BEFORE THE NEW MEXICO OIL CONSERVATION DIVISION

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APPLICATION OF CIMAREX ENERGY CO. OF COLORADO TO REINSTATE INJECTION AUTHORITY, EDDY COUNTY, NEW MEXICO.

Case No. 14994

SUPPLEMENTAL APPLICATION

Cimarex Energy Co. of Colorado applies for an order reinstating the injection authority for a salt water disposal well, and in support thereof, states:

1. Division Administrative Order SWD-380, dated October 27, 1989, approved the administrative application of Mallon Oil Company ("Mallon") to inject produced water at depths of 4022-4208 feet subsurface into the Amoco Fed. Well No. 1 (API No. 30-015-24666), located in the NE¼SE¼ of Section 27, Township 26 South, Range 29 East, N.M.P.M.

2. Applicant is a successor operator of the Amoco Fed. Well No. 1.

3. Written notice of Mallon's administrative injection application was not given to the surface owner.

4. By Order No. R-13699, the Division rescinded Administrative Order SWD-380 due to the lack of notice.

5. Applicant requests that the injection authority granted by Administrative Order SWD-380 to dispose of produced water into the Amoco Fed. Well No. 1 in the Delaware formation at depths of 4022-4208 feet subsurface be reinstated, effective as of October 27, 1989.

3. A supplemented Form C-108 for the subject well is attached hereto as Exhibit 1.

4. The granting of this application will prevent waste and protect correlative rights.

WHEREFORE, applicant requests that, after notice and hearing, the Division enter its order approving this application.

Respectfully submitted,

James Bruce
Post Office Box 1056
Santa Fe, New Mexico 87504
(505) 982-2043

Attorney for Cimarex Energy Co. of Colorado

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

FORM C-108
Revised June 10, 2003

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: Secondary Recovery ___ Pressure Maintenance ___X___ Disposal ___ Storage
Application qualifies for administrative approval? ___ Yes ___ No

II. OPERATOR: Cimarex Energy of Colorado

ADDRESS: 600 N. Marienfeld Street, Suite 600, Midland, Texas 79701

CONTACT PARTY: Scott Gengler PHONE: 432-571-7800

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

IV. Is this an expansion of an existing project? ___ Yes ___X___ No
If yes, give the Division order number authorizing the project: ___

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

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

VII. Attach data on the proposed operation, including:

EXHIBIT 1

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 geologic data on the injection zone including appropriate lithologic detail, geologic 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 sources 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 sources 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 Gengler TITLE: Engineer

SIGNATURE: [signature] DATE: April 29, 2013

E-MAIL ADDRESS: sgengler @cimarex.com

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

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

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

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

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

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

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

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

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

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

(2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;

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

(4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

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

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

Side 1

INJECTION WELL DATA SHEET

OPERATOR: Cimarex Energy of Colorado

WELL NAME & NUMBER: Amoco Federal #1 SWD

WELL LOCATION: 1665' FSL, 330' FEL | I | 27 | T26S | R29E

FOOTAGE LOCATION | UNIT LETTER | SECTION | TOWNSHIP | RANGE

WELLBORE SCHEMATIC

See Attached

WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12 ¼" Casing Size: 8 5/8"

Cemented with: 280 sx. *or* _____ ft^3

Top of Cement: Surface Method Determined: _____

Intermediate Casing

Hole Size: _____ Casing Size: _____

Cemented with: _____ sx. *or* _____ ft^3

Top of Cement: _____ Method Determined: _____

Production Casing

Hole Size: 7 7/8" Casing Size: 4 ½"

Cemented with: 450 sx. *or* _____ ft^3

Top of Cement: 2720' Method Determined: CBL

Total Depth: 6150'

Injection Interval

4022' feet to 4208'

(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" 4.7#, J-55 Lining Material: PVC Lined

Type of Packer: Elder Model T

Packer Setting Depth: 3994'

Other Type of Tubing/Casing Seal (if applicable): _____

Additional Data

1. Is this a new well drilled for injection? _____Yes ___X___No

   If no, for what purpose was the well originally drilled? Producer from Williamson (Delaware) Sand

2. Name of the Injection Formation: Delaware

3. Name of Field or Pool (if applicable): Brushy Draw

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. 4300' sqz with 250 sx, 4984-5004' CIBP ; 5350-5358' CIBP

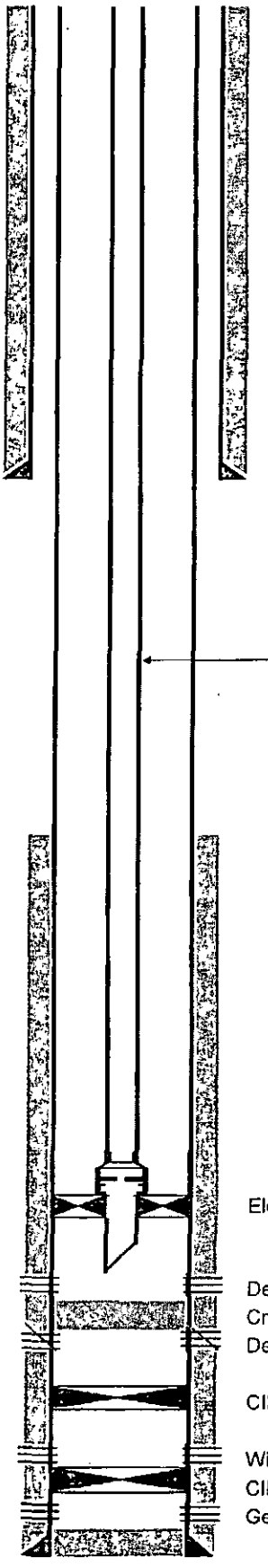
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Underlying #1 : "Williamson" (Delaware) Oil Sand @ 4915- 5022' (Amoco Fed #1)

