RELEASE 7-1-93

UNITED BANK PLAZA
400 N. PENN. SUITE 1000

CHARLES B. READ
PRESIDENT

PHONE 505 622-3770
FAX: 505 622-8643

Read & Stevens, Inc.
Oil Producers
P. O. Box 1518
Roswell, New Mexico 88202

OIL CONSERVATION DIVISION
RECEIVED
'93 JUN 14 AM 9 08

June 11, 1993

Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

SUBJECT: Application for Permit to Convert to Salt Water Disposal
Whitten Federal #1
1980' FSL & 660' FEL
Section 14 T20S-R34E
Lea County, New Mexico

Gentlemen:

Please find enclosed an application for permit to convert the above captioned well into a salt water disposal well. Copies have been submitted to the surface owner and the offset operators.

If you have any questions, please advise.

Sincerely,

READ & STEVENS, INC.

John C. Maxey, Jr.
Petroleum Engineer

JCM/sr/ocdltr.app

Enclosures

xc: OCD-Hobbs Division Office

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no

II. Operator: Read & Stevens, Inc.

Address: P. O. Box 1518 Roswell, NM 88202

Contact party: John C. Maxey, Jr. Phone: 505/622-3770

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: John C. Maxey, Jr. Title Petroleum Engineer

Signature: John C Maxey Jr. Date: June 9, 1993

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. _____

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Read & Stevens, Inc.
Application for Authority to Inject
Supplemental Information
Whitten Federal #1
Lea County, New Mexico

III. Well Data

A. (1) Well Name: Whitten Federal #1
1980' FSL & 660' FEL
Sec 14 T20S-R34E
Lea County, New Mexico

(2) Casing Data (Also see Exhibit "B")

Surface:
13 3/8" csg set @ 845' and cemented with 575 sx. Cement circulated.

Intermediate:
9 5/8" csg set in a 12 1/4" hole to 5,063' and cemented with 4,000 sx. TOC @ 2,800' by temperature survey.

Production:
7" csg set in an 8 1/4" hole to 14,169' and cemented with 470 sx. TOC @ 8,600' by cement bond log. Cut and pulled 5,949'.

(3) Injection Tubing:
2 7/8" 1.78#/ft 8RD EUE fiberglass tubing, or PLASTIC COATED 2 7/8" 6.5#/ft IPC 8RD EUE steel tubing set @ approximately 3,700'.

(4) Packer:
A Baker Lok-set or equivalent packer set @ approximately 3,700'.

B. (1) Injection Formation:
Seven Rivers

(2) Injection Interval:
Injection will be through perforations from 3,900' to 4,200'.

(3) Original Purpose:
This well was originally drilled to test the Devonian, and was subsequently completed as a Morrow producer.

(4) Added Perforated Intervals: (Also see Exhibit "B")
The Morrow formation was plugged by setting a slick line plug in the Otis permanent packer @ 12,800' and capped w/ 35 sx cement. The Bone Spring was then perforated 9,600' - 9,634' and tested dry. The zone was plugged with a CIBP @ 9,550', and a cement plug from 9,550' to 9,450'.

(5) Higher/Lower Oil Zones:
The top of the Yates is at 3,642', and the top of the Delaware is at 5,420'.

V. Map (See Exhibit "A")

VI. Wells in Area of Review:

(1)

Well Name:	Aztec Federal #1
Location:	1980' FSL & 1830' FEL Sec 14 T20S-R34E Lea County, New Mexico
Spud:	January 8, 1969
Surface Csg:	13 3/8" set @ 695', cement with 700 sx to surface.
Intermediate Csg:	9 5/8" set @ 5,040', cement with 875 sx, TOC @ 3,245'. Cut and pulled 3,005'.
Production Csg:	7" set @ 14,389', cement with 1,450 sx. Cut and pulled 5,000'.
Liner:	5" set @ 14,072' - 14,496', cement with 50 sx cement.
Total Depth:	14,546'
Comment:	The well was drilled to the Devonian and tested non-commercial. The well was plugged back to the Morrow and completed as a gas well from perfs 12,987' - 13,079' in 6/69. The well was P&A in 9/72.

