

ABOVE THIS LINE FOR DIVISION USE ONLY

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Pub. Lands*

**NEW MEXICO OIL CONSERVATION DIVISION**  
 - Engineering Bureau -  
 1220 South St. Francis Drive, Santa Fe, NM 87505



**ADMINISTRATIVE APPLICATION CHECKLIST**

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

**Application Acronyms:**

- [NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
- [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
- [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
- [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
- [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
- [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication  
 NSL  NSP  SD *- SWD-1567-A*  
*- Breitburn operating LP*  
*370080*
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement  
 DHC  CTB  PLC  PC  OLS  OLM *well*  
*- Breitburn operating LP 1930540*
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
 WFX  PMX  SWD  IPI  EOR  PPR *41246*  
*30-02-20692*
- [D] Other: Specify \_\_\_\_\_ *POU*
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or  Does Not Apply
- [A]  Working, Royalty or Overriding Royalty Interest Owners *- SWD; San Andre*  
*96121*
- [B]  Offset Operators, Leaseholders or Surface Owner *- SWD; Glorieta*  
*96108*
- [C]  Application is One Which Requires Published Legal Notice
- [D]  Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E]  For all of the above, Proof of Notification or Publication is Attached, and/or,  
 (proof of publication to follow 11/06/2015)
- [F]  Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

*Note: Statement must be completed by an individual with managerial and/or supervisory capacity.*

Shelly Doescher \_\_\_\_\_ Agent \_\_\_\_\_ 10-29-2015  
 Print or Type Name Signature Title Date

BEFORE THE OIL CONSERVATION DIVISION

Santa Fe, New Mexico

Exhibit No. 5

Submitted by: BREITBURN  
 Hearing Date: January 7, 2016

shelly\_doescher@yahoo.com  
 e-mail Address

**APPLICATION FOR AUTHORIZATION TO INJECT**

- I. PURPOSE: \_\_\_\_\_ Secondary Recovery \_\_\_\_\_ Pressure Maintenance \_\_\_\_\_  Disposal \_\_\_\_\_ Storage  
Application qualifies for administrative approval? \_\_\_\_\_ Yes \_\_\_\_\_ No
- II. OPERATOR: Breitburn Operating LP  
ADDRESS: 1401 McKinney Street Houston, Texas 77010  
CONTACT PARTY: Shelly Doescher, Agent 505-320-5682, Jeanie McMillan, Regulatory Manager 713-634-4696
- III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.  
Additional sheets may be attached if necessary.
- IV. Is this an expansion of an existing project? \_\_\_\_\_ Yes \_\_\_\_\_  No  
If yes, give the Division order number authorizing the project: \_\_\_\_\_
- V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.
- VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.
- VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
  2. Whether the system is open or closed;
  3. Proposed average and maximum injection pressure;
  4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
  5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
- \*VIII. Attach appropriate 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: Shelly Doescher TITLE: Agent

SIGNATURE: Shelly Doescher DATE: November 29, 2015

E-MAIL ADDRESS: shelly\_doescher@yahoo.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:

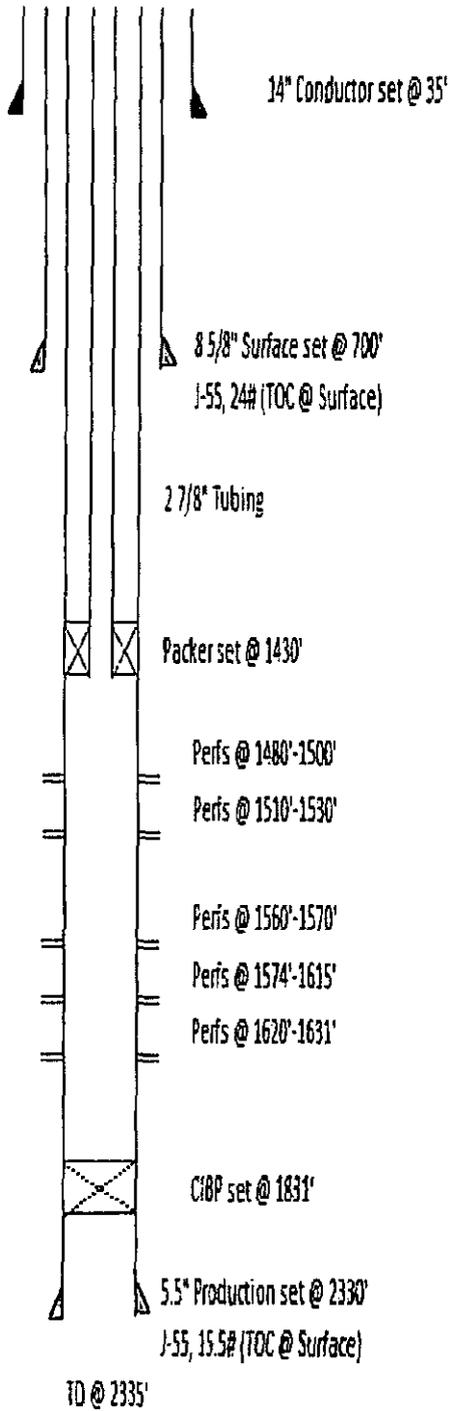
- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates 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.**

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**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.

## Proposed Wellbore Schematic SWD 12-4-G



Perforation Interval	SPF	Total Perforation Footage	Total Holes	
1480'-1500'	4	20	80	Dolomite
1510'-1530'	4	20	80	Dolomite
1560'-1570'	4	10	40	Sandstone
1574'-1615'	4	41	164	Sandstone
1620'-1631'	4	11	44	Sandstone
TOTAL		102	408	



**SWD 12-4-G  
Completion and Acid Procedure**

<b>ENGR:</b>	Nick Latulip	<b>Field Contact</b>	Buck Pollister
<b>OFFICE:</b>	(580) 545-4515	<b>OFFICE:</b>	
<b>CELL:</b>	(580) 520-1218	<b>CELL:</b>	(575) 741-0153

<b>Estimated Gross Cost</b>	\$20,000 (*rig and acid job only*)	<b>Estimated Net Cost</b>	
<b>AFE #</b>		<b>TASK:*</b>	Acidize Disposal Zone

<b>WELL TYPE:</b>	SWD	<b>Estimated BHP</b>	
<b>Comments:</b>		<b>Estimated BHT</b>	

<b>WELL INFORMATION:</b>	<i>Measured Depths</i>
<b>Spud :</b>	10/10/2015
<b>TD:</b>	2335'
<b>PBTD:</b>	1831'
<b>Reference:</b>	
<b>Ground Level:</b>	
<b>Packer Depth Approval</b>	1330'
<b>Top Injection Zone</b>	1480'-1530' (San Andres)
<b>Bottom Injection Zone</b>	1560'-1631' (Glorieta)
<b>Anticipated Maximum Wellhead Pressure</b>	3500 psi

