case 5800

SCHLUMBERGER WELL SURVEYING CORPORATION



COUNTY ATOKA PENN
 FIELD or LOCATION BOB CUSHWA #1
 WELL BOB CUSHWA #1
 COMPANY YATES PETROLEUM CORPORATION

COMPANY YATES PETROLEUM CORPORATION
 YATES BROTHERS
 GEOLOGICAL FILE

WELL BOB CUSHWA #1

FIELD ATOKA PENN

COUNTY EDDY STATE NEW MEX CO CO

Location: 1650' FS & EL

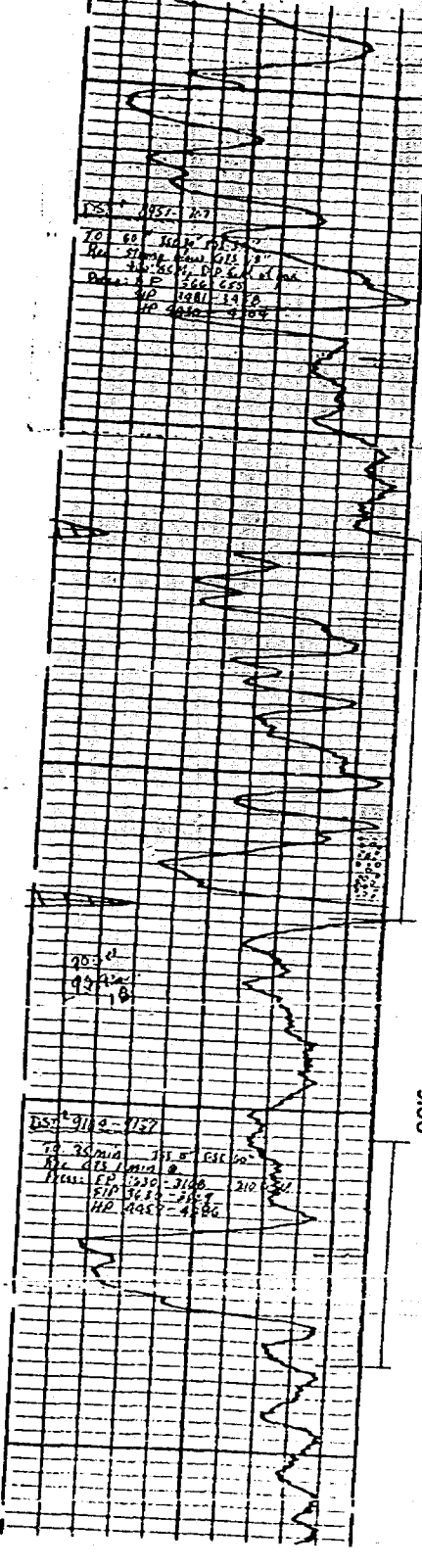
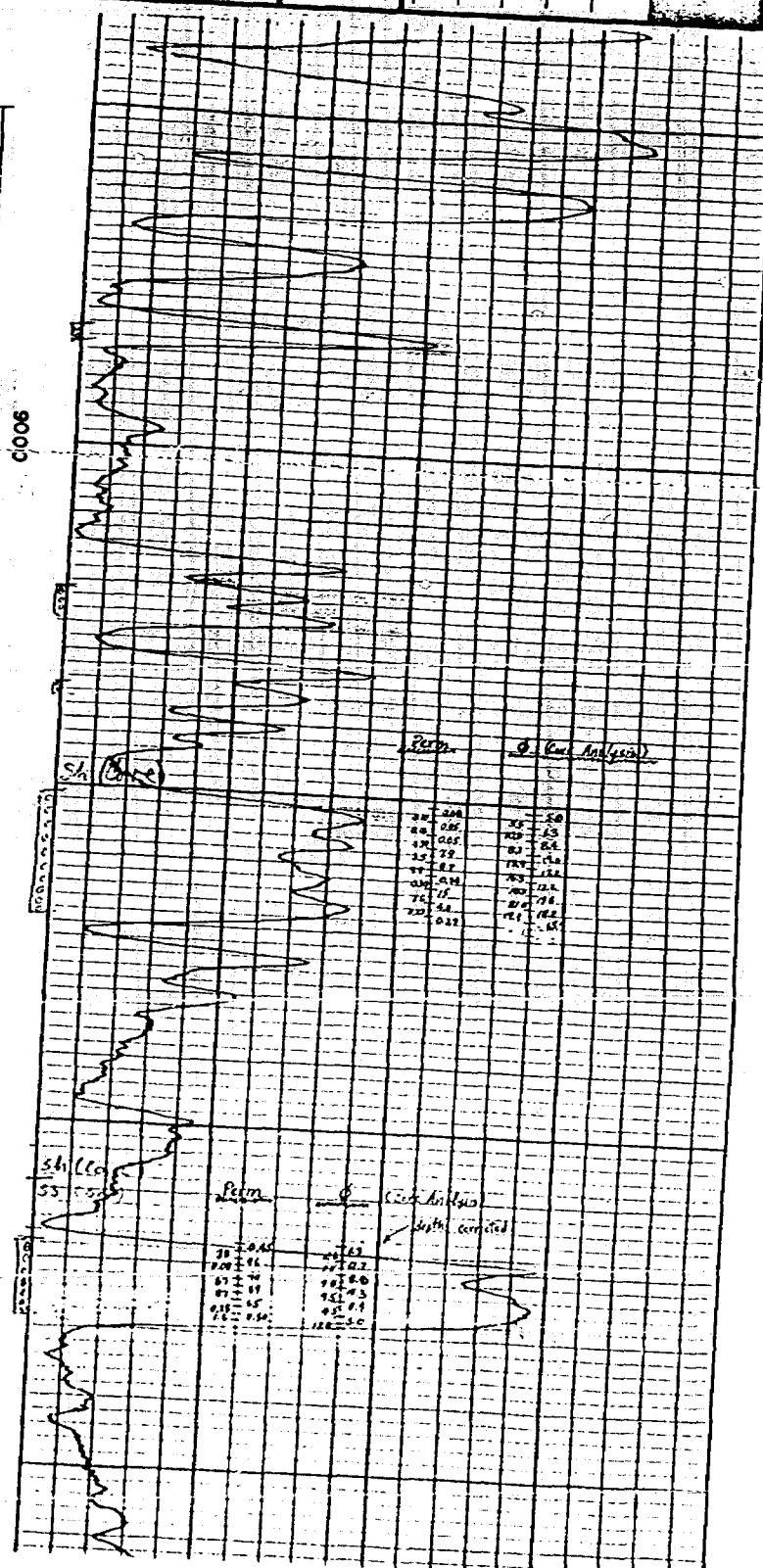
Sec. 21 Twp. 18S Rge. 26E

