WFX 2/12/98

PIONEER

January 26, 1998

New Mexico Oil Conservation Division
Attn: David Catanach
2040 S. Pacheco
Santa Fe, NM 87505

RE: Application for Authorization to Inject
Lusk West (Delaware) Unit
Lea County, NM

Dear Mr. Catanach:

Pioneer Natural Resources USA, Inc. is requesting your authorization to inject into the well described below, which is located within the Lusk West (Delaware) Unit. Enclosed you will find an original C-108 and one copy for your review.

The applicant proposes to inject saltwater into the Delaware Formation, at an approximate depth, rate, and pressure of 6450', 900 BWIPD and 1280 PSI, respectively. The proposed injector will be called the Lusk West (Delaware) Unit #915Y, which will be located in Unit O, 450' FSL & 2050' FEL, Section 29, T19S, R32E, Lea County, NM.

Any questions concerning this application should be forwarded to the attention of Scott H. Lackey at the address above or call (915) 571-3976.

Sincerely,

Pioneer Natural Resources USA, INC.

Scott H. Lackey
Sr. Operations Engineer

Enclosures

CC: BLM
Roswell, NM

BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

APPLICATION FOR AUTHORIZATION TO INJECT

LUSK WEST (DELAWARE) UNIT

Lea County, New Mexico

TABLE OF CONTENTS

APPLICATION

FORM C-108

POST OFFICE BOX 2010
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [XX] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [XX] yes [ ] no

II. Operator: Pioneer Natural Resources USA, Inc.

Address: P.O. Box 3178, Midland, TX 79702

Contact party: Scott H. Lackey Phone: (915) 571-3976

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? [XX] yes [ ] no
If yes, give the Division order number authorizing the project R-10863

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: Scott H. Lackey Title Sr. Operations Engineer

Signature: Scott H. Lackey Date: 1/15/98

* 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. Hearing Date: 2/6/97. Case Nos. 11, 703 and 11,704.

INJECTION WELL DATA SHEET

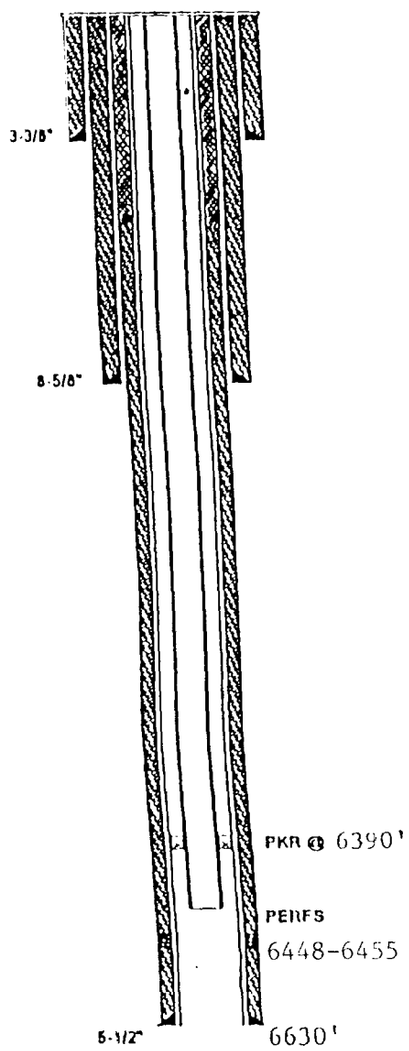
SECTION III

ERATOR: Pioneer Natural Resources USA, Inc. LEASE: Southern California Federal

ELL NO #915Y 450' FSL & 2050' FEL Section 29 T19S R32E

FOOTAGE LOCATION | SECTION | TOWNSHIP | RANGE

SCHEMATIC



WELL CONSTRUCTION DATA

1. SUFACE CASING

SIZE: 13-3/8 INCHES CEMENTED WITH: 675 SX

TOC: Surface FEET DETERMINED BY: Circulating

HOLE SIZE: 17-1/2 INCHES

2. INTERMIDIATE CASING

SIZE: 8-5/8 INCHES CEMENTED WITH: 1860 SX

TOC: Surface FEET DETERMINED BY: Circulating

HOLE SIZE: 12-1/4 INCHES

3. LONG STRING

SIZE: 5-1/2 INCHES CEMENTED WITH: 900 SX

TOC: Surface FEET DETERMINED BY: Circulating

HOLE SIZE: 7-7/8 INCHES

4. INJECTION INTERVAL 6448 FEET TO: 6455 FEET

(PERFORATED OR OPEN HOLE ; INDICATE WHICH)

"PERFORATED"

5. TOTAL DEPTH: 6630 FEET

6. TUBING SIZE

SIZE: 2-7/8 INCHES LINED WITH: IPC 505 - PLASTIC COATING

SET IN A: ARROW SET 1-XS, PKR PACKER AT: 6390' FEET:

OTHER DATA

A. IS THIS A NEW WELL DRILLED FOR INJECTION? XX YES ____ NO

IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED?

B. NAME THE INJECTION FORMATION: 6400' SAND (BRUSHY CANYON)

C. NAME THE FIELD OR POOL (IF APPLICABLE) LUSK WEST (DELAWARE)

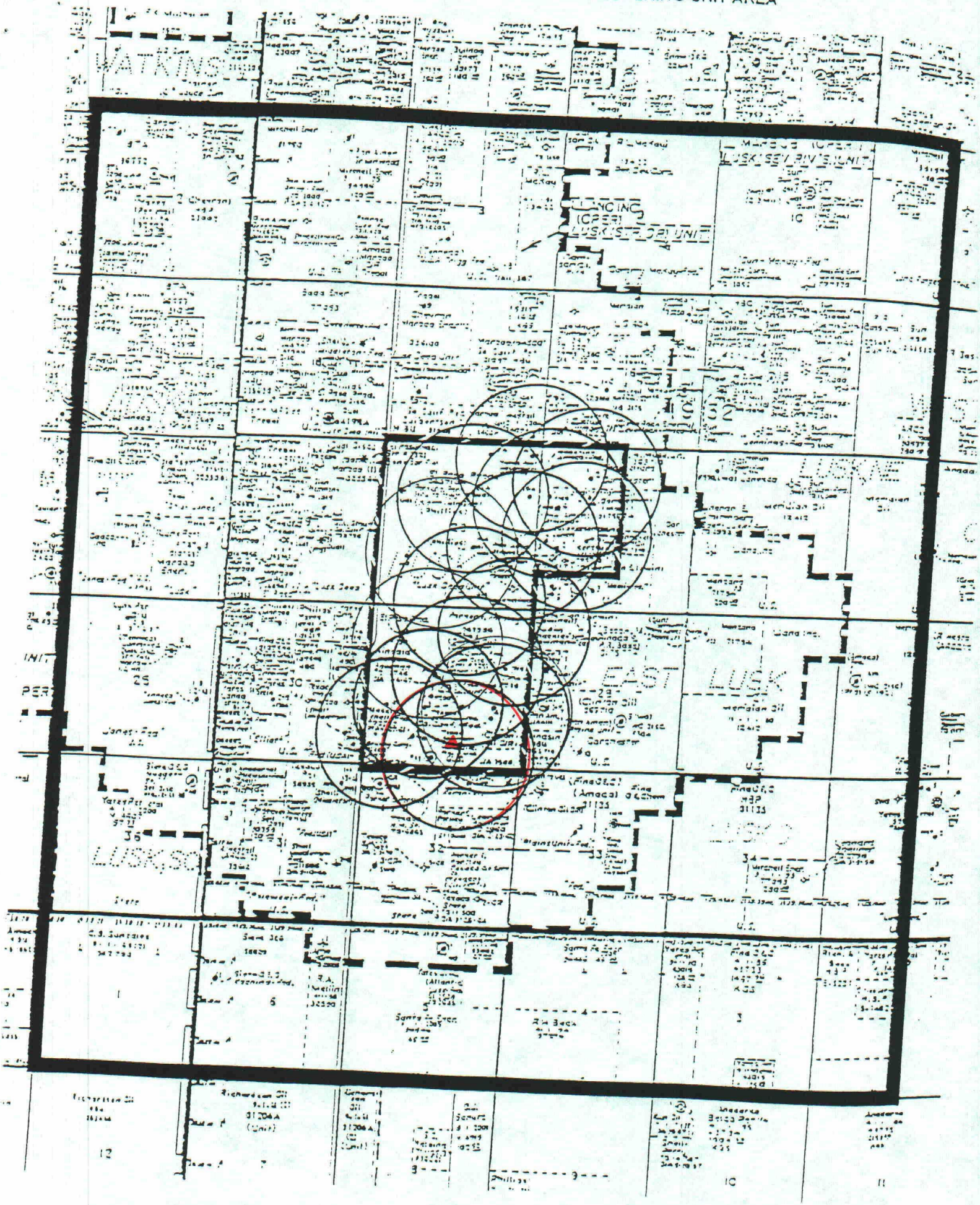
D. HAS THE WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGED DETAIL, I.E. SACKS OF CEMENT OR PLUG(S) USED. NO