<b>Local Area Needs (CPROX, Airport, etc)*</b>	No		
<b>Reason For Repair or Objective</b>	Stimulation of the San Andres/Glorieta to prepare for injection		
<b>Current Production</b>	New Disposal Well	<b>Estimated Production</b>	N/A
<b>Estimated Payout</b>		<b>Oil Price</b>	N/A

SIZE (IN)	WT (LB/FT)	GRADE	DEPTH (FT)	CMT (SX)	TOC (FT)	TECHNIQUE (TS, CBL, CIRCULATED, CALCULATED)
14			35'			Conductor
8 5/8	24#	J-55	700'	390	Surf	Circulated
5 1/2	15.5#	J-55	2330'	240	Surf	Circulated

<b>Type of completion</b>	Cased hole completion
<b>Perfs</b>	1480'-1500', 1510'-1530', 1560'-1570', 1574'-1615', 1620'-1631', CIBP @ 1831'

<b>PERTINENT DATA</b>	Workstring is 2 7/8" tubing.
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**SWD 12-4-G Procedure**

1. Hold safety meeting.
2. **MIRU Renegade Wireline Services**, run bond log
3. Perforate 1560'-1570', 1574'-1615', 1620'-1631'.
4. PU and RIH with 5 ½" CIBP and set at 1831' on wireline (state requested because of the amount of rat hole.) **RD Renegade Wireline Services**.
5. **MIRU Reliant** rig
6. PU 5 1/2" treating packer, TIH and set at 1500' with 2 7/8" workstring
7. **MIRU Allied Oil and Gas Services** and pressure test lines.
8. Pump acid job as follows:

	Stage Type	Volume (gal.)	Type of fluid
1	Pre-Flush	420	Produced Water
2	Acid	1/2 transport volume (~1500 gals)	15% HCl
3	Flush	4200	Produced Water

9. **RD Allied Oil and Gas Services**.
10. TOOH and LD 5 1/2" treating packer and 2 7/8" workstring.
11. **RU Renegade Wireline Services**, perforate 1480'-1510', 1510'-1530'. **RD Renegade Wireline Services**
12. PU 5 1/2" treating packer and 5 1/2" RBP, TIH and set RBP (bottom) @ 1550' with 2 7/8" workstring. Set treating packer @ 1430'
13. Pump acid job as follows:

	Stage Type	Volume (gal.)	Type of fluid
1	Pre-Flush	420	Produced Water
2	Acid	1/2 transport volume (~1500 gals)	15% HCl
3	Flush	4200	Produced Water

14. **RDMO Allied Oil and Gas Services**
15. TOOH and LD 5 1/2" treating packer, 5 1/2" RBP and 2 7/8" workstring
16. **RU Renegade Wireline Services**, and PU 5 ½" injection packer and wireline set at 1430'. **RDMO Renegade Wireline Services**.
17. PU and TIH with 2 7/8" fiberglass injection tubing and latch onto injection packer.
18. **RDMO Reliant** rig

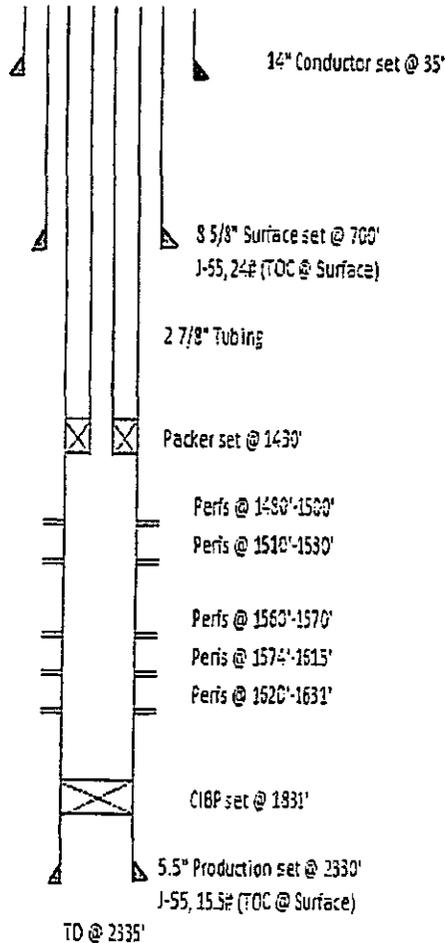
INJECTION WELL DATA SHEET

OPERATOR: Breitburn Operating LP

WELL NAME & NUMBER: Breitburn Operating LP 1930 SWD No. 12-4-G

WELL LOCATION: 2265' FNL and 1493' FEL      G      12      19N      30E  
 FOOTAGE LOCATION      UNIT LETTER      SECTION      TOWNSHIP      RANGE

WELBORE SCHEMATIC



WELL CONSTRUCTION DATA

Surface Casing

Hole Size: 12-1/4"      Casing Size: 8 5/8", 24#, J-55  
 Cemented with: 390 sx.      or \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: Surface      Method Determined: Circulate

Intermediate Casing N/A

Hole Size: \_\_\_\_\_ Casing Size: \_\_\_\_\_  
 Cemented with: \_\_\_\_\_ sx.      or \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: \_\_\_\_\_ Method Determined: \_\_\_\_\_

Production Casing

Hole Size: 7 7/8"      Casing Size: 5 1/2", 15.5#, J-55  
 Cemented with: 240 sx.      or \_\_\_\_\_ ft<sup>3</sup>  
 Top of Cement: Surface      Method Determined: CBL  
 Total Depth: 2335'

Injection Interval

1480 feet to 1631 feet (perforated)  
 (Perforated or Open Hole; indicate which)

**INJECTION WELL DATA SHEET**

Tubing Size: 2-7/8" Lining Material: IPC

Type of Packer: 7" ASI-XW w/T-2 on/off tool

Packer Setting Depth: 1430 feet.