Other Services: IES

Permanent Datum: GROUND LEVEL Elev. 3373
 Log Measured From K.B. 14 Ft. Above Perm. Datum
 Drilling Measured From K.B.

Elev. K.B. 3387
D.F. 3386
G.L. 3373

Run No.	2-20-61
Type Log	1
Depth—Driller	9231
Depth—Logger	9233
Bottom logged interval	9232
Type fluid in hole	100
Salinity, PPM Cl	GEL-DRISCOSE-QUEB-CAUSTIC SOD 2.011
Density	9.1
Level	FULL
Max rec. temp, deg F	140
Operating rig time	4 HOURS
Recorded by	HURST
Witnessed by	LANDENBERGER
RUN	BOREHOLE RECORD
No.	From To
1	111 SURF 1175
2	773 1175 9231
	Size of Well
	From To
	1175 SURF 1175



ENJAY CHEMICAL COMPANY

Houston Chemical Plant
8230 Stedman, Houston, Texas 77029

April 12, 1973
WATER ANALYSIS



Case
5800

SAMPLE DESCRIPTION: Produced San Andres water from Hornbaker "BA" #2 submitted for routine correlation and stability to CaCO_3 . Sample taken 4-5-73 (Penasco Draw - A)

COMPANY: Yates Petroleum Corporation

STSR NUMBER: #47374

REQUESTED BY: Harold Langen

DATE RECEIVED: 4-9-73

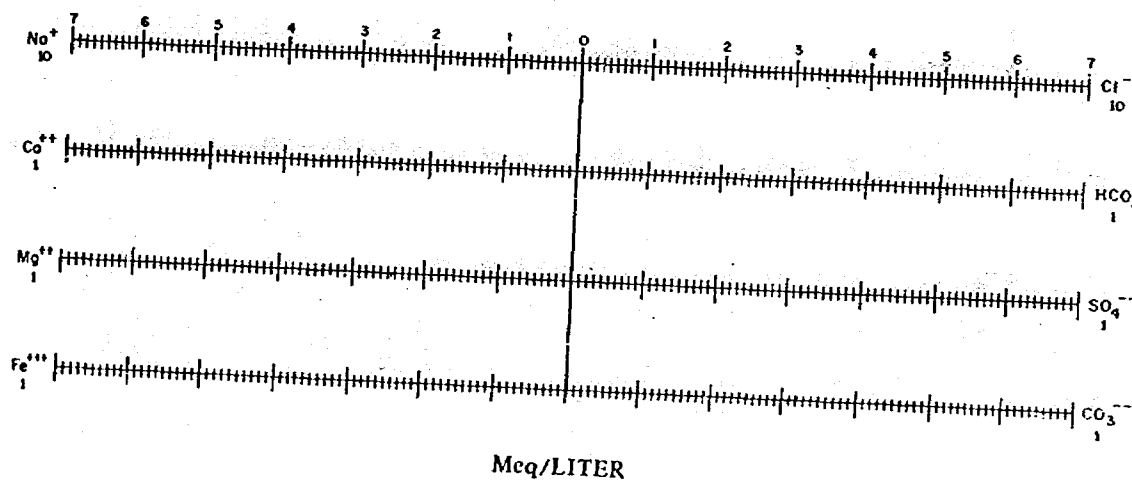
ANALYZED BY: T. C. Crawford

	Mg/L	Meq/L
Sodium	70,627	3,070.7
Calcium	3,000	150.0
Magnesium	1,094	90.0
Chloride	113,630	3,204.4
Sulfate	4,420	91.9
Bicarbonate	878	14.4
Carbonate	0	0.0
Hydroxide	0	0.0
TOTAL	193,649	
Dissolved Iron		
Total Iron	107	3.8

pH 7.7
Specific Gravity at 60 °F. 1.1185
Resistivity, ohms/m @ 77° F. 0.066

Mg/L
Oil Content
Organic Matter
Hydrogen Sulfide 350
Total Alkalinity, as CaCO_3 720
Supersaturation, as CaCO_3 130

WATER PATTERN (Stiff Method)



Remarks:

ENJAY CHEMICAL COMPANY

Houston Chemical Plant
8230 Stedman, Houston, Texas 77029

April 12, 1973

WATER ANALYSIS



Case
5800

SAMPLE DESCRIPTION: Produced water from Gissler SWD tank (Eagle Creek Field) submitted for routine correlation and stability to CaCO_3 . Sample taken 4-5-73

COMPANY: Yates Petroleum Corporation
STSR NUMBER: #47371
REQUESTED BY: Harold Langen