E. GIVE THE NAME(S) AND DEPTH(S) OF ANY OVER OR UNDERLYING OIL OR GAS ZONES IN THIS AREA:

1. YATES 2000'-2800'	WATKINS YATES	5. STRAWN 11000'-11200'	LUSK STRAWN OIL
	N.E. LUSK YATES	6. ATOKA 11200'-11400'	LUSK ATOKA GAS
	S. LUSK YATES	7. MORROW 11500'-12000'	LUSK MORROW GAS
2. DELAWARE 4600'-7100'	W. LUSK DELAWARE		N.W. LUSK MORROW GAS
	LUSK DELAWARE		N. LUSK MORROW GAS
3. BONE SPRING 8200'-8950'	WATKINS BONE SPRING		
	LUSK BONE SPRING		
	S. LUSK BONE SPRING		
	E. LUSK BONE SPRING		
4. WOLF CAMP 10100'-10700'	LUSK WOLFCAMP OIL		

FORM C-108
SECTION III
APPLICATION FOR AUTHORIZATION
TO INJECT

LAND PLAT OF TRACTS & LEASES COVERING UNIT AREA



TABULATIONS OF WELL DATA

SECTION VI

FORM C-108

SECTION VI

The information required under Section VI was previously submitted under Case Numbers 11,703 and 11,704 on February 6, 1997.

DATA SHEET ON PROPOSED OPERATIONS

SECTION VII

FORM C-108

SECTION VII

1) Proposed Average Daily Injection Rate - 500 BWIPD
   Proposed Maximum Daily Injection Rate - 900 BWIPD

2) This will be a closed system

3) Estimated Average Injection Pressure - 800 PSI
   Estimated Maximum Injection Pressure - 1280 PSI

4) See attached letter and chemical analysis

5) Does not apply

Champion Technologies, Inc.
P.O. BOX 2157
HOBBS, NEW MEXICO 88240
Telephone (505) 393-7726

December 10, 1996

Parker & Parsley
P.O. Box 3178
Midland, Tx. 79702

Attn: Britt Hirth

Dear Mr. Hirth,

According to reports, Parker & Parsley is planning to inject water at the Lusk West Delaware lease. Water from the Seven Rivers formation is going to be commingled with the Delaware water. When mixed these two waters show to have a Calcium Sulfate scaling tendency, thus making these two water incompatible.

Champion Technologies is recommending a scale inhibitor be injected continuously into the commingled injection water at a treating rate of 15 to 25 ppm. This treatment will inhibit the Calcium Sulfate scale from depositing in the injection wells and improve the quality of the injection water to acceptable levels. Compatibility tests with scale inhibitors and the injection water should be performed before a scale inhibitor is put in place.

If you have any questions please contact me in the Hobbs office.

Regards,

Kenny Kearney

Kenny Kearney

FORM C-108
SECTION VII
ITEM #4

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

Martin Water Laboratories, Inc.

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

RESULT OF WATER ANALYSES

TO: Mr. David Shrauner
P O Drawer E, Kermit, TX 79745

LABORATORY NO. 896141
SAMPLE RECEIVED 8-16-96
RESULTS REPORTED 8-21-96

COMPANY Parker & Parsley LEASE Pronghorn SWD
FIELD OR POOL Lusk
SECTION ____ BLOCK ____ SURVEY ____ COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Produced water - taken from inlet to gunbarrel. 8-16-96
NO. 2 Produced water - taken from Southern California heater treater (water pump). 8-16-
NO. 3 Produced water - taken from outlet from gunbarrel. 8-16-96
NO. 4
REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1436	1.1718		
pH When Sampled				
pH When Received	6.19	6.18		
Bicarbonate as HCO_3	273	78		
Supersaturation as $CaCO_3$	0	8		
Undersaturation as $CaCO_3$	--	--		
Total Hardness as $CaCO_3$	58,000	83,000		
Calcium as Ca	19,200	28,400		
Magnesium as Mg	2,430	2,916		
Sodium and/or Potassium	61,402	66,136		
Sulfate as SO_4	960	384		
Chloride as Cl	134,936	160,503		
Iron as Fe	11.3	10.5		
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	219,202	258,417		
Temperature °F.				
Carbon Dioxide, Calculated	301	86		
Dissolved Oxygen,				
Hydrogen Sulfide	0.0	0.0		
Resistivity, ohms/m at 77° F.	0.054	0.050		
Suspended Oil	--	--	1,027	
Filtrable Solids as mg/l				
Volume Filtered, ml				
Calcium Sulfate Scaling Tendency	None	None		
Calcium Sulfate Scaling Tendency	None	None		

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks: The objective herein is to evaluate compatibility between these two waters. A careful study of the waters has revealed no evidence of any incompatibility, therefore, the mixing of these two waters would not be expected to cause any scaling potential or precipitation.

By Waylan C. Martin, M.A.

Form No. 3
FORM C-108
SECTION VII
ITEM #4

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

Martin Water Laboratories, Inc.

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

RESULT OF WATER ANALYSES

TO: Mr. David Shrauner
P O Drawer E, Kermit, TX 79745

LABORATORY NO. 896140
SAMPLE RECEIVED 8-19-96
RESULTS REPORTED 8-21-96

COMPANY Parker & Parsley LEASE As listed
FIELD OR POOL Lusk
SECTION ___ BLOCK ___ SURVEY ___ COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:
NO. 1 Supply water - taken from Lusk Deep #7.
NO. 2 Produced water - taken from Southern California #5.
NO. 3 Produced water - taken from Southern California #7.
NO. 4

REMARKS: 2. 6,400' 3. 4,700'

CHEMICAL AND PHYSICAL PROPERTIES	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F	1.0323	1.1784	1.1721	
pH When Sampled				
pH When Received	5.80	6.31	6.41	
Bicarbonate as HCO_3	488	51	54	
Supersaturation as $CaCO_3$	--	6	4	
Undersaturation as $CaCO_3$	10	--	--	
Total Hardness as $CaCO_3$	8,800	87,000	78,000	
Calcium as Ca	2,520	29,600	28,000	
Magnesium as Mg	608	3,159	1,944	
Sodium and/or Potassium	12,226	67,015	70,258	
Sulfate as SO_4	3,785	313	362	
Chloride as Cl	22,016	164,764	163,344	
Iron as Fe	60.8	2.4	5.2	
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	41,643	264,902	263,962	
Temperature °F.				
Carbon Dioxide, Calculated	1,269	42	35	
Dissolved Oxygen,				
Hydrogen Sulfide	74.0	0.0	0.0	
Resistivity, ohms/m at 77° F.	0.200	0.0	0.0	
Suspended Oil	0.200	0.049	0.050	
Filtrable Solids as mg/l				
Volume Filtered, ml				
Calcium Carbonate Scaling Tendency	None	None	None	
Calcium Sulfate Scaling Tendency	Moderate	None	None	

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks

Form No. 3

FORM C-108
SECTION VII
ITEM #4

By ___

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

Martin Water Laboratories, Inc.