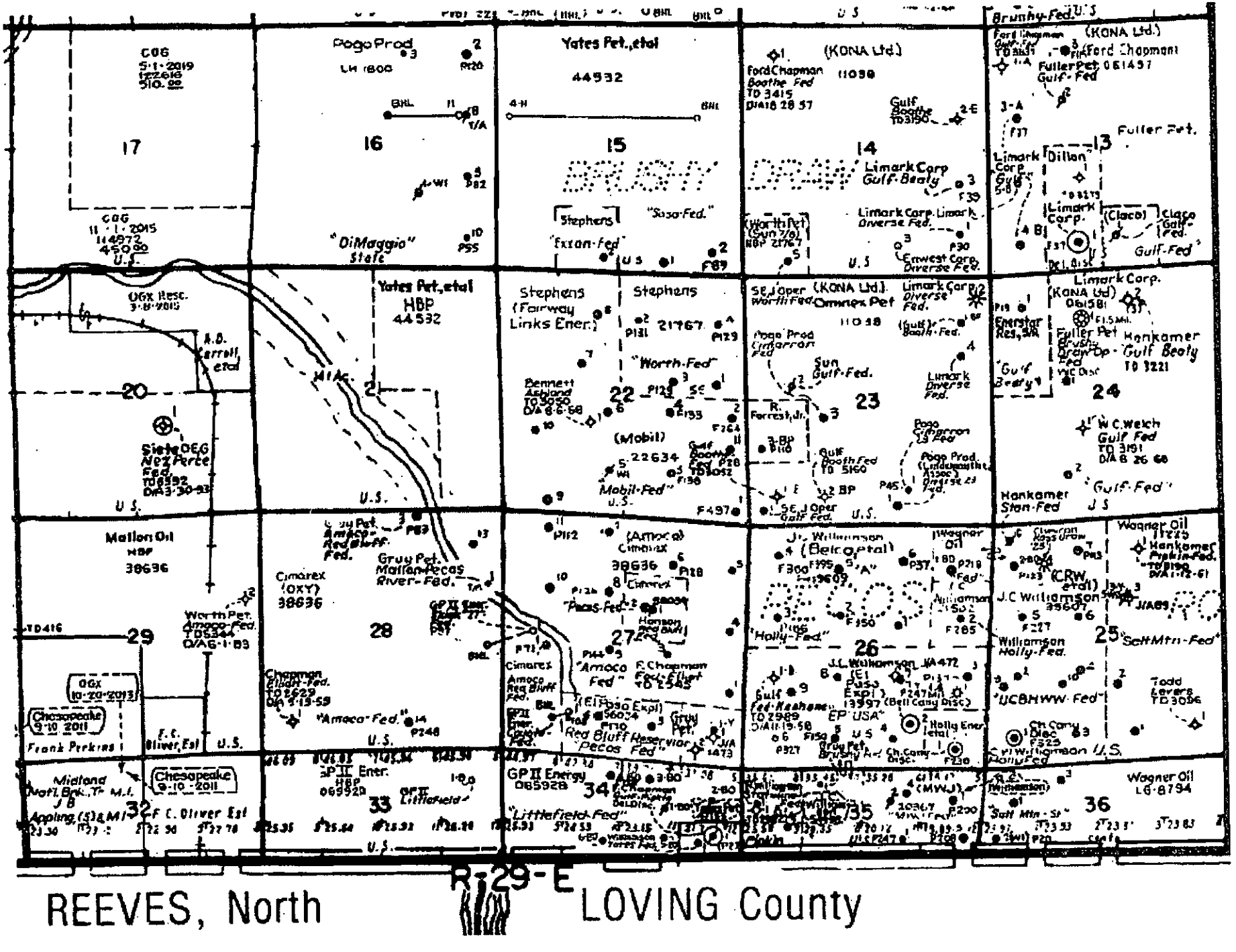
   Underlying #2 : "Getty Sand" (Delaware) Oil Sand @ 5265-5425'

   Underlying #3 : "Pecos Sand" (Delaware) Oil Sand @ 4820-4836'

   Overlying #1 : "Upper Bell Canyon" (Delaware) Oil Sand @ 2950-3030'

Cimarex Energy Co. of Colorado
Amoco Federal #1 SWD
1665 FSL & 330 FEL
Sec. 27, T-26-S, R-29-E, Eddy Co., NM
Ty Daws 07/11/2012
api 30-015-24466

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Pogo Prod.
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(KONA Ltd.)
Ford Chapman
Limark Corp.
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Fuller Pet.
Dillon
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Stephens
(Fairway Links Ener.)
Worth-Fed
Mobil-Fed
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Gulf Beaty
W.C.Welch
Gulf Fed
Mallon Oil
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Gruy Pet.
Mallon-Pecos River-Fed.
Chapman
Amoco-Fed.
(Amoco)
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Amoco Fed
Red Bluff Reservoir
Pecos Fed
J. Williamson
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Midland Nat'l Bk. Tr. M.I.
Appling (S) & MI
F. C. Oliver Est
GPII Energy
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"Littlefield Fed"
Wagner Oil
LG-8794
R-29-E
REEVES, North
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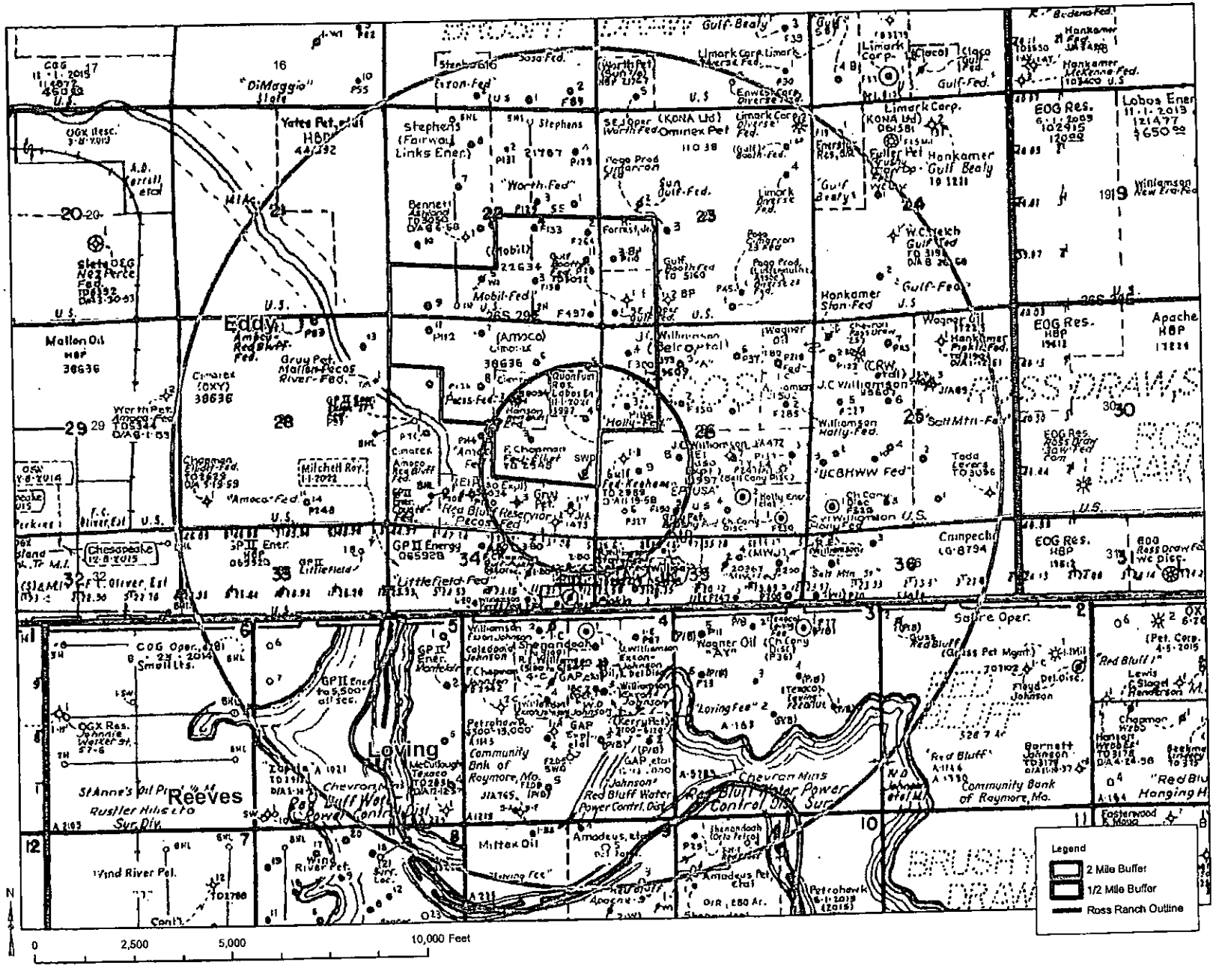
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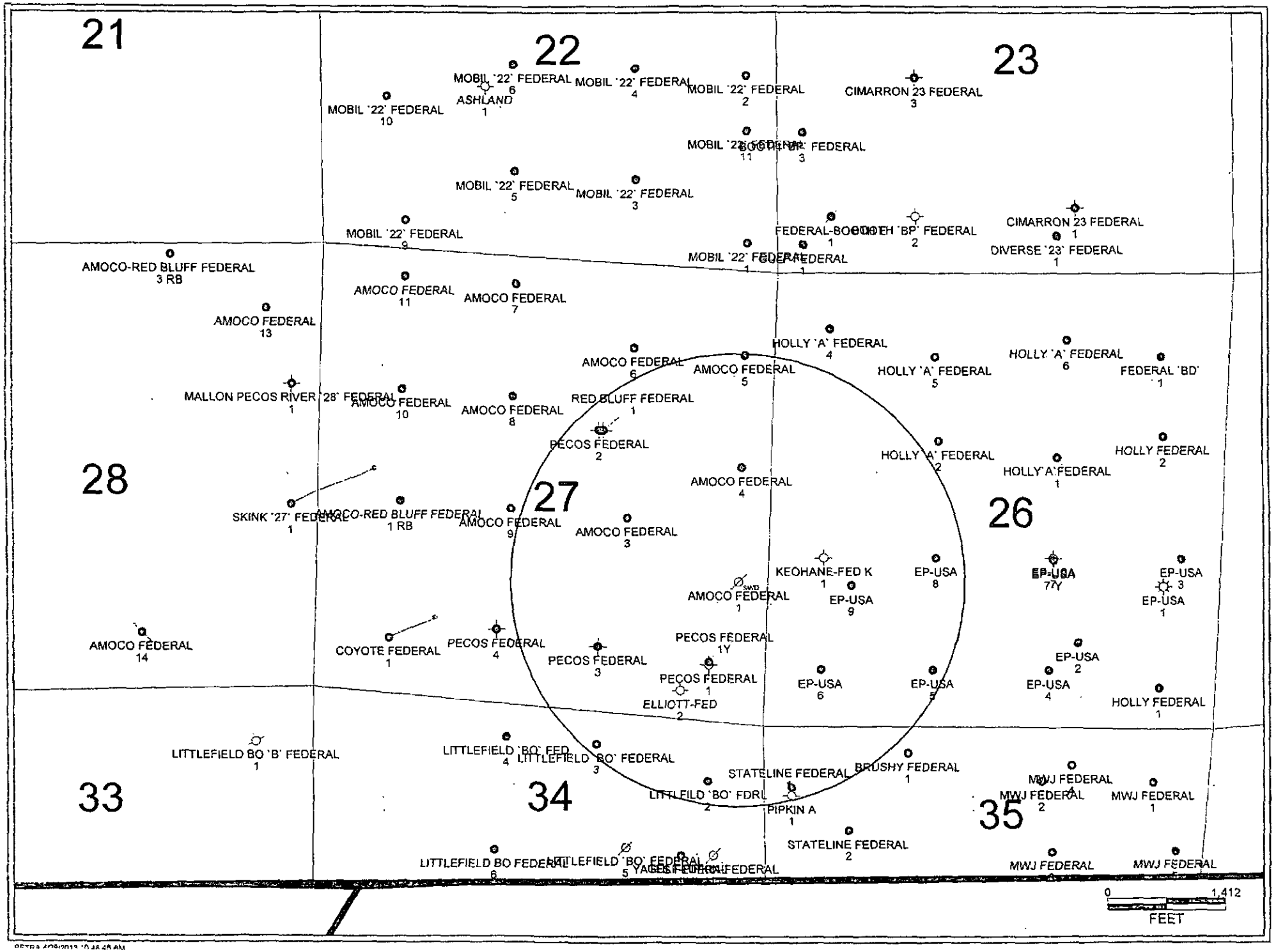
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MOBIL '22' FEDERAL 6
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MOBIL '22' FEDERAL 4
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CIMARRON 23 FEDERAL 3
MOBIL '22' FEDERAL 10
MOBIL '22' FEDERAL 11
MOBIL '22' FEDERAL 3
MOBIL '22' FEDERAL 5
MOBIL '22' FEDERAL 3
MOBIL '22' FEDERAL 9
FEDERAL-BOOTH 'BP' FEDERAL 1
FEDERAL 'BP' FEDERAL 2
CIMARRON 23 FEDERAL 1
DIVERSE '23' FEDERAL 1
MOBIL '22' FEDERAL 1
AMOCO-RED BLUFF FEDERAL 3 RB
AMOCO FEDERAL 11
AMOCO FEDERAL 7
AMOCO FEDERAL 13
HOLLY 'A' FEDERAL 4
AMOCO FEDERAL 6
AMOCO FEDERAL 5
HOLLY 'A' FEDERAL 5
HOLLY 'A' FEDERAL 6
FEDERAL 'BD' 1
MALLON PECOS RIVER '28' FEDERAL 1
AMOCO FEDERAL 10
AMOCO FEDERAL 8
RED BLUFF FEDERAL 1
PECOS FEDERAL 2
HOLLY 'A' FEDERAL 2
HOLLY 'A' FEDERAL 1
HOLLY FEDERAL 2
AMOCO FEDERAL 4
SKINK '27' FEDERAL 1
AMOCO-RED BLUFF FEDERAL 1 RB
AMOCO FEDERAL 9
AMOCO FEDERAL 3
KEOHANE-FED K 1
EP-USA 8
EP-USA 7Y
EP-USA 3
AMOCO FEDERAL 1
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COYOTE FEDERAL 1
PECOS FEDERAL 4
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PECOS FEDERAL 1Y
PECOS FEDERAL 1
ELLIOTT-FED 2
EP-USA 6
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EP-USA 2
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HOLLY FEDERAL 1
LITTLEFIELD BO 'B' FEDERAL 1
LITTLEFIELD 'BO' FED 4
LITTLEFIELD 'BO' FEDERAL 3
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III A.