(2)	Well Name:	Hanson "B" Federal #1 660' FSL & 1980' FEL Sec 14 T20S-R34E Lea County, New Mexico
	Spud:	December 12, 1956
	Surface Csg:	8 5/8" set @ 375', cement with 225 sx.
	Total Depth:	4,145'
	Comment:	This well was drilled to the Seven Rivers. Drill stem tests indicated the Yates and Seven Rivers to be non commercial. The well was P&A in 1/57.

VII. Proposed Operations Data:

(1) Average daily injection rate = 2,000 BWPD.
Maximum daily injection rate = 5,000 BWPD.

(2) Type of system is closed.

(3) Average injection pressure = 500 psi.
Maximum injection pressure = 1,500 psi.

(4) Source - Delaware produced water from the S/2 of Sec 3 & N/2 Sec 10 T20S-R34E. Water analysis attached.

(5) Chemical analysis of Seven Rivers is attached.

VIII. Geological Data:

The proposed injection zone is the Seven Rivers from 3,900' to 4,200'. The formation is a dolomite with small amounts of limestones, and interbedded sand present.

The underground source of drinking water overlying the proposed injection zone is the Triassic and the base of the fresh water is 230' below ground level. (Obtained from State Engineers Office)

There are no known sources of fresh water underlying the proposed injection zone.

IX. Proposed Stimulation Program:

5,000 gal of 15% NEFE acid with rubber coated nylon ball diverters.

X. Well Logs:

Copies of well logs have been filed with the Commission.

XI. Fresh Water Well Chemical Analysis:

Analysis of fresh water from the N.T. Roberts well in the SW/4 of the NW/4 of Sec 14 T20S-R34E is attached.

XII. Upon examination of the available geologic and engineering data, no evidence of open faults or any other hydrologic connection between the disposed zone and any underground source of drinking water was found.

