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December 6, 1990

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GARY W. LARSON\*  
STEPHANIE LANDRY\*  
JOHN R. KULSETH, JR.\*  
LISA K. SMITH

\*NOT LICENSED IN TEXAS

Oil Conservation Division  
Post Office Box 2088  
Santa Fe, New Mexico 87504

Attention: David Catanach

Re: Beach Exploration, Inc.  
Continuance of Case Nos. 10192  
and 10193

Dear David:

Pursuant to our telephone conversation of today, this letter is to confirm our request for a continuance of the above referenced cases from the ~~December 19, 1990~~ docket to the ~~January 10, 1991~~ docket.

If you need any further information in this regard, please do not hesitate to call.

Very truly yours,

HINKLE, COX, EATON,  
COFFIELD & HENSLEY

Conrad E. Coffield

CEC:cl  
cec\6\6.5lt

Copies:

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Mr. Jim Bruce  
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ROY C. SNODGRASS, JR. (1914-1987)

December 5, 1990

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Oil Conservation Division  
Post Office Box 2088  
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Attention: Florene Davidson

Re: Beach Exploration, Inc. -  
December 19, 1991 Docket --  
Case Nos. 10192 and 10193

Dear Florene:

After submission of the original Applications in the above referenced cases, Beach informed us that the "Cal-Mon State Lease" was not to be included in the unit. Beach also informed us that there were owners within 1/2 mile of the proposed injection wells that had not previously been listed. In this connection we submit the following:

(a) Amended Application for Water Injection for Secondary Recovery with the Red Lake Queen Unit, Eddy County, New Mexico (this application contains a new exhibit which no longer indicates inclusion of the Cal-Mon lease); and

(b) Amended Application for Statutory Unitization with the Red Lake Queen Unit, Eddy County, New Mexico (this application contains new exhibits which no longer indicate inclusion of the the Cal-Mon lease).

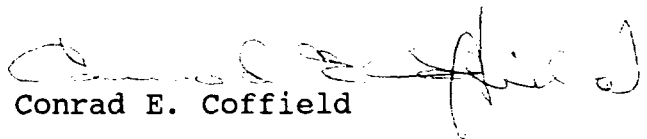
If anything more is needed, please call.

Page - 2 -

Thank you.

Very truly yours,

HINKLE, COX, EATON,  
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Conrad E. Coffield

CEC:cl  
cec\6\6.3ltr

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Southland Royalty Company  
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cec\6\6.31t

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Houston, Texas 77057

Eastland Oil Company  
Box 3488  
Midland, Texas 79702

BEFORE THE OIL CONSERVATION DIVISION OF  
THE DEPARTMENT OF ENERGY AND MINERALS

APPLICATION OF BEACH EXPLORATION,  
INC. FOR APPROVAL OF STATUTORY  
UNITIZATION, EDDY COUNTY, NEW MEXICO

RECEIVED  
OCT 15 1980  
STATE OF NEW MEXICO  
SANTA FE

AMENDED APPLICATION

BEACH EXPLORATION, INC., hereby makes application for an order for the unit operation of the Red Lake Unit in Eddy County, New Mexico and states:

1. The proposed Unit Area consists of lands located in Eddy County, New Mexico, as described on the attached Exhibit "A" from the Unit Agreement, containing 1,131.24 acres, more or less.

2. The vertical limits to be included in said Unit as to the above described lands are to be inclusive of the Penrose Sand member of the Queen formation with said interval having heretofore been found to occur in the Beach Exploration - New Mexico State 36 No. 4 Well located 1,980 feet from the west line and 660 feet from the north line, Section 36, Township 16 South, Range 28 East, N.M.P.M., Eddy County, New Mexico, at an indicated depth from 1,630 feet to 1,720 feet as recorded on the Welex Radioactivity Log dated March 17, 1980 with said log being measured from 1,746 feet to 1,300 feet.

3. The reservoir or portion thereof involved in this application has been reasonably defined by development.

4. The type of operations contemplated for the Unit Area shall consist of what is commonly known as the secondary recovery operations by water flooding.

5. A copy of the proposed plan of unitization, which applicant considers fair, reasonable and equitable is submitted herewith and the same is hereby incorporated herein by reference for all purposes.

6. A copy of the proposed operating plan for said Unit, covering the manner in which the Unit will be supervised and managed and costs allocated and paid is submitted herewith and the same is hereby incorporated herein by reference for all purposes.

7. In accordance with the requirements of the Statutory Unitization Act, applicant does hereby allege the following facts:

(a) The Unitized Management Operation and further development of the oil or gas pool involved herein, or portion thereof, is reasonably necessary in order to effectively carry on secondary recovery operations to



substantially increase the ultimate recovery of oil and gas from the pool or unitized portion thereof;

(b) Said secondary recovery operations as applied to such pool or a portion thereof is feasible, it will prevent waste and will result with reasonable probability in the increased recovery of substantially more oil and gas from the pool or unitized portion thereof than would otherwise be recovered;

(c) Estimated additional costs, if any, of conducting the operations sought hereunder will not exceed the estimated value of the additional oil and gas recovery plus reasonable profit.

(d) Said unitization and the adoption of the secondary recovery operations sought hereunder will benefit the working interest owners and royalty owners of the oil and gas rights within the pool or portion thereof affected by the order sought herein.

(e) Applicant has made a good faith effort to secure voluntary unitization within the pool or portion thereof as described in this application. The owners Applicant wished to have covered under this statutory unitization application include those listed on Exhibit "B" attached hereto.

(f) The participation formula contained in the Unitization Agreement allocates the produced and saved unitized hydrocarbons to the separately owned tracts in the Unit Area on a fair, reasonable and equitable basis.

8. Approval of the statutory unitization sought hereunder will be in the interest of conservation, the prevention of waste and the protection of correlative rights.

Wherefor, Applicant respectfully requests the setting of this matter for a hearing before the Oil Conservation Division at the earliest available date.

Dated this 5th day of December, 1990.

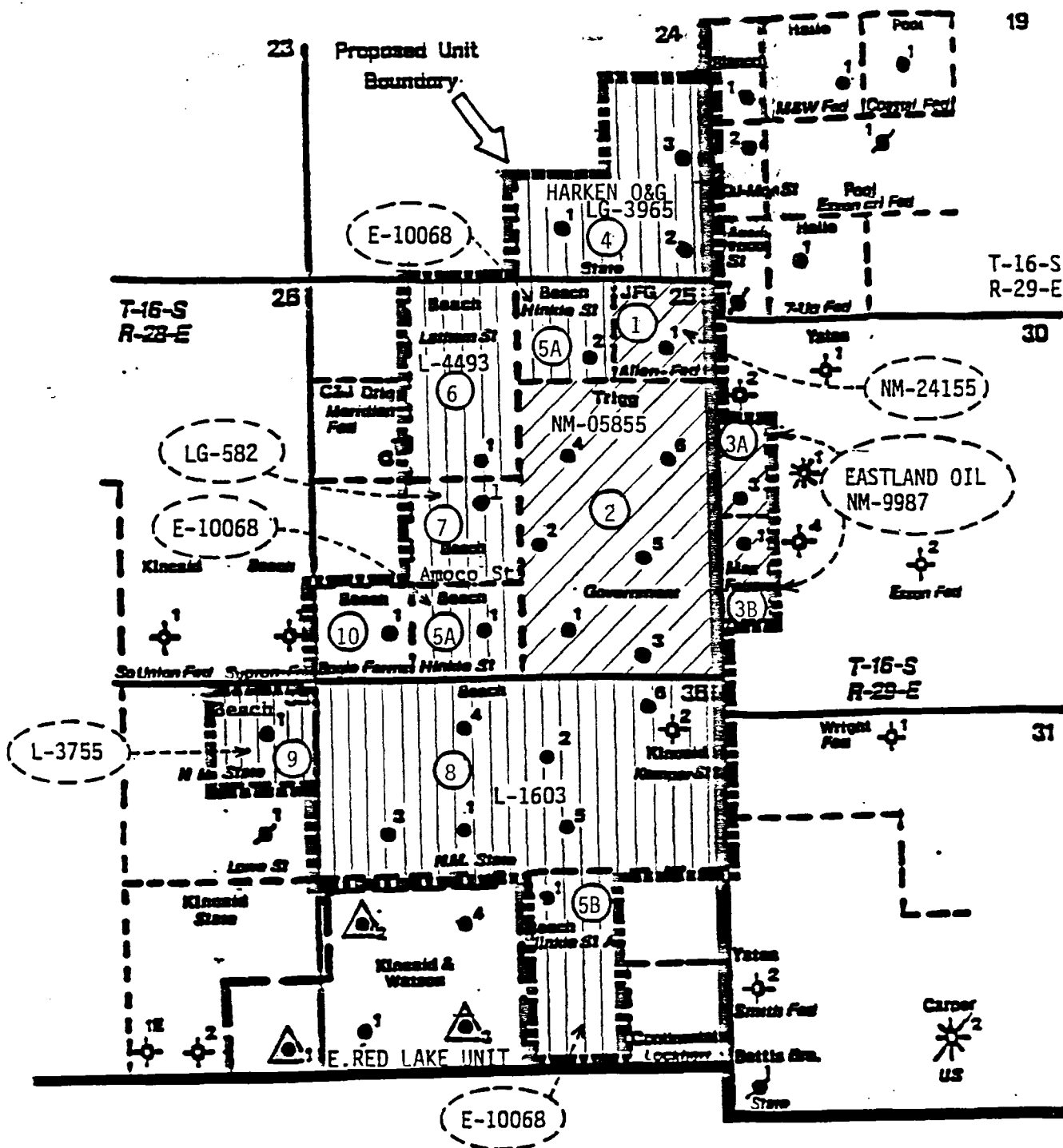
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COFFIELD & HENSLEY

By: 

Conrad E. Coffield  
Post Office Box 3580  
Midland, Texas 79702

Attorneys for Beach  
Exploration, Inc.

cec\6\6.4



760.00 ACRES OF STATE OF NEW MEXICO LANDS-	67.18%
331.24 ACRES OF FEDERAL LANDS-	29.28%
40.00 ACRES OF FEE LANDS-	3.54%
1131.24 ACRES TOTAL	100.00%

## BEACH EXPLORATION, INC.

RED LAKE UNIT  
EDDY COUNTY, NEW MEXICO  
EXHIBIT "A"

PROPOSED UNIT OUTLINE

○ TRACT NUMBER

SCALE: 1" = 2000' 11-28-90

NOTE: ALL LEASES WITHIN PROPOSED UNIT ARE HBP.

TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE OF LEASE	BASIC ROYALTY OWNER & %	LESSEE OF RECORD	ORRI %	M.I. OWNERS & %
1	NE/4 NE/4 SECT. 25 T-16-S,R-28-E	40.00	NM-24155 HBP	U.S. 0.1250	JFG ENTERPRISES	100 %	ALLEN, G.W. & JUANITA G. 0.03000000 BELLAH, CARROLL W. FLETCHER, LOY G. GUY, JAMES E. JACKSON, J.T. 0.05000000 0.31666700 0.31666700 0.31666600
2	SE/4, S/2 NE/4 SECT. 25 T-16-S,R-28-E NMPM	240.00	NM-05855 HBP	U.S. 0.1250	J.H. TRIGG	100 %	YATES EXPLORATION CO. 0.02500000 BEACH EXPLORATION, INC. TRIGG OIL & MINING CO. 0.55000000 0.45000000
3A	LOT 2 SECT. 30 T-16-S,R-29-E NMPM	25.62	NM-9987 HBP	U.S. 0.1250	EXXON	100 %	EXXON 0.09500000 POOL TRUST, F.F. & P.J. 1.00000000
3B	LOT 3 SECT. 30 T-16-S,R-29-E NMPM	25.62	NM-9987 HBP	U.S. 0.1250	EXXON	100 %	EXXON 0.09500000 POOL TRUST, F.F. & P.J. EZZELL JR., T. CALDER PENTA PRODUCTION CO. 0.05000000 0.11000000 0.84000000
TOTAL FEDERAL ACREAGE		331.24					

PAGE 1 OF 5

TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., M.N.

SERIAL NO. &  
EXPIRATION DATE  
BASIC ROYALTY  
OWNER & %  
LESSEE OF RECORD  
ORRI %  
W.I. OWNERS & %

TRACT NO.	DESCRIPTION	NO. OF ACRES	OF LEASE	STATE	0.1250	EXXON	100 %	EXXON	0.12500000	SPECTRUM 7 1984-1985 PDP	0.45000000
4	5/2 SE/4, NE/4 SE/4 SECT. 24	120.00	LB-3965	STATE				CHILDERS, MICHAEL R.	0.00250000	SPECTRUM 7 1985 DP	0.45000000
	T-16-S, R-28-E NMPM		HBP					VOZAR, MARK S.	0.00250000	SPECTRUM 7 1DP	0.10000000

5A	NW/4 NE/4, SE/4 SW/4 SECT. 25	80.00	E-10068	STATE	0.1250	HINKLE INV.	100 %	FRANKLIN, ROBERT O, JR	0.00437500	BALDWIN, J.H.	0.06250000
	T-16-S, R-28-E NMPM		HBP					HAMMACK, ELIZABETH S	0.00437500	BEACH, CARL C	0.03125000
								HILBURN, SAM E	0.00437500	BEACH, WILLIAM N	0.17500000
								HINKLE INVESTMENT COMPANY	0.37500000	BROWN ROYALTIES IP	0.01000000
								MORRIS, ALEXANDRA C	0.00218750	HOLLAND, DAVID L	0.03125000
								MORRIS, ROBERT B	0.00218750	JOHNSON, DEIRDRE J, IP	0.01000000

								McDONALD COMPANY	0.03125000	McDONALD, G K	0.03125000
								NARRELL, DON	0.06250000	NORTON, SHERMAN H., JR	0.21250000
								ROSE, J P	0.03750000	ROSE, J P	0.03750000
								SITTON ENTERPRISES	0.08333333	SITTON, P & E CORP.	0.09375000
								SITTON, RONALD	0.04166667	WEST, CHARLES L	0.09375000

5B	W/2 SE/4 SECT. 36	80.00	E-10068	STATE	0.1250	HINKLE INV.	100 %	FRANKLIN, ROBERT O, JR	0.00437500	BALDWIN, J.H.	0.06250000
	T-16-S, R-28-E NMPM		HBP					HAMMACK, ELIZABETH S	0.00437500	BEACH, CARL C	0.03125000
								HILBURN, SAM E	0.00437500	BEACH, WILLIAM N	0.17500000
								HINKLE INVESTMENT COMPANY	0.37500000	BROWN ROYALTIES IP	0.01000000
								MORRIS, ALEXANDRA C	0.00218750	HOLLAND, DAVID L	0.03125000
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								McDONALD COMPANY	0.03125000	McDONALD, G K	0.03125000
								NARRELL, DON	0.06250000	NORTON, SHERMAN H., JR	0.21250000
								ROSE, J P	0.03750000	ROSE, J P	0.03750000
								SITTON ENTERPRISES	0.08333333	SITTON, P & E CORP.	0.09375000
								SITTON, RONALD	0.04166667	WEST, CHARLES L	0.09375000

TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

SERIAL NO. & EXPIRATION DATE		BASIC ROYALTY OWNER & %		LESSEE OF RECORD		GRI %		M.I. OWNERS & %	
TRACT NO.	DESCRIPTION	NO. OF ACRES	OF LEASE	STATE					
6	E/2 NW/4 SECT. 25 T-16-S, R-28-E NMPH	80.00	L-4493 HBP			100 %			
							CALLAWAY, V J CBF COMPANY ERICKSON, W R & WANDA FAE LATHAM CO., E L MUMFORD ESTATE, CHARLES E MC PHERON, W G	0.00937500 0.00937500 0.00937500 0.01562500 0.00937500 0.00937500	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000
							BALDWIN, J. H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K NARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SITTON ENTERPRISES SITTON, P & E CORP. SITTON, RONALD WEST, CHARLES L	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.00333333 0.00375000 0.04166667 0.09375000	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.00333333 0.00375000 0.04166667 0.09375000
7	NE/4 SW/4 SECT. 25 T-16-S, R-28-E NMPH	40.00	L-6-582 HBP			100 %	AMOCO PRODUCTION	0.06250000	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.00333333 0.00375000 0.04166667 0.09375000
							BALDWIN, J. H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K NARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SITTON ENTERPRISES SITTON, P & E CORP. SITTON, RONALD WEST, CHARLES L	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.00333333 0.00375000 0.04166667 0.09375000	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.00333333 0.00375000 0.04166667 0.09375000

TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE OF LEASE		BASIC ROYALTY OWNER & %		LESSEE OF RECORD	100 %	DRRI %	M.I. OWNERS & %		
9	NE/4 SECT. 35 T-16-S, R-28-E NMPH	40.00	L-3755	HBP	STATE	0.1250	MARALO INC.	100 %	LOWE, ERMA MARALO INC PRUDE, RANDALL SCHWEINFURTH, MARK	0.01562500 0.04687500 0.01000000 0.00250000	BALDWIN, J.H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K MARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SITTON ENTERPRISES SITTON, P & E CORP. SITTON, RONALD WEST, CHARLES L	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.08333333 0.08333333 0.04166667 0.09375000
8	N/2 SECT. 36 T-16-S, R-28-E NMPH	320.00	L-1603	HBP	STATE	0.1250	MARALO INC.	100 %	LOWE, ERMA MARALO INC PRUDE, RANDALL SCHWEINFURTH, MARK	0.01562500 0.04687500 0.01000000 0.00250000	BALDWIN, J.H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K MARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SITTON ENTERPRISES SITTON, P & E CORP. SITTON, RONALD WEST, CHARLES L	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.08333333 0.08333333 0.04166667 0.09375000
TOTAL STATE ACREAGE		760.00										

PAGE 4 OF 5

EXHIBIT "B"  
TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE OF LEASE	BASIC ROYALTY OWNER & %	LESSEE OF RECORD
-----------	-------------	--------------	---	----------------------------	------------------

**W. I. DINERS & Z.**

**ORRI 7**

LESSEE OF RECORD

SIC ROYALTY  
OWNER & %

SERIAL NO. &  
EXPIRATION DATE  
OF LEASE

DESCRIPTION

TRACT NO.

```

10  SW/4 SW/4 SECT. 25
    TOTAL FEE ACRES
    GRAND TOTAL ACRES

```

40.00	
48.00	
<hr/>	
1131.24	

**BOGLE FARMS**

0.0625

N. BEACH

100 %

BOGLE FARMS, INC.  
DARTMOUTH COLLEGE ENDOWMENT  
MIDWEST. INVESTMENT CO

0.00000000  
0.06250000  
0.12500000

BALDWIN, J. H.  
BEACH, CARL C  
BEACH, WILLIAM N  
BROWN ROYALTIES IP

0.06250000  
0.03125000  
0.17750000  
0.01000000

JOHNSON, DELRDE J, IP	0.0100000000
MCDONALD COMPANY	0.0312500000
MCDONALD, G K	0.0312500000
NARRELL, DON	0.0625000000
NORTON, SHERMAN H., JR	0.2125000000
ROSE, J P	0.0375000000
SILTON ENTERPRISES	0.0833333333
SILTON, P & E CORP.	0.0833333333
SILTON, RONALD	0.0416666667
WEST, CHARLES L	0.0937500000

## RECAPITULATION

760.00 ACRES OF STATE OF N.M. LANDS	0.6718
331.24 ACRES OF FEDERAL LANDS	0.2928
40.00 ACRES OF FEE LANDS	0.0354

1131.24

1.0000

**EXHIBIT "B"**

G. W. Allen & Juanita G. Allen  
Post Office Box 402  
Mesquite, Texas 75149

J. H. Baldwin  
Box 422  
Lamesa, Texas 79331

Beach Exploration, Inc.  
800 N. Marienfeld, Suite 200  
Midland, Texas 79701

Carroll W. Bellah  
208 S 7th Street  
Lovington, New Mexico 88260

Brown Royalties IP  
Post Office Box 2690  
San Angelo, Texas 76902

CBF Company  
Post Office Box 5614  
Hobbs, New Mexico 88241-5614

Bernard D. Cleve  
c/o Elk Cattle Co.  
Hope, New Mexico 88250

W. R. Erickson & Wanda Faye  
Erickson  
Box 1100  
Hobbs, New Mexico 88241-1100

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Post Office Box 10  
Roswell, New Mexico 88202-0010

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Dallas, Texas 75382-0848

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Artesia, New Mexico 88210

Sam E. Hilburn  
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Midland, Texas 79701

Amoco Production Company  
Post Office Box 841521  
Dallas, Texas 75284-1521

Carl C. Beach  
3511 Meadowridge  
Midland, Texas 79707

William N. Beach  
800 N. Marienfeld, Suite 200  
Midland, Texas 79701

Bogle Farms, Inc.  
Post Office Box 358  
Dexter, New Mexico 88230-0358

V. J. Callaway  
Box 2424  
Hobbs, New Mexico 88241-2424

Michael R. Childers  
Post Office Box 1412  
Bedford, Texas 76095-1412

Dartmouth College Endowment  
c/o Deborah Lord-Nolet  
Post Office Box 107  
Col-Hall  
Hanover, NH 03755

Exxon Corporation  
Post Office Box 1547  
Houston, TX 77251-1547

Loy G. Fletcher  
Post Office Box 852  
Artesia, New Mexico 88210

W. L. (Dub) Gray  
Post Office Box 258  
Artesia, New Mexico 88210

Elizabeth S. Hammack  
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Dallas, Texas 75206

Hinkle Investment Company  
Post Office Box 2002  
Roswell, New Mexico 88201



**EXHIBIT "B"**

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Midland, Texas 79705

Deirde J. Johnson IP  
Post Office Box 2690  
San Angelo, TX 76902-0128

Erma Lowe  
Post Office Box 2923  
Houston, Texas 77252

Marshall & Winston, Inc.  
Post Office Box 50880  
Midland, Texas 79710-0880

G. K. McDonald  
Post Office Box 736  
Lamesa, Texas 79331-736

Midwest Investment Co.  
Post Office Box 597  
Roswell, New Mexico 88202

Alexandra C. Morris  
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Midland, Texas 79704

Charles E. Mumford Estate  
Jean E. Mumford, Executrix  
Post Office Box 144  
Hobbs, New Mexico 88241-0144

State of New Mexico  
Commissioner of Public Lands  
Post Office Box 1148  
Santa Fe, New Mexico 87504

Sherman H. Norton, Jr.  
916 Main, Suite 606  
Lubbock, Texas 79401

Pool Trust  
Fred F. & Penta J. Pool  
#5 Summer Wild Place  
Roswell, New Mexico 88201

Arvil Reynolds  
c/o Ima Dale  
325 S. 13th  
Artesia, New Mexico 88210

Martha Ryan  
1509 Dawson Ter  
Carona Del Mar, CA 92625-1733

J. T. Jackson  
711 W. Texas  
Artesia, New Mexico 88210

E. L. Latham Co.  
Post Office Box 1392  
Hobbs, New Mexico 88240

Maralo, Inc.  
Post Office Box 2923  
Houston, Texas 77252-2923

McDonald Company  
Post Office Box 736  
Lamesa, Texas 79331-736

W. G. McPheron  
Post Office Box 1907  
Hobbs, New Mexico 88241-1907

MMS  
Post Office Box 5760 TA  
Denver Fed Cntr Bldg 85 RM A212  
Denver, Colorado 80217

Robert B. Morris  
401 West Texas, Suite 407  
Midland, Texas 79701

Don Narrell  
2311 Maxwell Drive  
Midland, Texas 79705-4911

Gail L. Norton  
4603 29th Street  
Lubbock, Texas 79410-1717

Penta Production Co.  
Post Office Box 1393  
Roswell, New Mexico 88201

Randall Prude  
3100 N. A Bldg B, Suite 200  
Midland, Texas 79705

J. P. Rose  
916 Main, Suite 606  
Lubbock, Texas 79401

Mark Schweinfurth  
Post Office Box 2585  
Midland, Texas 79702

**EXHIBIT "B"**

Sitton Enterprises  
916 Main, Suite 503  
Lubbock, Texas 79401-3422

Spectrum 7 Energy  
Revenue Funds  
Post Office Box 612007  
Dallas, Texas 75261

Mark S. Vozar  
3705 Wheaton Drive  
Bedford, Texas 76021

Paul White  
Post Office Box 1025  
Artesia, New Mexico 88210

Bettis Brothers, Inc.  
Post Office Box 1240  
Graham, Texas 76046

DEPCO, Inc.  
1000 Petroleum Building  
110 - 16th Street  
Denver, Colorado 80202

Kincaid & Watson Drilling Company  
Post Office Box 498  
Artesia, New Mexico 88211-0498

Mewbourne Oil Company  
Post Office Box 7698  
Tyler, Texas 75711

Southland Royalty Company  
801 Cherry Street, Suite 700  
Fort Worth, Texas 76102

P&E Sitton Corporation  
916 Main, Suite 503  
Lubbock, Texas 79401-3422

Trigg Oil & Mining Co.  
John H. & Pauline Trigg  
Post Office Box 520  
Roswell, New Mexico 88201

Charles L. West  
3103 Auburn  
Midland, Texas 79705

Yates Exploration Co.  
Post Office Box 0  
Albuquerque, New Mexico 87103

Continental-Emsco Company  
Post Office Box 755  
Hobbs, New Mexico 88241

Haile Petroleum Ltd.  
813 South Roselawn  
Artesia, New Mexico 88210

McClellan Oil Corporation  
Post Office Drawer 730  
Roswell, New Mexico 88202

Santa Fe Energy Company  
1616 Voss Road  
Houston, Texas 77057

Eastland Oil Company  
Box 3488  
Midland, Texas 79702

BEFORE THE OIL CONSERVATION DIVISION OF  
THE DEPARTMENT OF ENERGY AND MINERALS

APPLICATION OF BEACH EXPLORATION,  
INC. FOR WATER INJECTION FOR  
SECONDARY RECOVERY WITH RED LAKE  
UNIT, EDDY COUNTY, NEW MEXICO

RECEIVED  
DEC 11 8 10 AM '90  
STATE OF NEW MEXICO  
SANTA FE, N.M.

AMENDED APPLICATION

BEACH EXPLORATION, INC., hereby makes application for approval of injection of water for secondary recovery project in Eddy County, New Mexico and states:

1. Area affected by the order sought is sometimes known as the proposed "Red Lake Unit" Area, all of which is located in Eddy County, New Mexico and the same is described as shown in the attached Exhibits "A" and "B", containing 1,131.24 acres, more or less.

2. Applicant seeks to inject produced water and fresh water from the City of Carlsbad system into injection wells which are to be located in the legal subdivisions set forth as shown on the attached Exhibit "A".


3. Applicant seeks to inject produced water and fresh water from the City of Carlsbad system into the above described wells as an essential part of a waterflood project for the Red Lake Unit Area in sufficient quantities and under sufficient pressure to stimulate production of oil from other wells in the area inasmuch as said other wells have reached an advance state of depletion and are regarded as what is commonly referred to as "stripper" wells.

4. Approval of the waterflood project sought hereby will be in the interest of conservation, the prevention of waste and the protection of correlative rights.

Wherefor, Applicant respectfully requests the setting of this matter for a hearing before the Oil Conservation Division at the earliest available date.

Dated this 5th day of December, 1990.

HINKLE, COX, EATON,  
COFFIELD & HENSLEY

By:   
Conrad E. Coffield  
Post Office Box 3580  
Midland, Texas 79702

Attorneys for Beach  
Exploration, Inc.



EXHIBIT "B"  
TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE OF LEASE		BASIC ROYALTY OWNER & %		LESSEE OF RECORD	ORRI %	M.I. OWNERS & %	
1	NE/4 NE/4 SECT. 25 T-16-S, R-28-E	40.00	NM-24155	U.S.	0.1250	JFG ENTERPRISES	100 %	ALLEN, G. W. & JUANITA G.	0.03000000	BELLM, CARROLL W. FLETCHER, LOY G. GUY, JAMES E. JACKSON, J. T. 0.05000000 0.31666700 0.31666700 0.31666600
2	SE/4, S/2 NE/4 SECT. 25 T-16-S, R-28-E NMPH	240.00	NM-05855	U.S.	0.1250	J. H. TRIGG	100 %	YATES EXPLORATION CO.	0.02500000	BEACH EXPLORATION, INC. TRIGG OIL & MINING CO. 0.55000000 0.45000000
3A	LOT 2 SECT. 30 T-16-S, R-29-E NMPH	25.62	NM-9987	U.S.	0.1250	EXXON	100 %	EXXON	0.09500000	POOL TRUST, F.F. & P.J. 0.10000000
3B	LOT 3 SECT. 30 T-16-S, R-29-E NMPH	25.62	NM-9987	U.S.	0.1250	EXXON	100 %	EXXON	0.09500000	POOL TRUST, F.F. & P.J. EZZELL JR., T. CALDER PENTIA PRODUCTION CO. 0.05200000 0.11000000 0.04200000
TOTAL FEDERAL ACREAGE		331.24								

