Due 8-10-82

ENSERCH EXPLORATION INC.

P. O. Box 4815
Midland, Texas 79704
915-682-9756

RECEIVED
JUL 21 1982
OIL CONSERVATION DIVISION
SANTA FE

Daniel C. Renoult
District Petroleum Engineer
West Texas District
Production Division

July 19, 1982

Application is OK - Production Division
7-21-82

Oil Conservation Division
P. O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

RE: Application for Salt Water Disposal
Scott Federal Well No. 2
Peterson, North Field
Roosevelt County, New Mexico

Dear Sir:

Enserch Exploration, Inc. hereby applies for administrative approval to dispose of lease and off-lease salt water by injection in the Enserch Exploration, Inc. Scott Federal Well No. 2 located 660' FNL and 1980' FEL of Section 20, Township 4 South, Range 33 East, Peterson North Field, Roosevelt County, New Mexico.

8722
2
1744

Water will be injected in the subject well in the Montoya Dolomite formation from 8722' to 8772' overall, at an expected maximum injection rate of 2000 barrels per day under a maximum injection pressure of 1744 psi. ok

Attached are Form C108, a land plat, the injection well data sheet, water analyses, the legal advertisement in the Portales New Tribune, the certified notice to the landowner, and well completion data.

XII OK

Review of geologic and engineering data was conducted and indicated that there is no evidence of open faults or any other hydrologic connection between the Montoya Dolomite disposal zone in the Scott Federal Well No. 2 and any underground source of drinking water.

Please advise if there are questions or additional information desired regarding this approval.

Daniel C. Renoult

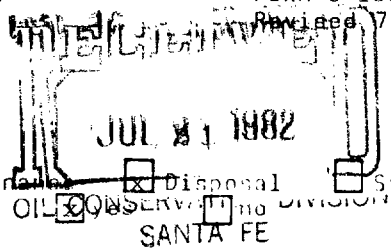
Daniel C. Renoult
District Petroleum Engineer

DCR/mb
cc: Leonard Kersh
J. M. Duffie
B. K. Irani
L. Alexander
OCD - Hobbs Office
N. Lowe

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: Enserch Exploration, Inc.

Address: P.O. Box 4815, Midland, Texas 79704

Contact party: Daniel C. Renoult (District Pet. Eng) Phone: 915/682-9756

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: Daniel C. Renoult Title District Petroleum Engineer

Signature: Daniel Renoult Date: July 12, 1982

* 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;

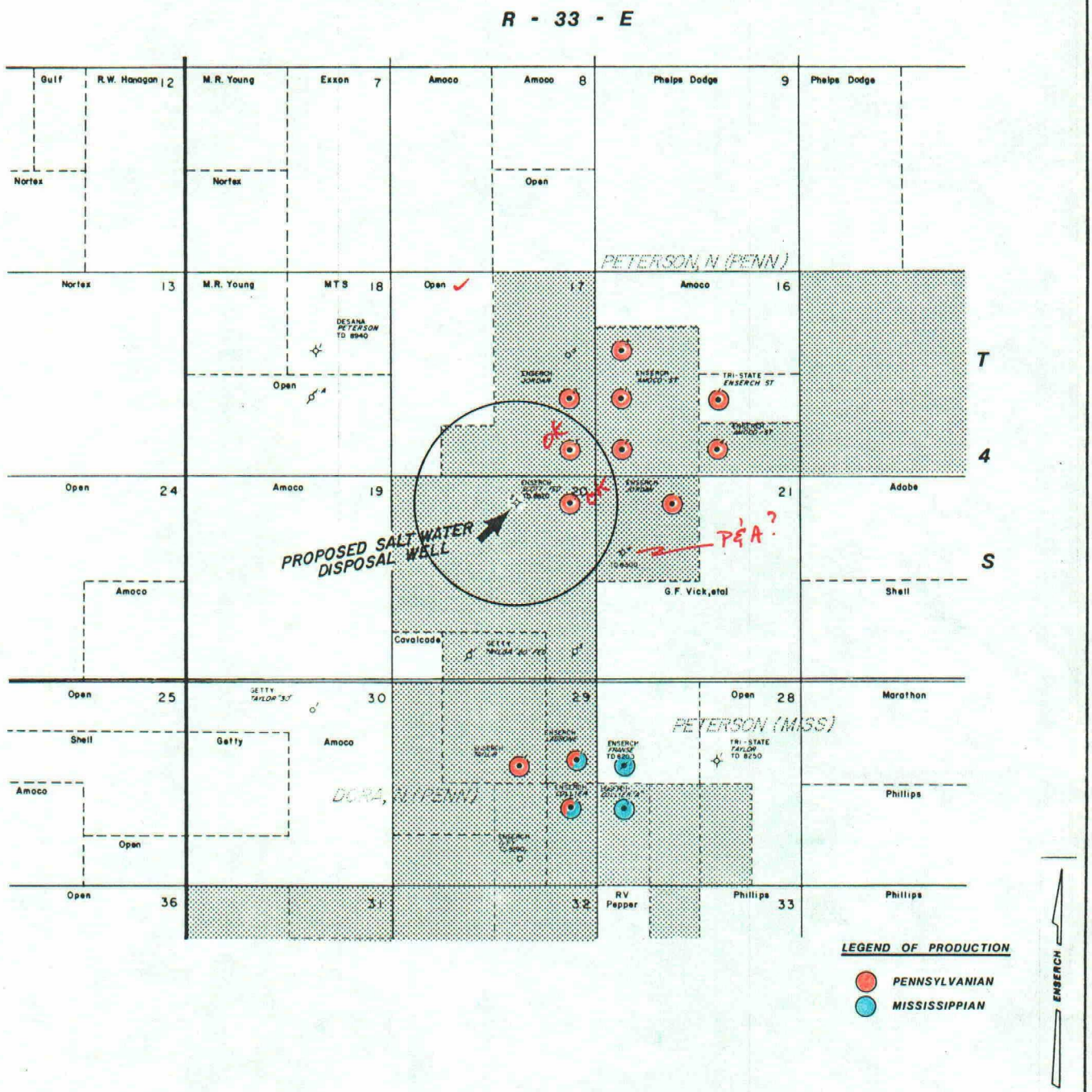
(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(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.



ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON, NORTH FIELD
ROOSEVELT COUNTY, NEW MEXICO

ENSERCH LEASES

SCALE 1" = 4000'

DATE June, 1982

LEGAL NOTICE

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

ENSERCH EXPLORATION, INC. hereby applies for administrative approval to dispose of lease and off lease salt water by injection in the Enserch Exploration Scott Federal Well No. 2 located 660' FNL and 1980' FEL of Section 20, Township 4 South, Range 33 East, Peterson Field, Roosevelt County, New Mexico.