Surface Owner:
Kenneth Smith, Inc.
P. O. Box 764
Carlsbad, NM 88220

Offset Operators:
Marathon Oil Co.
P. O. Box 552
Midland, TX 79702

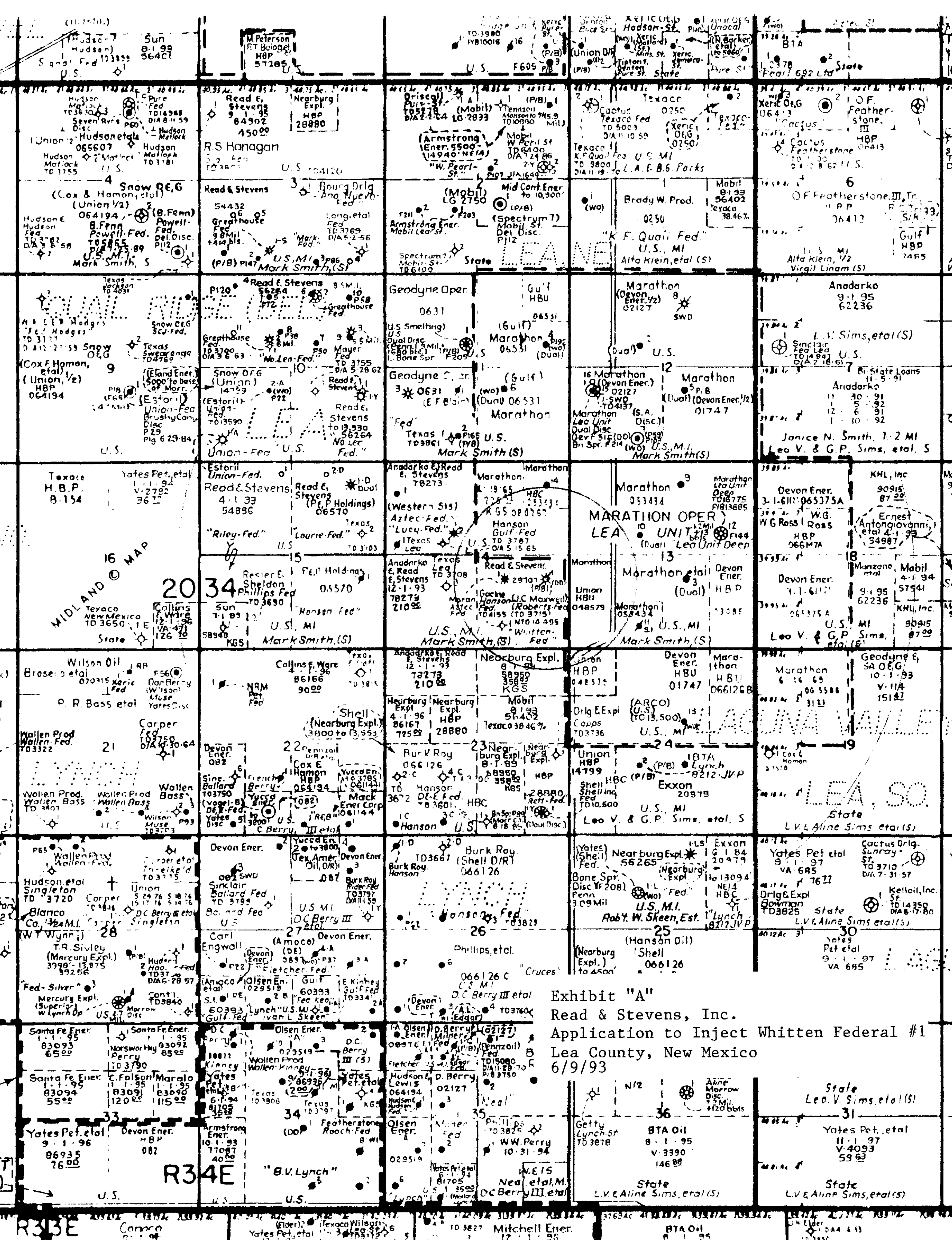


Exhibit "A"
Read & Stevens, Inc.
Application to Inject Whitten Federal #1
Lea County, New Mexico
6/9/93