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

RESULT OF WATER ANALYSES

TO: Mr. David Shrauner
P O Drawer E, Kermit, TX 79745

LABORATORY NO. 896140 (Page 2)
SAMPLE RECEIVED 8-19-96
RESULTS REPORTED 8-21-96

COMPANY Parker & Parsley LEASE As listed
FIELD OR POOL Lusk
SECTION ____ BLOCK ____ SURVEY ____ COUNTY Lea STATE NM
SOURCE OF SAMPLE AND DATE TAKEN:

NO. 1 Composite Southern California water (equal mix of well #5 & well #7).
NO. 2 Hypothetical combination of 25% Lusk #7 & 75% composite Southern California.
NO. 3 Hypothetical combination of 50% Lusk #7 & 50% composite Southern California.
NO. 4 Hypothetical combination of 75% Lusk #7 & 25% composite Southern California.

REMARKS:

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.1753			
pH When Sampled				
pH When Received	6.36			
Bicarbonate as HCO_3	53			
Supersaturation as $CaCO_3$				
Undersaturation as $CaCO_3$				
Total Hardness as $CaCO_3$	82,500			
Calcium as Ca	28,800	22,230	15,660	9,090
Magnesium as Mg	2,552			
Sodium and/or Potassium	68,637			
Sulfate as SO_4	338	1,200	2,062	2,923
Chloride as Cl	164,054	128,545	93,035	57,526
Iron as Fe	3.8			
Barium as Ba				
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	264,432			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen,				
Hydrogen Sulfide	0.0			
Resistivity, ohms/m at 77° F.	0.050			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Calcium Sulfate Scaling Tendency	None	Mild	Moderate	Severe

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks Letter of recommendation attached.

By Waylan C. Martin, M.A.

Form No. 3
FORM C-108
SECTION VII
ITEM #4

Martin Water Laboratories, Inc.
WATER CONSULTANTS SINCE 1953
BACTERIAL AND CHEMICAL ANALYSES

P. O. BOX 1468
MONAHANS, TEXAS 79756
(915) 943-3234 or 563-1040

709 W. INDIANA
MIDLAND, TEXAS 79701
(915) 683-4521

August 21, 1996

Mr. David Shrauner
Parker & Parsley
P.O. Drawer "E"
Kermit, TX 79745

Subject: Recommendations relative to laboratory #896140 (8-21-96), Lusk Deep #7 and Southern California #5 and #7.

Dear Mr. Shrauner:

The objective herein is to evaluate compatibility between the waters from Lusk Deep #7 and both Southern California #5 and #7. A careful study in this regard has revealed the following:

1. We have made hypothetical combinations of these waters and find that essentially any mixture of these waters would be expected to result in a calcium sulfate scaling potential. However, as the proportion of the water from Lusk Deep #7 increases, we find a proportionate increase in calcium sulfate scaling potential. The most severe scaling potential resulted when we combined 75 percent of the water from Lusk Deep #7 with the other two waters.

2. The results reveal the presence of a slight amount of iron in both of the Southern California wells and hydrogen sulfide in Lusk Deep #7. This evidence indicates iron sulfide precipitation can be expected on the mixing of these waters. It should be understood that we would anticipate variations in the iron content in Southern California #5 and #7 and therefore variations in the amount of iron sulfide that would precipitate when mixed with Lusk Deep #7.

3. This study has revealed no evidence of any other potential incompatibility.

Based on the evidence revealed in this study, we would conclude that these waters are not compatible, and we would recommend the waters not be mixed on the surface nor should Lusk Deep #7 be injected into the zone represented by the Southern California wells.

Yours very truly,

Waylan C. Martin

WCM/mo

FORM C-108
SECTION VII
ITEM #4

GEOLOGICAL DATA SHEET

SECTION VIII

FORM C-108 SECTION VIII

Geological Summary

The Lusk West Delaware field is located in Lea county, New Mexico in TWN 19S RGE 32E. As of April 30, 1996 there were 31 (seven inactive) wells producing approximately 9,441 BBLS/Mo, 16,950 MCF/Mo and 13,480 BW/Mo. The field's current producing gas-oil ratio is at 1,795 SCF/BBL as of April 1996. Cumulative production as of April 1996 for the field is 2,106.3 MBBLS, 4,367.3 MMCF and 1,789.8 MBW. Production comes mainly from the 6400' zone in the Delaware Brushy Canyon. There are several other Delaware Brushy Canyon zones including the 4900' sand, 5500' sand, 6650' sand, 7050' sand and the 7200' sand. These zones have contributed about 587 MBBLS & 1,029.2 MMCF. The proposal is to only Waterflood the 6400' sand interval. The wells that contributed to the 6400' zone have produced about 1,519 MBBLS, 3,338.1 MMCF and 1,281 MBW.

The 6400' zone is a deep marine turbidite fan system that runs primarily north-south along the slope break. The sandstone body varies in thickness from 0 to 35+ feet. The sand averages about 22 feet thick. A mineralogic and Petrographic analysis was performed by Western Atlas's Core Laboratories on the Damson Oil Corp. Southern California Federal #7. The following is the results of their analysis.

The sandstone is described as a subarkosic feldspathic sandstone that is fairly well sorted, ranges from very angular to rounded, is mature in texture, is random in grain orientation and has point, floating, straight, concavo-convex grain contacts. The sandstone is primarily composed of monocrystalline quartz, potassium feldspar, dolomite rock fragments, plagioclase and polycrystalline quartz. There is no rock matrix present. The cement is common to abundant, is finely disseminated with fine crystalline dolomite and patches of anhydrite. There is an abundance of intergranular pores, uncommon grain-moldic pores, rare intergranular and very small pores associated with dolomite rock fragments and dolomite cements. No authigentic clays are present, there is no evidence of sedimentary structures, the pore network is very well interconnected and fractures are not present.

The 6400' Delaware sand exhibits both stratigraphic and structural trapping mechanisms and characteristics. The Lusk West field trends structurally down dip in the easterly direction. There are two visible structural high's setting up a nose in which the thickest portion of the sand body is present. There appears to be an oil-water contact at approximately -2,900' on the down dip side. The up dip extent of field is delineated by sandstone fans that thins in a westerly direction to zero. These fans appear separated by a tight clay rich margin that trends SE to NW across the southern half of Sec. 20.

INJECTION WELL STIMULATION PROGRAM

SECTION IX

FORM C-108

SECTION IX

There will be a small clean up acid job only for each injection well.

LOGGING AND TEST DATA

SECTION X

FORM C-108

SECTION X

Well logs will be submitted upon completion of drilling operations.