Water will be injected in the subject well in the Montoya Dolomite formation from 8722' to 8772' overall, at an expected maximum injection rate of 2000 barrels per day under a maximum injection pressure of 1744 psi.

For further information concerning this action, please contact Enserch Exploration Inc. P.O. Box 4815, Midland, Texas 79704 (Attention Daniel C. Renoult, District Petroleum Engineer Phone: 915-682-9756).

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.

Published in the Portales News-Tribune July 15, 1982. Legal No. 7614.

ENSERCH EXPLORATION INC.

P. O. Box 4815
Midland, Texas 79704
915-682-9756

Daniel C. Renoult
District Petroleum Engineer
West Texas District
Production Division

ok
Land Owner

July 12, 1982

Mr. Bennie Taylor
Box 87
Elida, New Mexico 88116

Re: Application for Salt Water Disposal
Scott Federal Well No. 2
Peterson Field
Roosevelt County, New Mexico
(Certified Mail)
(Receipt No. P 206 128 646)

Dear Sir,

Please find the legal notice of ENSERCH EXPLORATION, INC. to dispose of salt water by injection into a porous formation in the Scott Federal Well No. 2 located on some land you are the surface owner.

ENSERCH EXPLORATION, INC. hereby applies for administrative approval to dispose of lease and off lease salt water by injection in the Enserch Exploration Scott Federal Well No. 2 located 660' FNL and 1980' FEL of Section 20, Township 4 South, Range 33 East, Peterson Field, Roosevelt County, New Mexico.

Water will be injected in the subject well in the Montoya Dolomite formation from 8722' to 8772' overall, at an expected maximum injection rate of 2000 barrels per day under a maximum injection pressure of 1744 psi.

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.

For further information concerning this action, please contact Enserch Exploration, Inc., P.O. Box 4815, Midland, Texas 79704 (Attention: Daniel C. Renoult, District Petroleum Engineer Phone 915/682-9756).

Yours very truly,

Daniel C. Renoult
District Petroleum Engineer

DCR/ec
cc: J.B. Cannon
L. Kersh
J.M. Duffie

PS Form 3811, Dec. 1980

RETURN RECEIPT, REGISTERED, INSURED AND CERTIFIED MAIL

● **SENDER:** Complete items 1, 2, 3, and 4.
Add your address in the "RETURN TO" space on reverse.

RESTRICTED DELIVERY

(CONSULT POSTMASTER FOR FEES)

1. The following services are available (check one).
   - ☐ Show to whom and date delivered ..... ¢
   - ☒ Show to whom, date, and address of delivery .. ¢
2. ☒ RESTRICTED DELIVERY ¢
   (The restricted delivery fee is charged in addition to the return receipt fee.)

DELIVER TO ADDRESSEE ONLY

TOTAL $

3. ARTICLE ADDRESSED TO:
Mr BENNIE TAYLOR
BOX 87
ELIDA - NEW MEXICO - 88116

4. TYPE OF SERVICE:
   - ☐ REGISTERED ☐ INSURED
   - ☒ CERTIFIED ☐ COD
   - ☐ EXPRESS MAIL

ARTICLE NUMBER

(Always obtain signature of addressee or agent)

I have received the article described above.