CALCULATIONS AND DESIGN DATA

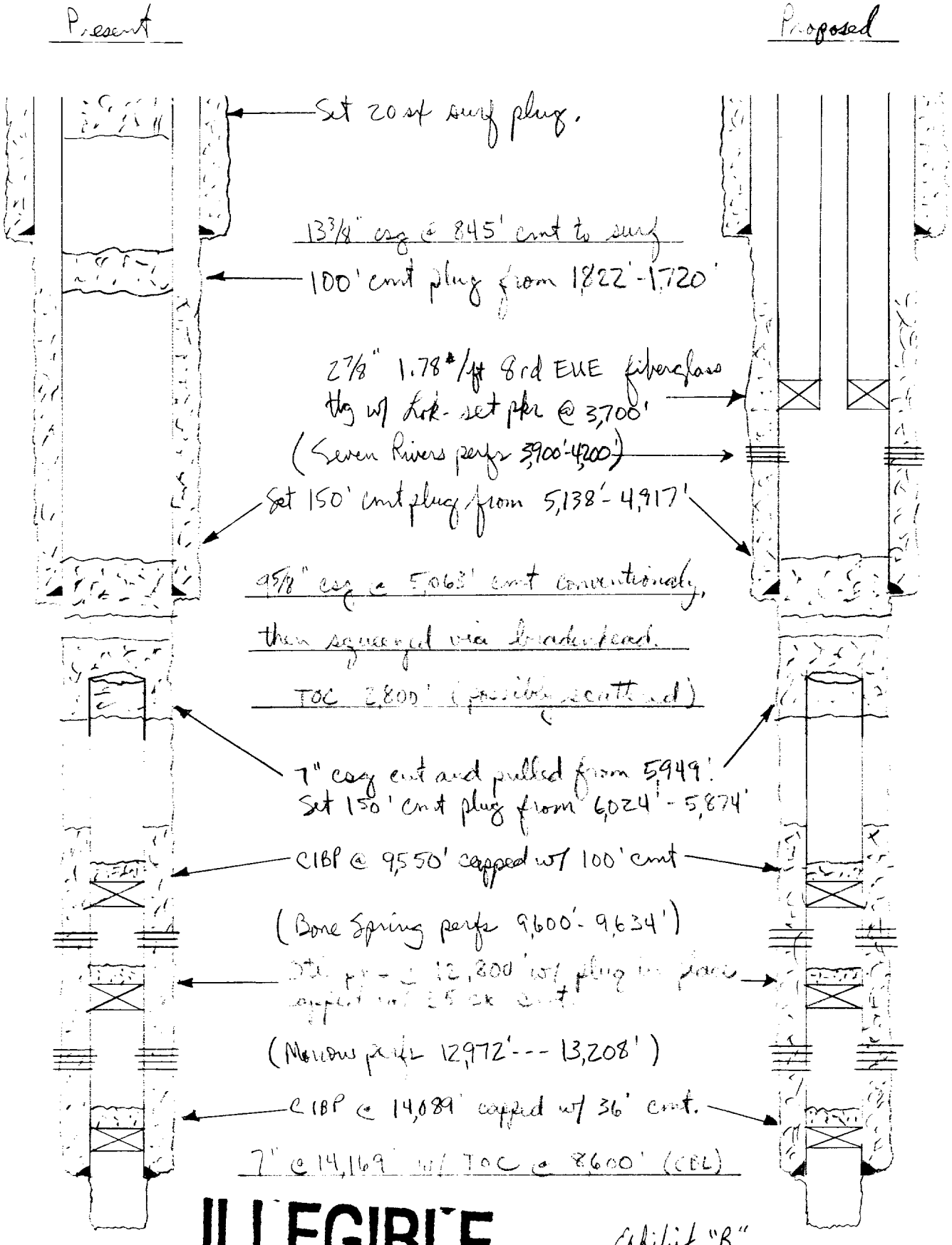
PREPARED BY

SUBJECT Whitten Federal #1

DATE 6/3/93

1980' FSL & 660' FEL Sec 14-20S-34E Lea Co. NM.