CHEMICAL ANALYSIS OF FRESH WATER

SECTION XI

FORM C-108

SECTION XI

There is no known beneficially used fresh water. Water from the Santa Rosa formation is not of sufficient supply and areal extent to justify drilling of water wells. Livestock is watered by private co-ops and pipeline.

AFFIRMATIVE STATEMENT

SECTION XII

FORM C-108

SECTION XII

Not applicable due to nature of the Secondary Recovery application. This Section does not apply.

PROOF OF NOTICE

SECTION XIII

Mailed 1/15/98

PIONEER
NATURAL RESOURCES USA, INC.

January 15, 1998

Bureau of Land Management
2909 West Second St.
Roswell, NM 88201

RE: Application for Authorization to Inject
Lusk West (Delaware) Unit #915Y
Lea County, New Mexico

Gentlemen:

Pioneer Natural Resources USA, Inc. is applying to the New Mexico Oil Conservation Division for a permit to inject fluid into a formation which is productive of oil and gas.

The applicant proposes to inject saltwater into the Delaware Formation, at an approximate depth, rate, and pressure of 6450', 900 BWIPD and 1280 PSI, respectively. The proposed injector will be called the Lusk West (Delaware) Unit #915Y, which will be located in Unit O, 450' FSL & 2050' FEL, Section 29, T19S, R32E, Lea County, NM.

The Oil Conservation Division requires that the attached information be sent to all offset operators and the surface owner.

Any questions concerning this application should be forwarded to the attention of Scott H. Lackey at the address above or call (915) 571-3976.

Sincerely,

Pioneer Natural Resources USA, INC.

Scott H. Lackey
Sr. Operation Engineer

Enclosures

P.O. BOX 3178 · MIDLAND, TEXAS 79702-3178 · 303 W. WALL, SUITE 101 · MIDLAND, TEXAS 79701 · MAIN: (915) 683-4768 · FAX: (915) 571-5063

PIONEER
NATURAL RESOURCES USA, INC.

January 15, 1998

Texaco Exploration & Producing
P. O. Box 3109
Midland, TX 79702

RE: Application for Authorization to Inject
Lusk West (Delaware) Unit #915Y
Lea County, New Mexico

Gentlemen:

Pioneer Natural Resources USA, Inc. is applying to the New Mexico Oil Conservation Division for a permit to inject fluid into a formation which is productive of oil and gas.

The applicant proposes to inject saltwater into the Delaware Formation, at an approximate depth, rate, and pressure of 6450', 900 BWIPD and 1280 PSI, respectively. The proposed injector will be called the Lusk West (Delaware) Unit #915Y, which will be located in Unit O, 450' FSL & 2050' FEL, Section 29, T19S, R32E, Lea County, NM.

The Oil Conservation Division requires that the attached information be sent to all offset operators and the surface owner.

Any questions concerning this application should be forwarded to the attention of Scott H. Lackey at the address above or call (915) 571-3976.

Sincerely,

Pioneer Natural Resources USA, INC.

Scott H. Lackey
Sr. Operation Engineer

Enclosures

P.O. BOX 3178 · MIDLAND, TEXAS 79702-3178 · 303 W. WALL, SUITE 101 · MIDLAND, TEXAS 79701 · MAIN (915) 683-4768 · FAX (915) 571-5063

PIONEER
NATURAL RESOURCES USA, INC

January 15, 1998

Shackelford Oil Company
203 W. Wall
Midland, TX 79701

RE: Application for Authorization to Inject
Lusk West (Delaware) Unit #915Y
Lea County, New Mexico

Gentlemen:

Pioneer Natural Resources USA, Inc. is applying to the New Mexico Oil Conservation Division for a permit to inject fluid into a formation which is productive of oil and gas.

The applicant proposes to inject saltwater into the Delaware Formation, at an approximate depth, rate, and pressure of 6450', 900 BWIPD and 1280 PSI, respectively. The proposed injector will be called the Lusk West (Delaware) Unit #915Y, which will be located in Unit O, 450' FSL & 2050' FEL, Section 29, T19S, R32E, Lea County, NM.

The Oil Conservation Division requires that the attached information be sent to all offset operators and the surface owner.

Any questions concerning this application should be forwarded to the attention of Scott H. Lackey at the address above or call (915) 571-3976.

Sincerely,

Pioneer Natural Resources USA, INC.

Scott H. Lackey
Sr. Operation Engineer

Enclosures

P.O. BOX 3178 · MIDLAND, TEXAS 79702-3178 · 303 W. WALL, SUITE 101 · MIDLAND, TEXAS 79701 · MAIN: (915) 683-4768 · FAX: (915) 571-5063

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Texaco Exploration & Producing
P. O. Box 3109
Midland, TX 79702

4a. Article Number
P 963 560 117

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery JAN 16 1998

5. Signature (Addressee)

6. Signature (Agent)
Sherry Thompson

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:

- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Shackelford Oil Company
203 W. Wall
Midland, TX 79701

4a. Article Number
P 963 560 116

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
1-20-98

5. Signature (Addressee)

8. Addressee's Address (Only if requested and fee is paid)

6. Signature (Agent)
M P Shackelford

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

Is your RETURN ADDRESS completed on the reverse side?

SENDER:
- Complete items 1 and/or 2 for additional services.
- Complete items 3, and 4a & b.
- Print your name and address on the reverse of this form so that we can return this card to you.
- Attach this form to the front of the mailpiece, or on the back if space does not permit.
- Write "Return Receipt Requested" on the mailpiece below the article number.
- The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

Consult postmaster for fee.

3. Article Addressed to:

Bureau of Land Management
2909 West Second St.
Roswell, NM 88201

4a. Article Number
P 963 560 118

4b. Service Type
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail ☒ Return Receipt for Merchandise

7. Date of Delivery
1-16-98

5. Signature (Addressee)

6. Signature (Agent)

8. Addressee's Address (Only if requested and fee is paid)

PS Form 3811, December 1991 ☆U.S. GPO: 1993—352-714 **DOMESTIC RETURN RECEIPT**

Thank you for using Return Receipt Service.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

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

of 1

weeks.

Beginning with the issue dated

January 18 1998

and ending with the issue dated

January 18 1998

Kathi Bearden

Publisher

Sworn and subscribed to before me this 16th day of

January 1998

Jodi Henson

Notary Public.

My Commission expires
October 18, 2000
(Seal)

LEGAL NOTICE
January 18, 1998
NOTICE OF APPLICATION FOR
FLUID INJECTION WELL PERMIT

Pioneer Natural Resources USA, Inc., P.O Box 3178, Midland, TX is applying to the New Mexico Oil Conservation Division for a permit to inject into a formation which is productive of oil and gas. The applicant proposes to inject saltwater into the Delaware Formation, at an approximate depth, rate, and pressure of 6450', 900 BWIPD, and 1280 PSI, respectively. The proposed injector will be called the Lusk West Delaware Unit #915Y, which will be located in Unit O, 450' FSL & 2050' FEL, Section 29, T19S, R32E, Lea County, NM. Any questions concerning this application should be forwarded to the attention of Scott H. Lackey at the address above or call (915) 571-3976. Interested parties must file objections or requests for hearing with the Oil Conservation Division, P.O. Box 2088, Santa Fe, NM 87501 within 15 days from this publication. Published in the Hobbs News Sun January 18, 1998.
#15668

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

a0107472000 01516466

Parker & Parsley
P.O. Box 3178
a/c# 057974
MIDLAND, TX 79701

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
P.O. Box 1980
Hobbs, NM 88241