EXHIBIT "B"  
TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

SERIAL NO. &  
EXPIRATION DATE  
BASIC ROYALTY  
OWNER & %  
LESSEE OF RECORD  
ORRI %  
M.I. OWNERS & %

TRACT NO.	DESCRIPTION	NO. OF ACRES	OF LEASE	STATE	0.1250	EXXON	100 %	EXXON CHILDERS, MICHAEL R. VOZAR, MARX S.	0.12500000 0.30250000 0.00250000	SPECTRUM 7 1984-1985 POP SPECTRUM 7 1985 DP SPECTRUM 7 IDP	0.45000001 0.45000001 0.12000001
4	S/2 SE/4, NE/4 SE/4 SECT. 24 T-16-S, R-28-E NMPM	120.00	LG-3965 HBP	STATE	0.1250	EXXON	100 %	EXXON CHILDERS, MICHAEL R. VOZAR, MARX S.	0.12500000 0.30250000 0.00250000	SPECTRUM 7 1984-1985 POP SPECTRUM 7 1985 DP SPECTRUM 7 IDP	0.45000001 0.45000001 0.12000001
5A	NW/4 NE/4, SE/4 SW/4 SECT. 25 T-16-S, R-28-E NMPM	80.00	E-10068 HBP	STATE	0.1250	HINKLE INV.	100 %	FRANKLIN, ROBERT D, JR HAMMACK, ELIZABETH S HILBURN, SAM E HINKLE INVESTMENT COMPANY MORRIS, ALEXANDRA C MORRIS, ROBERT B	0.00437500 0.00437500 0.00437500 0.07500000 0.00218750 0.00218750	BALDWIN, J.H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K MARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SIITON ENTERPRISES SIITON, P & E CORP. SIITON, RONALD WEST, CHARLES L	0.06250001 0.03125000 0.17750001 0.01000000 0.03125001 0.01000000 0.03125001 0.03125000 0.06250000 0.21250000 0.03750000 0.08333333 0.08375000 0.04166667 0.09375000
5B	W/2 SE/4 SECT. 36 T-16-S, R-28-E NMPM	80.00	E-10068 HBP	STATE	0.1250	HINKLE INV.	100 %	FRANKLIN, ROBERT D, JR HAMMACK, ELIZABETH S HILBURN, SAM E HINKLE INVESTMENT COMPANY MORRIS, ALEXANDRA C MORRIS, ROBERT B	0.00437500 0.00437500 0.00437500 0.07500000 0.00218750 0.00218750	BALDWIN, J.H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K MARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SIITON ENTERPRISES SIITON, P & E CORP. SIITON, RONALD WEST, CHARLES L	0.06250001 0.03125000 0.17750001 0.01000000 0.03125001 0.01000000 0.03125001 0.03125000 0.06250000 0.21250000 0.03750000 0.08333333 0.08375000 0.04166667 0.09375000

EXHIBIT "B"  
TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE		BASIC ROYALTY		LESSEE OF RECORD	OIL & GAS	M.I. OWNERS & %
			OF LEASE		OWNER & %				
6	E/2 NW/4 SECT. 25 T-16-S, R-28-E NMPH	80.00	L-4493	HBP	STATE	0.1250	E.L. LATHAM	100 %	
							CALLAWAY, V J	0.00937500	BALDWIN, J.H.
							CBF COMPANY	0.00937500	BEACH, CARL C
							ERICKSON, W R & MANDA FAE	0.00937500	BEACH, WILLIAM N
							LATHAM CO., E L	0.01562500	BROWN ROYALTIES IP
							MUMFORD ESTATE, CHARLES E	0.00937500	HOLLAND, DAVID L
							MC PHERON, W G	0.00937500	JOHNSON, DEIRDRE J, IP
									MC DONALD COMPANY
									MC DONALD, G K
									NARRELL, DON
									NORTON, SHERMAN H., JR
									ROSE, J P
									SITTON ENTERPRISES
									SITTON, P & E CORP.
									SITTON, RONALD
									WEST, CHARLES L
7	NE/4 SW/4 SECT. 25 T-16-S, R-28-E NMPH	40.00	L-582	HBP	STATE	0.1250	AMOCO	100 %	
							AMOCO PRODUCTION	0.06250000	BALDWIN, J.H.
									BEACH, CARL C
									BEACH, WILLIAM N
									BROWN ROYALTIES IP
									HOLLAND, DAVID L
									JOHNSON, DEIRDRE J, IP
									MC DONALD COMPANY
									MC DONALD, G K
									NARRELL, DON
									NORTON, SHERMAN H., JR
									ROSE, J P
									SITTON ENTERPRISES
									SITTON, P & E CORP.
									SITTON, RONALD
									WEST, CHARLES L

EXHIBIT "B"  
TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

SERIAL NO. & EXPIRATION DATE OF LEASE										BASIC ROYALTY OWNER & %		LESSEE OF RECORD		DARI %		N.I. OWNERS & %	
TRACT NO.	DESCRIPTION	NO. OF ACRES															
9	N/4 NE/4 SECT. 35 T-16-S, R-28-E NMPM	40.00 L-3755 HBP		STATE	0.1250	MARALO INC.	100 %	LOWE, ERMA MARALO INC PRUDE, RANDALL SCHWEINFURTH, MARK	0.01562500 0.04687500 0.01000000 0.00250000	BALDWIN, J. H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K MARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SITTON ENTERPRISES SITTON, P & E CORP. SITTON, RONALD WEST, CHARLES L	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.08333333 0.08375000 0.04166667 0.09375000						
8	N/2 SECT. 36 T-16-S, R-28-E NMPM	320.00 L-1603 HBP		STATE	0.1250	MARALO INC.	100 %	LOWE, ERMA MARALO INC PRUDE, RANDALL SCHWEINFURTH, MARK	0.01562500 0.04687500 0.01000000 0.00250000	BALDWIN, J. H. BEACH, CARL C BEACH, WILLIAM N BROWN ROYALTIES IP HOLLAND, DAVID L JOHNSON, DEIRDRE J, IP MCDONALD COMPANY MCDONALD, G K MARRELL, DON NORTON, SHERMAN H., JR ROSE, J P SITTON ENTERPRISES SITTON, P & E CORP. SITTON, RONALD WEST, CHARLES L	0.06250000 0.03125000 0.17750000 0.01000000 0.03125000 0.01000000 0.03125000 0.03125000 0.06250000 0.21250000 0.03750000 0.08333333 0.08375000 0.04166667 0.09375000						
TOTAL STATE ACREAGE		760.00															

PAGE 4 OF 5



EXHIBIT "B"  
TO UNIT AGREEMENT  
RED LAKE UNIT  
EDDY CO., N.M.

TRACT NO.	DESCRIPTION	NO. OF ACRES	SERIAL NO. & EXPIRATION DATE	BASIC ROYALTY OWNER & %	LESSEE OF RECORD	ORRI %	M.I. OWNERS & %
18	SW/4 SW/4 SECT. 25	40.00		BOGLE FARMS	0.0625	M.N. BEACH	100 %
	TOTAL FEE ACREAGE	40.00					BOGLE FARMS, INC.
							DARTMOUTH COLLEGE ENDOWME
							MIDWEST INVESTMENT CO
	GRAND TOTAL ACREAGE	1131.24					0.00000000
							0.06250000
							0.17500000
							0.01000000
							0.03125000
							0.01000000
							0.03125000
							0.03125000
							0.06250000
							0.21250000
							0.03750000
							0.08333333
							0.08375000
							0.04166667
							0.29375000
RECAPITULATION							
	760.00 ACRES OF STATE OF N.M. LANDS	0.6718					
	331.24 ACRES OF FEDERAL LANDS	0.2928					
	40.00 ACRES OF FEE LANDS	0.0354					
	1131.24	1.0000					

PAGE 5 OF 5



STATE OF NEW MEXICO

**ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**

OIL CONSERVATION DIVISION  
ARTESIA DISTRICT OFFICE

BRUCE KING  
GOVERNOR

P.O. DRAWER DD  
ARTESIA, NEW MEXICO 88210  
(505) 748-1283

January 17, 1991

David,

CJ Drilling, Meridian Fed #1 in E-25-16-28. BLM records show 1452 ft of 7" in 8" hole with 18 Sx of mud, with intention of pulling 7" and running 5 1/2" on completion of well. Last work day on well was 3-20-89.

Due to location of proposed injection wells Bogle Farms #1 in Unit M, Amoco State #1 in Unit K and Government #4 in Unit G, which are within 1/2 mile of C & J Drlg, Meridian Fed #1, I feel this well should be completed or plugged before injection begins.

Tallmadge St 24-1 in G-24-16-28 is poorly plugged with 5 Sx plugs at 2515', 1315' and 358'. Proposed injection well State 24 #1 in O-24-16-28 is with 1/2 mile.

Kincaid & Watson, Kemper State #2 in A-36-16-28 is poorly plugged with 7 SX plugs at 2386', 1605', 235' and surface plug. Proposed injection wells, Government #1 in O-25-16-28, Government #5 in I-25-16-28, NM St 36 #4 in C-36-16-28, NM St 36 #5 in G-36-16-28 and NM St 36 #6 in A-36-16-28 are within 1/2 mile.

Kincaid et al, So. Union Fed #1 in O-26-16-28 is poorly plugged with 10 Sx at 2659', 7 Sx at 800' and 20 Sx at surface. Proposed injection well Bogle Farms #1 is approximately 2070' to the east in Section 25. NM St 35 #1 in A-35-16-28 is within 1/2 mile.

Johnny Robinson

*Johnny Robinson*



OIL CONSERVATION DIVISION

RECEIVED

DIVISION

FEB 1 1991 8 35

February 1, 1991

'91 FEB 6 10 9 12

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

RE: Case 10192  
Proposed Injection Pressure  
Beach Exploration, Inc.  
Proposed Red Lake Unit  
Eddy County, New Mexico

Dear Mr. Catanach:

After our hearing for approval of the proposed water injection permit for the Red Lake Unit, I asked a technical representative from Halliburton Services to do some work on fracture propagation to show that the requested rates and maximum pressures in our application were reasonable and would never have any chance of endangering fresh water aquifers.

Attached for your information is a letter from Prentice Creel with Halliburton showing the results of the work done at my request. Their computer program is designed to predict fracture length and height based on given rock properties and fluid properties. It will not generate data if the rates and pressures of a certain fluid type are not sufficient to fracture the formation. Fresh water is a very inefficient fluid for fracture propagation due to its high leak off characteristics in any porous formation. In contrast, a very efficient fluid as the one shown in green on the graphs "Created Frac Length vs. Leak Off" and "Fluid Efficiency vs. Leak Off" will cease to propagate a fracture as a result of loss of fluid efficiency due to leak off after only a small volume of fluid is pumped. This point would be reached at the injected volume where fluid efficiency reaches a value of zero. Although the curves generated by the Halliburton program do not extend out far enough to reach zero due to the nature of the program, an extrapolation of the slope of the green curve indicates that fracture propagation would cease after only 4625 gallons, or 110 barrels. Also, the leak off coefficients (Cw) used to generate these curves are far lower than the coefficient for water in the Penrose, which would be approximately 0.004. A rate of 250 BPD at 1500 psi with water failed to generate a curve, indicating no fracture initiation or propagation.

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

June 4, 1991

Beach Exploration, Inc.  
800 N. Marienfeld  
Suite 200  
Midland, Texas 79701

Attention: Hal Gill

Dear Mr. Gill:

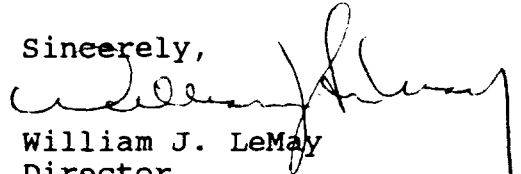
Reference is made to your request dated May 30, 1991, for an exception to the re-plugging requirement contained within Division Order No. R-9453, which order authorized Beach Exploration, Inc. to institute a waterflood project on its Red Lake Unit Area, provided that the Tallmadge State "24" Well No. 1 located in Unit G, Section 24, Township 16 South, Range 28 East, NMPM, Eddy County, New Mexico, be re-entered and re-plugged in accordance with current Division standards. It is our understanding that an unsuccessful attempt has been made to re-enter and re-plug the above-described well.

You are hereby relieved of the re-plugging requirement contained within Division Order No. R-9453 subject to the following provisions:

- 1) Beach Exploration, Inc. shall equip the above-described well as a monitor well in a manner set forth by the supervisor of the Artesia District office of the Division;
- 2) Should a waterflow ever be detected in the above-described well, Beach shall cease all injection within a one-half mile radius of said well. In addition, the Division may require Beach to take such action as may be necessary to correct the problem.
- 3) Upon termination of secondary recovery operations within the Red Lake Unit Area, Beach shall plug the above-described monitor well from a depth of approximately 200 feet to surface in a manner satisfactory to the Division.

If you should have any questions, please contact Mr. David Catanach at (505) 827-5800.

Sincerely,



William J. LeMay  
Director

xc: OCD-Artesia  
Case File-10192



May 30, 1991

Oil Conservation Division  
P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

Attention: Mr. David Catanach

RE: Request for Exception  
Plugging Requirements:  
Tallmadge-State "24" #1  
Red Lake Unit (Order No.R-9453)  
Eddy County, New Mexico

Dear Mr. Catanach:

Beach Exploration hereby respectfully requests an exception to the plugging requirements stipulated in the Red Lake Unit Order No.R-9453 for the Tallmadge-State "24" #1. In support of this request, attached are the following:

- 1.) Plat showing proposed injection well for which exception is requested
- 2.) Report of attempt to re-enter Tallmadge well
- 3.) Letter from geologist
- 4.) Structure Map
- 5.) Electric Log Section
- 6.) Penrose Sand Isopach Map
- 7.) Cross Section

Please refer to the plat which shows the location of the Tallmadge-State "24" #1, which was a dry hole that was drilled and plugged in 1940. The Oil Conservation Division Order approving the Red Lake Unit waterflood project stipulated that this well had to be re-entered and properly plugged before Red Lake Unit #2 (formerly Harken-State "24" #1) could be used as an injection well. Please note that the two wells are almost a half mile apart. After unsuccessfully arguing that re-entry of this well was not necessary to protect fresh water sands, Beach made an attempt to re-enter this well. Attached is a report of this attempt, which is currently suspended pending your decision in this matter. Beach is not willing to attempt any further re-entry of this well due to the extremely high costs associated with same.

## Request for Plugging Requirements

Page 2

Please refer to the letter dated April 12, 1991, from our geologist to the Oil Conservation Division, which explains why we have contended from the beginning that there was no danger of communication of injection water from Red Lake Unit #2 to the Tallmadge well. This letter refers to the attached structure map and electrical log section, which are Exhibit "A" and "B", respectfully. As stated in this letter, Beach contends that there can be no communication to the Tallmadge well through the Penrose formation due to the fact that it become salt-filled and impermeable between Red Lake Unit #2 and the Tallmadge well. This is further illustrated by the Penrose Sand Net Pay Isopach, which was prepared by T.Scott Hickman and Associates. This isopach shows the Tallmadge well is far outside the productive limits of the East Red Lake field, thus precluding any possibility of communication through the Penrose formation from Red Lake Unit #2 to the Tallmadge well.