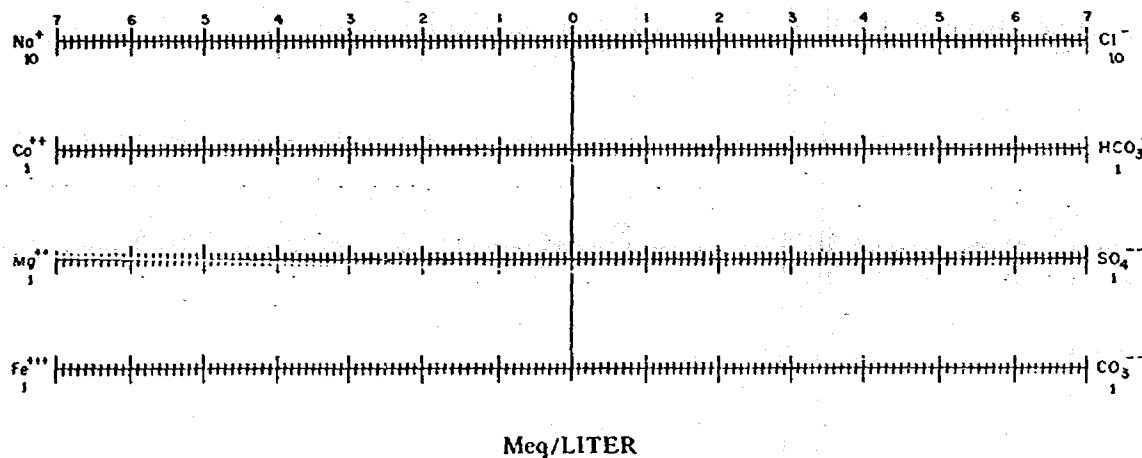
DATE RECEIVED: 4-9-73
ANALYZED BY: T. C. Crawford

	<u>Mg/L</u>	<u>Meq/L</u>		
Sodium	95,405	4,148.0	pH	7.3
Calcium	2,280	114.0	Specific Gravity at 60 °F.	1.1608
Magnesium	802	66.0	Resistivity, ohms/m @ 77°F.	0.057
Chloride	149,850	4,225.8		<u>Mg/L</u>
Sulfate	4,368	90.9	Oil Content	
Bicarbonate	695	11.4	Organic Matter	
Carbonate	0	0.0	Hydrogen Sulfide	110
Hydroxide	0	0.0	Total Alkalinity, as CaCO_3	570
TOTAL	253,400		Supersaturation, as CaCO_3	65

Dissolved Iron

Total Iron 0.66 0.0

WATER PATTERN (Stiff Method)



Remarks:

1342-A

HALLIBURTON DIVISION LABORATORY
HALLIBURTON COMPANY
LOVINGTON, NEW MEXICO

Case 5800

LABORATORY WATER ANALYSIS No. W73-735To Yates Petroleum CorporationDate 11-26-73207 S. 4th StreetArtesia, New Mexico

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

Submitted by _____ Date Rec. 11-26-73Well No. Federal CH #2 Depth 6800-6960' Formation CanyonCounty Eddy Field W. Eagle Creek Source DST #2-A

	Sampler	Tool Top	Pit Sample
Resistivity	0.296 @ 66° F.	0.264 @ 66° F.	0.720 @ 66° F.
Specific Gravity	1.033		
pH	8.2		
Calcium (Ca)	5,500		*MPL
Magnesium (Mg)	Nil		
Chlorides (Cl)	25,000	17,500	5,000
Sulfates (SO ₄)	400		
Bicarbonates (HCO ₃)	35		
Soluble Iron (Fe)	Nil		

Top of Recovery @ DST #2 Res. @ 66° F. - 0.401 Chlorides, mpl - 9,500

Pit Sample - DST #2 Res. @ 66° F. - 0.720 Chlorides, mpl - 5,000

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

CC:

By W. L. Brewer

CHEMIST

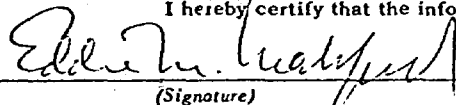
NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Yates Petroleum Corporation		ADDRESS 207 So. 4th, Artesia, NM 88210			
LEASE NAME Bob Gushwa	WELL NO. 1	FIELD Atoka Penn	COUNTY Body COMM		
LOCATION UNIT LETTER J WELL IS LOCATED 1650 FEET FROM THE South LINE AND 1650 FEET FROM THE East LINE, SECTION 21 TOWNSHIP 18S RANGE 26E NMPM.					
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	8 5/8"	1175	450	Surface	Circulated
INTERMEDIATE					
LONG STRING	5 1/2"	9229	600	6240	Temp. Survey
TUBING	3"	8950	NAME, MODEL AND DEPTH OF TUBING PACKER Guiberson UNI-V or Baker Model R		
NAME OF PROPOSED INJECTION FORMATION Morrow		TOP OF FORMATION 8983		BOTTOM OF FORMATION 9129	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLE? Perforations		PROPOSED INTERVAL(S) OF INJECTION 8983-9129	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Producer Natural Gas		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH 8983-85, 9021-26, 9033-35, 9051-69, 9118-29					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 1110		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA 3580		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA None	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.)	MINIMUM 550	MAXIMUM 5000	OPEN OR CLOSED TYPE SYSTEM Closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Pressure	APPROX. PRESSURE (PSI) 600
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Yates Petroleum Corp. 207 So. 4th St., Artesia, NM 88210					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL Yates Petroleum Corp. 207 So. 4th St., Artesia, NM 88210 Amoco Production Co. Box 1725 West Bldg, Midland, TX 79701 Mobil Oil Corp., Box 633 Wall Towers West, Midland, TX 79701					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER X		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL X	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		FLAT OF AREA X		ELECTRICAL LOG X	
				THE NEW MEXICO STATE ENGINEER X	
				DIAGRAMMATIC SKETCH OF WELL X	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