1. Amoco Federal #1 : 1665' FSL, 330' FEL, Sec. 27, T26S, R29E, Eddy Co., NM.
2. Surface Casing: 8 5/8", 24# J-55 set in 12 ¼" hole at 450' with 280 sx, calculated cement top at surface.
3. Injection tubing: 2 3/8" 4.7#/ft. PVC lined J-55.
4. Injection packer: Elder Model T set at 3994'

III B.

1. Injection Formation: Delaware
   Field and Pool Name: Brushy Draw
2. Injection Interval: 4022-34', 4036-40', 4050-60', 4092-4102', 4106-24', 4134-54', 4165-4208' (KB) perforated (2spf).
3. Well was originally drilled 4-13-83 as a producing well.
4. Other perforations: "Williamson Sd." Member, Cherry Canyon Formation original perforations 4950-59 (1spf), 4969-5039' (1 shot/10') squeezed with two 100 sx squeeze jobs. Re-perfed 4984-90', 5000-04' (2spf). "Getty Sd" Member, Brushy Canyon Formation tested through perforations 5352-60'. Well presently has a CIBP set at 5300' topped with 20' cement. A permanent BP is set at 4800'. Squeeze perforations were shot at 4300' and squeezed with 250 sx cement. Top of cement is at 2720' calculated by CBL.

5. Next oil and gas producing zone uphole from proposed injection zone within field:
   Olds Sd. Mbr. Bell Canyon
   Formation 2959-3031' (KB)
   Next oil and gas producing zone downhole from proposed injection zone within field:
   Abbey Sd. Mbr. Cherry Canyon
   Formation (approx.) 4315-62' (KB)

VI. Wells Penetrating Proposed Disposal Zone within One Half Mile of Proposed:

1. Well Name and Number: #1Y Pecos Federal
   Operator: RKI Exploration & Production LLC
   Location: 860' FSL, 2810' FWL (SE SE), Sec 27, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud date: 5-2-1984
   Completion Date: 7-11-1984 ; 12/20/1990
   Total Depth: 6000'
   PBTD: 5909'
   Casing Data: Surface 9 5/8", set at 2854' with 1025 sx
   Production 4 ½", set at 5970' with 760 sx; calculated cement top 3287'
   Completion Data: Perforated 4945-5006', fraced 24,000 gal wtr + N2 34,000# sd; 12-20-1990 Perforated 2948-3018' (2spf – 112 holes) acidized with 3400 gal 2% KCl water & 168 BS. Fraced with 23,000 gal N2 foam and 89,000# sand.