Also attached is a schematic cross section of the subject wells. The proposed injection into Red Lake Unit #2 is isolated by casing and tubing such that water (colored blue) can leave the wellbore only through the Penrose perforations. This water cannot get to the Tallmadge well through the Penrose due to the impermeable portion (colored green) of this formation, which separates the East Red Lake field from the Tallmadge wellbore. The fresh water sands are protected from any possibility of injection water contamination in the Red Lake Unit #2 by cement and three strings of pipe (8 5/8" casing, 4 1/2" casing, 2 3/8" tubing). The only possible way of any injection water from this well getting to the fresh water sands would be via a channel from the Penrose perforations up the Red Lake Unit #2 wellbore, then through some continuous "other zone" for almost a half mile, then up the Tallmadge wellbore into the water sands. Although I cannot tell you that the sands are protected in the Tallmadge wellbore, I am certain that no channel exists in the Red Lake Unit #2 wellbore that would allow this to happen, based on the cement bond log and the fact that this well made very little water production (a channel would allow water from other zones above the pay to enter the wellbore). If necessary, I can prove that no channel exists by running an injection profile tracer survey in this wellbore after injection begins. This would show where the injected water enters the formation at the wellbore. Once the injected water leaves the wellbore in the Penrose formation, it will stay in the Penrose until produced in another well in the field.

Request for Plugging Requirements

Page 3

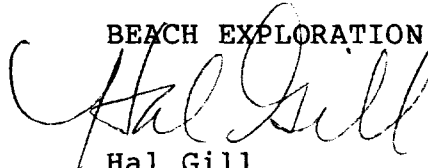
In the event that you do not allow this exception, significant loss of recoverable reserves will result. This loss will cause economic loss to the State of New Mexico, as the majority royalty interest owner in this waterflood, as well as to the working interest owners who are making the investment to install it.

Beach Exploration respectfully requests your approval for the use of the Red Lake Unit #2 (Harken-State "24" #1) wellbore for injection without any further attempt to properly plug the Tallmadge-State "24" #1 wellbore. It is our recommendation that the Tallmadge wellbore be filled with concrete from 218' to the surface. However, should you desire to equip it as an observation well, we will consider same.

Installation of this waterflood is almost complete, and further delays will only cost us more. A prompt decision and response to this request will be appreciated.

Very truly yours,

BEACH EXPLORATION, INC.

A handwritten signature in cursive script, appearing to read "Hal Gill", is written over the typed name.

Hal Gill  
Engineer

HG/bw

Enc.



BEACH EXPLORATION, INC.

WORKOVER REPORT

Tallmadge-State "24" #1

Purpose: To re-enter and properly plug old dry hole per OCD requirements

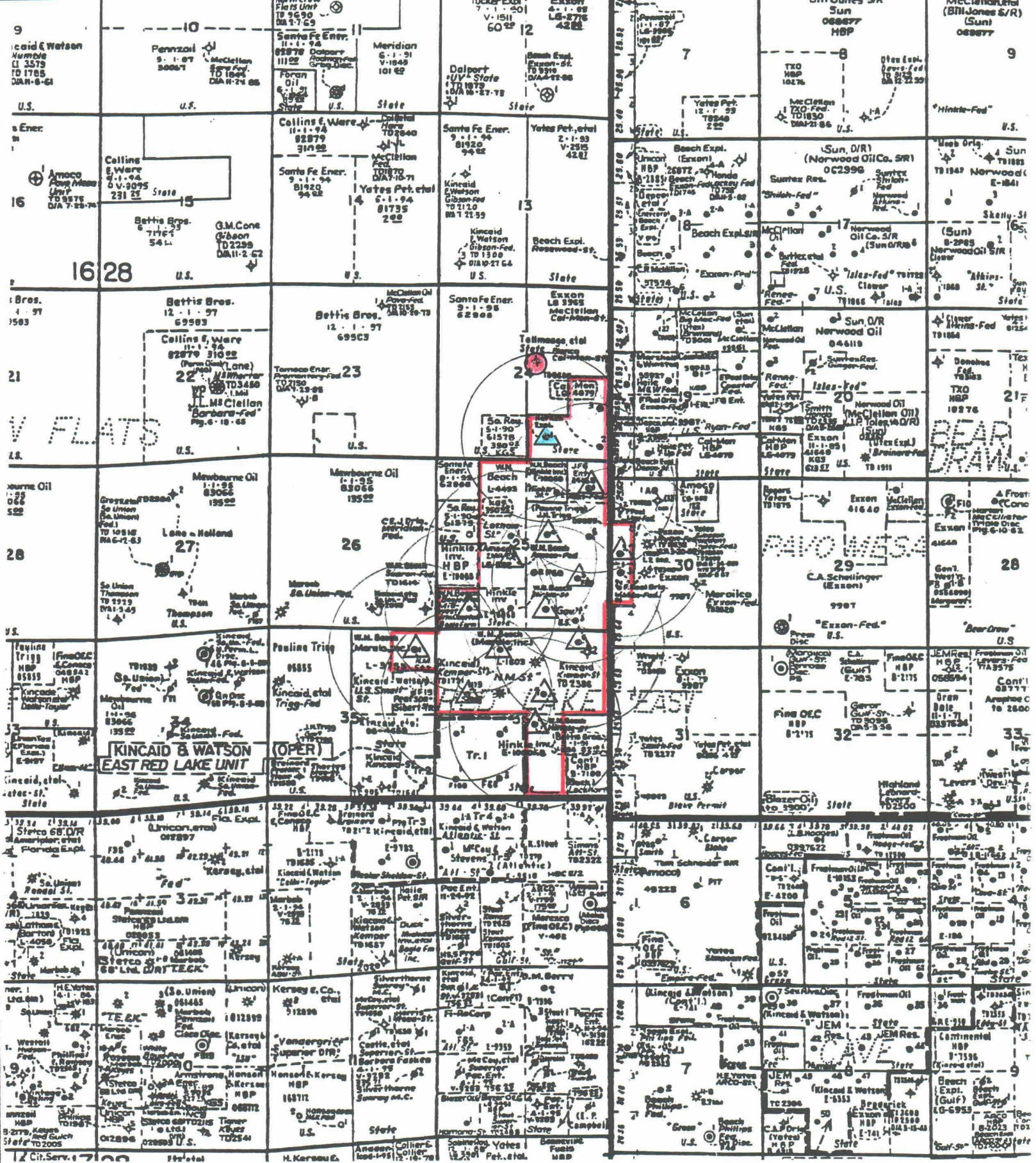
5-15-91 MIRU Real W/S, drilled out 2' cement inside dryhole marker, drilled on steel, dug out around dry hole marker, recovered dry hole marker. Could see down well bore - boards. PU 3 7/8" bit + 3 - 3 3/8" DC, tagged bridged @63'. drilled redbed stringers to 215', found top of 10 3/4" casing. Attempted to get inside with 3 7/8" bit for 1 hr. Did not succeed in getting inside. POOH Teeth knocked off of bit. SDON. Called Mike Williams w/OCD.

5-16-91 OCD requested we try one more day, WIH 4 1/4" tapered mill, washed thru redbed bridges from 90' to 217', milled on junk for 4 hrs. Made approx. 10' hole, we suspect we are outside of the 10 3/4" casing. Johnny Robinson with OCD called Mike Williams with OCD, Mike will not accept 4 1/2" tapered mill as legitimate attempt to get inside the 10 3/4" casing. POOH w/4 1/4"mill, SD until 5-20-91.

5-20-91 PU 12 1/4" bit + 7 3/4" DC, started reaming hole with no circulation @45'. Reamed to 215', top of shot-off casing. POOH WIH w/3 3/8" bit, 7 jts. tbg., could not stab into 10 3/4" casing. POOH. Bent 1 jt. tbg. WIH Could get into shot-off casing. POOH PU 12 1/4" concave mill, milled 215'-218' for 4 hrs., made 3'. POOH with mill, mill worn out. WIH w/3 7/8" bit, bent jt. tbg. attempted to get inside 10 3/4" casing with no success. POOH SDON

5-21-91 Suspended operations pending OCD decision about well - will request exception for RLU #2 to still be used as injector.









April 12, 1991

Oil Conservation Division  
District II  
P.O. Drawer DD  
Artesia, New Mexico 88210

RE: Red Lake Unit  
Eddy Co., New Mexico

Dear Sirs:

The OCD has required Beach Exploration, Inc. to properly re-plug the Tallmadge State #1 located in T-16-S, R-28-E, Section 24 and the Kincaid and Watson Southern Union-Federal #1 located in T-16-S, R29-E, Section 26 in order to approve injection in two wells within 1/2 mile of these wells in the proposed Red Lake Queen Waterflood Unit. As I understand it, the purpose of plugging these two wells is to prevent injected water within the unit from entering these well bores and contaminating any possible freshwater zones within these well bores.

It is my geologic opinion that these wells are in no danger of receiving injected water or fluids from the proposed waterflood project. The Red Lake field is a lower Queen Sand (Penrose) field stratigraphically trapped. The permeable sand lens grades into a red, shaly sand downdip, and updip. It is trapped by a facies change to anhydritic, salt-filled, non-permeable sand zone. The two wells in question are on the west updip seal or trapping portion of the field. The updip limits of the field have been well-defined by dry holes, an example being the Beach Exploration Exxon Federal "A" #4 (See Exhibit "A"). The compensated neutron-density log shows a classical example of a salt-filled non-permeable sand (See Exhibit "B"). The depressed neutron curve reads 0 to 2% porosity while the density curve reads 14 to 18% porosity which is typical for producing wells within the reservoir. The neutron porosity reading is the true porosity of the zone since the density reading is normal to high because of relatively low density of the salt, filled within the inter-particle porosity.

The Tallmadge State #1 and the Kincaid and Watson Southern Union-Federal #1 are both within the seal portion of East Red Lake field. The Tallmadge State was drilled in the 1940's and reported no shows of oil, gas or water from the Penrose and is updip from any producer in the field, the closest producer, the Spectrum 7 State "24" was temporarily abandoned because it has only made 2,454 BO from 2/87 to 5/90 and was making less than one-half barrel a day when it

Red Lake Unit  
Eddy Co., New Mexico

Page 2

was temporarily abandoned. The Kincaid and Watson Southern Union-Federal #1 is 53 feet updip from the Spectrum 7 well mentioned above and is separated from the East Red Lake field by a dry hole, the W.N.Beach Supron-Federal #1, which was a well drilled to test the Penrose sand.

It is for the reasons mentioned above that in my opinion that the Tallmadge State #1 and the Southern Union-Federal #1 are in fact out of the East Red Lake Queen reservoir and are in or updip of the seal or trapping portion of the field and therefore are incapable of receiving any of the injected water within the proposed waterflood unit.

Sincerely yours,

BEACH EXPLORATION, INC.

A handwritten signature in cursive script, reading "Charles S. Beach".

Charles S. Beach  
Geologist

SB/bw

258 No. CROW  
Flats Unit  
TD 9690

Dalport  
Rodman-Fed.  
+2257

Coil  
Hare  
TD 2640

  
 McClellan  
 Fed.  
 TD1870

Kincaid - W 13  
Gibson - Fed.  
TP 2120

+2166 PROBABLE  
URDIP PRODUCTIVE  
LIMIT ✓

EXHIBIT  
A

+2147  
TD2155

Tallmadge  
State  
TD 2605

SPECTRUM 7  
STATE  
"24" #1 → +2  
(Red Lake Unit #2)

Kincaid  
So Un - Fed  
TD 2659

$$+2029$$
$$+2103$$

✦ TD2700

TD 905

+1958 +1900 36  
TD 2386  
+1919 \* +1892

+1971 +1958 +1924  
+1981 +1957 +1926  
+1982 +1957

BEACH EXPLORATION  
EXXON FEDERAL "A" #4

Utex Expl  
Davis - Fed  
TD. 3129

McClellan  
TXQ-Fed  
TD/1830

Wondo-  
tackeg-  
Fed.  
TO 755

+1967 +1944  
(2) x 192

Yates  
Simpson  
TD2490

R. Smith  
Hondo  
TP2335

Utex  
Brainard-  
M 1911

1-AQ 11 + 1879  
(Welfelt)  
(Yates-Fed)  
TD 1828 TD 1860

(1)  
\* (TDIO338)  
+1874  
(Exxon)  
(Ryan Fed.)  
\* +1867  
TD 2410  
+1875

Maroilco  
Exxon-Fed  
702520

Rogers  
Yates  
T01A75

Schellinger  
Exxon-Fed

Yates  
Smith - Fed  
70 2277

Geror  
Schellinger Gulf-St.  
(MoroiCo)  
Gulf-St. TD. 3096

Structure Map  
Top Penrose

TD25C



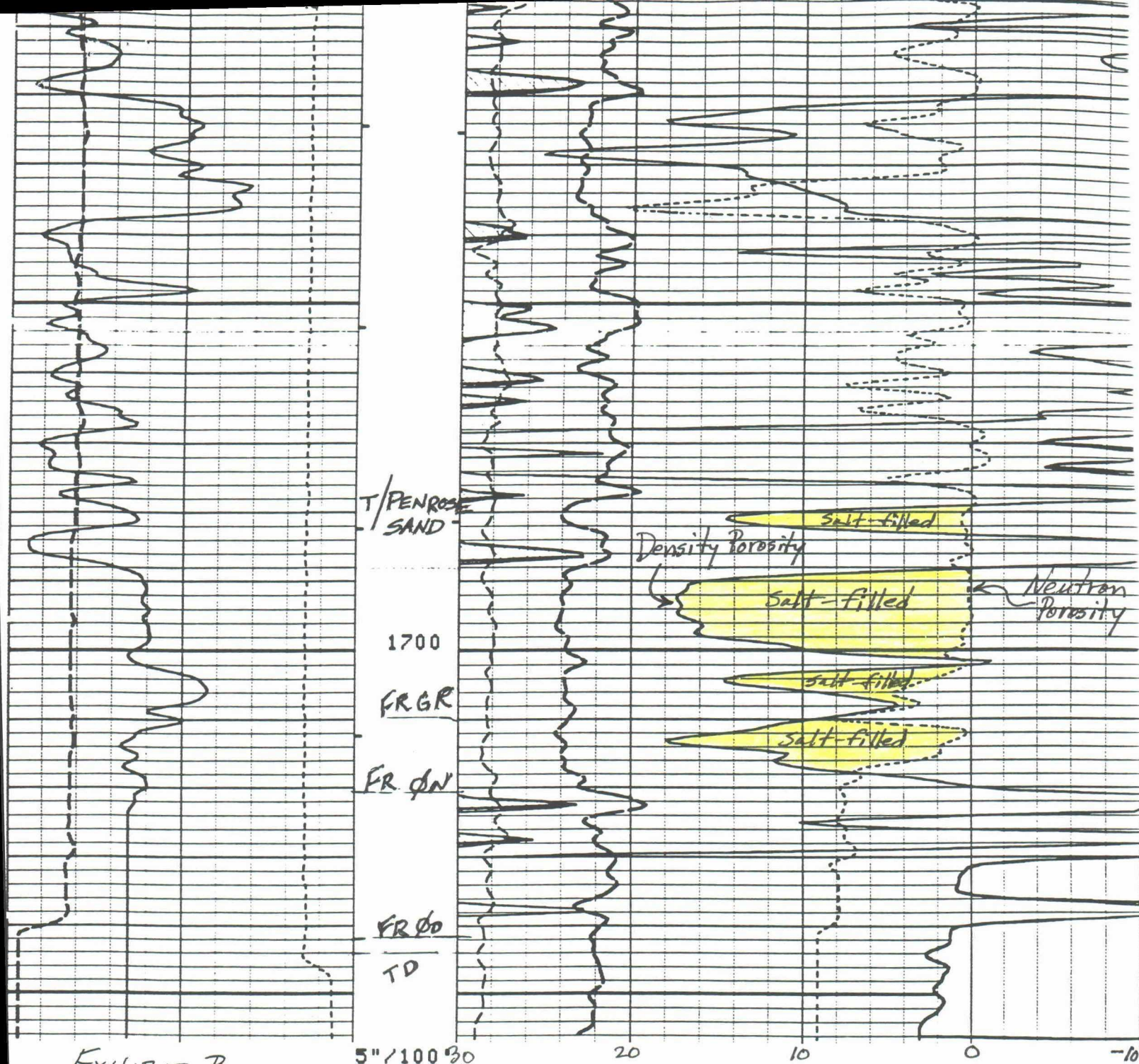


EXHIBIT B

CP 32.2

FILE

4

03-OCT-1989 13:01

BEACH EXPLORATION EXXON-FEDERAL "A" #4 - PJA

		DPHI			
-.1000		-.3000			
PEF				DPHI	
0.0		10.000		.50000	.30000
DRHO(G/C3)				NPHI	
-.0500		.45000		.50000	.30000
		DPHI			
.30000				-.1000	
		NPHI			
.30000				-.1000	