SIGNATURE ☐ Addressee ☐ Authorized agent

5. Bennie Taylor

DATE OF DELIVERY July 15 1982

POSTMARK JUL 15 1982 ELIDA

6. ADDRESSEE'S ADDRESS (Only if requested)
at Post Office

7. UNABLE TO DELIVER BECAUSE:

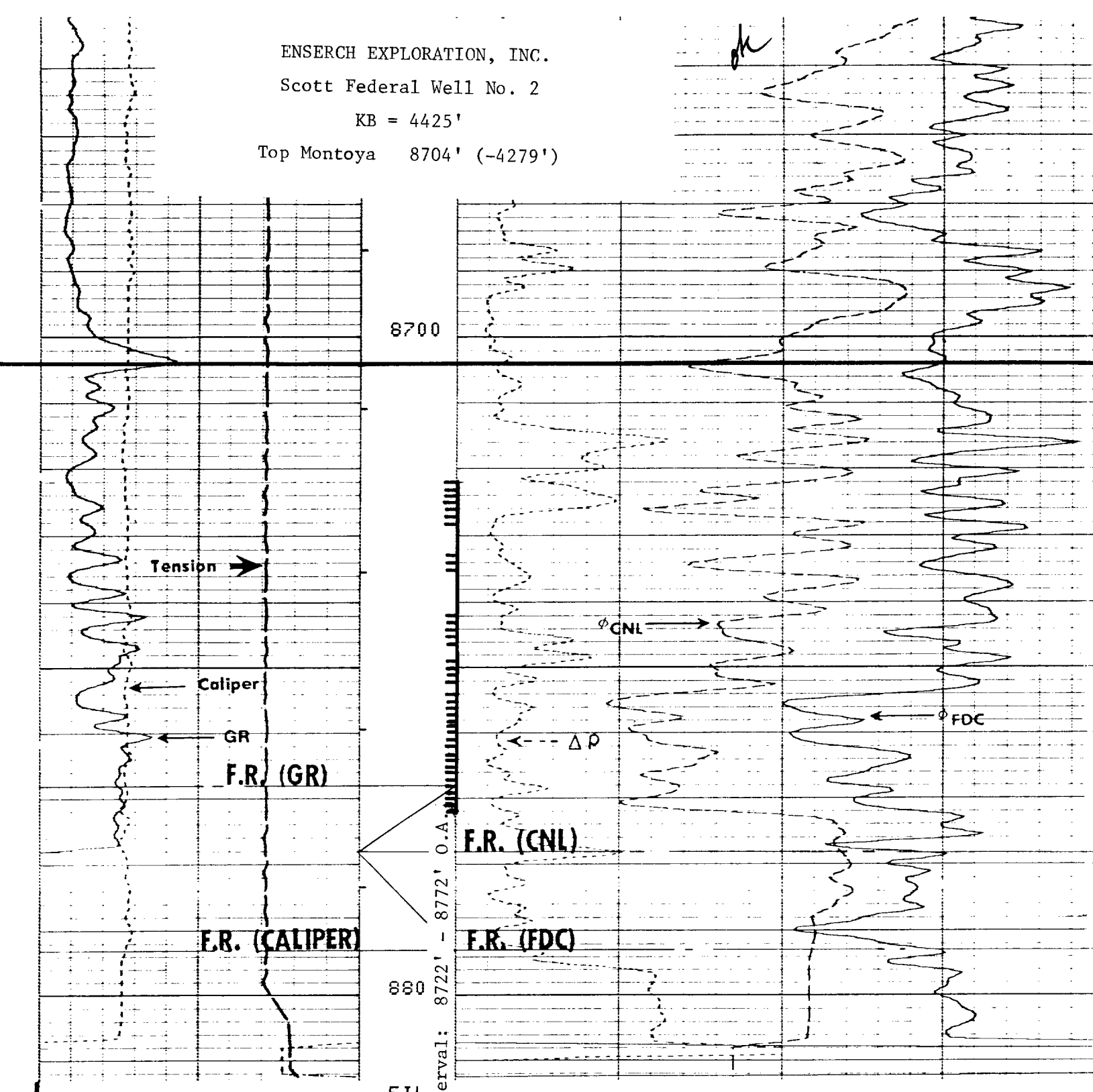
7a. EMPLOYEE'S INITIALS
LD

ENSERCH EXPLORATION, INC.

Scott Federal Well No. 2

KB = 4425'

Top Montoya 8704' (-4279')



TENS(LB)		DRHO(G/C3)	
10000.	0.0	-0.050	0.4500
GR (GAPI)		NPHI( )	
150.0	300.0	0.3000	-0.100
CALI(IN)		DPHI( )	
6.000	16.00	0.3000	-0.100
GR (GAPI)			
0.0	150.0		

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

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

Martin Water Laboratories, Inc

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

Engr

RESULT OF WATER ANALYSES

LABORATORY NO. 582188

TO: Mr. Daniel Renault
P.O.Box 4815, Midland, Texas

SAMPLE RECEIVED 5-14-82
RESULTS REPORTED 5-19-82

COMPANY Enserch Exploration, Inc. LEASE Scott Federal #2
FIELD OR POOL North Peterson
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Roosevelt STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Sample #1 @ 350' - reversed out of drill pipe. 5-14-82
NO. 2 Sample #2 @ 1,664' - reversed out of drill pipe. 5-14-82
NO. 3 Sample #3 @ 2,498' - reversed out of drill pipe. 5-14-82
NO. 4 Sample #4 @ 3,332' - reversed out of drill pipe. 5-14-82

REMARKS: DST #4 - Montoya/Fusselman - 8,650' - 8,800'

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1072	1.1077	1.1074	1.1058
pH When Sampled				
pH When Received	6.8	6.8	7.0	6.8
Bicarbonate as HCO_3	598	549	525	525
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	26,500	26,000	26,500	26,000
Calcium as Ca	8,000	8,000	8,000	7,800
Magnesium as Mg	1,580	1,458	1,580	1,580
Sodium and/or Potassium	48,402	47,687	47,427	45,808
Sulfate as SO_4	1,015	1,001	960	946
Chloride as Cl	92,325	90,904	90,904	88,064
Iron as Fe	1.6	1.6	1.2	5.5
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	151,920	149,599	149,396	144,723
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	0.00	0.0	0.0
Resistivity, ohms/m at 77° F.	0.070	0.070	0.070	0.072
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

Form No. 3

By ___

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

Martin Water Laboratories, Inc

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

RESULT OF WATER ANALYSES

LABORATORY NO. 582188 (Page 2)

TO: Mr. Daniel Renault
P.O.Box 4815, Midland, Texas

SAMPLE RECEIVED 5-14-82
RESULTS REPORTED 5-19-82

COMPANY Enserch Exploration, Inc. LEASE Scott Federal #2
FIELD OR POOL North Peterson
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Roosevelt STATE Texas
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Sample #5 @ 4,166' - reversed out of drill pipe. 5-14-82
NO. 2 Sample #6 @ 5,000' - reversed out of drill pipe. 5-14-82
NO. 3 Recovered water - sample chamber. 5-14-82
NO. 4

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES

	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1048	1.1048	1.1055	
pH When Sampled				
pH When Received	6.8	6.7	6.7	
Bicarbonate as HCO_3	476	500	586	
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	26,500	26,500	26,000	
Calcium as Ca	7,800	7,600	8,000	
Magnesium as Mg	1,701	1,823	1,458	
Sodium and/or Potassium	45,449	44,542	47,569	
Sulfate as SO_4	713	727	727	
Chloride as Cl	88,064	86,643	90,904	
Iron as Fe	7.0	8.2	119	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	144,203	141,835	149,244	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	0.072	0.073	0.070	
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks Our records of Montoya and Fusselman in the area are limited to wildcat wells; therefore, we do not feel we have good background records for comparison with the above. However, on the basis of what we do have, we would be relatively confident that the sample chamber does reflect characteristics of at least mostly natural connate water. Furthermore, by this comparison it would appear that all the other waters recovered are also predominantly natural water.

Form No. 3

By _____

Waylan C. Martin, M. A.

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

Martin Water Laboratories, Inc

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

RESULT OF WATER ANALYSES

LABORATORY NO. 6812

TO: District Engineer
P.O. Box 4815, Midland, Texas

SAMPLE RECEIVED 6-1-81
RESULTS REPORTED 6-1-81

COMPANY Enserch Exploration, Inc. LEASE Amoco State
FIELD OR POOL North Peterson
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Roosevelt STATE New Mexico
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Produced water - taken from Amoco State #1. 5-29-81
NO. 2 Produced water - taken from Amoco State #2. 5-29-81
NO. 3 Produced water - taken from Amoco State #3. 5-29-81
NO. 4

REMARKS: Pennsylvanian

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1019	1.1021	1.1084	
pH When Sampled				
pH When Received	5.8	5.9	5.3	
Bicarbonate as HCO_3	354	329	110	
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	27,000	27,500	31,500	
Calcium as Ca	9,600	10,000	11,200	
Magnesium as Mg	729	608	851	
Sodium and/or Potassium	46,988	46,736	46,609	
Sulfate as SO_4	656	632	535	
Chloride as Cl	90,904	90,904	93,745	
Iron as Fe	92.8	140	97.5	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	149,231	149,209	153,050	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	0.070	0.070	0.069	
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: Based on a comparison with our records of Pennsylvanian water in the South Peterson field, the above water from all three wells appears to be a natural connate Pennsylvanian water.

Form No. 3

By _____

Waylan C. Martin, M. A.