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

Additional Data

1. Is this a new well drilled for injection?     X     Yes      No

If no, for what purpose was the well originally drilled? \_\_\_\_\_

\_\_\_\_\_

2. Name of the Injection Formation: San Andres. Glorieta.

3. Name of Field or Pool (if applicable): Bravo Dome

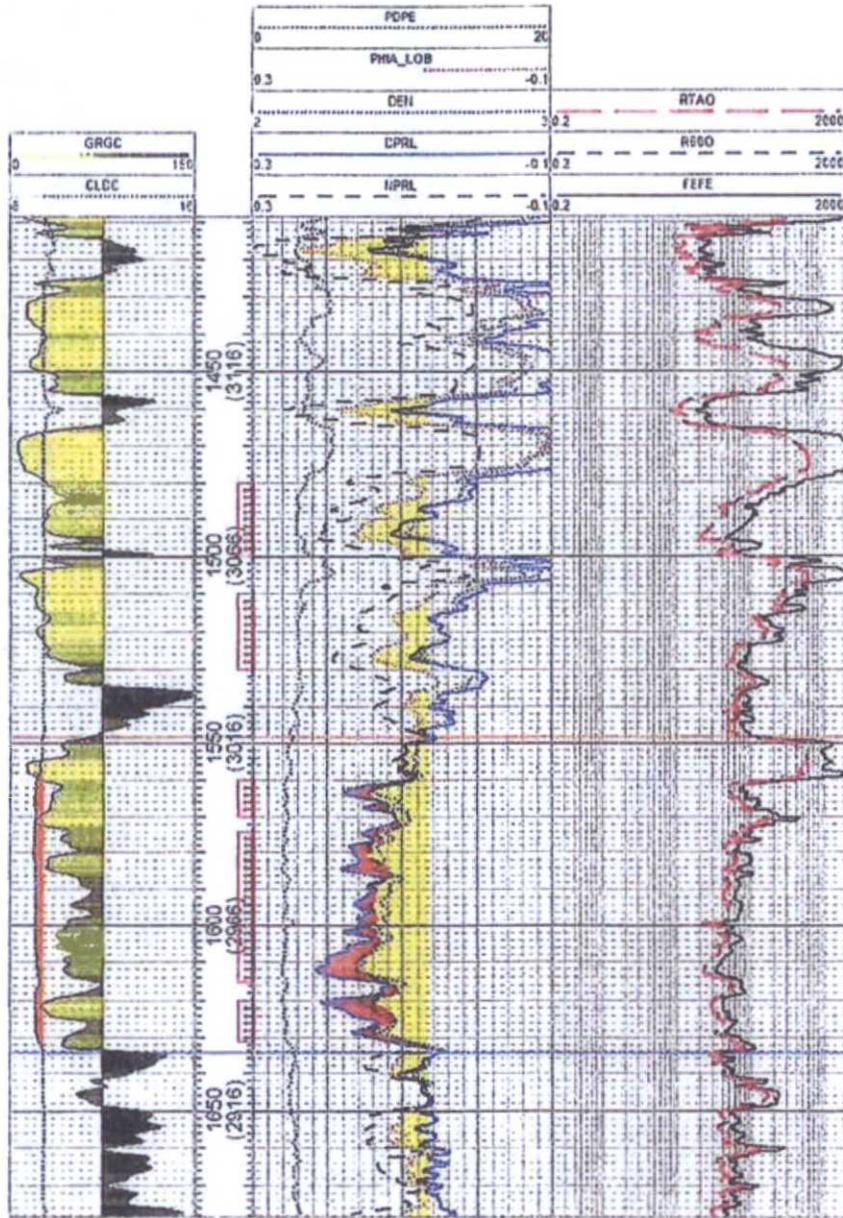
4. Has the well ever been perforated in any other zone(s)? No List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. \_\_\_\_\_

\_\_\_\_\_

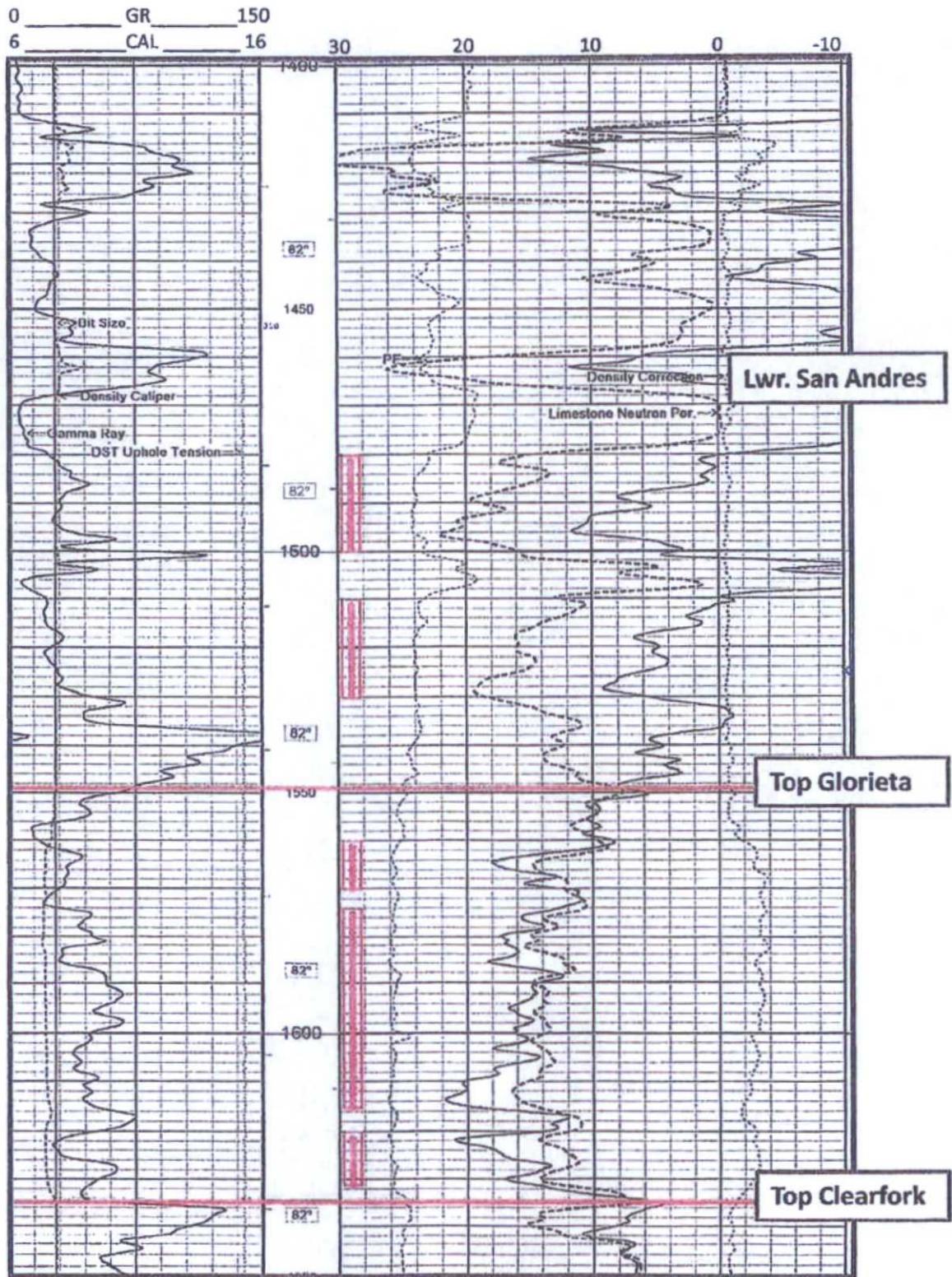
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:  
No oil or gas zones above the San Andres formation. The Glorieta formation top is below the San Andres formation at 1560 feet.