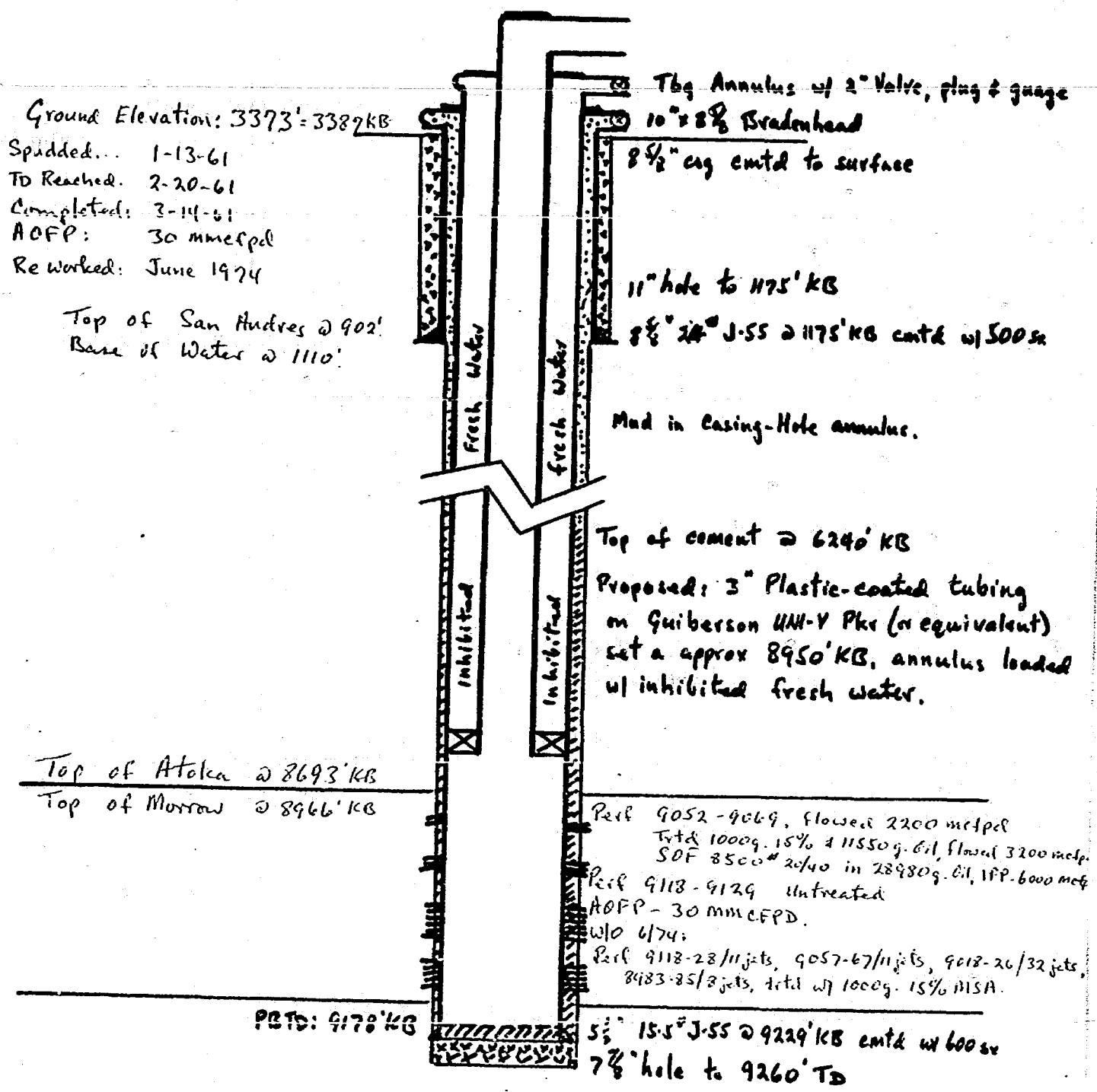
Eddie M. Mahfood Engineer
(Title)9-21-76
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

[illegible]

Case 5800

Diagrammatic Sketch of Proposed Injection Well
 Bob Gushwa Com No. 1, 1650/S 1650/E Sec 21-18S-26E, Eddy Co.



SCHLUMBERGER WELL SURVEYING CORPORATION

HOUSTON, TEXAS

MEMPHIS, TENN.

SCHLUMBERGER

Yates Petroleum Corp. - Atoka Penn.

COUNTY FIELD or LOCATION WELL COMPANY	COUNTY	ATOKA, PENN.
	WELL	BOB GUSHWA #1
	FIELD	ATOKA, PENN.
	COMPANY	YATES PETR. CORP.

COMPANY YATES PETROLEUM CORPORATION

YATES BROTHERS
GEOLOGICAL FILE

WELL BOB GUSHWA #1

FIELD ATOKA, PENN.