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

Martin Water Laboratories, Inc

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

RESULT OF WATER ANALYSES

JUL 9 1979

LABORATORY NO. 679309

TO: Mr. Jerry Nash
P.O.Box 4315, Midland, Texas

SAMPLE RECEIVED 6-28-79

RESULTS REPORTED 7-5-79

COMPANY Enserch Exploration, Inc. LEASE Lambirth

FIELD OR POOL South Peterson

SECTION ___ BLOCK ___ SURVEY ___ COUNTY Roosevelt STATE New Mexico

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Produced (Penn) water - taken from Lambirth #4. 6-27-79

NO. 2 Produced (Fusselman) water - taken from Lambirth #6. 6-27-79

NO. 3 Produced (Fusselman) water - taken from Lambirth #7. 6-27-79

NO. 4 ___

REMARKS: ___

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0698	1.0717	1.0721	
pH When Sampled				
pH When Received	6.7	6.7	6.7	
Bicarbonate as HCO_3	476	566	637	
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	23,400	16,300	17,800	
Calcium as Ca	7,040	4,560	5,120	
Magnesium as Mg	1,409	1,191	1,215	
Sodium and/or Potassium	30,268	34,682	33,902	
Sulfate as SO_4	662	1,066	821	
Chloride as Cl	62,497	63,917	63,917	
Iron as Fe	81.1	56.5	97.5	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	102,352	105,982	105,612	
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	0.093	0.091	0.091	
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: We are not familiar with the objectives herein; but if a differentiation is desired, we see only a very slightly higher calcium and magnesium and lower sodium and sulfate in the Pennsylvanian water as compared to the Fusselman. This is considered a relatively minor difference; but if conclusive evidence as to the stability of the characteristics can be acquired, then it would be possible to differentiate the waters.

Form No. 3

By ___

Waylan C. Martin, M. A.

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

Martin Water Laboratories, Inc

MAY 8 1980

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

ENGINEERING

RESULT OF WATER ANALYSES

LABORATORY NO. 53013

TO: Mr. Horace Burnett
P.O. Box 4815, Midland, Texas

SAMPLE RECEIVED 5-2-80

RESULTS REPORTED 5-5-80

COMPANY Enserch Exploration LEASE Lambirth

FIELD OR POOL South Peterson

SECTION ___ BLOCK ___ SURVEY ___ COUNTY Roosevelt STATE New Mexico

SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Recovered water - taken from Lambirth #5. 4-29-80

NO. 2

NO. 3

NO. 4

REMARKS: Granite Wash

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1103			
pH When Sampled				
pH When Received	5.2			
Bicarbonate as HCO_3	5,734			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	60,000			
Calcium as Ca	21,200			
Magnesium as Mg	1,701			
Sodium and/or Potassium	36,496			
Sulfate as SO_4	474			
Chloride as Cl	95,140			
Iron as Fe	1,248			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	160,745			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen, Winkler				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	0.066			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The above results show reasonably comparable conditions to analysis #480254 (4-30-80) of water from this same well. It is apparent that there is still some spent acid influence, but it appears to be less than on this previous analysis. In light of the fact that we do not have water from this zone recorded in the area, we cannot be sure at this point as to the involvement of natural connate water.

Form No. 3

By ___

PROPOSED SALT WATER INJECTION
ENSERCH EXPLORATION, INC. - SCOTT FEDERAL WELL NO. 2
North Peterson Field - Roosevelt County
New Mexico

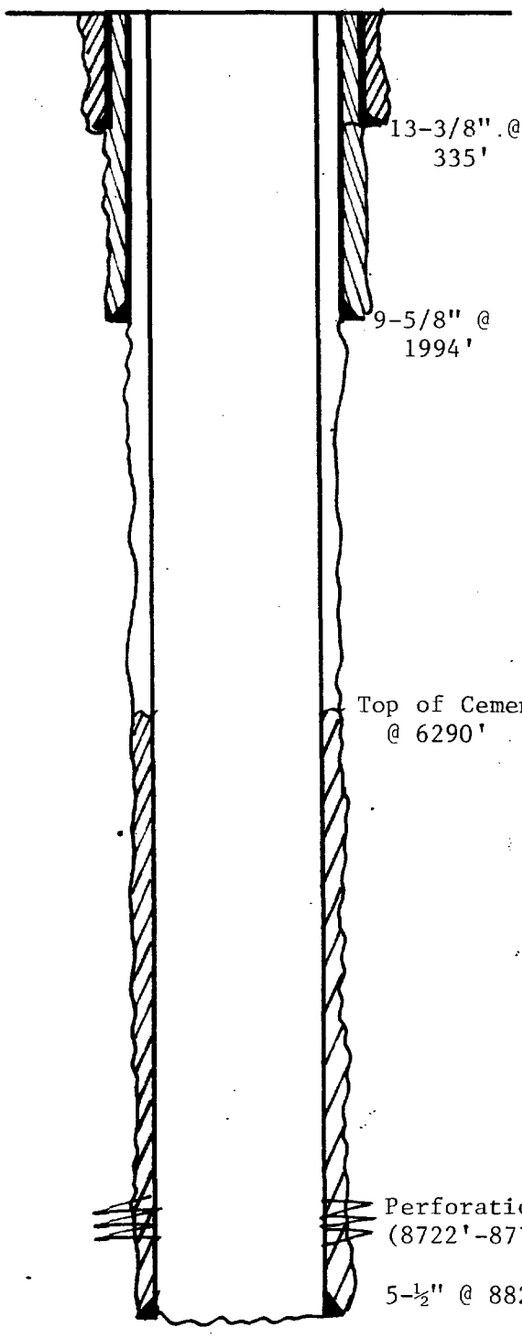
Proposed Average Daily Injection Rate:	2,000 bbls
Anticipated Maximum Injection Rate:	2,000 bbls
Type of system:	Closed
Proposed Average Injection Pressure:	1774 psi ok
Maximum Injection Pressure:	1774 psi
Source of Injection Water:	Fusselman and Pennsylvanian
Water Analysis/Injection Water: (See Attachments)	Pennsylvanian (Lambirth lease) Pennsylvanian (Lambirth lease) Fusselman (Lambirth lease) Granite Wash (Lambirth lease)
Water Analysis/Receiving formation water: (See Attachments)	Montoya (Scott Federal lease) ok
Injection zone:	Montoya Dolomite
Top of Montoya formation:	8704' (-4279') (See attached logs)
Fresh water aquifer:	Ogallala
Depth fresh water aquifer:	±200'
Stimulation treatment/Injection zone:	8000 gals. of 15% NEFE acid flushed with 36 bbls 2% KCL Dropped 25-1" RCN ball sealers TX ok
Logging program through injection zone:	FDC/CNL - GR
Testing program:	DST 8550'-8700' (See Attachment)
Fresh Water Samples:	Not available within one mile

INJECTION WELL DATA SHEET

Enserch Exploration, Inc. (OPERATOR) Scott Federal (LEASE)

2 (WELL NO.) 660' FNL & 1980' FEL of (FOOTAGE LOCATION) Section 20 (SECTION) Township 4 South - Range 33 East (TOWNSHIP) (RANGE)

Schematic



Tabular Data

Surface Casing

Size 13-3/8 " Cemented with 460 ✓ sx.