# Libby Ranch 1930 12-4-G

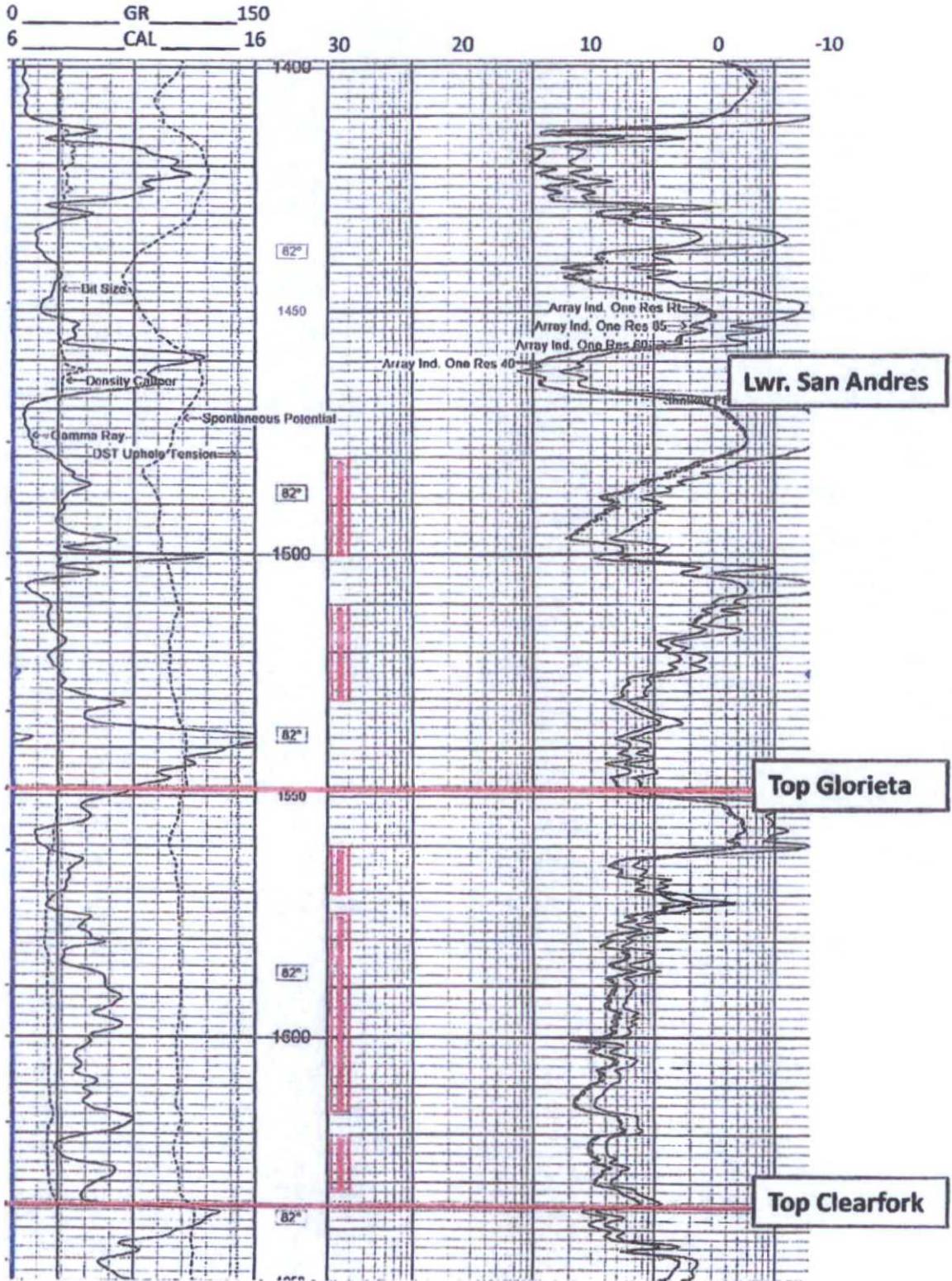
30212069200000



Libby Ranch 1930 SWD 12-4-G  
Density / Neutron Log



# Libby Ranch 1930 SWD 12-4-G Array Induction Log



Submit 1 Copy To Appropriate District Office  
 District I - (575) 393-6161  
 1625 N. French Dr., Hobbs, NM 88240  
 District II - (575) 748-1283  
 811 S. First St., Artesia, NM 88210  
 District III - (505) 334-6178  
 1000 Rio Brazos Rd., Aztec, NM 87410  
 District IV - (505) 476-3460  
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
 Energy, Minerals and Natural Resources

Form C-103  
 Revised July 18, 2013

OIL CONSERVATION DIVISION  
 1220 South St. Francis Dr.  
 Santa Fe, NM 87505

WELL API NO. 30-021-20692
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Breitburn Operating LP 1930 SWD
8. Well Number 12-4-G
9. OGRID Number 370080
10. Pool name or Wildcat SWD; San Andres, Glorietta

**SUNDRY NOTICES AND REPORTS ON WELLS**  
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well  Gas Well  Other CO2

2. Name of Operator  
Breitburn Operating LP

3. Address of Operator  
1401 McKinney Houston, Texas 77010

4. Well Location  
Unit Letter G: 2265 feet from the North line and 1493 feet from the East line  
Section 12 Township 19N Range 30E NMPM Harding County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)  
4556' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

<p><b>NOTICE OF INTENTION TO:</b></p> <p>PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/></p> <p>TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input checked="" type="checkbox"/></p> <p>PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPL <input type="checkbox"/></p> <p>DOWNHOLE COMMINGLE <input type="checkbox"/></p> <p>CLOSED-LOOP SYSTEM <input type="checkbox"/></p> <p>OTHER: <input type="checkbox"/></p>	<p><b>SUBSEQUENT REPORT OF:</b></p> <p>REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/></p> <p>COMMENCE DRILLING OPNS. <input checked="" type="checkbox"/> P AND A <input type="checkbox"/></p> <p>CASING/CEMENT JOB <input checked="" type="checkbox"/></p> <p>OTHER: <input type="checkbox"/></p>
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13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

10/09/2015: Skid rig 10' west of original hole; SWD 12-3-G API # 30-021-20682. Air drill 35' of 17.5" hole and set 13 3/8" casing.  
 10/10/2015: WOC. Cut off conductor. MIRU. Spud well at 11:30 am. Drill 12 1/4" surface hole 35' - 553'.  
 10/11/2015: Drill 553' - 712' TD. Run 8 5/8", 24#, J-55 casing to 700'. Cement surface casing as follows; Lead cement 190 sx, tail cement 200 sx. Started displace, pump 2 bbl, pressure up, cement locked up. (Total cement to surface 10 bbls.)  
 10/12/2015: WOC. N/U BOP Drill out cement 30' - 712'. Circ hole clean and test casing to 850 psi for 30 minutes. Test passed.  
 10/13/2015: TTH to 712'. Circ and mix mud in system. Wash and ream production hole 712' - 982'. Drill 7 7/8" production hole 982' - 1307'.  
 10/14/2015: Drill production hole 1307' - 2136'.  
 10/15/2015: Drill production hole 2136' - 2335' TD. Trip-out for logs. Log well. Run 5 1/2", 15.5#, J-55 casing.  
 10/16/2015: Finish running casing to 2330'. Cement production casing as follows; 20 bbl KCL 2% ahead, lead cement 115 sx 87 bbl, tail cement 125 sx 126 bbl. Displace w/55 bbl fresh water. 15 bbl cement return to surface. Final psi 550. Land plug w/1100 psi. Rig released @ 1:30 pm.