2. Well Name and Number: #2 Pecos Federal
   Operator: Quantum Resources Management LLC
   Location: 1980' FNL, 2030' FEL, (SW NE) Sec. 27, T26S, R29E, Eddy Co., NM
   Type well: Oil / P&A 8-25-2008
   Spud Date: 10-22-1985
   Completion Date: 11-13-1985
   Total Depth: 5509'
   PBTD: 5470'
   Casing Data: Surface 13 3/8", set at 366' with 350 sx cement.
   Intermediate 8 5/8" set at 2860' with 1500 sx cement.
   Production 4 ½", set at 5509' with 3500 sx; calculated cement top 2692'
   Completion Data: Perforated 4901-90'. Acidized with 4000 gal 15% HCl, fraced with unreported vol gelled water + 78,500# sd.

   P&A 8-25-2008 See attached Sundry Notice

3. Well Name and Number: #3 Pecos Federal
   Operator: Quantum Resources Management LLC
   Location: 760' FSL, 1980' FEL, (SW SE) Sec. 27, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud Date: 11-05-1985
   Completion Date: 12-11-1985 ; 12-23-1990
   Total Depth: 5505'
   PBTD: 5457'
   Casing Data: Surface 13 3/8", set at 396' with 420 sx cement.
   Intermediate 8 5/8" set at 2845' with 775 sx cement.
   Production 4 ½", set at 5500' with 375 sx; temperature log cement top 3850' KB
   Completion Data: Perforated 4883-4979' with 46 shots, acidized with 3800 gal 15% NEFE acid (No frac record)
   12-23-1990 Add perforations 4804-4820' (2spf – 32 Holes) with 1000 gal treated 2% KCl water & 54 BS. Fraced with 11,000 gal & 20,500# sand.

   P&A 01-15-2009 See attached Sundry Notices

4. Well Name and Number: #2 BO, Littlefield Federal
   Operator: George H. Mitchell (GP II Energy Inc.)
   Location: 724' FNL, 660' FEL, Sec. 34, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud Date: 05-29-1984
   Completion Date: 08-06-1984
   Total Depth: 5900'
   Casing Data: Surface 9 5/8", set at 350' with 485 sx cement.
   Intermediate 7" set at 2880' with 200 sx cement.
   Production 4 ½", set at 5900' with 356 sx; calculated cement top 2512'

Completion Data: Perforated 4950', 4953', 4957', 4961', 4964', 4967', 4973', 4976', 4979', 4983', 4989', 4992', 4995', 4998', acidized with 1500 gal 7 1/2% MSR acid, frac with 24,000 gal foamed, gelled water + 34,000# sd.

5. Well Name and Number: #1 Stateline Federal
   Operator: Ralph E Williamson (originally New Tex Oil)
   Location: 740' FNL, 330' FWL, Sec. 35, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud Date: 06-04-1983
   Completion Date: 08-07-1983
   Total Depth: 6750'
   PBTD: 6708'
   Casing Data: Surface 13 3/8", set at 455' with 450 sx cement.
   Intermediate 8 5/8" set at 2901' with 650 sx cement.
   Production 5 ½", set at 6750' with 1800 sx; calculated cement top at surface
   Completion Data: Perforated 6442-6565' (22 holes) squeezed off with 150 sx. Perforated 5863-5892' (15 holes), acidized with 1500 gal HCl, fraced with 12,000 gal + 17,000# sd. Perforated 5308-30' (1 spf); acidized with 2000 gallons fraced with 15,000 gallons + 23,000# sd.; Perforated 5103-07', 5129-35' (2 spf). Acidized with 1500 gallons fraced with 12,000 gallons + 19,000# sd.; Perf 4935 -5005', acidized with 3000 gallons, fraced with 20,000 gallons + 25,000# sd.

6. Well Name and Number: #5 EP-USA
   Operator: J.C. Williamson
   Location: 660' FSL, 1980' FWL, (SE SW), Sec. 26, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud Date: 01-31-1985
   Completion Date: 02-26-1985
   Total Depth: 6250'
   PBTD: 6208'
   Casing Data: Surface 13 3/8", set at 452' with 500 sx cement.
   Intermediate 8 5/8" set at 2770' with 150 sx cement.
   Production 4 ½", set at 6250' with 1150 sx; calculated cement top 2195'
   Completion Data: Perforated 4985-5057' (28 holes) acidized with 3000 gal 7 ½% NEFE, frac with 55,700 gallons gelled water + 100,000# sd.

7. Well Name and Number: #6 EP-USA
   Operator: J.C. Williamson
   Location: 660' FSL, 660' FWL, (SW SW), Sec. 26, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud Date: 03-19-1985
   Completion Date: 04-23-1985
   Total Depth: 6200'
   PBTD: 6160'

Casing Data: Surface 12 3/4", set at 425' with 450 sx cement.
Intermediate 8 5/8" set at 2810' with 150 sx cement.
Production 4 ½", set at 6200' with 1150 sx; calculated cement top 2145'
Completion Data: Perforated 4958-5042'. Acidized with 3000 gal 7 ½% NEFE, fraced with 58,256 gallons + 99,000# sd.

8. Well Name and Number: #9 EP-USA
   Operator: J.C. Williamson
   Location: 1650' FSL, 990' FWL, (NW SW), Sec. 26, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud Date: 03-14-1985
   Completion Date: 04-16-1985
   Total Depth: 6220'
   PBTD: 6178'
   Casing Data: Surface 13 3/8", set at 425' with 450 sx cement.
   Intermediate 8 5/8" set at 2764' with 150 sx cement.
   Production 5 ½", set at 6220' with 1300 sx; calculated cement top 178'
   Completion Data: Perforated 4961-5024' (25 shots). Acidized with 3000 gal 7 ½% HCl, fraced with 56,000 gallons + 82,450# sd.

9. Well Name and Number: #8 EP-USA
   Operator: J.C. Williamson
   Location: 1980' FSL, 1980' FWL, Sec. 26, T26S, R29E, Eddy Co., NM
   Type well: Oil
   Spud Date: 02-28-1985
   Completion Date: 03-27-1985
   Total Depth: 6250'
   PBTD: 6208'
   Casing Data: Surface 13 3/8", set at 425' with 450 sx cement.
   Intermediate 8 5/8" set at 2775' with 150 sx cement.
   Production 5 ½", set at 6250' with 1000 sx; calculated cement top 1602'
   Completion Data: Perforated 4983-5065' Acidized with 3000 gallons, fraced with 57,496 gallons + 100,000# sd.

10. Well Name and Number: #3 Holly "A" Federal
    Operator: J.C. Williamson
    Location: 1980' FNL, 660' FWL, (SW NW), Sec. 26, T26S, R29E, Eddy Co., NM
    Type well: Oil
    Spud Date: 12-17-1984
    Completion Date: 01-17-1985
    Total Depth: 5452'
    PBTD: 5412'
    Casing Data: Surface 13 3/8", set at 472' with 500 sx cement.
    Intermediate 8 5/8" set at 5432' with 900 sx cement.

Production 5 ½", set at 6250' with 1000 sx; calculated cement top 2259'
Completion Data: Perforated 4935-5026' Acidized with 3000 gallons 7 ½% NEFE, fraced with 55,000 gallons gelled water + 89,000# sd.

11. Well Name and Number: Amoco-Federal #3
    Operator: Cimarex Energy of Colorado
    Location: 2310' FSL, 1681' FEL, (NW SE), Sec. 27, T26S, R29E, Eddy Co., NM
    Type well: Oil
    Spud Date: 08-16-1983
    Completion Date: 10-14-1983
    Total Depth: 5075'
    PBTD: 5035'
    Casing Data: Surface 8 5/8", set at 445' with 280 sx cement.
    Production 5 ½", set at 5070' with 400 sx; Cement top (CBL) 3219'
    Completion Data: Perforated 4909-4974' (1spf). Acidized with 1500 gallons, fraced with 30,000 gallons + 64,000# sd.