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: NMLC063586
6. If Indian, Allottee or Tribe Name: NA
7. If Unit or CA, Agreement Designation: Lusk West (Delaware) Un
8. Well Name and No.: 915Y
9. API Well No.: 30-025-34269
10. Field and Pool, or Exploratory Area: Lusk Delaware, West
11. County or Parish, State: Lea County, NM

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other Injector
2. Name of Operator: Pioneer Natural Resources USA, Inc.
3. Address and Telephone No.: P. O. Box 3178, Midland, TX 79702 915/571-3937
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 450' FSL & 2050' FEL, UL O, Sec. 29, T19S, R32E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Drilling Details	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

See Attached Well Chronology Report.

acs

14. I hereby certify that the foregoing is true and correct

Signed Jeanie Dodd Title Engineering Tech Date 3/24/98

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side

PERC

WELL CHRONOLOGY REPORT

WELL NAME : LUSK WEST (DELAWARE) UNIT #915Y WELL ID # : 924998999

OPERATOR : PIONEER NATURAL RESOURCES DISTRICT :

FIELD : LUSK WEST (DELAWARE) LOCATION : 450' FSL & 2050' FEL, SEC 29, T19S, R32E

COUNTY & STATE : LEA NM CONTRACTOR :

NWI WI% : AFE# : API# : PLAN DEPTH : 6,630 SPUD DATE : 1/15/98

DHC : CWC : AFE TOTAL : FORMATION : DELAWARE

REPORT DATE : 1/16/98 MD : 557 TVD : 0 DSS : 1 DOL : 0 MW : 8.4 VISC : 28

DAILY DETAILS : 1ST REPORT
****

DIRECTIONS: GO WEST OUT OF HOBBS, NM ON HWY 62-180 FOR 37 MILES TO HWY 243. TURN RT ON 243 FOR 4.7 MILES. TURN RT ON LUSK FIELD ROAD. GO 4.1 MILES, TURN RIGHT1/2 MILE TO RIG.

MIRU LAKOTA RIG #4. SPUD @ 3:45 PM ON 1/15/98. DRLG 40' TO 215'. SURVEY 3/4 DEG @ 215'. DRLG 215 TO 557'. ART: DRLG W/FULL RETURNS.

REPORT DATE : 1/17/98 MD : 855 TVD : 0 DSS : 2 DOL : 1 MW : 8.4 VISC : 29

DAILY DETAILS : DRLG 557' TO 642'. SURVEY 3/4 DEG @ 615'. DRLG 642' TO 855'. SURVEY 1 1/2 DEG @ 855'. CIRC & PUMPED SWEEP. TOH. RU CSG CREW. RUN 13 3/8" CSG. SET @ 855'. CIRC HOLE. RU BJ & CEMENTED. WOC 4 HRS. CIRC 120 SXS TO SURFACE. ART: NU BOP.

CSG & CMT DETAIL:

1-13 3/8" TEXAS PATTERN SHOE J55 STC	.75
1-13 3/8" SHOE JT. 54.5# J55 STC	28.45
13 3/8" INSERT BALVE	
19-13 3/8" 54.50# J55 STC CSG	853.70
TOTAL CSG	883.65
CUT OFF	46.65
CSG LEFT IN HOLE	837.00
KB	17.00
CSG LANDED KB	854.00

RAN 6 CENTERLIZERS: ON JTS. #19, 16, 12, 8, 5, 2 WELDED BTM THREE JTS.
CEMENT: W/475 SX 35-65 POZ CL"C" + 6% GEL + 5% SALT + .25#/SX CELLOFLAKES WT 2.7 PPG, YIELD 1.94 CU FT/SX, WTR 10.48 GAL/SX. TAIL W/200 SX CL"C" NEAT + 2% CACL2 + .25#/SX CELLO FLAKES, WT 14.84 PPG, YIELD 1.32 CU FT/SX, WTR 6.32 GAL/SX. FLOAT HELD.

REPORT DATE : 1/18/98 MD : 1,300 TVD : 0 DSS : 3 DOL : 2 MW : 9.8 VISC : 28

DAILY DETAILS : NU BOP, TESTED BOP & CSG TO 1000 PSI. TIH. DRLG CMT, TAG UP @ 812'. DRLG NEW FORMATION FROM 855' TO 962'. SURVEY 1 1/4 DEG @ 962'. DRLG 962' TO 1300'. ART: DRLG W/FULL RETURNS.

REPORT DATE : 1/19/98 MD : 2,405 TVD : 0 DSS : 4 DOL : 3 MW : 9.8 VISC : 28

DAILY DETAILS : DRLG 1300' TO 1443'. SURVEY 1 1/2 DEG @ 1403'. DRLG 1443' TO 1909'. SURVEY 3/4 DEG @ 1878'. DRLG 1909' TO 2380'. SURVEY 3 DEG @ 2340'. DRLG 2380' TO 2405'. ART: DRLG W/FULL RETURNS.

PERC

WELL CHRONOLOGY REPORT

REPORT DATE : 1/20/98 MD : 2,672 TVD : 0 DSS : 5 DOL : 4 MW : 9.9 VISC : 28

DAILY DETAILS : DRLG 2405' TO 2443'. SURVEY 2 DEG @ 2405'. SR. DRLG 2443' TO 2615'. TRIP FOR HOLE IN DP 13 STDS. DRLG 2615' TO 2622'. ART: DRLG W/FULL RETURNS.

REPORT DATE : 1/21/98 MD : 3,166 TVD : 0 DSS : 6 DOL : 5 MW : 9.9 VISC : 28

DAILY DETAILS : DRLG 2672' TO 2725'. SR. DRLG 2725' TO 2750'. RD (PUMP) DRLG 2750' TO 2944'. SURVEY 1 DEG @ 2903'. DRLG 2944' TO 3166'. ART: DRLG W/95% TO 100% RETURNS.

*LOST 20% RETURNS @ 2885'. MIX PIT OF LCM PUMPED 25 BBLS SWEEPS AT 2916' AND 2944' - 2980' - 3012'.

REPORT DATE : 1/22/98 MD : 3,881 TVD : 0 DSS : 7 DOL : 6 MW : 9.9 VISC : 28

DAILY DETAILS : DRLG FROM 3166' TO 3196' (LOST RETURNS @ 3196'). DRY DRLG 3176' TO 3553'. SR. DRY DRLG 3353' TO 3374'. RUN SURVEY 1 DEG @ 3334', 1 DEG @ 3836'. DRY DRLG 3374' TO 3881'. ART: DRY DRLG @ 28 TO 30 FT/HR.

REPORT DATE : 1/23/98 MD : 4,200 TVD : 0 DSS : 8 DOL : 7 MW : 9.9 VISC : 28

DAILY DETAILS : DRY DRLG FROM 3881' TD 4200' CIRC SPOT 40 BBLS, 60 VIS MUD, MADE SHORT TRIP, CIRC HOLE 1/2 HRS. PUMP 60 BBLS PILL ON BTM. TOH & LD 7-8" DC'S. RU & RUN CSG. ART: RUNNING 8 5/8" CSG @ 3200' +

REPORT DATE : 1/24/98 MD : 4,200 TVD : 0 DSS : 9 DOL : 8 MW : VISC :

DAILY DETAILS : RUNNING 8 5/8" CSG. 1/2 HR CIRC. RU BJ & CEMENTED 1ST STAGE. WOC 4 HOURS. CEMENTED 2ND STAGE. WOC 4 HRS. ND BOP & CUT OFF 8 5/8" CSG & WELDED ON 8 5/8" WELLHEAD. NU BOP & TESTING CSG. DETAIL BELOW:

1 - 8 5/8" GUIDE SHOE	1.50
1 - 8 5/8" 32# J-55 ST&C CSG SHOE JT	41.50
1 - 8 5/8" FLOAT COLLAR	1.20
35 - 8 5/8" 32# J-55 ST&C CSG	1592.60
1 - 8 5/8" DV TOOL	2.55
7 - 8 5/8" 32# J-55 ST&C CSG	304.64
52 - 8 5/8" 24# J-55 ST&C CSG	2263.38
TOTAL CSG	4207.37
CUT OFF	24.37
CSG LEFT IN HOLE	4183.00
KB	17.00
CSG LANDED KB	4200.00

CENTRALIZERS ON JTS #35 & #37 THREADLOCKED AND WELDED SHOE AND BOTTOM THREE & DV TOOL. CEMENT 1ST STAGE: W/685 SX 50/50 POZ CLASS "C" + 10% GEL + 5% SALT, WT 11.92 PPG, YIELD 2.35 CU FT/SK WATER 13.41 GALS/SX. TAIL W/200 SX CLASS "C" NEAT +1% CACL2, WT 14.81 PPG, YIELD 1.33 CU FT/SK. PLUG DOWN 11:06 AM 1/23/98. CEMENT 2ND STAGE W/825 SX 50/50 POZ CLASS "C" + 10% GEL + 5% SALT, WT 11.92 PPG, YIELD 2.35 CU FT/SKS, WTR 13.41 GALS/SK. TAIL W/150 SX CLASS "C" NEAT + 2% CACL2, WT 14.81 PPG, YIELD 1.33 CU FT/SK, WTR 6.32 GALS/SK. CLOSED DV TOOL. PLUG DOWN AT 3:48PM 1/23/98.

PERC

WELL CHRONOLOGY REPORT

REPORT DATE : 1/25/98 MD : 4,759 TVD : 0 DSS : 10 DOL : 9 MW : 8.4 VISC : 28

DAILY DETAILS : NU BOP. TESTED BOP & CSG. PICKED UP 7-6" DC. TIH. DRLG CMT & DV TOOL. TIH. DRLG CMT. DRLG NEW FORMATION 4200' TO 4281'. RUN SURVEY AT 4241'=1 1/2DEG. DRLG FROM 4281' TO 4719'. RUN SURVEY AT 4679'=3/4DEG. DRLG 4719' TO 4759'. REPORT TIME: DRILLING AT 4759' W/FULL RETURNS.

REPORT DATE : 1/26/98 MD : 5,557 TVD : 0 DSS : 11 DOL : 10 MW : 8.3 VISC : 28

DAILY DETAILS : PRESENT OPT: 5557' - DRILLING W/FULL RETURNS.
DRILLED 798' IN 23 1/4 HOURS. SURVEY AT 5177'=1DEG.

REPORT DATE : 1/27/98 MD : 6,062 TVD : 0 DSS : 12 DOL : 11 MW : 8.5 VISC : 34

DAILY DETAILS : DRILL 5557' TO 6062' (505'). SURVEY AT 5673'=1DEG. MAKE TRIP FOR HOLE IN DP. FOUND HOLE @ 41 STANDS + SINGLE. RIH & CONTINUE DRILLING. REPORT TIME: DRILLING AHEAD WITH FULL RETURNS.

REPORT DATE : 1/28/98 MD : 6,368 TVD : 0 DSS : 13 DOL : 12 MW : 8.6 VISC : 34

DAILY DETAILS : DRILL 6062' - 6118'. SURVEY 1 DEG @ 6076'. DRILL 6188' - 6233'. TRIP FOR HOLES IN DP. LD JTS #4, 20, 89 & 104. DRILL 6233' - 6368'. ART: DRLG @ 6368' W/FULL RETURNS.

REPORT DATE : 1/29/98 MD : 6,630 TVD : 0 DSS : 14 DOL : 13 MW : 8.5 VISC : 34

DAILY DETAILS : DRILL 6368' - 6429'. SR. DRILL 6429' - 6551'. REPAIR RIG. DRILL 6551' - 6630'. CIRC. SHORT TRIP. CIRC. LD DP & DC'S. TD @ 6630' @ 11:15 PM ON 1/28/98. ART: LD DC'S.

REPORT DATE : 1/30/98 MD : 6,630 TVD : 0 DSS : 15 DOL : 14 MW : 8.5 VISC : 34

DAILY DETAILS : RD ALLENS LD MACHINE. RU HALLIBURTON LOGGING UNIT. RAN GR SPECTRAL DENSITY, DUAL SPACED NEUTRON 4163 - 6614. RD HALLIBURTON. RU ALLENS CASING CREW. RAN 147 JTS. 5 1/2" CSG. RU BJ SERVICES. CEMENTED. DISPLACED W/10 BBLS FW FOLLOWED BY 147 BBL 2% KCL WATER. FULL RETURNS THRU OUT JOB. CEMENT DID NOT CIRC. PLUG DOWN @ 8:30 PM ON 1/29/97. FLOAT HELD. NP BOP. SET SLIPS, CUT OFF 5 1/2", WELD ON WELL HEAD. RU WL & RAN TEMP SURVEY. TOP OF CMT @ 170' FROM SURFACE. RELEASE RIG @ 3:30 AM ON 1/30/98.
CSG & CMT DETAIL:

1-5 1/2" FLOAT SHOE	1.50
1-5 1/2" CSG SHOE JTS. 15.50 J55 LTC	45.42
1-5 1/2" FLOAT COLLAR LTC	2.00
146-5 1/2" CASING 15.50 J55 LTC	6596.79

RAN 10 CENTERLIZERS: 1ST ON BTM JT, THEN 1 JT ABOVE FLOAT COLLAR, THEN ON JTS #141, 137, 133, 129, 125, 121, 117 & 113. THREAD LOCK SHOE, SHOE JTS & FLOAT COLLAR.
CEMENT W/1000 SKS 50-50 POZ CL"C" + 2% GEL + 5% FL-62, YIELD 1.25 CU FT/SX, WTR 13.41 GAL/SX. DISPLACE CMT W/10 BBLS FRESH WATER, FOLLOWED BY 148 BBLS 2% KCL.

PERC

WELL CHRONOLOGY REPORT

REPORT DATE : 2/16/98 MD : 6,630 TVD : 0 DSS : 16 DOL : 15 MW : 8.5 VISC : 34

DAILY DETAILS : MOVE IN & RIG UP WSU. SET PIPE RACKS & MOVE WORK STRING. ND WELLHEAD & NU BOP. PICKED UP & RAN 4 3/4" ROCK BIT, X-OVER, & 218 JTS 2 7/8" WORK STRING. TAGGED PBTD AT 6,582'. CIRCULATED HOLE WITH 170 BBL 2% KCL WATER. TOH WITH TBG.