Spud Date:  Rig Release Date:

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

SIGNATURE  TITLE Agent DATE 10/19/2015

Type or print name Shelly Doescher E-mail address: shelly\_doescher@yahoo.com PHONE: 505-320-5682

For State Use Only

APPROVED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_ DATE: \_\_\_\_\_

Conditions of Approval (if any):

District I  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-4161 Fax: (575) 393-9720  
District II  
411 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720  
District III  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

<sup>1</sup> API Number 30-021-20692		<sup>2</sup> Pool Code		<sup>3</sup> Pool Name SWD; San Andres, Glorieta	
<sup>4</sup> Property Code		<sup>5</sup> Property Name Breithurn Operating LP 1930 SWD			<sup>6</sup> Well Number 12-4-G
<sup>7</sup> OGRID No. 370080		<sup>8</sup> Operator Name Breithurn Operating LP			<sup>9</sup> Elevation 4556'

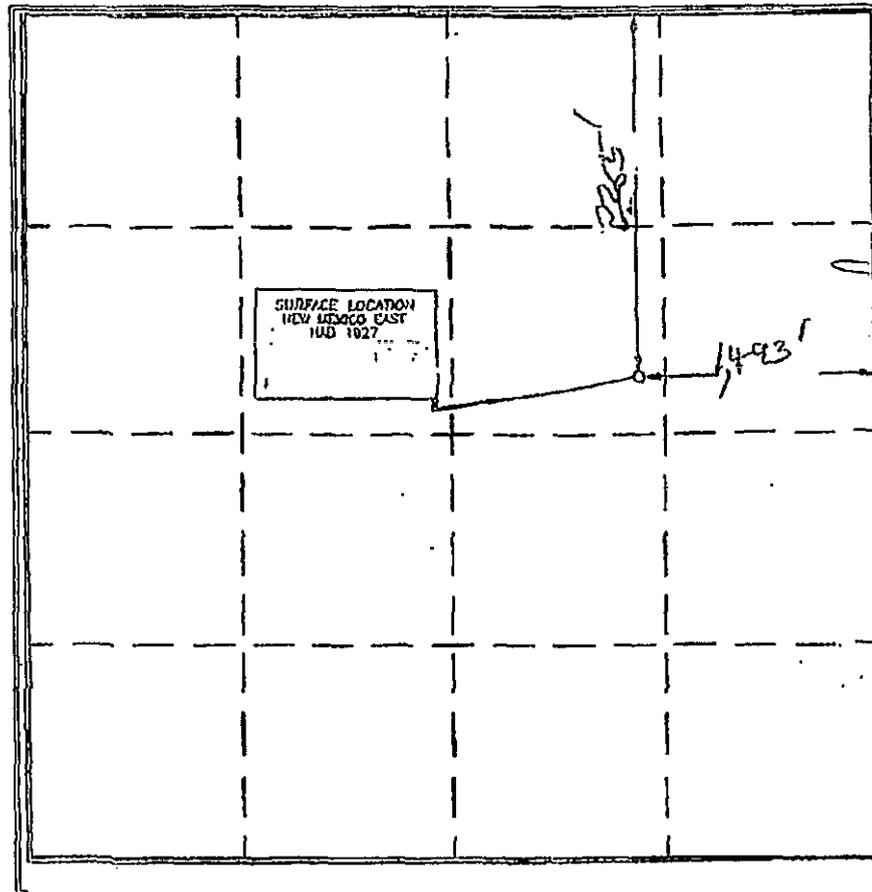
<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
G	12	19N	30E		2265'	North	1493	East	Harding

<sup>11</sup> Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
<sup>12</sup> Dedicated Acres <sup>13</sup> Joint or Infill <sup>14</sup> Consolidation Code <sup>15</sup> 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.



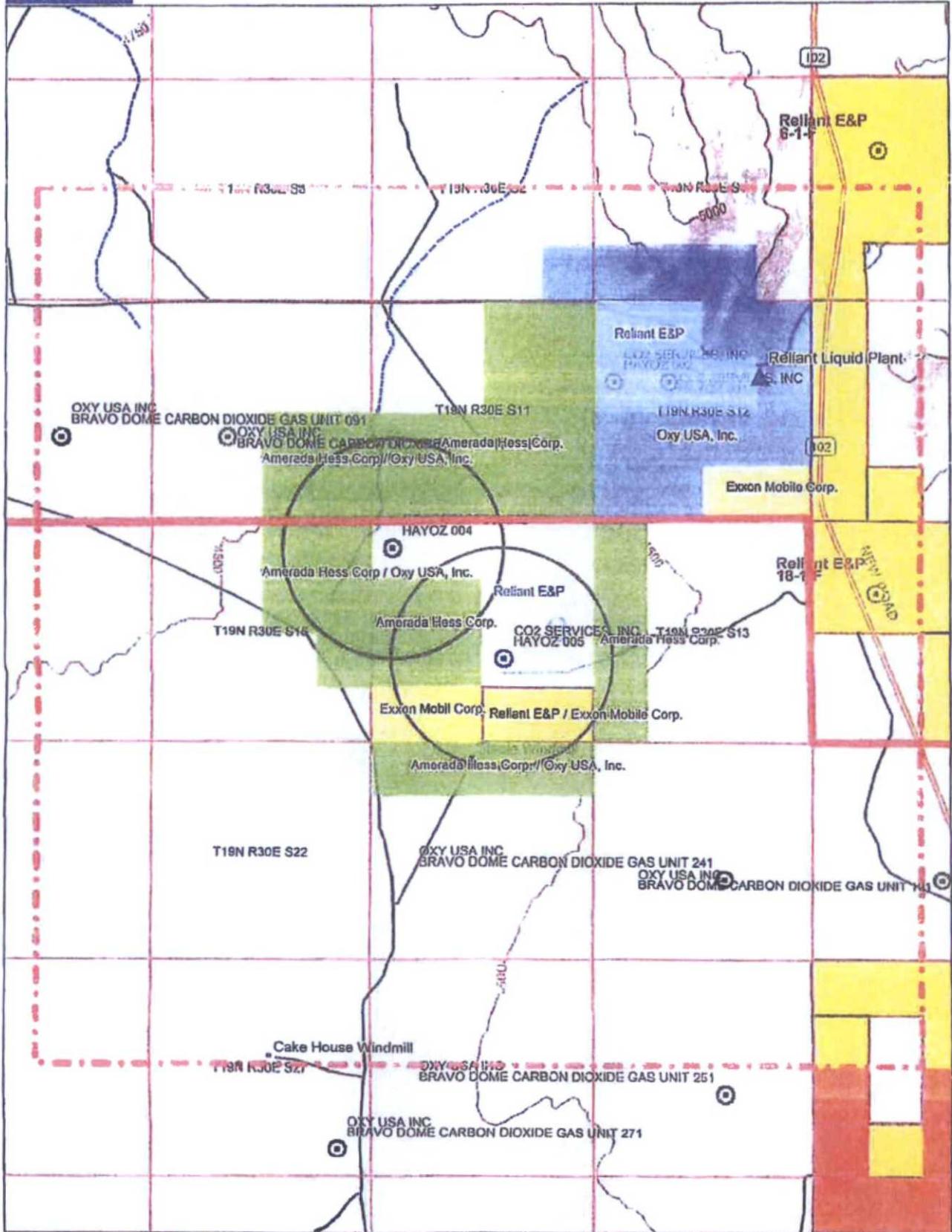
**<sup>16</sup> OPERATOR CERTIFICATION**  
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order hereinafter entered by the division.