12. Well Name and Number: Amoco-Federal #4
    Operator: Cimarex Energy of Colorado
    Location: 2310' FNL, 330' FEL, (SE NE), Sec. 27, T26S, R29E, Eddy Co., NM
    Type well: Oil
    Spud Date: 11-28-1983
    Completion Date: 02-27-1984
    Total Depth: 5052'
    PBTD: 5037'
    Casing Data: Surface 8 5/8", set at 517' with 1275 sx cement.
    Production 5 ½", set at 5046' with 450 sx; Cement top (CBL) 3180'
    Completion Data: Perforated 4962-5017' (18 shots). Acidized with 2500 gallons HCl, fraced with 30,000 gallons + 50,000# sd.

13. Well Name and Number: #3 BO, Littlefield Federal
    Operator: George H. Mitchell (GP II Energy Inc.)
    Location: 400' FNL, 1980' FEL, Sec. 34, T26S, R29E, Eddy Co., NM
    Type well: Oil
    Spud Date: 12-15-1986
    Completion Date: 01-12-1987
    Total Depth: 5200'
    PBTD: 5127'
    Casing Data: Surface 9 5/8", set at 354' with 170 sx cement.
    Production 4 ½", set at 5200' with 615 sx; cement top surface
    Completion Data: Perforated 4817-4955' (20 holes) acidized with 2500 gal 15% NEFE acid.

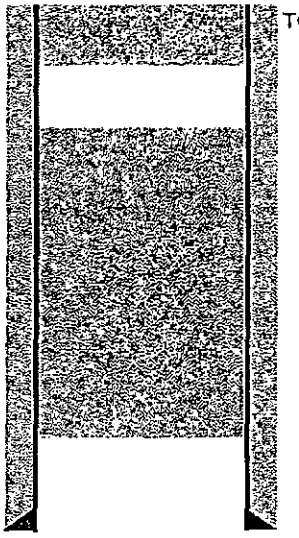
Completed: Nov 13, 1985
Original Operator: Ex Paso Expl

Pecos Federal #2
1980 FNL & 2030 FEL
Sec. 27, T-26-S, R-29-E, Eddy Co., NM

api 30-015-25376

Spot 25 sacks to surface

TOC Surf



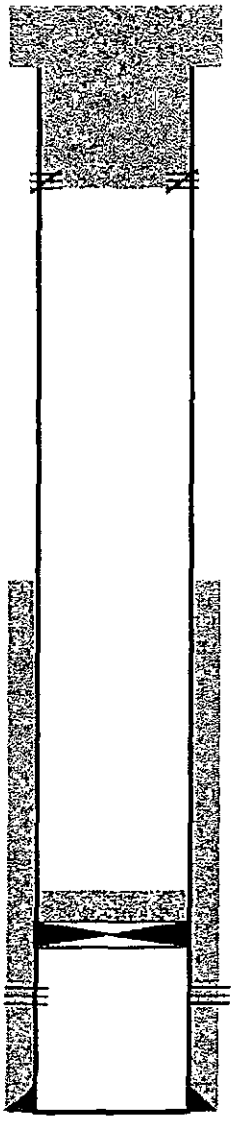
13 3/8" @ 366'; cmt 420 sx to surf

65 sacks @ 547'
Respot 73 sacks @ 547'
Tag @ 62'

8 5/8" @ 2860'; cmt 870 sx to surf

40 sack cement plug from 2569 - 2765'
90 sack cement plug from 2765 - 2966'

53 Sack cement plug spotted & Squeezed
from 2966 - 3213
Hole in casing @ 3213'



4-1/2" casing cut and pulled @2906'

Top of cement unknown

CIBP @ 4827' capped with 25 sx cement (8/19/2008)

Delaware perfs 4901-4990'

4 1/2" @ 5509'; cmt 500 sx

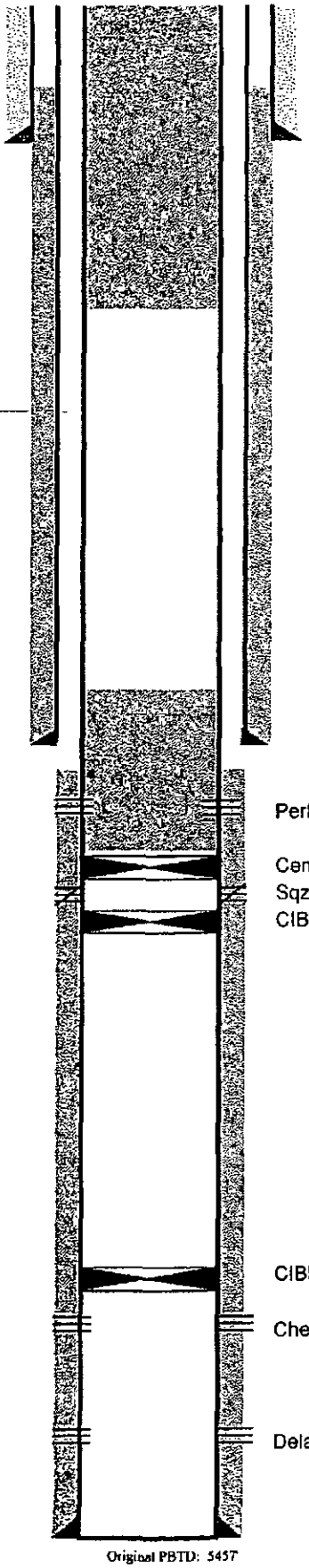
Original PBTD: 5470'
TD @ 5509'

Printed 4/26/2013

Completed: Dec 11, 1985
Original Operator: Ex Paso Expl

Pecos Federal #3
760 FSL & 1980 FEL
Sec. 27, T-26-S, R-29-E, Eddy Co., NM

api 30-015-25435



13 3/8" @ 396'; cmt 420 sx to surf

40 sack cement plug from 3'-557'

8 5/8" @ 2845'; cmt 775 sx to 365'
Top of cement 2900'
25 sack cement plug at 2656-2949'

Perfs 2885-2904'

Cement Retainer @ 2998'
Sqz hole in csg @ 3050'
CIBP @ 3105'

CIBP @ 4775'

Cherry Canyon perfs 4804-4820'

Delaware perfs 4883-4979'

4 1/2" @ 5500'; cmt 375 sx

Original PBTD: 5457
TD @ 5505'

Printed 4/26/2013

VII. Proposed Injection Operation:

1. Proposed Average Daily Injection Rate: 800 BWPD.
   Proposed Maximum Daily Injection Rate: 1600 BWPD.

2. Closed system.

3. Average Surface Injection Pressure: 640 psi.
   Proposed Maximum Surface Injection Pressure: 804 psi.

4. All injected fluid will be water produced from the Cherry Canyon Fm. (analysis attached). No water from the proposed injection zone is available for analysis.

5. The apparent water resistivity back calculated from the open hole logs indicates a sodium chloride equivalent concentration of 60,000 PPM (mg/L). There are no wells producing from proposed disposal zone within one mile.

VIII. Proposed Injection Zone:

Ross Sands, Cherry Canyon Fm., Delaware Mountain Group.
Fine to medium grained sandstone bounded by areally continuous shales above & below
Net sand thickness (porosity greater than 18% (20 FDC)) 74' (4024-4206', Gross).

Drinking Water Zone:
"Dewey Lake" 150-200'+ (KB), no other known fresh water zones in area.