REPORT DATE : 2/17/98 MD : 6,630 TVD : 0 DSS : 17 DOL : 16 MW : 8.5 VISC : 34

DAILY DETAILS : RIG UP HOLMES WIRELINE TRUCK. WIRELINE TD 6572'. RAN GR/CCL FROM 6572' TO 4200'. PULL OUT OF HOLE & PICK UP PERF GUN. RAN IN HOLE AND GOT ON DEPTH. PERF 6434' - 6456' WITH 2 SPF, 90DEG PHASING, USING 19 GRAM CHARGE VIA A HOLLOW STEEL CARRIER. HAD VERY SLIGHT BLOW AFTER PERFING. 46 HOLES. RIG DOWN WIRELINE TRUCK. TIH W/ARROW HD TREATING PKR, SN, & 2 7/8" WORK STRING. SPOT 100 GAL 15% NEFE HCL ACROSS PERFS. PULLED PKR TO 6300' & PUMPED 5 BBL WATER DOWN BACK SIDE. SET PKR & ACIDIZED PERFS WITH REMAINING 2900 GAL NEFE HCL, CONTAINING 3 GAL CORROSION INHIBITOR, 3 GAL NE AGENT, 6 GAL CALY STABALIZER, 3 GAL IRON REDUCER, & 3 GAL SUSPENDER. DROPPED 79 BALLS. HAD VERY SLIGHT BALL ACTION. FORMATION BROKE AT 2600 PSI. AVERAGE RATE 3.9 BPM, MAX RATE 4.1 BPM, AVG PRESSURE 1700 PSI, MAX PRESSURE 1890 PSI, ISIP 1380 PSI, 5 MIN 950 PSI, 10 MIN 480 PSI, 15 MIN 190 PSI. FLUSHED WITH 100 BBL 2% KCL WATER. RIG DOWN REEF.

REPORT DATE : 2/18/98 MD : 6,630 TVD : 0 DSS : 18 DOL : 17 MW : 8.5 VISC : 34

DAILY DETAILS : REMOVE WSU SLIPS AND INSTALL RENTAL SLIPS. RIG DOWN WSU. DITCH & INSTALL INJECTION FROM EDGE OF LOCATION TO WELL. INSTALL INJECTION EQUIPMENT ON WELLHEAD & START INJECTING WATER AT 5:00 PM.

REPORT DATE : 2/25/98 MD : 6,630 TVD : 0 DSS : 19 DOL : 18 MW : VISC :

DAILY DETAILS : MIRU WSU. Unset PKR. Pick up 5 jts 2 7/8" tbg & run pkrs thru perfs. Layed down 80 jts 2 7/8" Work strung. Shut down by hi winds.

REPORT DATE : 2/26/98 MD : 6,630 TVD : 0 DSS : 20 DOL : 19 MW : VISC :

DAILY DETAILS : Finish TOH laying down 2 7/2 work string and PKR. ND BOP & NU well head. Rig down and release WSU.

REPORT DATE : 3/3/98 MD : 6,630 TVD : 0 DSS : 21 DOL : 20 MW : VISC :

DAILY DETAILS : Rig up BJ. Had safety meeting. Tested lines to 4,000 psi. Held OK. Acidize and frac down 5 1/2" csg. Pumped 2,000 gal 15% NEFE HCL containing 2 gal CI-25, 4 gal

---

PERC

WELL CHRONOLOGY REPORT

REPORT DATE : 3/16/98 MD : 6,630 TVD : 0 DSS : 23 DOL : 22 MW : VISC :

DAILY DETAILS : Rig up WSU, ND well head, NU BOP, and ran 2 3/8" X 5 1/2" arrowset 1-X5, Inj pkr (nickel coated), 2 3/8" X 5 1/2" T2 on-off tool w/ 1.78 F, 55 profile nipple w/ SS body, 201 jts 2 3/8" 8rd upset IPC tubing. Bottom of pkr @ 6369'. Pumped 120 bbl fresh water mixed w/ 50 gallons Baker Petrolite pkr fluid, ND BOP & NU well head. Rig down WSU.

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons.
P.O. x 1980
Hobbs, NM 88241

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT - " for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: NMLC063586
6. If Indian, Allottee or Tribe Name: NA
7. If Unit or CA, Agreement Designation: Lusk West (Delaware) Unit
8. Well Name and No.: 915
9. API Well No.: 30-025-34269
10. Field and Pool, or exploratory Area: Lusk Delaware, West
11. County or Parish, State: Lea NM

1. Type of Well: [ ] Oil Well [ ] Gas Well [X] Other Injector
2. Name of Operator: Pioneer Natural Resources USA, Inc.
3. Address and Telephone No.: P. O. Box 3178 Midland, TX 79702
4. Location of Well (Footage, Sec., T., R., M., or Survey Description): Unit O, 2050' FEL & 450' FSL, Sec. 29, T19S, R32E

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
[X] Notice of Intent	[ ] Abandonment	[ ] Change of Plans
[ ] Subsequent Report	[ ] Recompletion	[ ] New Construction
[ ] Final Abandonment Notice	[ ] Plugging Back	[ ] Non-Routine Fracturing
	[ ] Casing Repair	[ ] Water Shut-Off
	[ ] Altering Casing	[ ] Conversion to Injection
	[X] Other Drill	[ ] Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

During Drilling Operations for the Lusk West (Delaware) Unit #915 (formally the Southern California Federal # lost hole due to casing part and subsequently the wellbore was abandoned.

Request authorization to move drilling location 50 feet to the west and redrill the proposed injector under t original APD.

The drilling pad will be extended 50 feet to the west and will still be within the boundaries of the original archelogical survey.

Verbal Approval Granted By Joe Lara 01-13-98

RECEIVED
1998 JAN 15 P 1:41
BUREAU OF LAND MANAGEMENT
HOBBS, NEW MEXICO

14. I hereby certify that the foregoing is true and correct
Signed Scott A. [illegible] Title Sr. Operation Engineer Date 1/12/98

(This space for Federal or State office use)
Approved by [illegible] DAVID R. GLASS Title PETROLEUM ENGINEER Date FEB 05 1998
Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

* See Instruction on Reverse Side

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, NM 88211-0719

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
P.O. BOX 2088, SANTA FE, N.M. 87504-2088

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised February 10, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

RECEIVED
1998 JAN -1 P 1:43
BUREAU OF LAND MGMT.
CARLSBAD RESOURCE AREA

☐ AMENDED REPORT

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
	41540	Lusk Delaware, West

Property Code	Property Name	Well Number
022063	Lusk West (Delaware) Unit	915-X

OGRID No.	Operator Name	Elevation
036324	PIONEER NATURAL RESOURCES USA, Inc.	3551