CALI(IN )

6.0000 16.000

GR (GAPI)

0.0 100.00

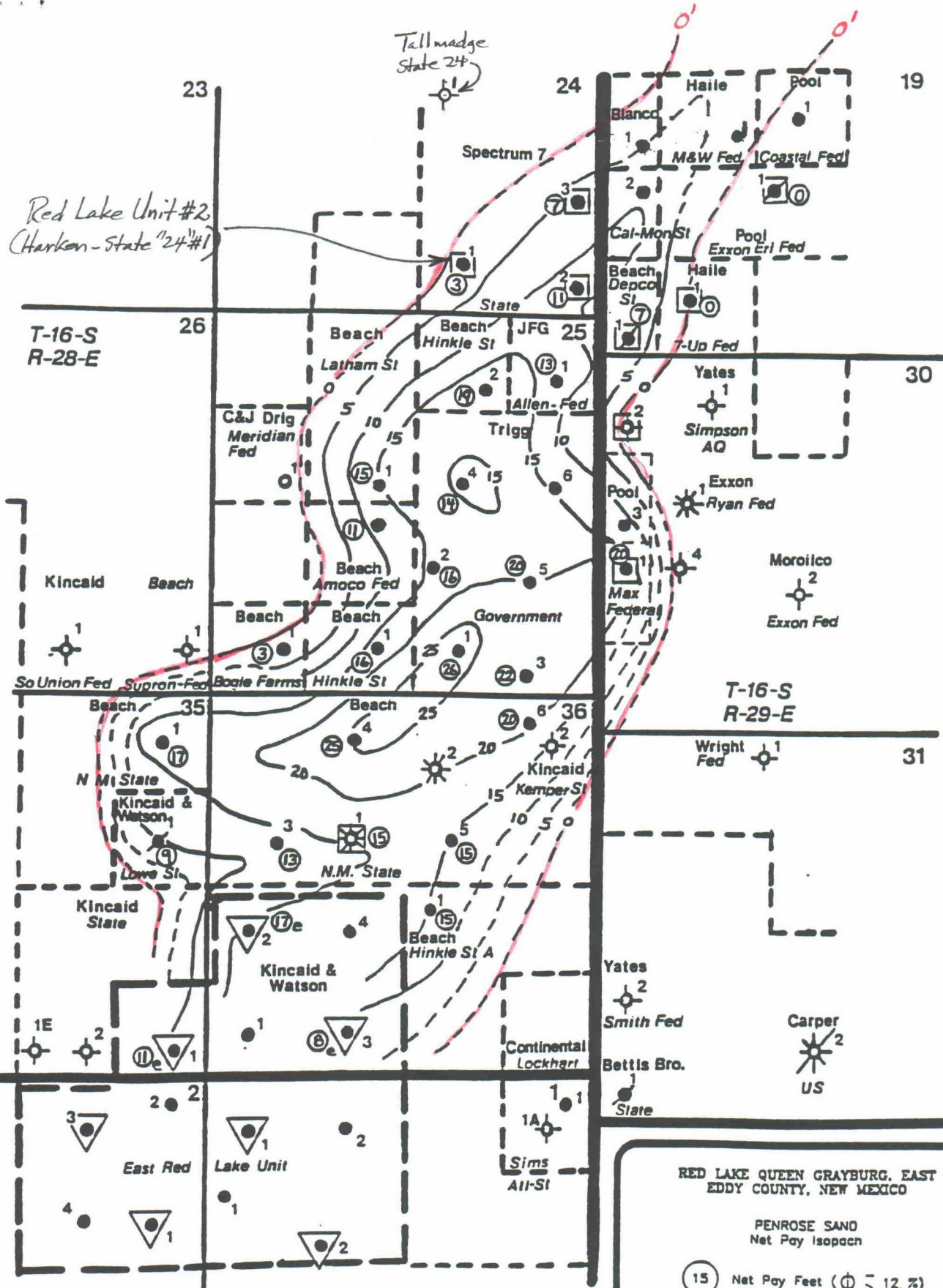
TENS(LBF )

10000. 0.0



Red Lake Unit #2  
Chalken - State "24" #1

T-16-S  
R-28-E



RED LAKE QUEEN GRAYBURG, EAST  
EDDY COUNTY, NEW MEXICO

PENROSE SAND  
Net Pay Isopach

(15) Net Pay Feet ( $\phi > 12\%$ )

■ CNL-FDC Logs

● GRN Log

Contour Interval: 5 ft.

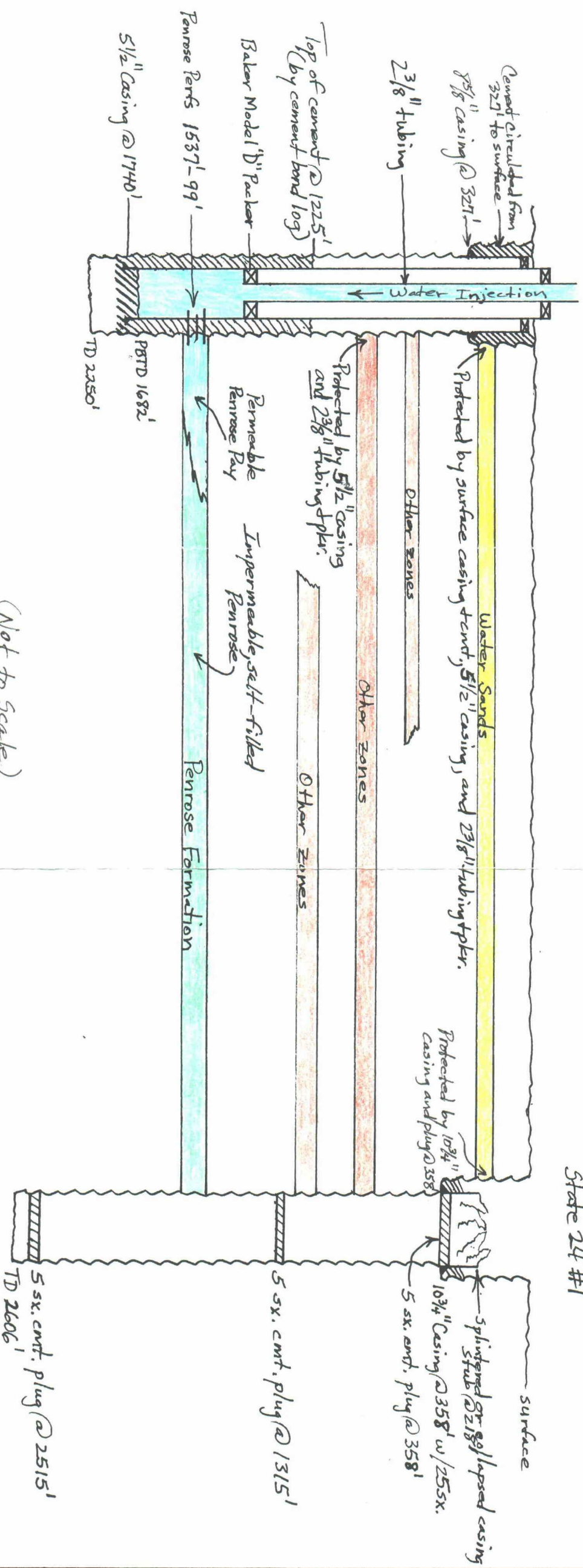
T. SCOTT HICKMAN & ASSOCIATES, INC.

# Cross Section Between Wells: Red Lake Unit #2 (State #24 #1) and Tallmadge State 24 #1)

DISTANCE BETWEEN WELLS:  
 2333'

Red Lake Unit #2  
 (State #24 #1)

Tallmadge  
 State 24 #1



(Not to Scale)





STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR

March 14, 1991

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

Mr. James Bruce  
Hinkle, Cox, Eaton,  
Coffield & Hensley

Attorneys at Law  
500 Marquette, N.W.  
Suite 800

Albuquerque, New Mexico 87102-2121 Beach Exploration Inc.

Re: CASE NO. 10192  
ORDER NO. R-9453

Applicant:

Beach Exploration Inc.

Dear Sir:

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

Sincerely,

Florence Davidson

FLORENE DAVIDSON  
OC Staff Specialist

Copy of order also sent to:

Hobbs OCD \_\_\_\_\_x\_\_\_\_\_  
 Artesia OCD \_\_\_\_\_x\_\_\_\_\_  
 Aztec OCD \_\_\_\_\_

Other \_\_\_\_\_



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING  
GOVERNOR

POST OFFICE BOX 2088  
STATE LAND OFFICE BUILDING  
SANTA FE, NEW MEXICO 87504  
(505) 827-5800

September 4, 1991

Beach Exploration, Inc.  
800 N. Marienfeld  
Suite 200  
Midland, Texas 79701

Attention: Hal Gill

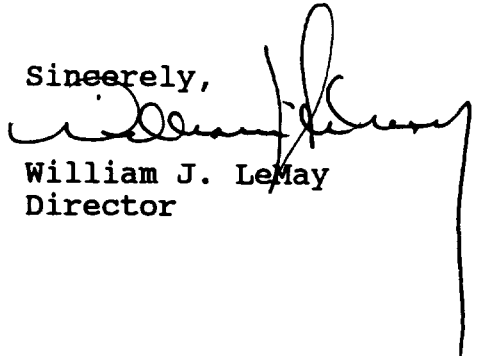
Dear Mr. Gill:

Reference is made to your request dated August 7, 1991, to increase the surface injection pressure on fourteen wells within the Red Lake Unit Waterflood Project. This request is based on step rate tests conducted on five injection wells within the unit. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure to 900 psi for those wells shown on Exhibit "A" attached hereto.

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,



William J. LeMay  
Director

xc: OCD-Artesia  
Case File-10192 ✓  
R. Brown  
D. Catanach

**EXHIBIT "A"**  
**INJECTION PRESSURE INCREASE**  
**RED LAKE UNIT**

WELL NAME AND LOCATION	WELL LOCATION
Red Lake Unit No. 2	Unit 0, Section 24, T-16S, R-28E
Red Lake Unit No. 5	Unit A, Section 25, T-16S, R-28E
Red Lake Unit No. 7	Unit G, Section 25, T-16S, R-28E
Red Lake Unit No. 9	Unit E, Section 30, T-16S, R-29E
Red Lake Unit No. 10	Unit K, Section 25, T-16S, R-28E
Red Lake Unit No. 12	Unit I, Section 25, T-16S, R-28E
Red Lake Unit No. 14	Unit M, Section 25, T-16S, R-28E
Red Lake Unit No. 16	Unit O, Section 25, T-16S, R-28E
Red Lake Unit No. 18	Unit A, Section 35, T-16S, R-28E
Red Lake Unit No. 19	Unit C, Section 36, T-16S, R-28E
Red Lake Unit No. 21	Unit A, Section 36, T-16S, R-28E
Red Lake Unit No. 22	Unit E, Section 36, T-16S, R-28E
Red Lake Unit No. 24	Unit G, Section 36, T-16S, R-28E
Red Lake Unit No. 25	Unit J, Section 36, T-16S, R-28E



OIL CONSERVATION DIVISION

AUG 9 1991

RECEIVED

AUG 08 1991

O. C. D.  
ARTESIA, OFFICE

August 7, 1991

Oil Conservation Division  
Drawer DD  
Artesia, New Mexico 88210

Attention: Johnny Robinson

Re: Request for Pressure Increase  
Red Lake Unit (Order No. R-9453)  
Eddy County, New Mexico

Dear Mr. Robinson:

Beach Exploration hereby requests an increase in the injection pressure limit for the Red Lake Unit. As you know, we conducted five step rate tests on Red Lake Unit well nos. 5, 9, 14, 22, and 25. Wellhead parting pressures in these tests ranged from 830 psig to 1160 psig. Enclosed are copies of the results of these tests, which were run by John West Engineering Company.