SHEET 1 OF 1



ILLEGIBLE

Exhibit "B"
Read & Stevens Inc.
Whitten Fed #1

CALCULATIONS AND DESIGN DATA

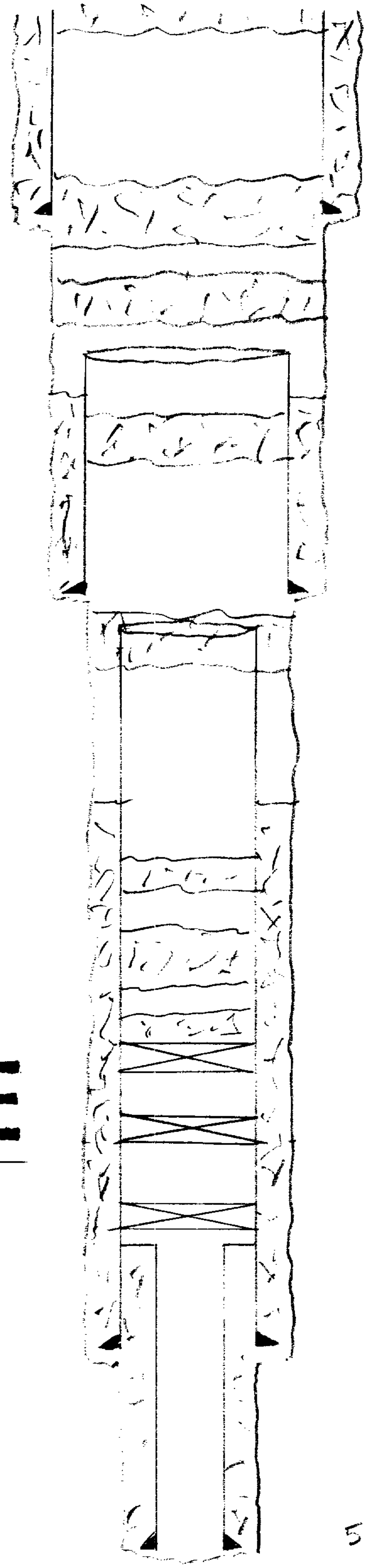
PREPARED BY Jcm

SUBJECT Aztec Federal #1

DATE 6/3/93

1980' FSL & 1830 FEL Sec 14-20s-34e Lea Co NM

SHEET 1 OF 1



ILLEGIBLE

P & A 9/72

CALCULATIONS AND DESIGN DATA

PREPARED BY Jay

SUBJECT Hanson Fed #1

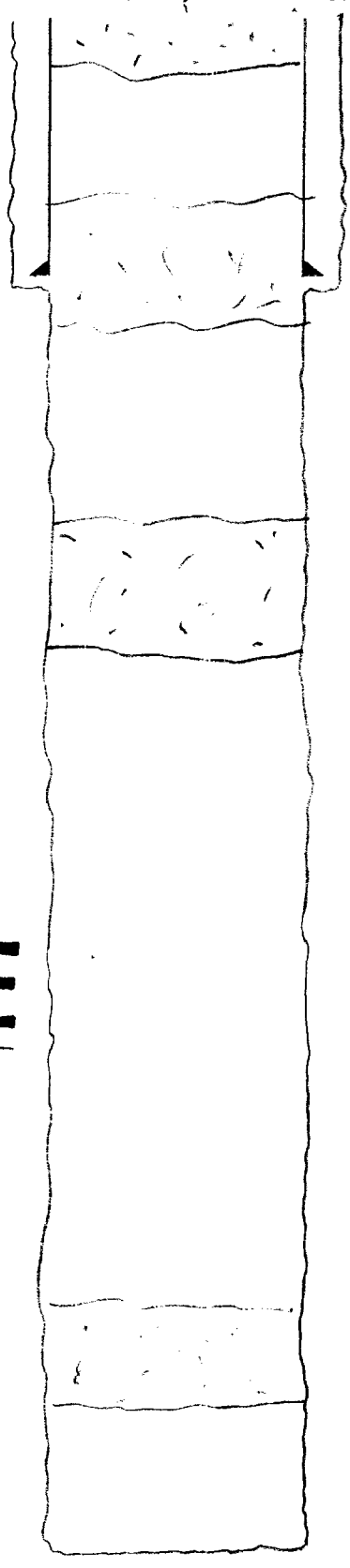
DATE 6/7/93

660' FSL & 1980' FEL Sec 14 - 20S - 34E Lea Co., NM

SHEET 1 OF 1

surf plug

25 sx @ 320'



7 7/8" @ 575' cmt w/ 225 sx

TOC @ surf (calc)

25 sx @ 1,700'

ILLEGIBLE

25 sx @ 3,255'

TD @ 4,145'

BAKER
Performance Chemicals
WATER ANALYSIS REPORT

Lab ID No. : 022891-54 Analysis Date: February 28, 1991

Company : Read & Stevens
Field :
Lease/Unit : Mark Federal
Well ID. : No. 1
Sample Loc.: Delaware water

Sampled By : Pro-Kem, Inc.
Sample Date: 20-February-1991
Salesperson: Gerald Phillips
Formation :
Location : Lovington, N. M.

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/I
Calcium as Ca++	20,577	1,029	Hydroxyl as OH-	0	0
Magnesium as Mg++	5,437	446	Carbonate as CO3=	0	0
Sodium as Na+ (Calc)	62,354	2,711	Bicarbonate as HCO3-	210	3
Barium as Ba++	Not Determined		Sulfate as SO4=	410	9
Oil Content	0		Chloride as Cl-	147,967	4,17

Total Dissolved Solids, Calculated: 236,955 mg/L.