IX. Proposed Stimulation:

The proposed injection zone was previously acidized with 2500 gals of acid. No additional stimulation is anticipated

X. Logs previously submitted.

XI. See attachments for water analyses from the two known fresh water wells in the area.
Well #1 SW SW Sec, 22, T26S, R29E, "Challenger Fresh", sampled 5-27-1988.

Well #2 NW SW Sec. 26, T26S, R29E, "Williamson Fresh", sampled 5-27-1988.

XII. Statement regarding hydrologic connection between fresh water aquifer and proposed disposal zone:

Detailed mapping of the Williamson Sd (Cherry Canyon Formation) which lies approximately 700' below the proposed disposal zone shows no indication of faulting or other potentials conduits for fluid flow between the proposed disposal zone and the aquifer in the Dewey Lake Formation. Further, no indications have been observed during drilling of the wells to make such geologic phenomena seem likely.

A copy of the application has been provided, by certified mail, to the following persons:

Surface owner
George Ross Ranch LLC.
3710 Rawlins Street, Ste. 850
Dallas, TX 75219

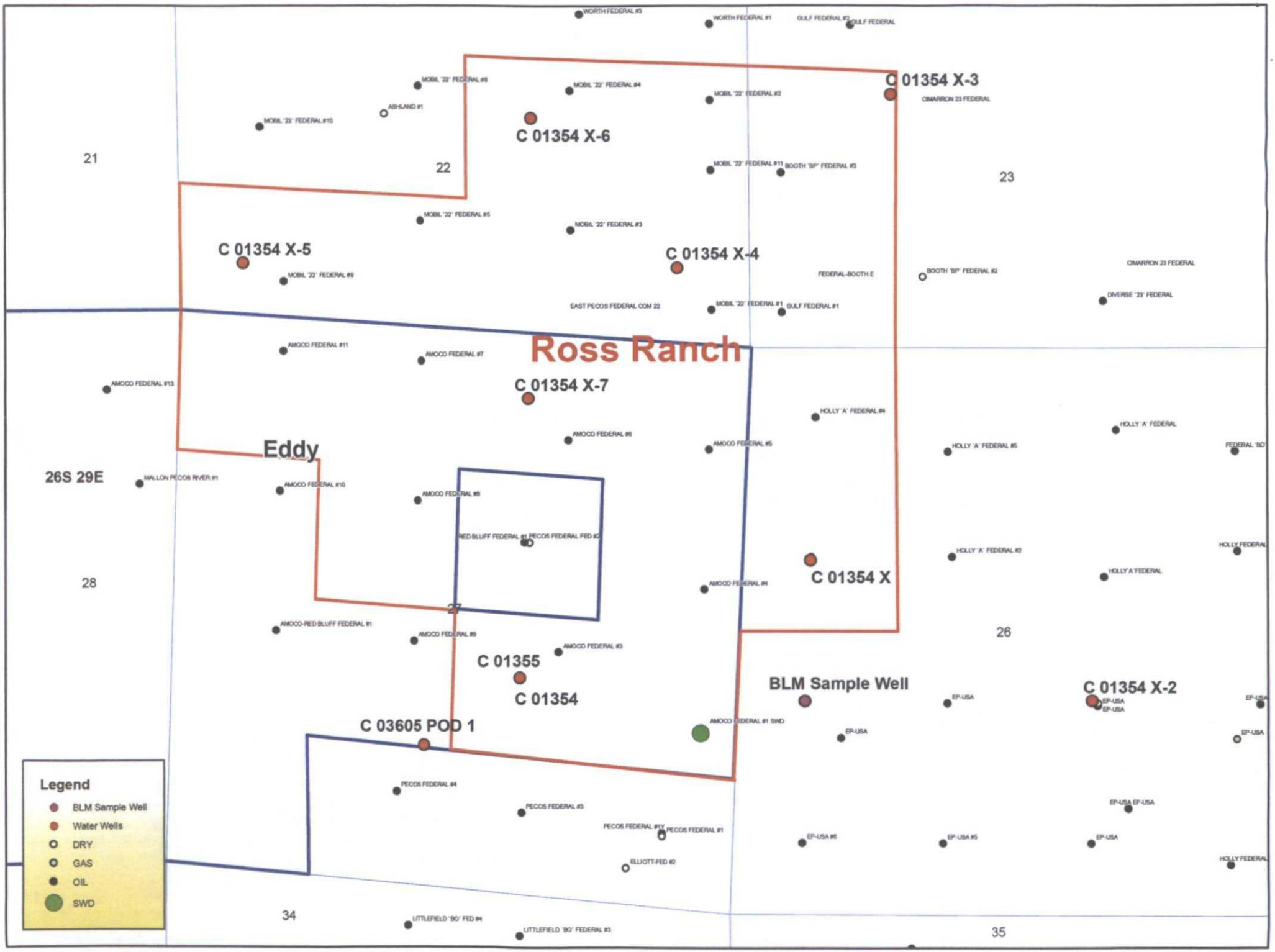
Operators within one-half mile of the injection well
Shenandoah Petroleum Corporation
24 Smith Road, Suite 601
Midland, TX 79705

RKI Exploration & Production, Inc.
3817 NW Expressway, Ste. 950
Oklahoma City, OK 73112

Ralph E. Williamson
P.O. Box 50498
Austin, TX 78763

GP II Energy, Inc.
113 Corporate Drive
Midland, TX 79705

Quantum Resources Management LLC.
1401 McKinney, Ste. 2400
Houston, TX 77010


Ross Ranch
Eddy
26S 29E
C 01354 X-3
C 01354 X-6
C 01354 X-5
C 01354 X-4
C 01354 X-7
C 01354 X
C 01355
C 01354
C 03605 POD 1
BLM Sample Well
C 01354 X-2
21
22
23
28
27
26
34
35
Legend
BLM Sample Well
Water Wells
DRY
GAS
OIL
SWD

North Permian Basin Region
P.O. Box 740
Sundown, TX 79372-0740
(806) 229-8121
Lab Team Leader - Sheila Hernandez
(432) 495-7240

Water Analysis Report by Baker Petrolite

Company:	CIMAREX ENERGY	Sales RDT:	33500.33
Region:	PERMIAN BASIN	Account Manager:	DUSTIN POLK (575) 513-8405
Area:	ARTESIA, NM	Sample #:	636799
Lease/Platform:	AMOCO FEDERAL	Analysis ID #:	131572
Entity (or well #):	8	Analysis Cost:	$90.00
Formation:	UNKNOWN		
Sample Point:	WELLHEAD		

Summary	
Sampling Date:	4/19/2013
Analysis Date:	4/24/2013
Analyst:	STACEY SMITH
TDS (mg/l or g/m3):	281286.5
Density (g/cm3, tonne/m3):	1.209
Anion/Cation Ratio:	1
Carbon Dioxide:	330 PPM
Oxygen:	0 PPM
Comments:	
RESISTIVITY .012 OHM-M @ 250°F	

Analysis of Sample 636799 @ 75 °F

Anions	mg/l	meq/l	Cations	mg/l	meq/l
Chloride:	**175303.0**	**4944.66**	**Sodium:**	**60359.4**	**2625.49**
Bicarbonate:	**36.6**	**0.6**	**Magnesium:**	**5012.0**	**412.31**
Carbonate:	**0.0**	**0.**	**Calcium:**	**36347.0**	**1813.72**
Sulfate:	**188.0**	**3.91**	**Strontium:**	**2285.0**	**52.16**
Phosphate:			**Barium:**	**5.5**	**0.08**
Borate:			**Iron:**	**35.0**	**1.26**
Silicate:			Potassium:	1687.0	43.14
			Aluminum:		
Hydrogen Sulfide:		0 PPM	Chromium:		
pH at time of sampling:		6	Copper:		
pH at time of analysis:			Lead:		
pH used in Calculation:		**6**	Manganese:	28.000	1.02
			Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite $CaCO_3$		Gypsum $CaSO_4 \cdot 2H_2O$		Anhydrite $CaSO_4$		Celestite $SrSO_4$		Barite $BaSO_4$		CO_2 Press
°F	psi	Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	psi
80	0	-0.25	0.00	-0.41	0.00	-0.35	0.00	-0.06	0.00	0.39	1.61	0.15
100	*0*	*-0.17*	*0.00*	*-0.48*	*0.00*	*-0.36*	*0.00*	*-0.08*	*0.00*	*0.20*	*1.08*	*0.17*
120	0	-0.09	0.00	-0.54	0.00	-0.34	0.00	-0.08	0.00	0.04	0.27	0.2
140	0	0.00	0.00	-0.59	0.00	-0.30	0.00	-0.07	0.00	-0.09	0.00	0.22

Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.

Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.

Note 3: The reported CO2 pressure is actually the calculated CO2 fugacity. It is usually nearly the same as the CO2 partial pressure.

HALLIBURTON DIVISION LABORATORY
HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

RECEIVED JUN 0 3 1988

LABORATORY WATER ANALYSIS

No.

To Mallon Oil

Date 5-25-88

Submitted by Date Rec.

Well No. Depth Formation

County Field Source

	Williamson Fresh	Amoco Production	Challanger Fresh	
Resistivity	.854 @ 70°	.059 @ 70°	1.75 @ 70°	
Specific Gravity	1.005	1.205.	1.000	
pH	7.2	6.7	7.1	
Calcium (Ca)	1350	32,500	450	*MPL
Magnesium (Mg)	90	5100	Nil	
Chlorides (Cl)	4000	189,000	1600	
Sulfates (SO_4)	1800	100	1700	
Bicarbonates (HCO_3)	180	24	193	
Soluble Iron (Fe)	Nil	25	nil	

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst:

HALLIBURTON COMPANY

cc:

By
CHEMIST

NOTICE

THIS REPORT IS LIMITED TO THE DESCRIBED SAMPLE TESTED. ANY USER OF THIS REPORT AGREES THAT HALLIBURTON SHALL NOT BE LIABLE FOR ANY LOSS OR DAMAGE WHETHER IT BE TO ACT OR OMISSION

Analytical Report 463775

for

Baker Hughes

Project Manager: Dustin Polk

Cimarex Amoco Lease Fresh Water

29-MAY-13

Collected By: Client

12600 West I-20 East Odessa, Texas 79765

Xenco-Houston (EPA Lab code: TX00122):
Texas (T104704215-10-6-TX), Arizona (AZ0765), Arkansas (08-039-0), Connecticut (PH-0102), Florida (E871002)
Illinois (002082), Indiana (C-TX-02), Iowa (392), Kansas (E-10380), Kentucky (45), Louisiana (03054)
New Hampshire (297408), New Jersey (TX007), New York (11763), Oklahoma (9218), Pennsylvania (68-03610)
Rhode Island (LAO00312), USDA (S-44102), DoD (L11-54)

Xenco-Atlanta (EPA Lab Code: GA00046):
Florida (E87429), North Carolina (483), South Carolina (98015), Kentucky (85), DoD (L10-135)
Louisiana (04176), USDA (P330-07-00105)

Xenco-Tampa Mobile (EPA Lab code: FL01212): Florida (E84900)
Xenco-Lakeland: Florida (E84098)
Xenco-Odessa (EPA Lab code: TX00158): Texas (T104704400-TX)
Xenco-Dallas (EPA Lab code: TX01468): Texas (T104704295-TX)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona(AZ0757)
Xenco-Phoenix Mobile (EPA Lab code: AZ00901): Arizona (AZM757)
Xenco Tucson (EPA Lab code:AZ000989): Arizona (AZ0758)

XENCO Laboratories

29-MAY-13

Project Manager: **Dustin Polk**
Baker Hughes
2101 Market St Building B

Midland, TX 79703

Reference: XENCO Report No(s): **463775**
Cimarex Amoco Lease Fresh Water
Project Address: Malaga,NM

Dustin Polk:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 463775. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 463775 will be filed for 60 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

Kelsey Brooks
Project Manager

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.
Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

Houston - Dallas - Odessa - San Antonio - Tampa - Lakeland - Atlanta - Phoenix - Oklahoma - Latin America

Sample Cross Reference 463775

Baker Hughes, Midland, TX

Cimarex Amoco Lease Fresh Water

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Post-Purge	W	05-23-13 11:40	- 68 ft	463775-002
Pre-Purge	W	05-23-13 11:30	- 68 ft	Not Analyzed

CASE NARRATIVE

Client Name: Baker Hughes

Project Name: Cimarex Amoco Lease Fresh Water

Project ID:
Work Order Number(s): *463775*

Report Date: *29-MAY-13*
Date Received: *05/24/2013*

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 463775

Baker Hughes, Midland, TX

Project Name: Cimarex Amoco Lease Fresh Water

Project Id:
Contact: Dustin Polk
Project Location: Malaga,NM

Date Received in Lab: Fri May-24-13 10:25 am
Report Date: 29-MAY-13
Project Manager: Kelsey Brooks

Analysis Requested								
	Lab Id:	463775-002						
	Field Id:	Post-Purge						
	Depth:	-68 ft						
	Matrix:	WATER						
	Sampled:	May-23-13 11:40						
Inorganic Anions by EPA 300/300.1	*Extracted:*	May-24-13 16:17						
	Analyzed:	May-24-13 16:17						
	Units/RL:	mg/L	RL					
Chloride		1780	50.0					
Sulfate		126	100					
TDS by SM2540C	*Extracted:*							
	Analyzed:	May-24-13 14:00						
	Units/RL:	mg/L	RL					
Total dissolved solids		4640	5.00					

Kelsey Brooks
Project Manager

Flagging Criteria

X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.

B A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.

D The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.

E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.

F RPD exceeded lab control limits.

J The target analyte was positively identified below the quantiation limit and above the detection limit.

U Analyte was not detected.

L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.

H The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.

K Sample analyzed outside of recommended hold time.

JN A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit **SDL** Sample Detection Limit **LOD** Limit of Detection

PQL Practical Quantitation Limit **MQL** Method Quantitation Limit **LOQ** Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

+ NELAC certification not offered for this compound.

* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation

Blank Spike Recovery

Project Name: Cimarex Amoco Lease Fresh Water

Work Order #: 463775 **Project ID:**

Lab Batch #: 914783 **Sample:** 914783-1-BKS **Matrix:** Water

Date Analyzed: 05/23/2013 **Date Prepared:** 05/23/2013 **Analyst:** AMB

Reporting Units: mg/L **Batch #:** 1

TDS by SM2540C Analytes	Blank Result [A]	BLANK /BLANK SPIKE RECOVERY STUDY Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Control Limits %R	Flags
Total dissolved solids	<5.00	1000	910	91	80-120	

Blank Spike Recovery [D] = 100*[C]/[B]
All results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

BS / BSD Recoveries

Project Name: Cimarex Amoco Lease Fresh Water

Work Order #: 463775, 463775 **Project ID:**

Analyst: AMB **Date Prepared:** 05/24/2013 **Date Analyzed:** 05/24/2013

Lab Batch ID: 914778 **Sample:** 638801-1-BKS **Batch #:** 1 **Matrix:** Water

Units: mg/L

Inorganic Anions by EPA 300/300.1	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY										
Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<1.00	25.0	24.9	100	25.0	24.9	100	0	90-110	20	
Sulfate	<2.00	25.0	26.6	106	25.0	26.3	105	1	90-110	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS Recoveries