TOC surface feet determined by circulation to surface

Hole size 17-½

Intermediate Casing

Size 9-5/8 " Cemented with 995 ✓ sx.

TOC surface feet determined by circulation to surface

Hole size 12-¼

Long string

Size 5-½ " Cemented with 660 sx.

TOC 6290' feet determined by cement bond log ✓ variable density log

Hole size 8-3/4

Total depth 8378'

Injection interval

8722' feet to Perforated from: 8772' feet (39 shots)

(perforated or open-hole, indicate which)

Tubing size 2-3/8 lined with Plastic Coated (material) OK set in a

Model C-25 Production Retainer Baker Packer (brand and model) packer at 8704 OK feet

(or describe any other casing-tubing seal).

OK

80 joints with fusion bonded epoxy film PA-50
200 joints with A-vis phenol epoxy SC-650

Other Data

1. Name of the injection formation Montoya Dolomite ✓
2. Name of Field or Pool (if applicable) North Peterson ✓
3. Is this a new well drilled for injection? [ ] Yes [x] No

   If no, for what purpose was the well originally drilled? Originally drilled as a Mississippian lime test
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   No
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Pennsylvanian lime perforated from 7887' to 7896' in offset Enserch Exploration, Inc. Scott Federal Well No. 1 in North Peterson Oil Pool. OK

APPLICATION FOR APPROVAL OF SALT WATER DISPOSAL WELL

ENSERCH EXPLORATION, INC. - SCOTT FEDERAL WELL NO2

NORTH PETERSON FIELD - ROOSEVELT COUNTY

NEW MEXICO

Operator Well Name	Location	Distance to Enserch Scott Federal No.2	Casing String Setting Depth	Cement (Sacks)	Cement Top	Total Well Depth	Current Producing Interval (Subsea Depth)	Current Producing Formation	KB	Date Drilled
Enserch Exploration, Inc. Scott Federal No. 2	660' FNL 1980' FEL Section 20 T4S, R33E	8722'-8772'	13-3/8" @ 335' 9-5/8" @ 1994' 5-1/2" @ 8821'	460 995 660	Circulated Circulated 6290'	? 8378' ? 8821'	8722',8772' (-4297'-4347')	(Montoya)	4425'	5/12/82
Enserch Exploration, Inc. Scott Federal No. 1	660' FNL 660' FEL Section 20 T4S, R33E	1320'	13-3/8" @ 355' ✓ 9-5/8" @ 1994' 5-1/2" @ 8300'	460 990 400	Circulated Circulated 6920'	8323'	7887',7896' (-3494'-3503')	Pennsylvanian	4393'	12/6/81
Enserch Exploration, Inc. Pearl Jordan No. 3	660' FSL 660' FEL Section 11 T4S, R33E	1867'	13-3/8" @ 345' 9-5/8" @ 1932' 5-1/2" @ 8200'	460 990 550	Circulated 7140'	8201'	7830',7852' (-3433'-3455')	Pennsylvanian	4397'	5/27/81

JS-164-A

JOHNSTON-MACCO

Schlumberger

technical report

FIELD REPORT NO. 36474E

COMPANY ENSERCH EXPLORATION, INC. WELL SCOTT FEDERAL #2 TEST NO. 4 COUNTY ROOSEVELT STATE NEW MEXICO

* TEST TICKET DATA PRINTOUT *

WELL IDENTIFICATION

1.	WELL	: SCOTT FEDERAL #2
2.	COMPANY	: ENSERCH EXPLORATION, INC.
3.		: 1230 RIVER BEND DR., SUITE 136
4.		: DALLAS, TEXAS 75227
5.	CUSTOMER	: SAME
6.		:
7.		:
8.	FIELD	: WILDCAT (N. PETERSON)
9.	COUNTY	: ROOSEVELT
10.	STATE/PROV.	: NEW MEXICO
11.	LOCATION	: SEC.20/TWN.4SS/RGE.33E
12.	TECHNICIAN	: FOWLER (HOBBS)
13.	TEST APPROVED BY	: MR. ALEK B. CLOUGH
14.	TEST DATE	: 5-13-82
15.	DEPTH REFERENCE	: KELLY BUSHING
16.	DEPTH REFERENCE ELEVATION	: G.L. 4410. FT

HOLE INFORMATION

1. THE HOLE IS STRAIGHT.

2.	TOTAL DEPTH	: 8300. FT
3.	OPEN HOLE DIAMETER	: 8.75 IN

MUD INFORMATION

1.	MUD TYPE	: BRINE GEL/STARCH
2.	MUD WEIGHT	: 10.0 LB/GAL
3.	MUD VISCOSITY	: 65. MARSH FUNNEL SEC
4.	CORRECTED WATER LOSS	: 10.0 CC/30 MIN
5.	MUD RESISTIVITY	: 0.04 OHM-M
6.	MUD RES. MEAS. TEMP.	: 62.0 DEG F
7.	MUD FILTRATE RESISTIVITY	: OHM-M
8.	MUD FILT. RES. MEAS. TEMP.	: DEG F
9.	MUD CHLORIDES CONTENT	: 122000.0 PPM BY WEIGHT

****
* TEST TICKET DATA PRINTOUT *
****

TEST INFORMATION

1.	FIELD REPORT NUMBER	: 36474E
2.	TEST TYPE	: MFE OPEN HOLE
3.	TEST NUMBER	: 4
4.	TELEFLOW IN USE ?	: NO
5.	SSDR OR J-300 IN USE ?	: NO
6.	SPRO IN USE ?	: NO
7.	PTSDL IN USE ?	: NO

TEST STRING INFORMATION

#	COMPONENT NAME	EFFECTIVE I.D. (IN)	O.D. (IN)	FLOW PATH LENGTH (FT)
1	DRILL PIPE	3.83	4.50	8120.
2	DRILL COLLARS	2.25	7.00	495.
3	TOOL STRING	0.94	5.00	185.