COUNTY EDDY STATE NEW MEXICO

Location: 1650' FS 6 EL

Other Services:
IES

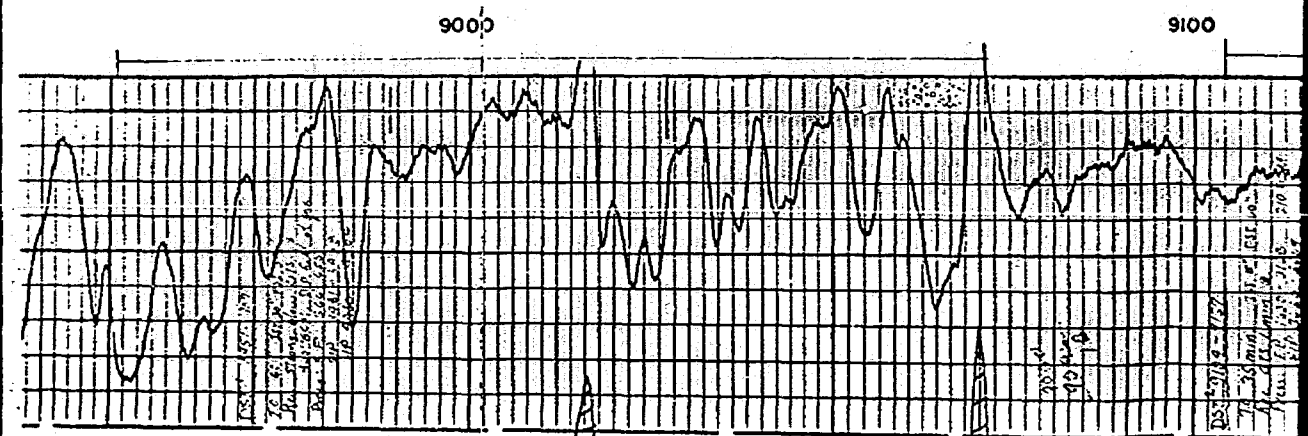
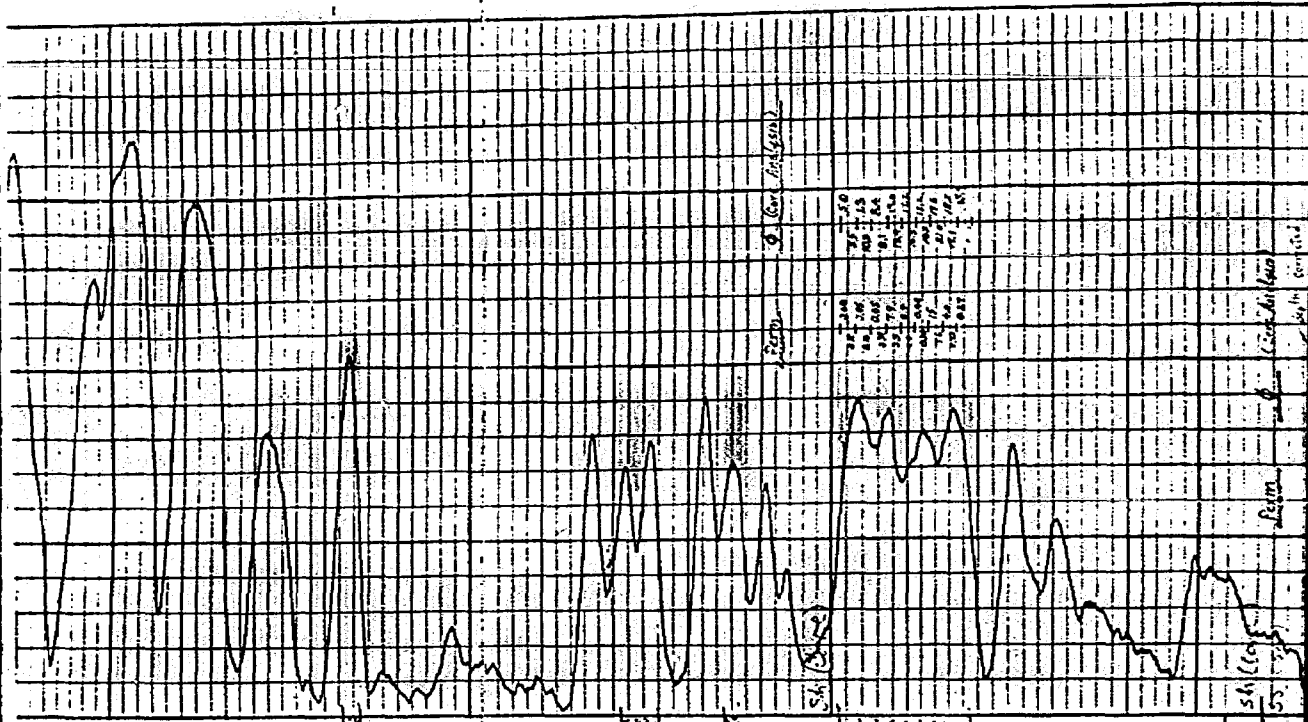
Sec. 21 Twp. 18S Rge. 26E

Permanent Datum: GROUND LEVEL; Elev.: 3373
Log Measured From K.E., 14 Ft. Above Perm. Datum
Drilling Measured From K.E.

Elev. K.B. 3387
D.F. 3386
G.L. 3373

Date	2-20-61
Run No.	1
Type Log	GNT-G
Depth—Driller	9231
Depth—Logger	9233
Bottom logged interval	9232
Top logged interval	100
Type fluid in hole	GEL - BRISCOSE - OVER - CAUSTIC SODA OIL
Salinity, PPM Cl.	2000
Density	0.1
Level	FULL
Max rec. temp., deg F.	140
Operating rig time	4 HOURS
Recorded by	HURST
Witnessed by	LANDENBERGER

BORE-HOLE RECORD				CASING RECORD			
No.	Size	From	To	Size	Wgt.	From	To
1	1 1/2"	SUSP	1175	8 5/8"		SURE	1175
1	7 7/8"	1175	9231				