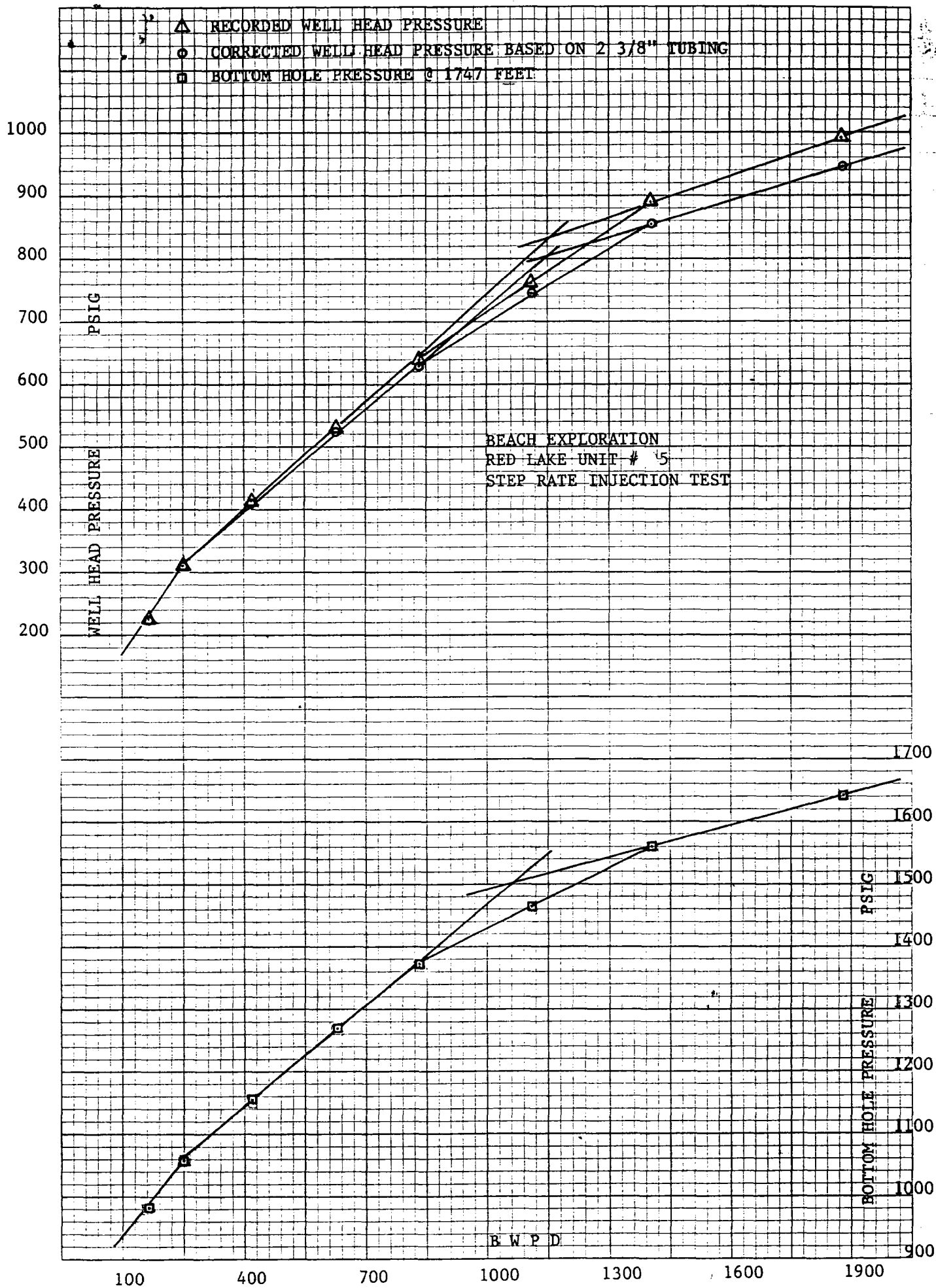
Please advise as to what the pressure limit will be increased to, based on these tests. Also, since 800 psi (or less) will probably not be sufficient pressure to conduct the waterflood properly, please advise as to what procedure will be required to obtain a higher pressure limit in the future, should this become necessary.

Thank you for your help and consideration in this matter.

Very Truly Yours,

Beach Exploration, Inc.

Hal Gill  
Engineer



**JOHN WEST ENGINEERING CO.**  
**Step Rate Injection Test**

Well Name BEACH EXPLORATION  
CO. Name RED LAKE UNIT # 5

Date 7-30-91

PAGE 1

Remarks	Time	Tbg. Press.	Rate B P D	Total	B H P	Tbg. Press.	Rate G P M	HEAD LOSS
PERFS @ 1687	and 1807	FEET	PKR @	642 FEET				
Set @ 1747	FEET							
	9:30	145.60		0	904.50			
	9:35	191.20	201.60	.7	944.20			
	9:40	205.0	144.00	1.2	964.50			
1	9:45	225.40	144.00	1.7	981.70	224.9	4.76	.527
			163.20					
	9:50	267.40	259.20	2.6	1015.10			
	9:55	295.40	259.20	3.5	1037.70			
2	10:00	312.00	230.40	4.3	1060.10	310.9	7.28	1.156
			249.60					
	10:05	362.90	432.00	5.8	1100.10			
	10:10	396.10	403.20	7.2	1131.50			
3	10:15	415.10	432.00	8.7	1157.00	412.1	12.32	3.060
			422.40					
	10:20	473.00	633.60	10.9	1205.60			
	10:25	495.70	662.40	13.20	1240.00			
4	10:30	530.20	604.80	15.30	1268.80	523.7	18.48	6.479
			633.60					
	10:35	580.00	864.00	18.30	1312.40			
	10:40	605.60	806.40	21.10	1342.20			
5	10:45	640.00	835.20	24.0	1368.60	629.2	24.36	10.801
			835.20					
	10:50	703.00	1123.20	27.90	1411.80			
	10:55	732.30	1094.40	31.70	1439.40			
6	11:00	760.40	1123.20	35.60	1465.30	742.0	32.48	18.390
			1113.60					
	11:05	839.50	1497.80	40.8	1506.20			
	11:10	872.60	1497.80	46.0	1536.00			
7	11:15	890.60	1526.40	51.3	1561.40	858.4	43.96	32.193
			1507.20					
	11:20	955.70	1900.80	57.9	1597.40			
	11:25	978.60	1872.00	64.4	1622.00			
8	11:30	992.60	1872.00	70.9	1641.60	944.1	54.88	48.530
			1881.60					

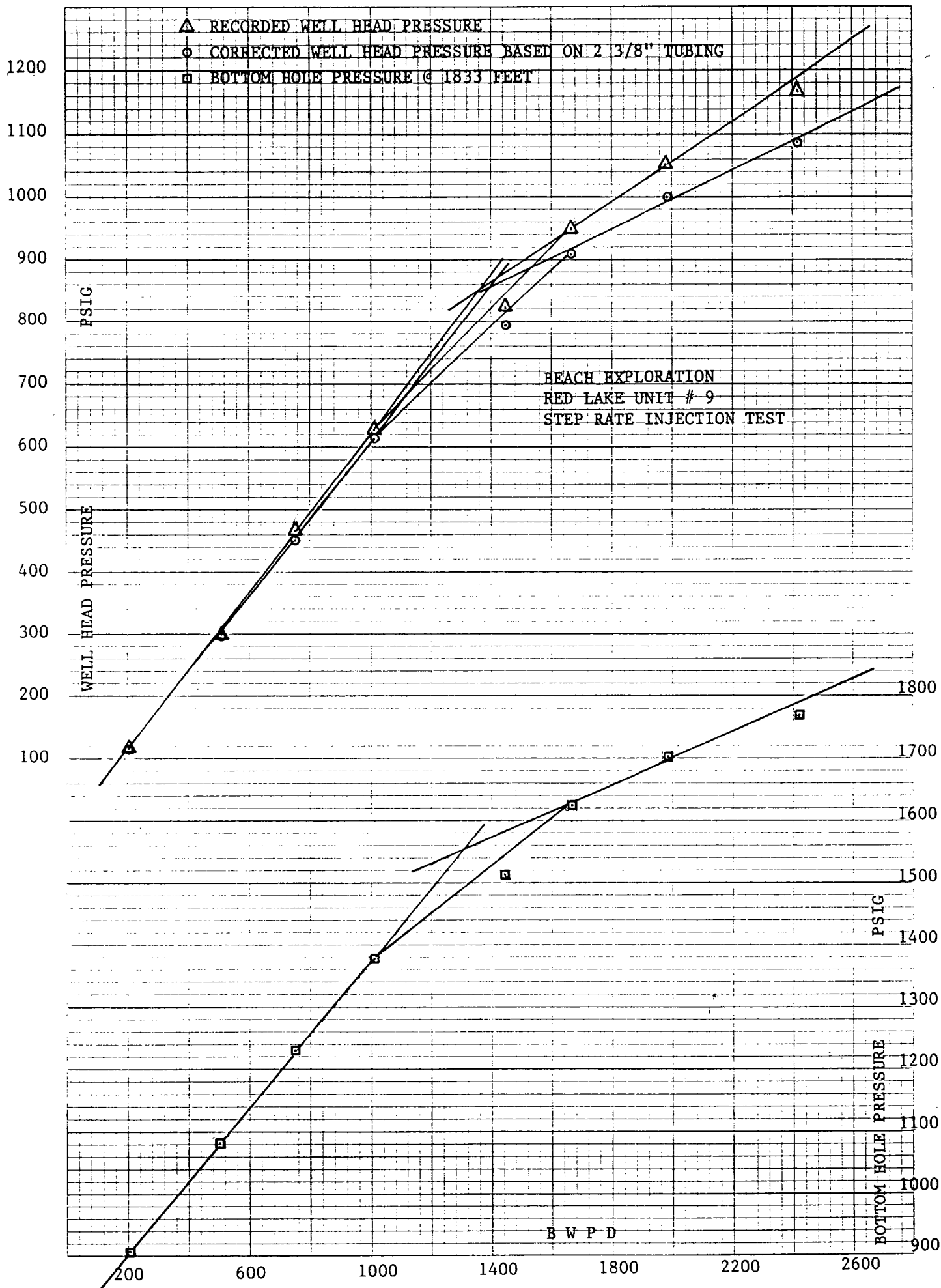
**JOHN WEST ENGINEERING CO.**  
**Step Rate Injection Test**

Well-Name RED LAKE UNIT # 5  
CO. Name BEACH EXPLORATION

Date 7-30-91

PAGE 2

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JOHN WEST ENGINEERING CO.  
Step Rate Injection Test

Well Name RED LAKE UNIT # 9

Date 8-1-91

CO. Name BEACH EXPLORATION

PAGE 1

Remarks	Time	Tbg. Press.	Rate BPD	Total	B H P	Tbg. Press.	Rate GPM	HEAD LOSS
PERFS @ 1828 and 1838			PKR @ 1773					
SET @ 1833 FEET			PBTD @ 1880					
	8:00	19.30		0	773.20			
	8:05	56.10	201.60	.7	842.40			
	8:10	91.50	172.80	1.3	879.20	117.28	5.88	.817
1	8:15	118.10	230.40	2.1	905.10			
			201.60					
	8:20	239.0	489.60	3.8				
	8:25	277.10	518.40	5.6	1059.40			
2	8:30	299.00	518.40	7.4	1080.7	294.1	14.84	4.530
			508.80					
	8:35	406	748.80	10.0	1171.10			
	8:40	443	777.60	12.7	1206.20			
3	8:45	464.30	748.80	15.3	1230.20	454.1	22.12	9.480
			758.40					
	8:50	565.20	1008.00	18.8	1317.80			
	8:55	611.10	1008.00	22.3	1354.40			
4	9:00	628.00	1008.00	25.8	1379.00	612.00	29.40	16.048
			1008.00					
	9:05	734.80	1353.60	30.50	1463.20			
	9:10	774.20	1353.60	35.20	1492.40			
5	9:15	821.30	1324.80	39.8	1517.00	794.0	39.20	27.324
			1343.99					
	9:20	908.10	1670.40	45.60	1584.00			
	9:25	922.10	1670.40	51.40	1609.50			
6	9:30	948.00	1670.40	57.20	1626.40	907.2	48.72	40.853
			1670.40					
	9:35	1032.00	1987.20	64.10	1676.00			
	9:40	1050.00	1987.20	71.00	1691.00			
7	9:45	1056.10	1987.20	77.9	1702	999.8	57.96	56.332
			1987.20					
	9:50	1171.20	2419.20	86.30	1754.00			
	9:55	1176.20	2419.20	94.70	1764.10			
8	10:00	1170.00	2419.20	103.10	1771.30	1089.0	70.56	81.059
			2419.20					

### Step Rate Injection Test

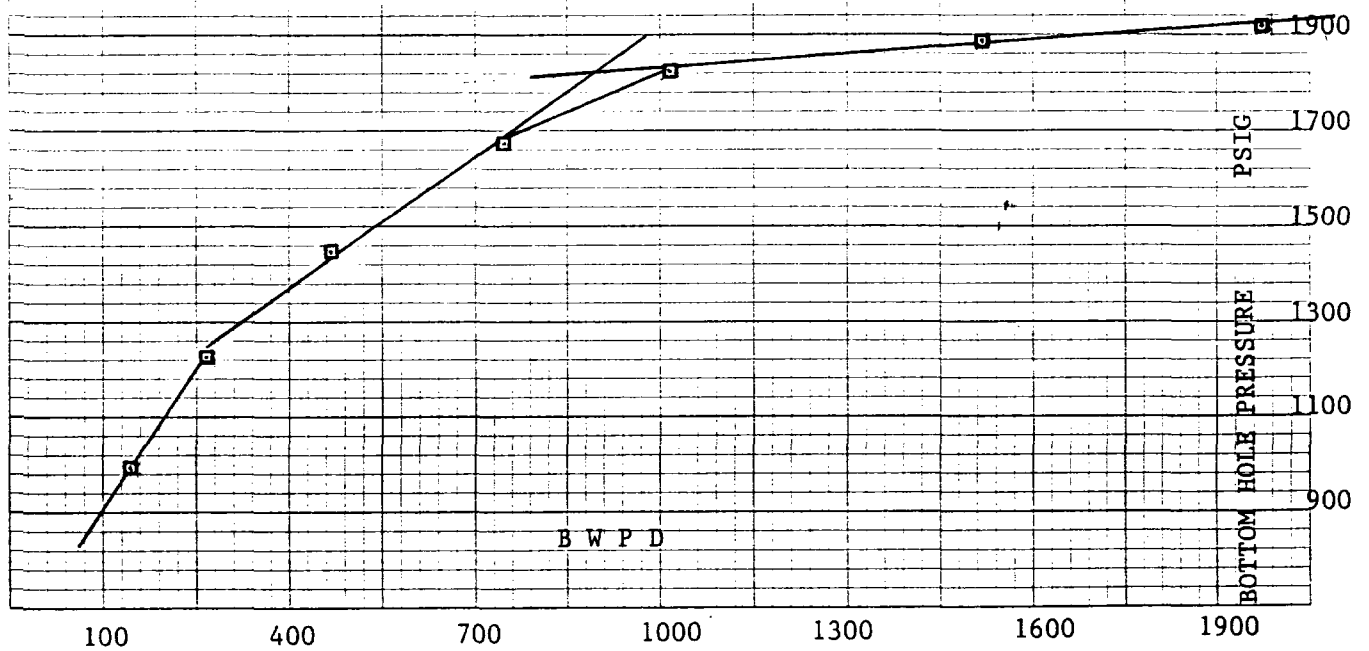
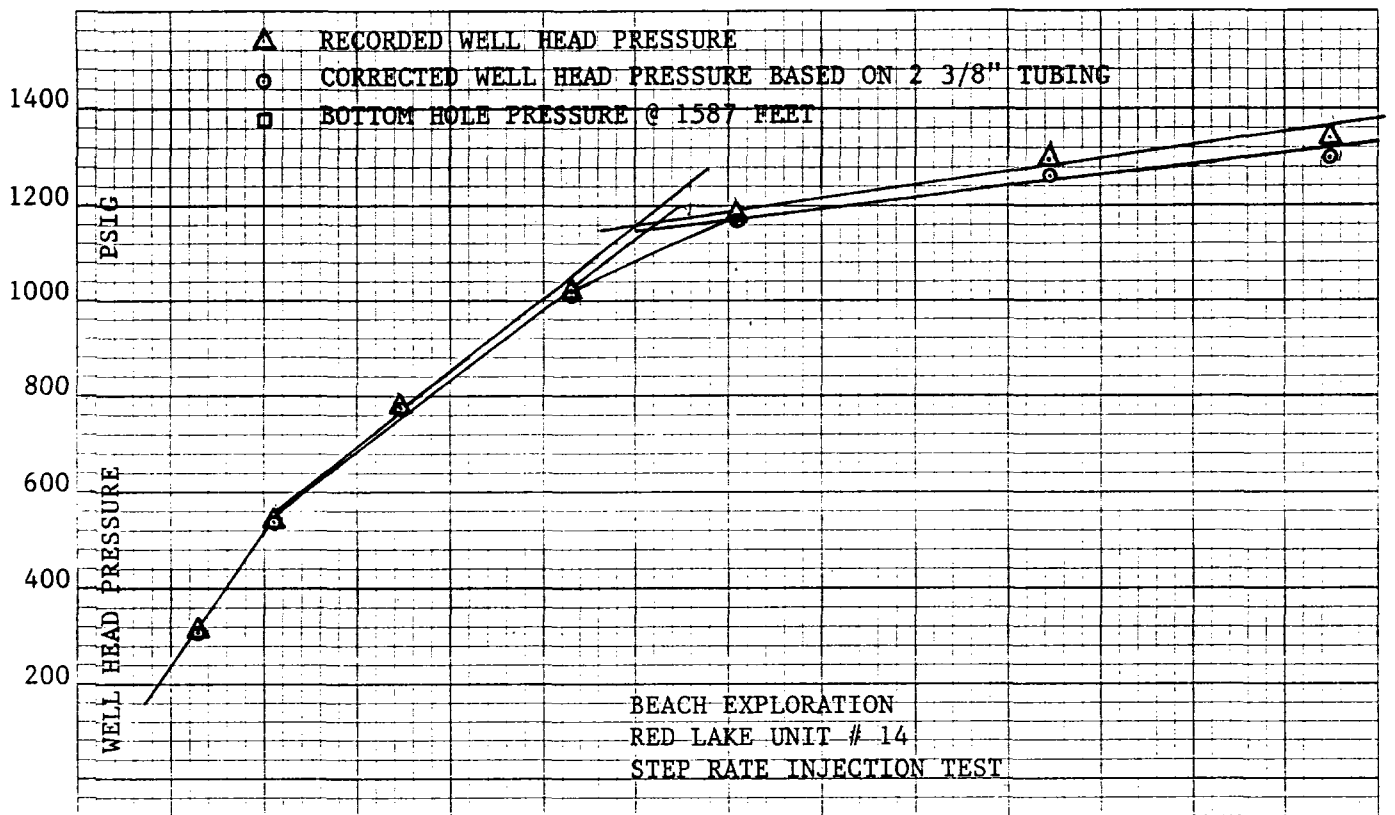
Well Name RED LAKE UNIT # 9