TEST STRING PLACEMENT

1.	TEST TYPE CODE 1 - ON BOTTOM	
2.	PACKER DEPTHS	: 8644. FT & 8650. FT

TEST ZONE DESCRIPTION

	FORMATION NAME	TOP (FT)	BOTTOM (FT)	PRODUCTION ZONE THICKNESS (FT)	POROSITY (%)
1	FUSSELMAN			20.	10.

TEST CONDITIONS

1.	BOTTOMHOLE CHOKE(S) EFF. INTERNAL DIA.	: 0.94 IN

****
* TEST TICKET DATA PRINTOUT *
****

TEST TOOL SAMPLE CHAMBER RECOVERY DATA

SAMPLE PRESSURE : 250. PSIG
OIL GRAVITY : DEG. API @ DEG F
GAS/OIL RATIO : FT3/BBL
GAS/LIQUID RATIO : FT3/BBL

SAMPLE CHAMBER CONTENTS

FLUID	VOLUME	RESISTIVITY	CHLORIDES
GAS	FT3		
OIL	CC		
WATER	2250.0 CC	0.09 OHM-M @ 62.0 DEG F	90000. PPM
MUD	CC	OHM-M @ DEG F	
TOTAL LIQUID	2250.0 CC		

RECOVERY INFORMATION

DESCRIPTION	FEET	% OIL	% H2O	% OTH	API DEG.	API DEG.F	RESISTIVITY OHM-M	RESISTIVITY DEG.F	CHL PPM
1 FORMATION FLUID	5000								

2 TOOK SIX SAMPLES WHILE REVERSING OUT, CHLORIDES RANGED FROM 84000 TO 90000 PPM AND RESIST. RANGED FROM .06 @ 62 TO .09 @ 64

****
* TEST TICKET DATA PRINTOUT *
****

SURFACE INFORMATION

	DESCRIPTION	TIME	PRESSURE	CHOKE SIZE
1	SET PACKER (5-13-82)	0637	-	-
2	OPENED TOOL	0638	-	1/8"
3	FAIR BLOW	0640	-	"
4		0642	-	1/4"
5	CLOSED FOR INITIAL SHUT-IN	0737	-	"
6	FINISHED SHUT-IN	0822	-	"
7	RE-OPENED TOOL	0823	-	"
8	WEAK BLOW	0825	-	1/8"
9	BLOW DIED	0833	-	"
10	CLOSED FOR FINAL SHUT-IN	0923	-	-
11	FINISHED SHUT-IN	1125	-	-
12	PULLED PACKER LOOSE	1130	-	-