Penitence = Plea for Forgiveness

Case

374674

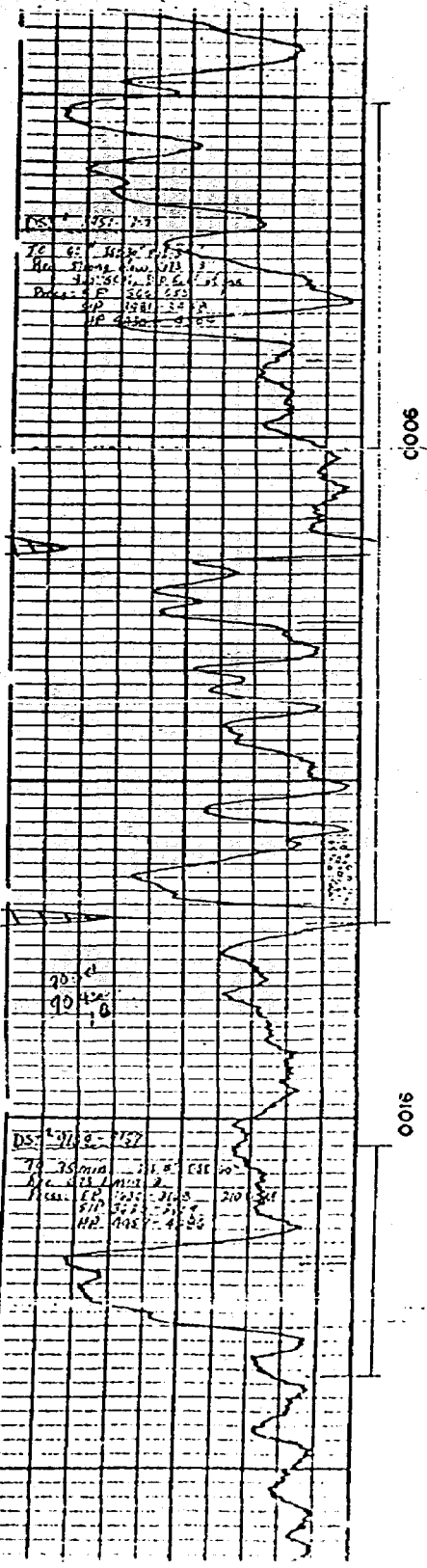
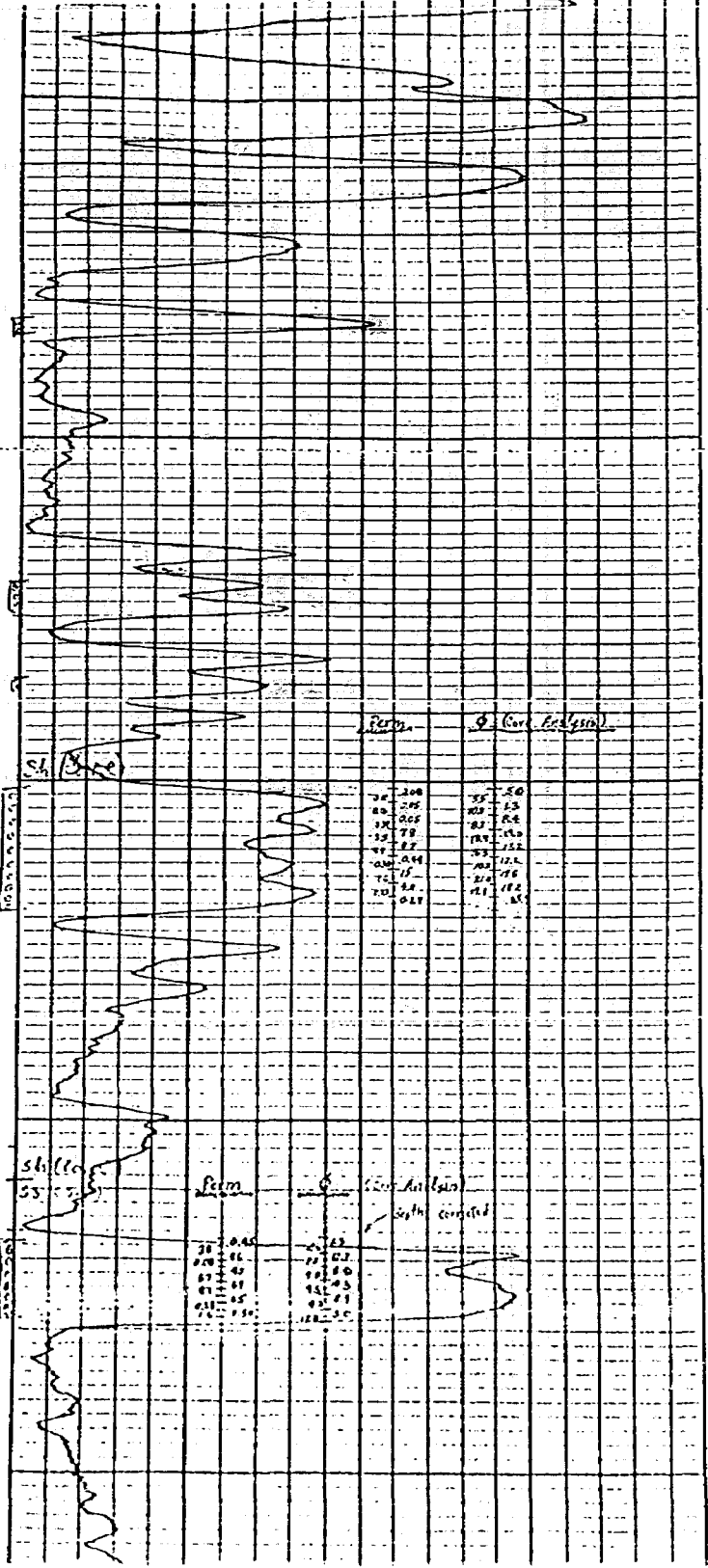
COUNTY _____
FIELD or _____
LOCATION ATOGA PERU _____
WELL BOB GUSTINA #1 _____
COMPANY YATES PETR. CORP. _____