Date 8-1-91

CO. Name BEACH EXPLORATION

PAGE 2

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**JOHN WEST ENGINEERING CO.**  
**Step Rate Injection Test**

Well Name RED LAKE UNIT # 14  
CO. Name BEACH EXPLORATION

Date 7/30/91

PAGE 1

Remarks	Time	Tbg. Press.	Rate BPD	Total	B H P	Tbg. Press.	Rate GPM	HEAD LOSS
PERES @ 1575 and 1599 FEET			PKR @ 1522 FEET					
SET @ 1587 FEET								
	1:30	91.50		0	779.60			
	1:35	204.7	115.20	.4	890.40			
	1:40	274.6	144.00	.9	953.50			
1	1:45	310.10	172.80	1.5	989.90	309.7	4.20	.379
			144.00					
	1:50	443.00	288.00	2.5	1129.8			
	1:55	470.00	259.20	3.4	1157.30			
2	2:00	538.70	259.20	4.3	1225.90	537.3	7.84	1.205
			268.80					
	2:05	678	489.60	6.0	1374.30			
	2:10	763.50	460.80	7.6	1428.20			
3	2:15	773.60	460.80	9.2	1456.30	770.2	13.72	3.392
			470.40					
	2:20	955.10	748.80	11.8	1611.60			
	2:25	991.00	748.80	14.4	1649.50			
4	2:30	1014.00	748.80	17.0	1673.00	1006.0	21.84	8.017
			748.80					
	2:35	1144	1008.00	20.50	1786			
	2:40	1171	1036.80	24.10	1812			
5	2:45	1175.2	1008.00	27.6	1822.10	1161.1	29.68	14.140
			1017.59					
	2:50	1276	1497.60	32.8	1888			
	2:55	1307	1526.40	38.10	1901			
6	3:00	1283	1526.40	43.40	1897	1263.4	44.24	29.590
			1516.80					
	3:05	1366	1987.20	50.30	1922			
	3:10	1349	1958.40	57.10	1920			
7	3:15	1346	1987.20	64.00	1918	1297.7	57.68	48.337
			1977.60					
FALL OFF								
	3:16	1155			1839			
	3:17	1103			1785			
	3:18	1063.0			1747			
	3:19	1046			1730			

**JOHN WEST ENGINEERING CO.**  
**Step Rate Injection Test**

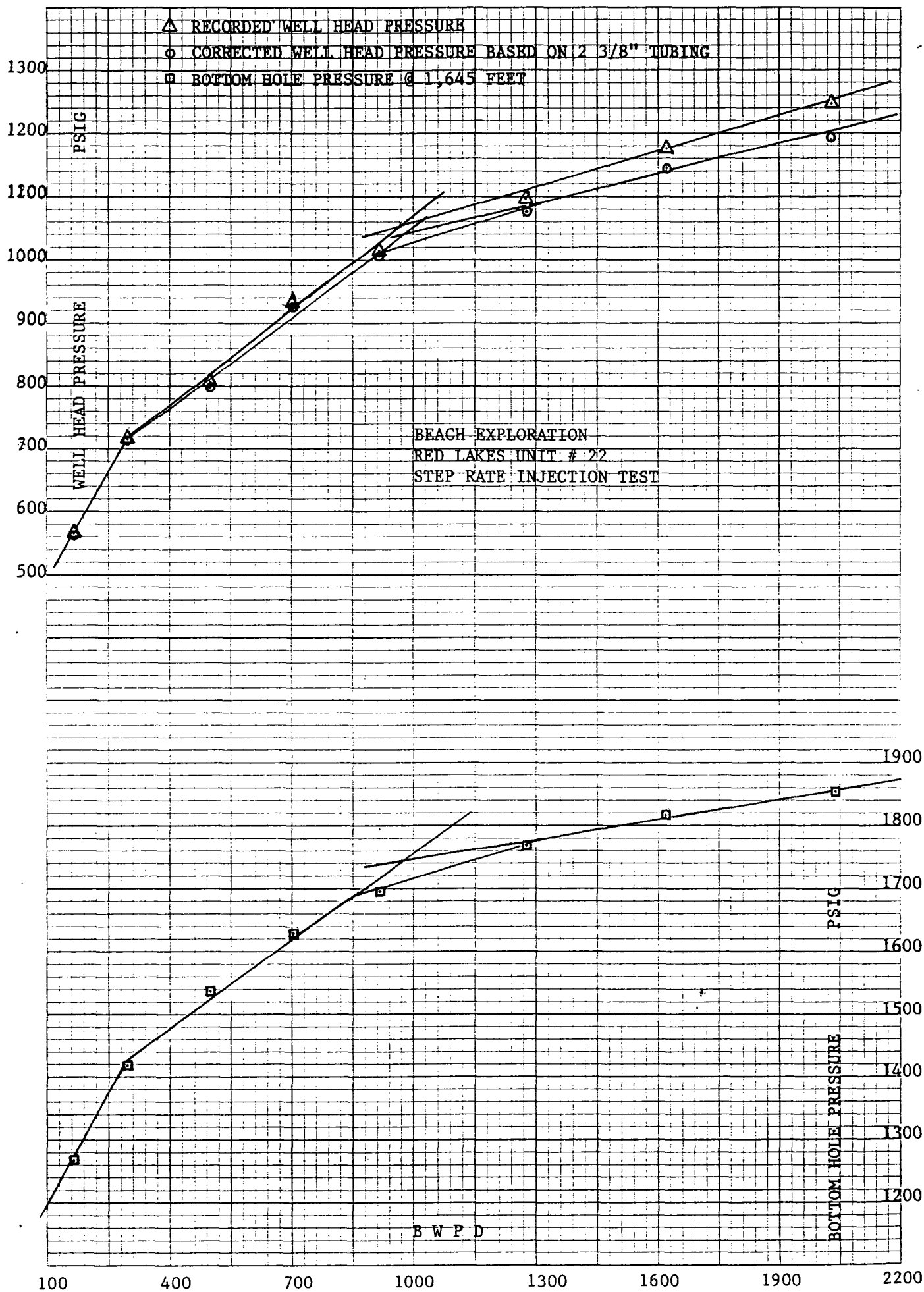
Well Name RED LAKE UNIT # 14

Date 7-30-91

CO. Name BEACH EXPLORATION

PAGE 2

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**JOHN WEST ENGINEERING CO.**  
**Step Rate Injection Test**

Well Name RED LAKE UNIT # 22

Date 7-31-91

CO. Name BEACH EXPLORATION

PAGE 1

Remarks	Time	Tbg. Press.	Rate B P D	Total	B H P	Tbg. Press.	Rate G P M	HEAD LOSS
PERFS. @ 1618 and 1672		FEET	PKR @ 1672	FEET				
SET @ 1645 FEET		PDTD 1718	FEET					
	7:55	345		0	1030			
	8:00	448.30	172.80	.6	1162.50			
	8:05	524.90	144.00	1.1	1226.80			
1	8:10	563.20	172.80	1.7	1266.30	562.7	4.76	.496
			163.20					
	8:15	629.60	288.00	2.7	1341.10			
	8:20	674.30	288.00	3.7	1384.00			
2	8:25	715.20	316.80	4.8	1419.00	713.7	8.68	1.508
			297.60					
	8:30	762.40	489.60	6.5	1476.60			
NO METER READING	8:35		489.60	8.2				
3	8:40	803.2	518.40	10.0	1538	799.3	14.56	3.925
			499.20					
	8:45	894.00	691.20	12.40	1580			
	8:50	914.00	720.00	14.90	1606			
4	8:55	929.50	691.20	17.30	1627	922.15	20.44	7.351
			700.80					
	9:00	971.60	892.80	20.40	1659.30			
	9:05	987.00	921.60	23.60	1680.00			
5	9:10	1017.50	921.60	26.80	1698.10	1005.6	26.60	11.968
			912.00					
	9:15	1048	1267.20	31.20	1732.00			
	9:20	1086.40	1296.00	35.70	1751.00			
6	9:25	1099.10	1267.20	40.10	1766.00	1076.8	37.24	22.302
			1276.80					
	9:30	1154.00	1641.60	45.8	1791.60			
	9:35	1154.00	1612.80	51.4	1805.70			
7	9:40	1177.40	1612.80	57.0	1818.00	1142.7	47.32	34.738
			1622.40					
	9:45	1232.00	2044.80	64.10	1838.20			
	9:50	1242.70	2016.00	71.10	1847.60			
8	9:55	1245.00	2044.80	79.20	1854.00	1192.2	59.36	52.837
			2035.20					

JOHN WEST ENGINEERING CO.  
Step Rate Injection Test

Well Name RED LAKE UNIT # 22

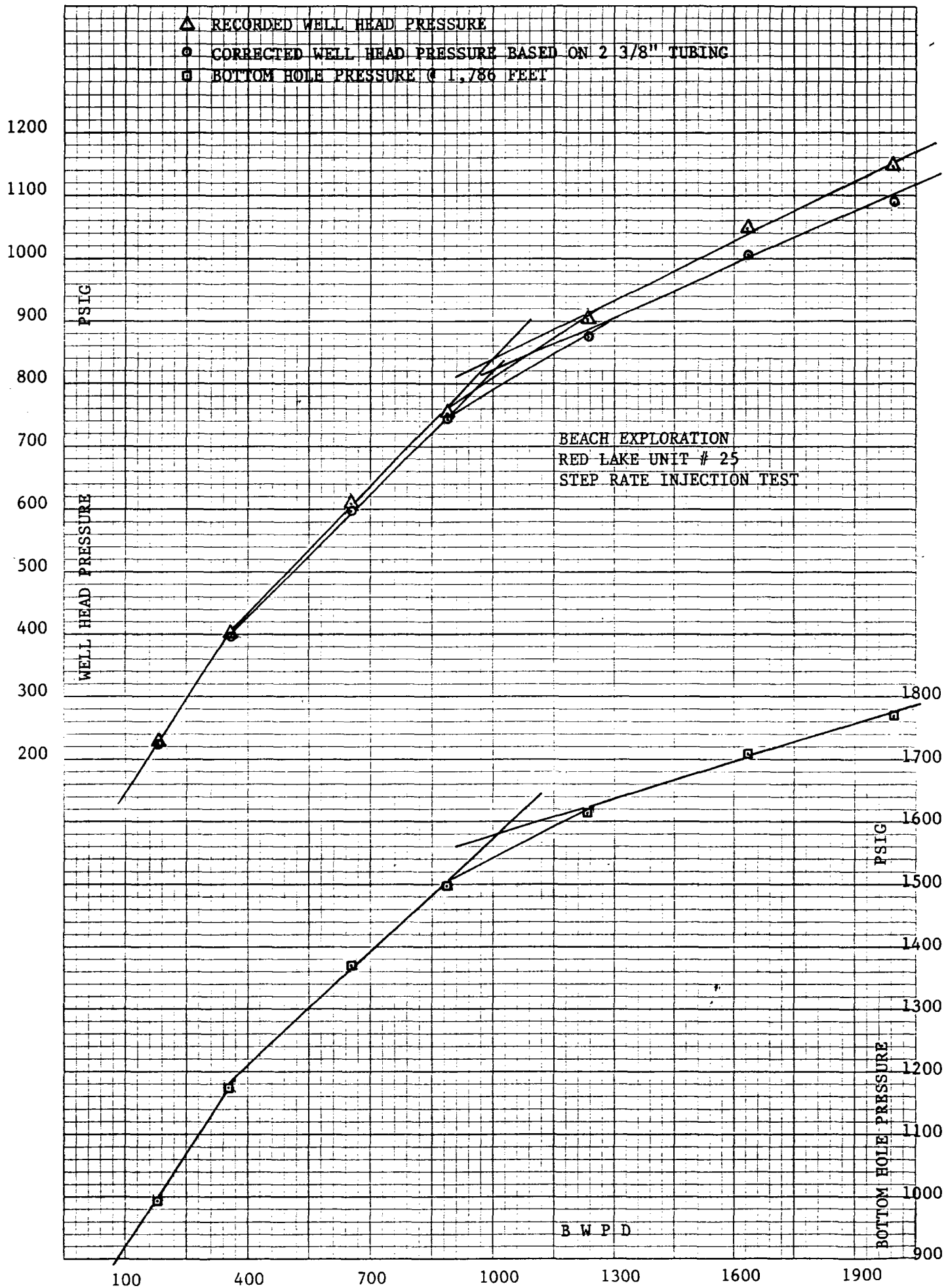
Date 7-31-91

CO. Name BEACH EXPLORATION

PAGE 2

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JOHN WEST ENGINEERING CO.  
Step Rate Injection Test