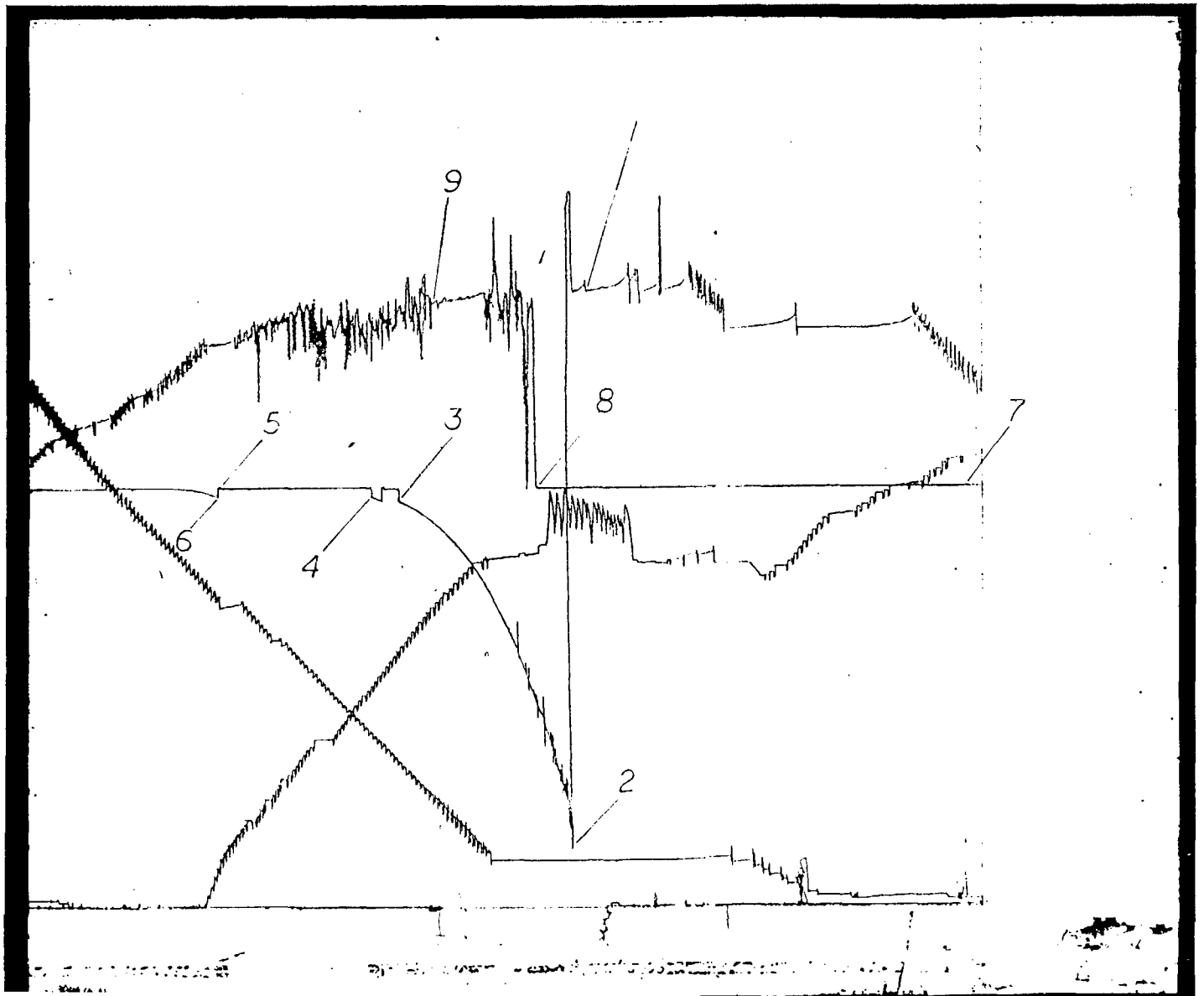
FIELD REPORT NO.: 36474E

CAPACITY: 6400#

INSTRUMENT NO.: J-1706

NUMBER OF REPORTS: 5

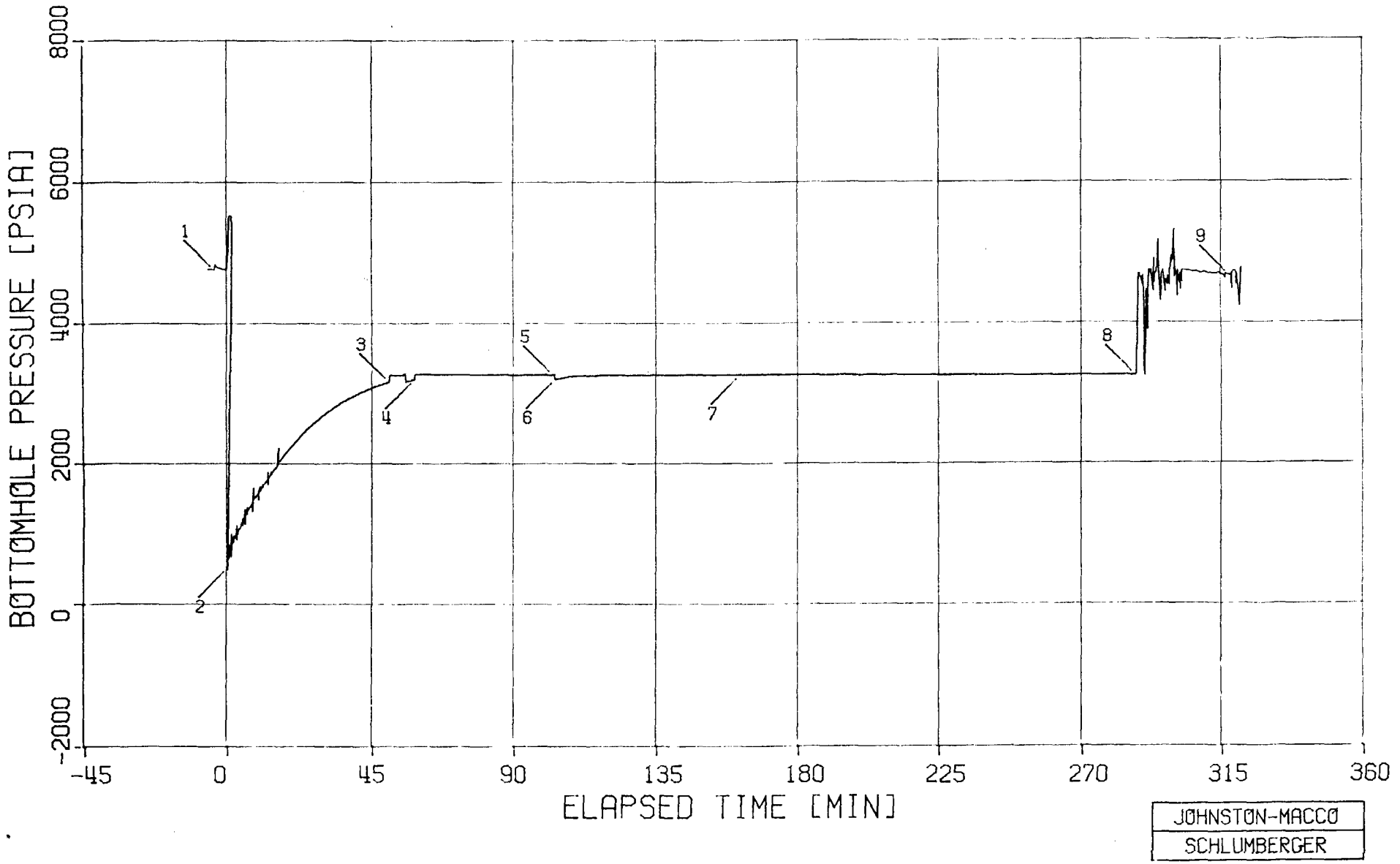
JOHNSTON
Schlumberger



BOTTOMHOLE PRESSURE LOG

FIELD REPORT NO. 36474E
INSTRUMENT NO. J-1706
DEPTH : 8788 FT
CAPACITY : 6400 PSI
PORT OPENING : OUTSIDE

COMPANY : ENSERCH EXPLORATION INC.
WELL : SCOTT FEDERAL #2



JOHNSTON-MACCO
SCHLUMBERGER

WELL TEST DATA PRINTOUT

FIELD REPORT # : 36474E

COMPANY : ENSERCH EXPLORATION INC.
WELL : SCOTT FEDERAL #2

INSTRUMENT # : J-1706
CAPACITY [PSI] : 6400.
DEPTH [FT] : 8788.0
PORT OPENING : OUTSIDE
TEMPERATURE [DEG F] : 164.0

LABEL POINT INFORMATION

#	TIME OF DAY HH:MM:SS	DATE DD-MM	EXPLANATION	ELAPSED TIME,MIN	BOT HOLE PRESSURE PSIA
1	6:33:35	13-MY	HYDROSTATIC MUD	-4.41	4760
2	6:38: 0	13-MY	START FLOW	0.00	507
3	7:28:15	13-MY	CYCLED TOOL	50.25	3149
4	7:36:26	13-MY	END FLOW & START SHUT-IN	58.43	3188
5	8:20:21	13-MY	END SHUT-IN	102.35	3258
6	8:21:13	13-MY	START FLOW	103.22	3194
7	9:19:25	13-MY	END FLOW & START SHUT-IN	161.42	3254
8	11:25: 0	13-MY	END SHUT-IN	287.00	3258
9	11:55:19	13-MY	HYDROSTATIC MUD	317.32	4670

SUMMARY OF FLOW PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA
1	0.00	58.43	58.43	507	3188
2	103.22	161.42	58.20	3194	3254

SUMMARY OF SHUTIN PERIODS

PERIOD	START ELAPSED TIME,MIN	END ELAPSED TIME,MIN	DURATION MIN	START PRESSURE PSIA	END PRESSURE PSIA	FINAL FLOW PRESSURE PSIA	PRODUCING TIME, MIN
1	58.43	102.35	43.92	3188	3258	3188	58.43
2	161.42	287.00	125.58	3254	3258	3254	116.63

TEST PHASE : FLOW PERIOD # 1

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
6:38: 0	13-MY	0.00	0.00	507
6:43: 0	13-MY	5.00	5.00	1193
6:48: 0	13-MY	10.00	10.00	1642
6:53: 0	13-MY	15.00	15.00	1937
6:58: 0	13-MY	20.00	20.00	2248
7: 3: 0	13-MY	25.00	25.00	2497
7: 8: 0	13-MY	30.00	30.00	2692
7:13: 0	13-MY	35.00	35.00	2851
7:18: 0	13-MY	40.00	40.00	2975
7:23: 0	13-MY	45.00	45.00	3075
7:28: 0	13-MY	50.00	50.00	3146
7:33: 0	13-MY	55.00	55.00	3264
7:36:26	13-MY	58.43	58.43	3188