COMPANY	YATES PETROLEUM CORPORATION		
	YATES BROTHERS GARDINGALE FIELD		
WELL	808 GUSHWA #1		
FIELD	ATOCA PENN		
COUNTY	EDDY	STATE	NEW MEXICO
Location:	1650' FS & EL		
Sec. 21	Twp.	Rge.	26E
Other Services:		LES	

[illegible]

Date	2-20-61
Run No.	1
Test Log	GMT-6
Down-Driller	92231
Down-Lifter	92232
Bottom-Lessed Interval	92232
Top-Lessed Interval	100
Test fluid in hole	REF-EPICLOSE-OILRB.-CAUSTIC SOD 2 OIL
Service, PMA Cl.	9000
Density	9.1
Level	Full
Working temp., deg F.	140
Operating pressure	2 HOURS
Recorded by	HURST
Checked by	LANDSBERGER

BOREHOLE RECORD						CASING RECORD	
No.	3'	From	To	Size	Wgt.	From	To
1	117"	SURF	1175	R 5/8		SURFACE	1175
1	127 3/4	1175	9231			END OF LOG	



ENJAY CHEMICAL COMPANY

Houston Chemical Plant
8230 Stedman, Houston, Texas 77029

April 12, 1973

WATER ANALYSIS



Case
5800

SAMPLE DESCRIPTION: Produced water from Gissler SWD tank (Eagle Creek Field) submitted for routine correlation and stability to CaCO_3 . Sample taken 4-5-73

COMPANY: Yates Petroleum Corporation

STSR NUMBER: #47371

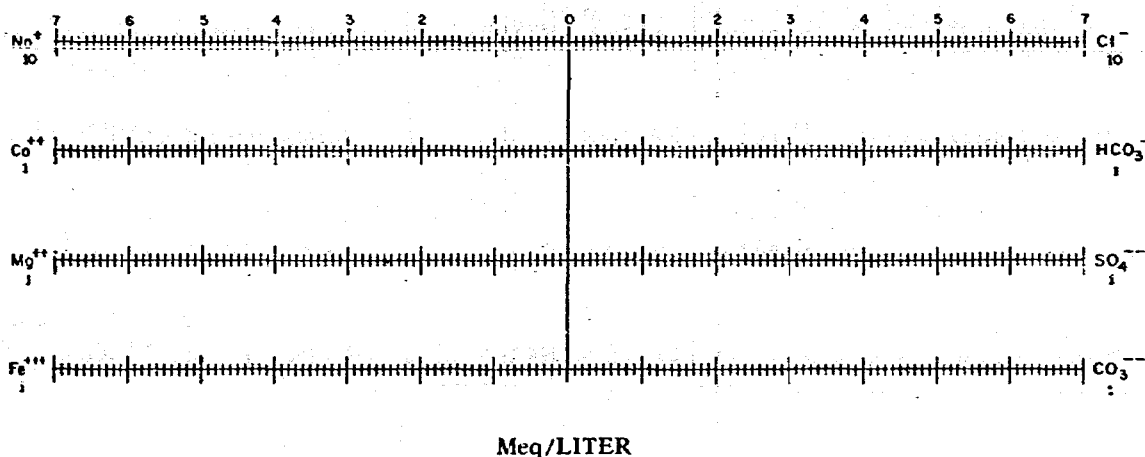
REQUESTED BY: Harold Langen

DATE RECEIVED: 4-9-73

ANALYZED BY: T. C. Crawford

	Mg/L	Meq/L		
Sodium	95,405	4,148.0	pH	7.3
Calcium	2,280	114.0	Specific Gravity at 60 °F.	1.1608
Magnesium	802	66.0	Resistivity, ohms/m @ 77°F.	0.057
Chloride	149,850	4,225.8		Mg/L
Sulfate	4,368	90.9	Oil Content	
Bicarbonate	695	11.4	Organic Matter	
Carbonate	0	0.0	Hydrogen Sulfide	110
Hydroxide	0	0.0	Total Alkalinity, as CaCO_3	570
TOTAL	253,400		Supersaturation, as CaCO_3	65
Dissolved Iron				
Total Iron	0.66	0.0		

WATER PATTERN (Stiff Method)



Remarks:

ENJAY CHEMICAL COMPANY

Houston Chemical Plant
8230 Stedman, Houston, Texas 77029

April 12, 1973

WATER ANALYSIS



Case
5800

SAMPLE DESCRIPTION: Produced San Andres water from Hornbaker "BA" #2 submitted for routine correlation and stability to CaCO_3 . Sample taken 4-5-73 (Perrine 1111)