Signature: *Shelly Doescher*      Date: 10-30-2015  
Printed Name: Shelly Doescher  
E-mail Address: shelly\_doescher@yahoo.com

**<sup>18</sup> 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 supervision, and that the same is true and correct to the best of my belief.

Date of Survey: 5-7-2015  
Signature and Seal of Professional Surveyor: *Michael L. Stanford*  
Certificate Number: 10324

File No. A-10984



Data use subject to license.

© DeLorme, XMap® 5.2 GIS Editor.

www.delorme.com



Scale 1 : 37,500



1" = 3,125.0 ft Data Zoom 12-0

State of N.M.

# 1

State of N.M.

02: T19N.R30E

Michal, T.E. & Son Inc

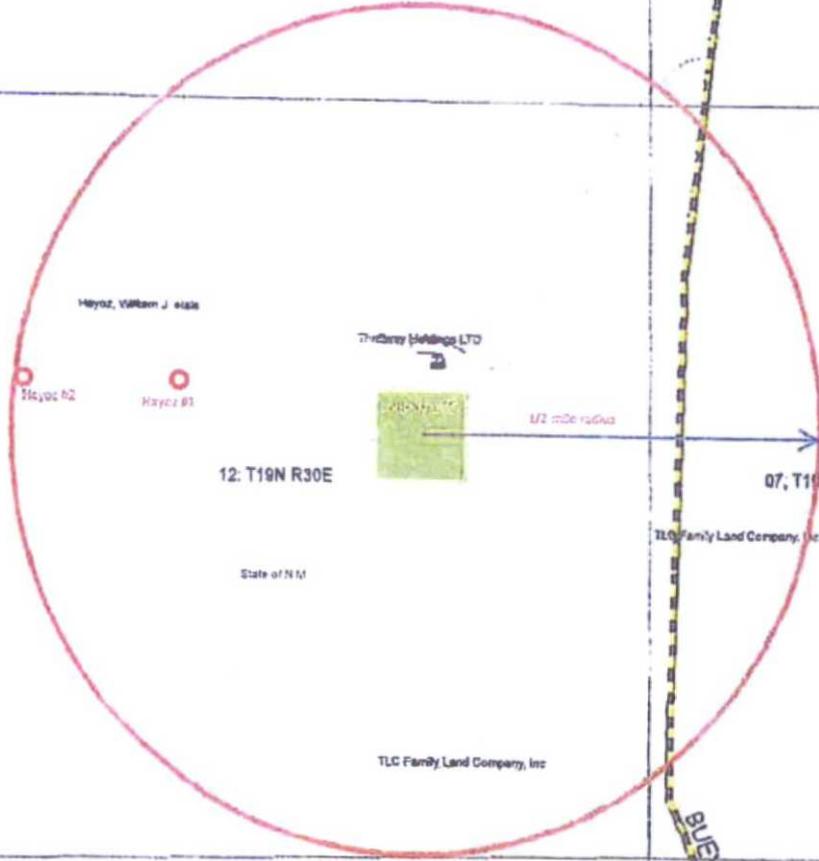
01: T19N.R30E

Michal, T.E. & Son Inc

TLC Family Land Company, Inc.

06: T19N.R31E

State of N.M.



Michal, T.E. & Son Inc  
11: T19N.R30E

Hayoz, William J. et al

Trinity Holdings LTD

Hayoz #2

Hayoz #3

12: T19N R30E

1/2 mile radius

07: T19N R31E

State of N.M.

TLC Family Land Company, Inc.

State of N.M.

TLC Family Land Company, Inc.

# Hayoz

Hayoz, William J. et al  
14: T19N.R30E

Hayoz, William J. et al

TLC Family Land Company, Inc.

13: T19N.R30E

Michal, T.E. & Son Inc

Yesterday's Valley Ranch, LLC

18: T19N.R31E

TLC Family Land Company, Inc.

State of N.M.

BUEYEROS HWY

# Yes

**Breitburn Operating LP 1930 SWD No. 12-4-G Injection Well**  
**(API No. 30-021-20692)**  
**G, Section 12, T19N, R30E N.M.P.M.**

**C-108 Data Sheet**

V. See attached maps

VI. See attached Tabulation Sheet

VII. Operation Data

1. A. Average Daily Injection Rate =350 bbls  
Maximum Daily Injection Rate=700 bbls  
B. Proposed Volume 1,277,500 bbls
2. The system is open (water will be trucked to the facility)
3. Proposed Pressures: Average and maximum injection pressures will be determined from a step rate test run after the stimulation.
4. Source of Injection Fluid: Tubb formation water from surrounding wells. (Please see the attached water analysis.) The Glorieta and lower San Andres formations are dry so there should be no compatibility issues in the injection zones.
5. There is no indication from the State Engineers website that there are any water wells drilled to the Glorieta or lower San Andres formations.

VIII. Geology

The Glorieta Sandstone is the shallowest Permian Age sandstone of significant thickness. The sand is usually a white to pink fine-to medium-grained slightly gypsiferous unconsolidated sand. The lower San Andres is of Permian Age and is composed of dolomitic, limy carbonates with a mixture of fine grained mixed clastics. There are no known domestic water wells within the area of interest. There is one well listed on the website of the Office of the State Engineer which is 920 meters away in the SE/4 of Section 12, T19N, R30E but no depth to ground water is listed. The depth of the well is reported as 250'. A water analysis of the proposed injection water is attached. This analysis indicates that the Tubb Formation water has a TDS of approximately 48,800 ppm.