Surface Location

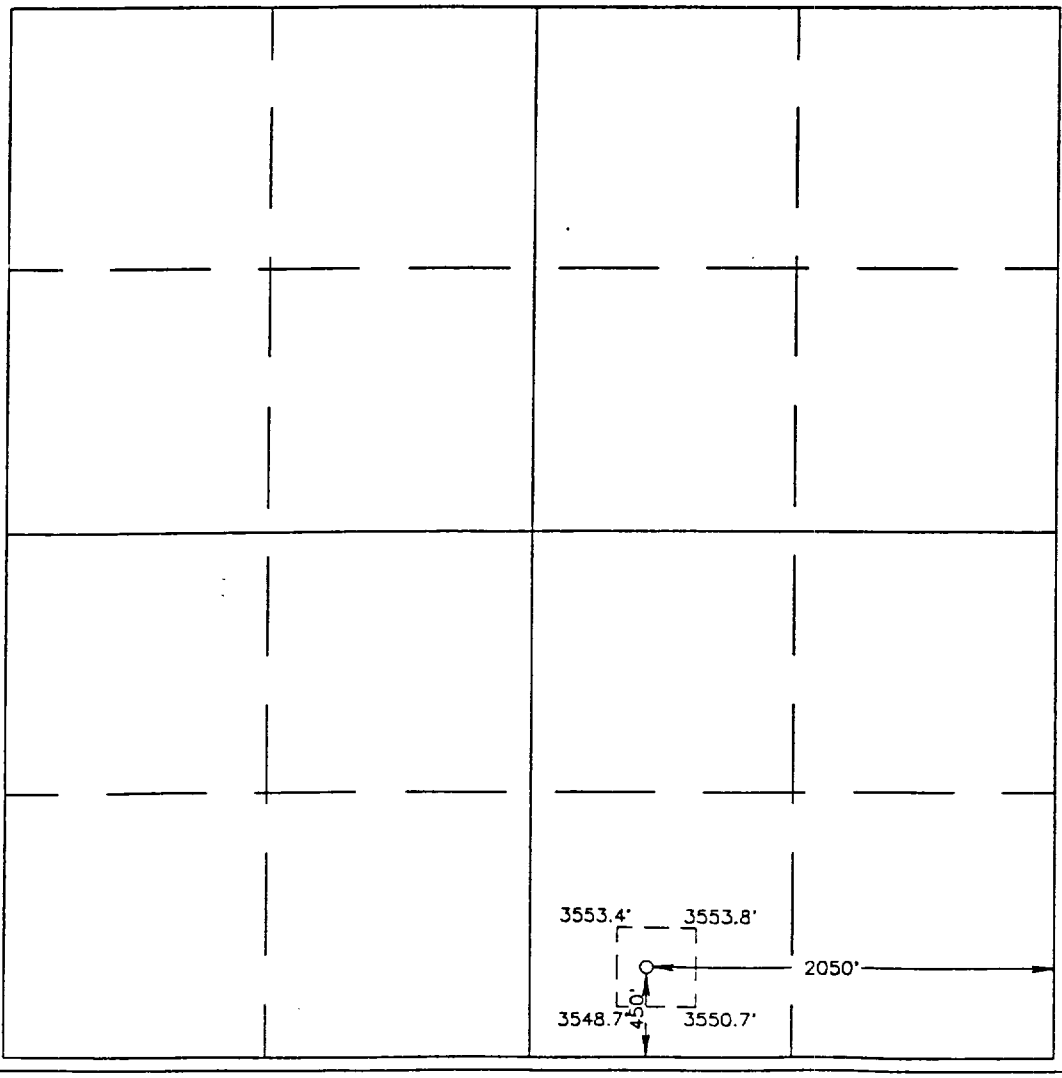
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	29	19 S	32 E		450	SOUTH	2050	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

Signature

Scott H. Lackey
Printed Name

Sr. Operations Engineer
Title

1/13/98
Date

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervison, and that the same is true and correct to the best of my belief.

JAN. 13, 1998
Date Surveyed

Signature & Seal of Professional Surveyor

RONALD J. EIDSON NEW MEXICO REGISTERED PROFESSIONAL SURVEYOR

01-12-98

98-11-0047

Certificate No.		
	JOHN W. WEST	676
	RONALD J. EIDSON	3239
	GARY L. JONES	12641

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
811 S. 1st Street, Artesia, NM 88210-2834
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

Energy, Minerals & Natural Resources Departm.

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Revised Oct.
Instruc
Submit to Appropriate D.
State Lea
Fee Lea.

Form
ober 18
ctions o
District
ase - 6
ase - 5

☐ AMENDED

REPO

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A

[1] Operator name and Address	[2] OGRID Nu
Pioneer Natural Resources USA, Inc. P.O. Box 3178, Midland, TX 79702 Permit Expires 1 Year From Approval Date Unless Drilling Underway	03632 [3] API Num 30-025-34

[4] Property Code	[5] Property Name	[6] Well
022063	Lusk West (Delaware) Unit	9

[7] Surface Location

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	C
O	29	19S	32E		450	South	2050	East	

[8] Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West line	C

[9] Proposed Pool 1	[10] Proposed Pool 2
Lusk Delaware, West	

[11] Work Type Code	[12] Well Type Code	[13] Cable/Rotary	[14] Lease Type Code	[15] Ground Level El
N	I	R	F	3551'
[16] Multiple	**[17] Proposed Depth**	**[18] Formation**	**[19] Contractor**	**[20] Spud Date**
No	6630'	Delaware	Lakota Drlg	1/14/98

[21] Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated
17 1/2"	13 3/8"	54.5#	850'	675 sx	Surfa
12 1/4"	8 5/8"	24# & 32#	4200'	1625 sx 2nd stg	Surfac
7 7/8"	5 1/2"	15.5#	6630'	1250 sx	Surfac

[22] Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new produ
Describe the blowout prevention program, if any. *Use additional sheets if necessary*

Move well location 50 feet to the west of junked & abandoned wellbore Lusk West (Delaware) Unit #915 that was originally permitted as the Southern California Federal #10, and drill to 6630' and complet well in the 6400' Delaware Sand Formation.

Original approved Drilling Permit attached. Drilling Program will be the same as was submitted for the original well. See BLM attachment

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

Signature: Scott H. Lackey

Printed name: Scott H. Lackey

Title: Sr. Operations Engineer

OIL CONSERVATION DIVISION

Approved by: ORIGINAL SIGNED BY CHRIS WILLIAMS
Title: DISTRICT I SUPERVISOR
Approval Date: FEB 19 1998
Expiration Date:

**Must complete work in Order #R-10863 before injection commences. This approval is Drilling ONLY! Chris Williams, District Supervisor

Form 3160-5
(November 1994)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
P.O. Box 1980
Hobbs, NM 88241

FORM APPROVED
Budget Bureau No. 1004-0135
Expires July 31, 1996

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on reverse side

5. Lease Serial No.
NMLC063586

6. If Indian, Allottee or Tribe Name
NA

7. If Unit or CA/Agreement, Name and/or No.
Lusk West (Delaware) Unit

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other Injector

8. Well Name and No.
915Y

2. Name of Operator
Pioneer Natural Resources USA, Inc.

9. API Well No.
30-025-34269

3a. Address
P. O. Box 3178, Midland, TX 79702

3b. Phone No. *(include area code)*
915/571-3937

10. Field and Pool, or Exploratory Area
Lusk Delaware, West

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
450' FSL & 2050' FEL, UL O, Sec. 29, T19S, R32E

11. County or Parish, State
Lea NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other Completion
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Coommpleted Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

See Attached Well Completion Report & Pressure Chart.

ACCEPTED FOR RECORD
APR 2 9 1998
acs

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Jeanie Dodd

Title
Operations Tech

Date 4/23/98

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by	Title	Date
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.	Office	

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on reverse)

Form 3160-5
(June 1990)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

N.M. Oil Cons. Division
P.O. Box 1980
Hobbs, NM 88241

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.: NMLC063586

6. If Indian, Allottee or Tribe Name: NA

7. If Unit or CA, Agreement Designation: Lusk West (Delaware) Un

1. Type of Well: ☐ Oil Well ☐ Gas Well ☒ Other Injector

8. Well Name and No.: 915Y

2. Name of Operator: Pioneer Natural Resources USA, Inc.

9. API Well No.: 30-025-34269

3. Address and Telephone No.: P. O. Box 3178, Midland, TX 79702 915/571-3937

10. Field and Pool, or Exploratory Area: Lusk Delaware, West

4. Location of Well (Footage, Sec., T., R., M., or Survey Description): 450' FSL & 2050' FEL, UL O, Sec. 29, T19S, R32E

11. County or Parish, State: Lea County, NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
☐ Notice of Intent	☐ Abandonment	☐ Change of Plans
☒ Subsequent Report	☐ Recompletion	☐ New Construction
☐ Final Abandonment Notice	☐ Plugging Back	☐ Non-Routine Fracturing
	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
	☒ Other Drilling Details	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

See Attached Well Chronology Report.

ACCEPTED FOR RECORD
MAR 31 1998
acs

14. I hereby certify that the foregoing is true and correct

Signed Jeanie Dodd Title Engineering Tech Date 3/24/98

(This space for Federal or State office use)

Approved by _____ Title _____ Date _____

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*See Instruction on Reverse Side