Calculated Resistivity: 0.015 ohm-meters
mg/L. Hydrogen Sulfide: Not Present
mg/L. Carbon Dioxide: Not Determined
mg/L. Dissolved Oxygen: Not Determined

pH: 5.360
Specific Gravity 60/60 F.: 1.167
Saturation Index @ 80 F.: -0.263
@ 140 F.: +0.757

Total Hardness: 73,690 mg/L. as CaCO3
Total Iron: 40.00 mg/L. as Fe++

Calcium Sulfate Scaling Potential
Not Present

Estimated Temperature of Calcium Carbonate Instability is
93 F.

PROBABLE MINERAL COMPOSITION

COMPOUND	MG/L	MEQ
Ca(HCO3)2	279	3
CaSO4	581	8
CaCl2	56,437	1,016
Mg(HCO3)2	0	0
MgSO4	0	0
MgCl2	21,222	445
NaHCO3	0	0
Na2SO4	0	0
NaCl	158,488	2,71

Analyst 04:44 PM

HALLIBURTON SERVICES
HOBBS, NEW MEXICO

To Read & Stevens

Sample Number 152

FAX: 505-622-8643

ATT: John Maxey

Submitted by -

Date Received 5-12-92

Well No. North Lea #5 Depth Formation Seven Rivers

County Field Source

Resistivity.....	0.1031 @ 76°F		
Specific Gr.....	1.045		
pH.....	7.3		
Calcium*.....	2850		
Ca			
Magnesium*.....	960		
Mg			
Chlorides*.....	39750		
Cl			
Sulfates*.....	7121		
SO_4			
Bicarbonates*....	500		
HCO_3			
Soluble Iron*....	nil		
Fe			

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: J. LEWALLEN

HALLIBURTON COMPANY

By

HALLIBURTON SERVICES

HOBBS, NEW MEXICO

To Read & Stevens

Sample Number 205

ATT: John Maxey

Submitted by Date Received 6-8-93

Well No. North Lea Water Well Depth Formation

County Field Source Shallow fresh water well.

Resistivity.....	2.577 @ 70 F		
Specific Gr.....	1.025		
pH.....	8.8		
Calcium*.....	75		
Ca Magnesium*.....	nil		
Mg Chlorides*.....	395		
Cl Sulfates*.....	1515		
SO_4 Bicarbonates*....	232		
HCO_3 Soluble Iron*....	nil		
Fe			

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Glorianne

HALLIBURTON COMPANY

By

CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE

RECEIVED JUN 1 8 1993

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, Kathi Bearden

General Manager

of the Hobbs Daily News-Sun, a daily newspaper published at Hobbs, New Mexico, do solemnly swear that the clipping attached hereto was published once a week in the regular and entire issue of said paper, and not a supplement thereof for a period.

of _____

one weeks.
Beginning with the issue dated

June 13 , 1993
and ending with the issue dated

June 13 , 1993

Kathi Bearden
General Manager
Sworn and subscribed to before

me this 17 day of
June , 1993

Charlene Perrin
Notary Public.

My Commission expires
March 15, 1997
(Seal)

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937, and payment of fees for said publication has been made.

LEGAL NOTICE
June 13, 1993

Read & Stevens, Inc. will apply for authority to convert the Whitten Federal #1 well located 1980' FSL and 660' FEL of Section 14 T20S-34E of Lea County, New Mexico, into a salt water disposal well. Water produced from the North Lea Federal and Mark leases will be disposed of into the Seven Rivers formation from 3,900' to 4,200'. The maximum daily injection rate will be 5,000 BWPD with a maximum injection pressure of 1,500 psi. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504-2088 within fifteen days (15) of this notice.

John C. Maxey, Jr.
Petroleum Engineer
Read & Stevens, Inc.
P.O. Box 1518
Roswell, NM 88202
505/622-3770

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

HOBBS DISTRICT OFFICE

'93 JUN 25 AM 9 22

6-22-93

BRUCE KING
GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

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

Gentlemen:

I have examined the application for the:

Read & Stevens Inc. Whitten Federal #1-I 14-20-34
Operator Lease & Well No. Unit S-T-R

and my recommendations are as follows:

IS CLOSE TO REEF

Yours very truly,

Jerry Sexton
Supervisor, District 1

/ed