IX. Operator plans to stimulate the Glorieta and lower San Andres with a yet to be determined amount of 15% HCl acid and ball sealers.

X. Well logs are attached.

XI. Analysis of the Tubbs Formation water is attached.

XII. The relatively impermeable portions of the upper San Andres Limestone overlay the planned injection intervals. According to a report prepared by the USGS, which studied the potential of brine contamination from Glorieta Sandstone injection wells into shallower aquifers, there is no evidence of any cross flow from any of the many Glorieta SWD wells in the Texas and Oklahoma panhandle area. (1.)

XIII. See attached mail receipts.

(1.) Geologic Information on the Glorieta Sandstone and the Ogallala Formation in the Oklahoma Panhandle and Adjoining Areas as Related to Underground Waste Disposal, James H. Irwin and Robert B. Morton, Geological Survey Circular 630, 1969 and 1978.

## Well Tabulation Sheet

Wells within One-Half Mile of the Breilburn Operating LP 1930 SWD No. 12-4-G

Unit	Section	Operator	Well	Location	Spud Date	T.D.	Status	Perfs
F	12	Breilburn Operating LP	Hayoz No. 001	1980' FSL 990' FEL	11/15/1983	2240'	Plan to P&A	1555'-1620' (Glorieta) 2093'-2161' (Tubb)
E	12	Breilburn Operating LP	Hayoz No. 002	1980' FNL 660' FWL	02/14/1980	2240'	Plan to P&A	2030'-2134' (Tubb)

P.O. BOX 98  
MIDLAND, TX. 79702  
PHONE (432) 683-4521

Martin Water Laboratories, Inc.

709 W. INDIANA  
MIDLAND, TEXAS 79701  
FAX (432) 682-8819

RESULT OF WATER ANALYSES

TO: Mike Raines, Vance Vanderburg, and Scott Vanderburg  
10817 W. CR 60, Midland, TX 79707

LABORATORY NO. 1013-305  
SAMPLE RECEIVED 10-15-13  
RESULTS REPORTED 10-24-13

COMPANY Whiting / Reliant Holdings LEASE Libby Minerals #16-2-N  
FIELD OR POOL Bravo Dome  
SECTION      BLOCK      SURVEY      COUNTY Harding STATE Texas

SOURCE OF SAMPLE AND DATE TAKEN:  
NO. 1 Submitted water sample - taken 9-4-13 and labeled as "Produced Fluid".  
NO. 2       
NO. 3       
NO. 4     

REMARKS: Tubb (below Dean)

CHEMICAL AND PHYSICAL PROPERTIES				
	NO. 1	NO. 2	NO. 3	NO. 4
Specific Gravity at 60° F.	1.0330			
pH When Sampled				
pH When Received	6.20			
Dicarbonate as CaCO <sub>3</sub>	1,220			
Supersaturation as CaCO <sub>3</sub>				
Undersaturation as CaCO <sub>3</sub>				
Total Hardness as CaCO <sub>3</sub>	12,200			
Calcium as Ca	2,880			
Magnesium as Mg	1,215			
Sodium and/or Potassium				
Sulfate as SO <sub>4</sub>	1,223			
Chloride as Cl	28,400			
Iron as Fe	63			
Barium as Ba	0			
Turbidity, Electric				
Color as Pt				
Total Solids, Calculated	48,792			
Temperature °F.				
Carbon Dioxide, Calculated				
Dissolved Oxygen				
Hydrogen Sulfide	0.0			
Residual Hy. Sulfide at 77° F.	0.000			
Suspended Oil				
Filtrable Solids as mg/l				
Volume Filtered, ml				
Sodium	19,336			
Potassium	200			

Results Reported As Milligrams Per Liter

Additional Determinations And Remarks The undersigned certifies the above to be true and correct to the best of his knowledge and belief.

Form No. 3

Greg Ogden, B.S.

LATHAM PRINTING CO. - 333-1232



New Mexico Office of the State Engineer  
**Point of Diversion Summary**

(quarters are 1=NW 2=NE 3=SW 4=SE)  
 (quarters are smallest to largest) (NAD83 UTM in meters)

POD Number	Q64	Q16	Q4	Sec	Tws	Rng	X	Y
TU 01913 POD1	4	3	4	12	19N	30E	617252	3972037

**Driller License:** DESERT SAND WATER WELL

**Driller Name:**

**Drill Start Date:**

**Drill Finish Date:**

**Plug Date:**

**Log File Date:**

**PCW Rcv Date:**

**Source:**

**Pump Type:**

**Pipe Discharge Size:**

**Estimated Yield:**

**Casing Size:**

**Depth Well:** 250 feet

**Depth Water:**

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.



# New Mexico Office of the State Engineer Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)  
(quarters are smallest to largest)

(NAD83 UTM In meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q Q Q			Sec	Twp	Rng	X	Y	Distance	Depth:	Depth:	Water
				64	16	4							Well	Water Column	
TU 01913 POD1	HA		HA	4	3	4	12	19N	30E	617252	3972037	920	250		
TU 00503	HA		HA	4	4	3	34	20N	30E	613503	3975192*	4034	80		
TU 01740 POD1	HA		HA	2	4	3	34	20N	30E	613570	3975305	4049	300		
TU 00513	HA		HA	1	3	2	04	19N	30E	612104	3974571*	4980	60		

Average Depth to Water: -  
Minimum Depth: --  
Maximum Depth: --

**Record Count: 4**

**UTMNAD83 Radius Search (in meters):**

Easting (X): 616766

Northing (Y): 3972819

Radius: 5000

\*UTM location was derived from PLSS - see Help

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

**C-108 Application for Authorization to Inject  
Breitburn Operating LP 1930 SWD No. 12-4-G  
Unit Letter G, 2265' FNL & 1493' FEL  
Sec. 12, T19N, R37E  
Harding County New Mexico  
API No. 30-021-20692**

**GEOLOGICAL STATEMENT**

**Available engineering and geological data have been examined and no evidence of open faults or hydrologic connections between the disposal zones and any underground sources of drinking water have been found.**



---

**Landon Berg  
Geologist  
Breitburn Operating LP**

October 30, 2015

Form C-108  
Breitburn Operating LP  
Breitburn Operating LP 1930 SWD No. 12-4-G  
Section 12, T-19 North, R-30 East, NMPM  
Harding County, New Mexico

Scheduled for publication in the Harding County Leader on Wed., November 4, 2015. The Affidavit of Publication will be forwarded to the Division upon receipt by Breitburn Operation LP.