TEST PHASE : SHUTIN PERIOD # 1
FINAL FLOW PRESSURE [PSIA] = 3188
PRODUCING TIME [MIN] = 58.43

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
7:36:26	13-MY	58.43	0.00	3188	0	
7:37:26	13-MY	59.43	1.00	3257	69	1.774
7:38:26	13-MY	60.43	2.00	3257	69	1.480
7:39:26	13-MY	61.43	3.00	3257	69	1.311
7:40:26	13-MY	62.43	4.00	3257	69	1.193
7:41:26	13-MY	63.43	5.00	3257	69	1.103
7:42:26	13-MY	64.43	6.00	3257	69	1.031
7:43:26	13-MY	65.43	7.00	3257	69	0.971
7:44:26	13-MY	66.43	8.00	3257	69	0.919
7:45:26	13-MY	67.43	9.00	3257	69	0.875
7:46:26	13-MY	68.43	10.00	3257	69	0.835
7:48:26	13-MY	70.43	12.00	3257	69	0.769
7:50:26	13-MY	72.43	14.00	3257	69	0.714
7:52:26	13-MY	74.43	16.00	3257	69	0.668
7:54:26	13-MY	76.43	18.00	3257	69	0.628
7:56:26	13-MY	78.43	20.00	3257	69	0.593
7:58:26	13-MY	80.43	22.00	3257	69	0.563
8: 0:26	13-MY	82.43	24.00	3257	69	0.536
8: 2:26	13-MY	84.43	26.00	3257	69	0.512
8: 4:26	13-MY	86.43	28.00	3257	69	0.490
8: 6:26	13-MY	88.43	30.00	3257	69	0.469
8:11:26	13-MY	93.43	35.00	3257	69	0.426
8:16:26	13-MY	98.43	40.00	3257	69	0.391
8:20:21	13-MY	102.35	43.92	3258	71	0.367

TEST PHASE : FLOW PERIOD # 2

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA
8:21:13	13-MY	103.22	0.00	3194
8:26:13	13-MY	108.22	5.00	3230
8:31:13	13-MY	113.22	10.00	3246
8:36:13	13-MY	118.22	15.00	3252
8:41:13	13-MY	123.22	20.00	3252
8:46:13	13-MY	128.23	25.00	3253
8:51:13	13-MY	133.22	30.00	3253
8:56:13	13-MY	138.22	35.00	3253
9: 1:13	13-MY	143.22	40.00	3253
9: 6:13	13-MY	148.22	45.00	3253
9:11:13	13-MY	153.22	50.00	3253
9:16:13	13-MY	158.22	55.00	3253
9:19:25	13-MY	161.42	58.20	3254

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 3254
PRODUCING TIME [MIN] = 116.63

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
9:19:25	13-MY	161.42	0.00	3254	0	
9:20:25	13-MY	162.42	1.00	3258	4	2.071
9:21:25	13-MY	163.42	2.00	3258	4	1.773
9:22:25	13-MY	164.42	3.00	3258	4	1.601
9:23:25	13-MY	165.42	4.00	3258	4	1.479
9:24:25	13-MY	166.42	5.00	3258	4	1.386
9:25:25	13-MY	167.42	6.00	3258	4	1.310
9:26:25	13-MY	168.42	7.00	3258	4	1.247
9:27:25	13-MY	169.42	8.00	3258	4	1.193
9:28:25	13-MY	170.42	9.00	3258	4	1.145
9:29:25	13-MY	171.42	10.00	3258	4	1.103
9:31:25	13-MY	173.42	12.00	3258	4	1.030
9:33:25	13-MY	175.42	14.00	3258	4	0.970
9:35:25	13-MY	177.42	16.00	3258	4	0.919
9:37:25	13-MY	179.42	18.00	3258	4	0.874
9:39:25	13-MY	181.42	20.00	3258	4	0.835
9:41:25	13-MY	183.42	22.00	3258	4	0.799
9:43:25	13-MY	185.42	24.00	3258	4	0.768
9:45:25	13-MY	187.42	26.00	3258	4	0.739
9:47:25	13-MY	189.42	28.00	3258	4	0.713
9:49:25	13-MY	191.42	30.00	3258	4	0.689
9:54:25	13-MY	196.42	35.00	3258	4	0.637
9:59:25	13-MY	201.42	40.00	3258	4	0.593
10: 4:25	13-MY	206.42	45.00	3258	4	0.555
10: 9:25	13-MY	211.42	50.00	3258	4	0.523

TEST PHASE : SHUTIN PERIOD # 2
FINAL FLOW PRESSURE [PSIA] = 3254
PRODUCING TIME [MIN] = 116.63

TIME OF DAY HH:MM:SS	DATE DD-MM	ELAPSED TIME,MIN	DELTA TIME,MIN	BOT HOLE PRESSURE PSIA	DELTA P PSI	LOG HORNER TIME
10:14:25	13-MY	216.42	55.00	3258	4	0.494
10:19:25	13-MY	221.42	60.00	3258	4	0.469
10:24:25	13-MY	226.42	65.00	3258	4	0.446
10:29:25	13-MY	231.42	70.00	3258	4	0.426
10:34:25	13-MY	236.42	75.00	3258	4	0.407
10:39:25	13-MY	241.42	80.00	3258	4	0.391
10:44:25	13-MY	246.42	85.00	3258	4	0.375
10:49:25	13-MY	251.42	90.00	3258	4	0.361
10:54:25	13-MY	256.42	95.00	3258	4	0.348
10:59:25	13-MY	261.42	100.00	3258	4	0.336
11: 4:25	13-MY	266.42	105.00	3258	4	0.324
11: 9:25	13-MY	271.42	110.00	3258	4	0.314
11:14:25	13-MY	276.42	115.00	3258	4	0.304
11:19:25	13-MY	281.42	120.00	3258	4	0.295
11:24:25	13-MY	286.42	125.00	3258	4	0.286
11:25: 0	13-MY	287.00	125.58	3256	4	0.285

OIL CONSERVATION DIVISION
DISTRICT I

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

DATE July 22, 1982

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

Gentlemen:

I have examined the application for the:

Enserch Exploration, Inc.	Scott Federal	No. 2-B	20-4-33
Operator	Lease and Well No.	Unit, S - T - R	

and my recommendations are as follows:

O.K.---J.S.

Yours very truly,

Jerry Sexton

/mc