COMPANY: Yates Petroleum Corporation

STSR NUMBER: #47374

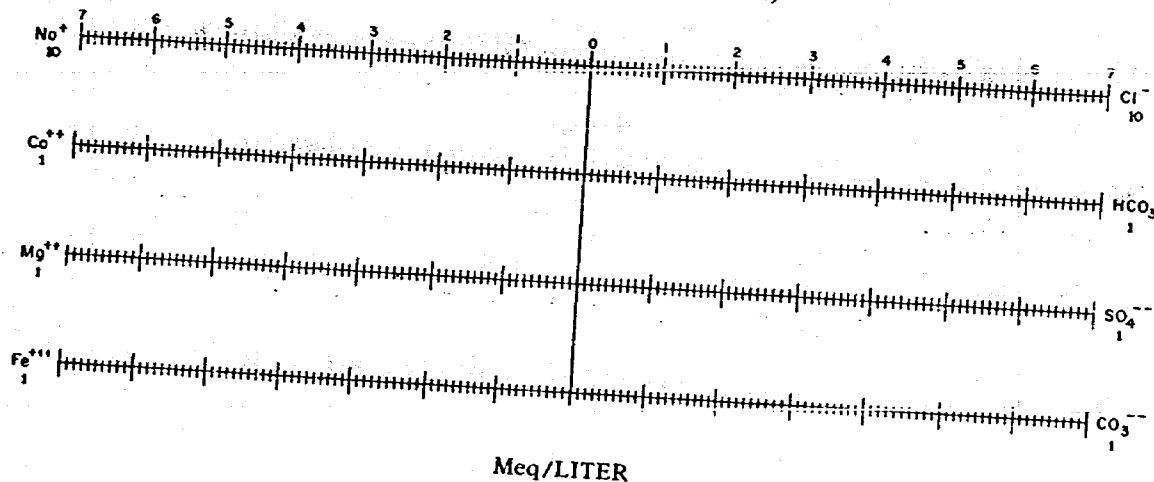
REQUESTED BY: Harold Langen

DATE RECEIVED: 4-9-73

ANALYZED BY: T. C. Crawford

	Mg/L	Meq/L		
Sodium	70,627	3,070.7	pH	7.7
Calcium	3,000	150.0	Specific Gravity at 60 °F.	1.1185
Magnesium	1,094	90.0	Resistivity, ohms/m @ 77° F.	0.066
Chloride	113,630	3,204.4		
Sulfate	4,420	91.9	Oil Content	Mg/L
Bicarbonate	878	14.4	Organic Matter	
Carbonate	0	0.0	Hydrogen Sulfide	350
Hydroxide	0	0.0	Total Alkalinity, as CaCO_3	720
TOTAL	193,649		Supersaturation, as CaCO_3	130
Dissolved Iron				
Total Iron	107	3.8		

WATER PATTERN (Stiff Method)



Remarks:

HALLIBURTON DIVISION LABORATORY

HALLIBURTON COMPANY
LOVINGTON, NEW MEXICOCase
5800LABORATORY WATER ANALYSIS No. W73-735To Yates Petroleum CorporationDate 11-26-73207 S. 4th StreetArtesia, New Mexico

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

Submitted by _____ Date Rec. 11-26-73Well No. Federal CH #2 Depth 6800-6960' Formation CanyonCounty Eddy Field W. Eagle Creek Source DST #2-A

	Sampler	Tool Top	Pit Sample
Resistivity	0.296 @ 66° F.	0.264 @ 66° F.	0.720 @ 66° F.
Specific Gravity	1.033		
pH	8.2		
Calcium (Ca)	5.500		*MPL
Magnesium (Mg)	Nil		
Chlorides (Cl)	25,000	17,500	5,000
Sulfates (SO ₄)	400		
Bicarbonates (HCO ₃)	35		
Soluble Iron (Fe)	Nil		

Top of Recovery @ DST #2 Res. @ 66° F. = 0.401 Chlorides, mml - 9,500
Pit Sample - DST #2 Res. @ 66° F. = 0.720 Chlorides, mml - 5,000

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer
cc:

HALLIBURTON COMPANY

By W. L. Brewer

CHEMIST

NOTICE

This report is limited to the described sample tested. Any user of this report agrees that Halliburton shall not be liable for any loss or damage, whether it be to act or omission, resulting from such report or its use.

Case 5800

OIL CONSERVATION COMMISSION
Artesia DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE 10-7-76

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD X _____
Proposed WFX _____
Proposed PMX _____

OCT 13 1976
OIL CONSERVATION COMMISSION

Gentlemen:

I have examined the application dated 9-21-76
for the Yates Lbr. Corp. Bob Lushwa #1 J-21-18-26
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Does not meet requirements for Administrative
Approval.
Set for Hearing.

Yours very truly,

W.A. Gressett

DRAFT

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

dr/

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

CASE NO. 5800

Order No. R- 5322

APPLICATION OF YATES PETROLEUM CORPORATION
FOR SALT WATER DISPOSAL WELL, EDDY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 10, 1976,
at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this day of November, 1976, 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, Yates Petroleum Corporation,
is the owner and operator of the Bob Gushwa Well No. 1,
located in Unit J of Section 21, Township 18 South,
Range 26 East, NMPM, Atoka-Pennsylvanian Gas Pool,
Eddy County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Morrow
formation, with injection into the perforated interval
from approximately 8,983 feet to 9,129 feet.

(4) That the injection should be accomplished through
3-inch plastic lined tubing installed in a packer
set at approximately 8950 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; and *that the well should be equipped to facilitate the periodic testing of the annular space between production and surface casing.*

(4) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than ¹⁸⁰⁰ ~~2000~~ psi.

(5) 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.

(6) 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.

(7) 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, Yates Petroleum Corporation, is hereby authorized to utilize its Bob Gushwa Well No. 1, located in Unit J of Section 21, Township 18 South, Range 26 East, NMPM, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, to dispose of produced salt water into the Morrow formation, injection to be accomplished through 3-inch tubing installed in a packer set at approximately 8950 feet, with injection into the perforated interval from approximately 8,983 feet to 9,129 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; and *that the annulus between casing-casing annulus shall be equipped with a riser to facilitate periodic testing of the wellhead for pressure or fluid production.*

CASE NO. _____

(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 ¹⁵⁰⁰ ~~700~~ psi.

(3) 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.

(4) 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 ^{or any other evidence of fluid migration from the injection well} 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.

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

(6) 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.