**Breitburn Operating, LP, 1401 McKinney Street, Suite 2400, Houston, Texas 77010 is filing a Form C-108 (Application for Authorization to Inject) with the Oil Conservation Division ("Division") seeking administrative approval to utilize its proposed Breitburn Operating LP 1930 SWD #12-4-G (API No. 30-021-20692) to be drilled 2265' from the North line and 1493' East line (UL G) of Section 12, Township 19 North, Range 30 East, NMPM, Harding County, New Mexico (16.25 miles East Northeast of Mosquero) and complete the well as a produced water disposal well in the San Andres and Glorieta formations. Injection is to occur through the perforated interval from approximately 1480 feet to 1530 feet in the San Andres formation and from approximately 1560 feet to 1631 feet in the Glorieta formation.**

**Produced water from the Tubb formation originating from Breitburn Operating LP operated wells in this area will be injected into the Breitburn Operating LP 1930 SWD No. 12-4-G well at average and maximum rate of 350 and 700 barrels of water per day respectfully. The average and maximum injection pressures will be determined from a step rate test run after the well is drilled and stimulated.**

**Interested parties must file objection with the New Mexico Oil Conservation Division, 1220 S. St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days of the date of this publication.**

**Contact Information for Breitburn Operating is: Jeanie McMillan, Regulatory Manager, 1401 McKinney, Suite 2400, Houston, TX 77010, Office Phone (713) 634-4696.**



October 29, 2015

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED

TO: OFFSET OPERATORS/LEASEHOLE OWNERS AND SURFACE OWNERS  
(See attached Notice List)

RE: Breitburn Operating LP  
Form C-108 (Application for Authorization to inject  
Breitburn Operating LP 1930 SWD #12-4-G  
API No. – 30-021-20692  
2265' North & 1493' East, UL G, Section 12, T19N, R30E, NMPM,  
Harding County, New Mexico

Ladies and Gentlemen:

Enclosed please find a copy of Oil Conservation Division Form C-108 (Application for Authorization to Inject) for the Breitburn Operating LP 1930 SWD #12-4-G. You are being provided a copy of the application as an offset operator/leaseholder or as the owner of the surface where the proposed well is located. Breitburn Operating LP proposes to drill the Breitburn Operating LP 1930 SWD #12-4-G and utilize the well as a produced water disposal well, injection to occur into the San Andres formation through the perforated interval from approximately 1480 feet to 1530 feet, and the Glorieta formation through the perforated interval from approximately 1560 feet to 1631 feet.

Objections must be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505, within 15 days.

If you should have any questions, please contact undersigned at (713) 634-4696.

Sincerely,

A handwritten signature in cursive script that reads 'Jeanie McMillan'.

Jeanie McMillan  
Regulatory Manager

jm  
Encl.

**Breitburn Operating LP 1930 SWD No. 12-4-G  
(API No. 30-021-20692  
G, Section 12, T19N, R30E NMPM  
C-108**

**LIST OF OFFSET MINERAL, SURFACE and LEASE HOLD OWNERS WITHIN ½ MILE Radius**

**Reliant Holdings  
300 N Marienfeld St. #600  
Midland, Texas 79701**

**OXY  
5 Greenway Plaza, Suite 110  
Houston, Texas 77046-0521**

**EXXON  
Exploration and Producing Operations  
800 Bell Street  
Houston, Texas 77002**

**AFFIDAVIT OF PUBLICATION**

State of New Mexico  
County of Union

SS.

The undersigned, being first duly sworn according to law, on her oath deposes and says that she is the office manager of the newspaper named the *Union County Leader* and that she has personal knowledge of the facts stated herein: That the said *Union County Leader* is a weekly newspaper of general paid circulation in Union and Harding Counties published in the County of Union and State of New Mexico; entered under the second class privilege at the U.S. Post Office at Clayton, Union County, New Mexico and having been uninterruptedly and continuously so printed and published during a period of more than six months next to the date of the printing of the first publication concerning which this affidavit is made and a copy of which is hereto attached; that the said publication, a printed copy of which is hereto attached and made part of this affidavit, was published in said newspaper once each week for one successive weeks, and that payment for said publication has been made or assessed as part of the court costs to which it relates; said publications having been made on the following dates, to wit:

1<sup>st</sup> publication: the 4 day of November, 2015  
2<sup>nd</sup> publication: the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

3<sup>rd</sup> publication: the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
4<sup>th</sup> publication: the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

Union County Leader  
Terry Martin  
Terry Martin, CEO/Publisher/Editor

Publisher's Bill  
110 lines, 1x times \$ 69.30  
\_\_\_\_\_ lines, display \_\_\_\_\_ times \$ \_\_\_\_\_  
Tax \$ 5.46  
Total \$ 74.76

Subscribed and sworn to before me this 12 day of November, 2015.  
Fabrica A. Herrera  
Notary Public, Union County, New Mexico  
My commission expires 11-5-2018

Received payment: \_\_\_\_\_  
\_\_\_\_\_

Form C-108 Form C-108 (Appli: perforated interval run after the well is  
Breitburn Operat- cation for Authoriza: from: approximately drilled and stimulat-  
ing, L.P. tion to inject) with 1480 feet to 1530 feet od.  
Breitburn Operat- the Oil Conservation in the San Andres  
ing L.P. 1930 SWD Division ("Division") formation and from interested parties  
No. 12-4-G seeking administra: approximately 1560 must file objection  
Section 12, T-19 tive approval to cut: feet to 1631 feet in with the New Mexico  
North, R-30 East, lize its proposed the Glorieta for Oil Conservation Di-  
NMPM Breitburn Operating mation: vision, 1220 S. St.  
Harding County, L.P. 1930 SWD #12-4: Francis Drive, Santa  
New Mexico G (API No. 30,021: Produced water from Fac: New Mexico  
20692) to be drilled the Tubb formation 87505: within 15  
Scheduled for publi- 22652 from the North originating it from days for the date of  
cation in the Harding line and 1493 East Breitburn Operating this publication.  
County Leader on line (U, C) of Section 12 operated wells in  
Wed, November 4, 12, Township 19, this area will begin. Contact Information:  
2015. The Affidavit North Range 30, injected into the Breit for Breitburn Operat-  
of Publication will be East, NMPM, Hur- burn Operating, L.P. ingas, Jennie McMil-  
forwarded to the Di- ding County, New 1930 SWD No. 12-4, Jan. Regulatory Man-  
vision upon receipt Mexico (16.25 miles G well at average aver, 1401 McKin-  
by Breitburn Opern- East, Northeast of and maximum rate of hoy, Suite 2400,  
tion L.P. Mosquero) and com- 350 and 700 barrels Houston, TX 77010,  
plete; the well as a of water per day re- Office Phone (713)  
Breitburn Operating, produced water dis- spectfully. That aver 634-1696.  
L.P. 1401 McKinney, posal well in the Glo- age and maximum  
Street, Suite 2400, rita Bravo Dome injection pressures 11-4  
Houston, Texas Field. Injection is to will be determined  
77010 in filing occur through the from a stop rate test