Well Name RED LAKE UNIT # 25

Date 7-31-91

CO. Name BEACH EXPLORATION

PAGE 1

Remarks	Time	Tbg. Press.	Rate BPD	Total	BHP	Tbg. Press.	Rate GPM	HEAD LOSS
PERFS @ 1762 and 1809 Feet								
SET @ 1786 FEET								
	12:15	22.10		0	797.10			
	12:20	131.30	201.60	.7	905.50			
	12:25	187.20	172.80	1.3	957.40			
1	12:30	224.10	172.80	1.9	995.30	223.44	5.32	.662
			182.40					
	12:35	318.70	345.60	3.1	1082.50			
	12:40	367.00	374.40	4.4	1134.30			
2	12:45	401.40	345.60	5.6	1174.10	399.1	10.36	2.271
			355.20					
	12:50	522.60	662.40	7.9	1275.50			
	12:55	578.60	662.40	10.2	1332.70			
3	1:00	605.20	633.60	12.4	1369.20	598.2	19.04	7.000
			652.80					
	1:05	698.40	892.80	15.50	1432.00			
	1:10	727.50	664.00	18.50	1469.50			
4	1:15	754.30	892.80	21.60	1498.00	742.1	25.76	12.244
			883.20					
	1:20	864.30	1209.60	25.8	1557.30			
	1:25	873.20	1238.40	30.10	1589.20			
5	1:30	901.10	1267.20	34.50	1615.10	878.2	36.12	22.883
			1238.40					
	1:35	999.40	1612.80	40.10	1663.40			
	1:40	1017.30	1641.60	45.80	1687.70			
6	1:45	1044.30	1641.60	51.50	1707.50	1006.2	47.60	38.129
			1632.00					
	1:50	1116.10	1987.20	58.40	1741.00			
	1:55	1127.70	1987.20	65.30	1758.10			
7	2:00	1142.00	2016.00	72.30	1770.30	1086.6	58.25	55.389
			1997.00					
FALL OFF								
	2:01	966.6			1734			
	2:02	954.00			1723			
	2:03	945.00			1715			
	2:04	938.60			1709			
	2:05	932.20			1703			

JOHN WEST ENGINEERING CO.  
Step Rate Injection Test

Well Name RED LAKE UNIT # 25

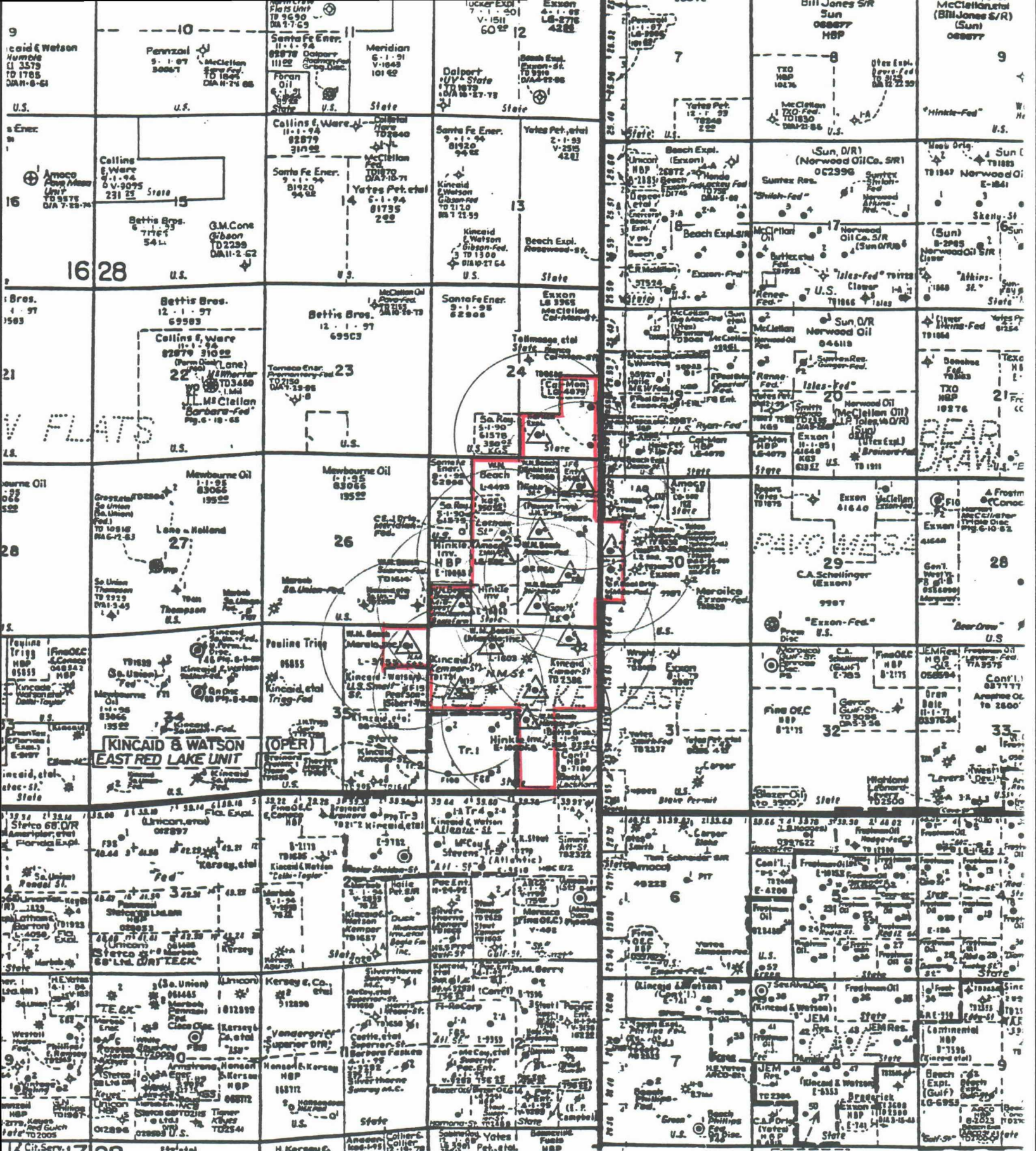
CO. Name BEACH EXPLORATION

PAGE 2

Date 7-31-91

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# LEGEND

- PROPOSED RED LAKE UNIT OUTLINE
- ▲ PROPOSED INJECTION WELL

BEACH EXPLORATION, INC.  
PROPOSED RED LAKE UNIT  
RED LAKE QUEEN-GRAYBURG, EAST  
EDDY COUNTY, NEW MEXICO

AREA OF REVIEW

Scale: 1" = 4000'



STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

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

CASE NO. 10192  
ORDER NO. R-9453

APPLICATION OF BEACH EXPLORATION INC.  
FOR A WATERFLOOD PROJECT, EDDY COUNTY,  
NEW MEXICO.

ORDER OF THE DIVISION

This cause came on for hearing at 8:15 a.m. on January 10, 1991 at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 12<sup>th</sup> day of March, 1991, the Division Director, having considered the testimony, the record and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) Division Case Nos. 10192 and 10193 were consolidated at the time of the hearing for the purpose of testimony.
- (3) The applicant, Beach Exploration Inc., seeks authority to institute a waterflood project in its Red Lake Unit (being the subject of Division Case No. 10193) by the injection of water into the Penrose Sand member of the Queen formation, East Red Lake-Queen-Grayburg Pool, through the gross perforated interval from approximately 1537 feet to 1838 feet in fourteen existing wells located in Sections 24, 25, 35 and 36, Township 16 South, Range 28 East, NMPM, and in Section 30, Township 16 South, Range 29 East, NMPM, Eddy County, New Mexico, all as shown on Exhibit "A" attached hereto.

(4) The wells located within applicant's Red Lake Unit Area are in an advanced state of depletion and should properly be classified as "stripper wells".

(5) The proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) The applicant 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 from injection, production, or plugged and abandoned wells.

(7) The injection of water into each of the wells shown on Exhibit "A" should be accomplished through internally plastic-lined tubing installed in a packer set within 100 feet of the uppermost injection perforation; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(8) Prior to commencing injection operations into the wells shown on Exhibit "A", the casing in each well should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(9) There are 4 wells, shown on Exhibit "B" attached hereto, which are located within the "area of review" which may not be completed or plugged in such a manner which will assure that their wellbores will not serve as a conduit for movement of injected fluid out of the injection interval.

(10) Prior to initiating injection operations within one-half mile of any of the wells shown on Exhibit "B", the applicant should be required to complete or re-plug said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid and to the satisfaction of the supervisor of the Artesia district office of the Division.

(11) The applicant requested that it be allowed to inject fluid into each of the wells shown on Exhibit "A" at a surface pressure not to exceed 1500 psi, as an exception to the standard injection pressure limitation of 0.2 psi per foot of depth to the top perforation.

(12) According to applicant's testimony, approximately half of the proposed injection wells are located in "tight" areas or areas of decreased permeability within the Penrose Sand member, and injection into these wells at the proposed rates of 150-250 barrels of water per day cannot be accomplished at the standard injection pressure limitation normally imposed by the Division.

(13) Prior to authorizing injection at the proposed surface injection pressure of 1500 psi. the applicant should be required to conduct a minimum of four step rate injection tests in order to properly determine the current fracture pressure of the Penrose Sand member, and in order to allow the Division the opportunity to assess the potential for fracturing and/or migration of injected fluid out of zone as a result of injection at the proposed pressure.

(14) The injection wells or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the top injection perforation, or in the case of open hole completions, the casing shoe, all as shown on Exhibit "A".

(15) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(16) The operator should give advance notification to the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement or plugging operations in order that the same may be witnessed.

(17) The application should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Beach Exploration Inc., is hereby authorized to institute a waterflood project in its Red Lake Unit (being the subject of Division Case No. 10193) by the injection of water into the Penrose Sand member of the Queen formation, East Red Lake-Queen-Grayburg Pool, through the gross perforated interval from approximately 1537 feet to 1838 feet in fourteen existing wells located in Sections 24, 25, 35 and 36, Township 16 South, Range 28 East, NMPM, and in Section 30, Township 16 South, Range 29 East, NMPM, Eddy County, New Mexico, all as shown on Exhibit "A" attached hereto.

(2) Prior to initiating injection operations within one-half mile of any of the wells shown on Exhibit "B", the applicant shall complete or re-plug said wells in a manner which will assure that these wellbores will not serve as a conduit for migration of injected fluid and to the satisfaction of the supervisor of the Artesia district office of the Division.

(3) The applicant shall 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 from injection, production, or plugged and abandoned wells.

(4) Injection into the proposed injection wells shall be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation or casing shoe; the casing-tubing annulus in each well shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(5) The injection wells or pressurization system shall be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 0.2 psi per foot of depth to the top injection perforation, or in the case of open hole completions, the casing shoe, all as shown on Exhibit "A".

(6) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.



(7) Prior to commencing injection operations into the proposed injection wells, the casing in each well shall be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

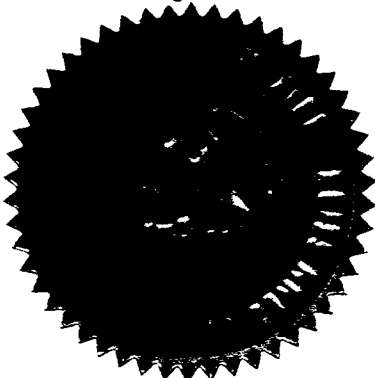
(8) The operator shall give advance notification to the supervisor of the Artesia district office of the Division of the date and time of the installation of injection equipment, of the mechanical integrity pressure tests, and of the conductance of any remedial cement or plugging operations in order that the same may be witnessed.

(9) The applicant shall immediately notify the supervisor of the Artesia district office of the Division of the failure of the tubing, casing or packer in any of the injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such steps as may be timely and necessary to correct such failure or leakage.

(10) The subject waterflood project is hereby designated the Red Lake Unit Penrose Waterflood Project, and the applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

(11) Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

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



S E A L

STATE OF NEW MEXICO  
OIL CONSERVATION DIVISION

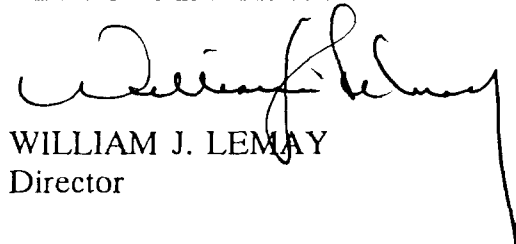
  
WILLIAM J. LEMAY  
Director

EXHIBIT "A"  
RED LAKE UNIT  
APPROVED INJECTION WELLS  
CASE NO. 10192  
ORDER NO. R-9453

Well Name	Location	Unit	S-T-R	Injection Perforations	Packer Depth	Tubing Size	Maximum Surface Injection Pressure
Amoco State No. 1	2310' FSL & 2287' FWL	K	25-16S-28E	1609' - 1634'	1559'	2 3/8	322
Bogle Farms No. 1	660' FSL & 990' FWL	M	25-16S-28E	1575' - 1599'	1525'	2 3/8	315
Hinkle State "A" No. 1	2310' FSL & 2310' FEL	J	36-16S-28E	1762' - 1809'	1712'	2 3/8	352
N.M. State "35" No. 1	660' FNL & 660' FEL	A	35-16S-28E	1560' - 1585'	1510'	2 3/8	312
N.M. State "36" No. 3	1980' FNL & 990' FWL	E	36-16S-28E	1618' - 1672'	1568'	2 3/8	324
N.M. State "36" No. 4	660' FNL & 1980' FWL	C	36-16S-28E	1656' - 1675'	1606'	2 3/8	331
N.M. State "36" No. 5	1986' FNL & 1983' FEL	G	36-16S-28E	1778' - 1824'	1728'	2 3/8	356
N.M. State "36" No. 6	330' FNL & 981' FEL	A	36-16S-28E	1814' - 1825'	1764'	2 3/8	363
Government No. 1	660' FSL & 1980' FEL	O	25-16S-28E	1779' - 1804'	1729'	2 3/8	356
Government No. 4	2310' FNL & 1980' FEL	G	25-16S-28E	1642' - 1660'	1592'	2 3/8	328
Government No. 5	1650' FSL & 990' FEL	I	25-16S-28E	1816' - 1838'	1766'	2 3/8	363
Allen Federal No. 1	860' FNL & 660' FEL	A	25-16S-28E	1687' - 1807'	1637'	2 3/8	337
Max Federal No. 3	2310' FNL & 330' FWL	E	30-16S-29E	1828' - 1838'	1778'	2 3/8	366
State "24" No. 1	660' FSL & 1980' FEL	O	24-16S-28E	1537' - 1599'	1487'	2 3/8	307

EXHIBIT "B"  
RED LAKE UNIT  
INADEQUATELY COMPLETED, PLUGGED OR ABANDONED WELLS  
CASE NO. 10192  
ORDER NO. R-9453

Well Name	Location	Unit	S-T-R
Meridian Federal No. 1	2310' FNL - 990' FWL	E	25-16S-28E
State "24" No. 1	2310' FNL - 2310' FEL	G	24-16S-28E
Kemper State No. 2	660' FNL - 660' FEL	A	36-16S-28E
Southern Union Federal No. 1	660' FSL - 1980' FEL	O	26-16S-28E