Project Name: Cimarex Amoco Lease Fresh Water

Work Order #: 463775

Lab Batch #: 914778 **Project ID:**

Date Analyzed: 05/24/2013 **Date Prepared:** 05/24/2013 **Analyst:** AMB

QC- Sample ID: 463662-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	162	250	405	97	80-120	
Sulfate	111	250	372	104	80-120	

Lab Batch #: 914778

Date Analyzed: 05/25/2013 **Date Prepared:** 05/25/2013 **Analyst:** AMB

QC- Sample ID: 463727-001 S **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

Inorganic Anions by EPA 300	MATRIX / MATRIX SPIKE RECOVERY STUDY					
Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	%R [D]	Control Limits %R	Flag
Chloride	1350	500	1800	90	80-120	
Sulfate	<40.0	500	565	113	80-120	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference [E] = 200*(C-A)/(C+B)
All Results are based on MDL and Validated for QC Purposes

BRL - Below Reporting Limit

XENCO Laboratories

Sample Duplicate Recovery

Project Name: Cimarex Amoco Lease Fresh Water

Work Order #: 463775

Lab Batch #: 914783 **Project ID:**

Date Analyzed: 05/23/2013 14:00 **Date Prepared:** 05/23/2013 **Analyst:** AMB

QC- Sample ID: 463472-008 D **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

TDS by SM2540C	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	2110	2040	3	30	

Lab Batch #: 914783

Date Analyzed: 05/23/2013 14:00 **Date Prepared:** 05/23/2013 **Analyst:** AMB

QC- Sample ID: 463544-001 D **Batch #:** 1 **Matrix:** Water

Reporting Units: mg/L

TDS by SM2540C	SAMPLE / SAMPLE DUPLICATE RECOVERY				
Analyte	Parent Sample Result [A]	Sample Duplicate Result [B]	RPD	Control Limits %RPD	Flag
Total dissolved solids	328	322	2	30	

Spike Relative Difference RPD 200 * | (B-A)/(B+A) |
All Results are based on MDL and validated for QC purposes.
BRL - Below Reporting Limit

XENCO Laboratories

☐ 4143 Greenbriar Drive, Stafford, TX 77477 **281-240-4200** ☐ 9701 Harry Hines Blvd., Dallas, TX 75220 **214-902-0300**
☐ 5332 Blackberry Drive, San Antonio, TX 78238 **210-509-3334** ☐ 12600 West I-20 East, Odessa, TX 79765 **432-563-1800**

Serial #: 330802 Page of

Company-City Baker Hughes Upstream Chemicals	**Phone** 575.513.8405
Project Name-Location Amoco Lease Fresh Water / Malaga, NM	☐ Previously done at XENCO **Project ID**
Proj. State: TX, AL, FL, GA, LA, MS, NC, NJ, PA, SC, TN, UT Other	**Proj. Manager (PM)** Dustin Polk / John Pitsiorf
E-mail Results to ☐ PM and dustin.polk@bakerhughes.com	Jpitsworth@cimarex.com **Fax No:**
Invoice to ☐ Accounting ☐ Inc. Invoice with Final Report ☐ Invoice must have a P.O. Bill to: Baker	
Quote/Pricing:	**P.O. No:** ☐ Call for P.O.
Reg Program: UST DRY-CLEAN Land-Fill Waste-Disp NPDES DW TRRP	
QAPP Per-Contract CLP AGCEE NAVY DOE DOD USACE OTHER:	
Special DLs (GW DW QAPP MDLs RLs See Lab PM Included Call PM)	
Sampler Name	**Signature**

Lab Only: 463795

TAT: ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d Standard TAT is project specific.
It is typically 5-7 Working Days for level II and 10+ Working days for level III and IV data.

	Sample ID	Sampling Date	Time	Depth ft/in/m	Matrix	Composite	Grab	# Containers	Container Size	Container Type	Preservatives
1	Pre-Purge	5-23-13	11:30am	68'				2	250	P	C
2	Post-Purge	5-23-13	11:40am	18				2	↓	↓	↓
3											
4											
5											
6											
7											
8											
9											
10											

VOA: Full-List BTEX-MTBE EtOH Oxyg VOHs VOAs
VOA: PP TCL DW Appdx-1 Appdx-2 CALL Other:
PAHs SIM 8310 8270
TX-1005 DRO GRO MA EPH MA VPH
SVOCs: Full-List DW BN&AE TCLP PP Appdx-2 CALL
OC Pesticides PCBs Herbicides OP Pesticides
Metals: RCRA-8 RCRA-4 Pb 13PP 23TAL Appdx 1 Appdx2
SPLP - TCLP (Metals VOCs SVOCs Pest. Herb. PCBs)
EDB / DBCP

Chlorides
Sulfates
TDS
Hold for Pre Purge

TAT ASAP 5h 12h 24h 48h 3d 5d 7d 10d 21d
Addn: PAH above mg/L W, mg/Kg S Highest Hit
Hold Samples (Surcharges will apply and are pre-approved)

Remarks
Sample Clean-ups are pre-approved as needed

Addn: Date Rcv. by: From:

Relinquished by (Initials and Sign)	Date & Time	Relinquished to (Initials and Sign)	Date & Time
1) DP	5-23-13 19:40	2)	5-23-13 1442
3)		4)	
5)		6)	5-24-13 19:23

Total Containers per COC: 4 Cooler Temp: 8.1 °C 1.5

Otherwise agreed on writing. Reports are the Intellectual Property of XENCO until paid. Samples will be held 30 days after final report is e-mailed unless hereby requested. Rush Charges and Collection Fees are pre-approved if needed.

Preservatives: Various (V), HCl pH<2 (H), H2SO4 pH<2 (S), HNO3 pH<2 (N), Asbc Acid&NaOH (A), ZnAc&NaOH (Z), (Cool, <4C) (C), None (NA), See Label (L), Other (O) _____
Cont. Size: 4oz (4), 8oz (8), 32oz (32), 40ml VOA (40), 1L (1), 500ml (5), Tedlar Bag (B), Various (V), Other _____ **Cont. Type:** Glass Amb (A), Glass Clear (C), Plastic (P), Various (V)

Matrix: Air (A), Product (P), Solid (S), Water (W), Liquid (L)

Committed to Excellence in Service and Quality www.xenco.com

Final 1.000

XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Baker Hughes

Date/ Time Received: 05/24/2013 10:25:00 AM

Work Order #: 463775

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used :

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	1.5
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	Yes
#5 Custody Seals intact on sample bottles?	Yes
#6 *Custody Seals Signed and dated?	Yes
#7 *Chain of Custody present?	Yes
#8 Sample instructions complete on Chain of Custody?	Yes
#9 Any missing/extra samples?	No
#10 Chain of Custody signed when relinquished/ received?	Yes
#11 Chain of Custody agrees with sample label(s)?	Yes
#12 Container label(s) legible and intact?	Yes
#13 Sample matrix/ properties agree with Chain of Custody?	Yes
#14 Samples in proper container/ bottle?	Yes
#15 Samples properly preserved?	Yes
#16 Sample container(s) intact?	Yes
#17 Sufficient sample amount for indicated test(s)?	Yes
#18 All samples received within hold time?	Yes
#19 Subcontract of sample(s)?	Yes
#20 VOC samples have zero headspace (less than 1/4 inch bubble)?	Yes
#21 <2 for all samples preserved with HNO3,HCL, H2SO4?	Yes
#22 >10 for all samples preserved with NaAsO2+NaOH, ZnAc+NaOH?	Yes

*** Must be completed for after-hours delivery of samples prior to placing in the refrigerator**

Analyst:	PH Device/Lot#:

Checklist completed by: Kelsey Brooks Date: 05/24/2013

Checklist reviewed by: Kelsey Brooks Date: 05/24/2013