

10/22/03 11/06/03

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RECEIVED

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL
RESOURCES DEPARTMENT

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

PWVJ0331863981
OCT 22 2003

FORM C-108
Revised 4-1-98

APPLICATION FOR AUTHORIZATION TO INJECT
OIL CONSERVATION
DIVISION

WVS

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

II. OPERATOR: Echo Production, Inc.

ADDRESS: PO Box 1210, Graham, Texas 76450

CONTACT PARTY: Tom Golden

PHONE: (940) 549-3292

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:

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.).

Received 10/23/03
Cable
10/23/03
Notice Envelope
To BLM

*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: Tom Golden

TITLE: Operations Manager

SIGNATURE: Tom Golden

DATE: 10/13/03

* 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: Echo Production, Inc.

30-025-32093

WELL NAME & NUMBER: Silverton '31' Federal #1

WELL LOCATION: 660' FSL & 660' FWL
FOOTAGE LOCATION

M

UNIT LETTER

31

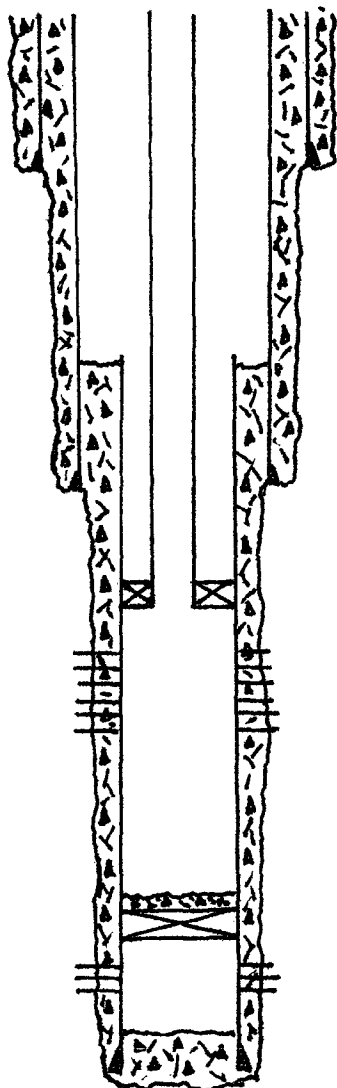
SECTION

22S

TOWNSHIP

32E

RANGE

WELLBORE SCHEMATIC11 3/4" 42# csg @ 609'
w/ 400 sx - circTop of 5 1/2" csg @ 3050'
Top of cmt 3100'8 5/8" 32# csg @ 4497'
w/ 1300 sx - circ2 3/8" Salta lined tbg @ +4550'
w/ Model 'R' DG pkrInjection Interval
4590-5626'

CIBP @ 8034' w/ cmt to 7999'

Delaware Perfs 8201-35' & 8335-50'

5 1/2" 15.5 & 17# csg @ 8456'
w/ 876 sx. TOC 3100' CBL

TD 8461'

WELL CONSTRUCTION DATASurface Casing

Hole Size: 14 3/4" Casing Size: 11 3/4" @ 609'

Cemented with: 400 sx. or ft³

Top of Cement: Surface Method Determined: circulated

Intermediate Casing

Hole Size: 11" Casing Size: 8 5/8" @ 4497'

Cemented with: 1300 sx. or ft³

Top of Cement: surface Method Determined: circulated

Production Casing

Hole Size: 7 7/8" Casing Size: 5 1/2" @ 3050-8456'

Cemented with: 876 sx. or ft³

Top of Cement: 3100' Method Determined: CBL

Total Depth: 8461'

Injection Interval

4590 feet to 5626

(Perforated or Open Hole; indicate which)
Perforated

INJECTION WELL DATA SHEET

Tubing Size: 2 3/8" Lining Material: Salta

Type of Packer: Model 'R' DG

Packer Setting Depth: +4550'

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

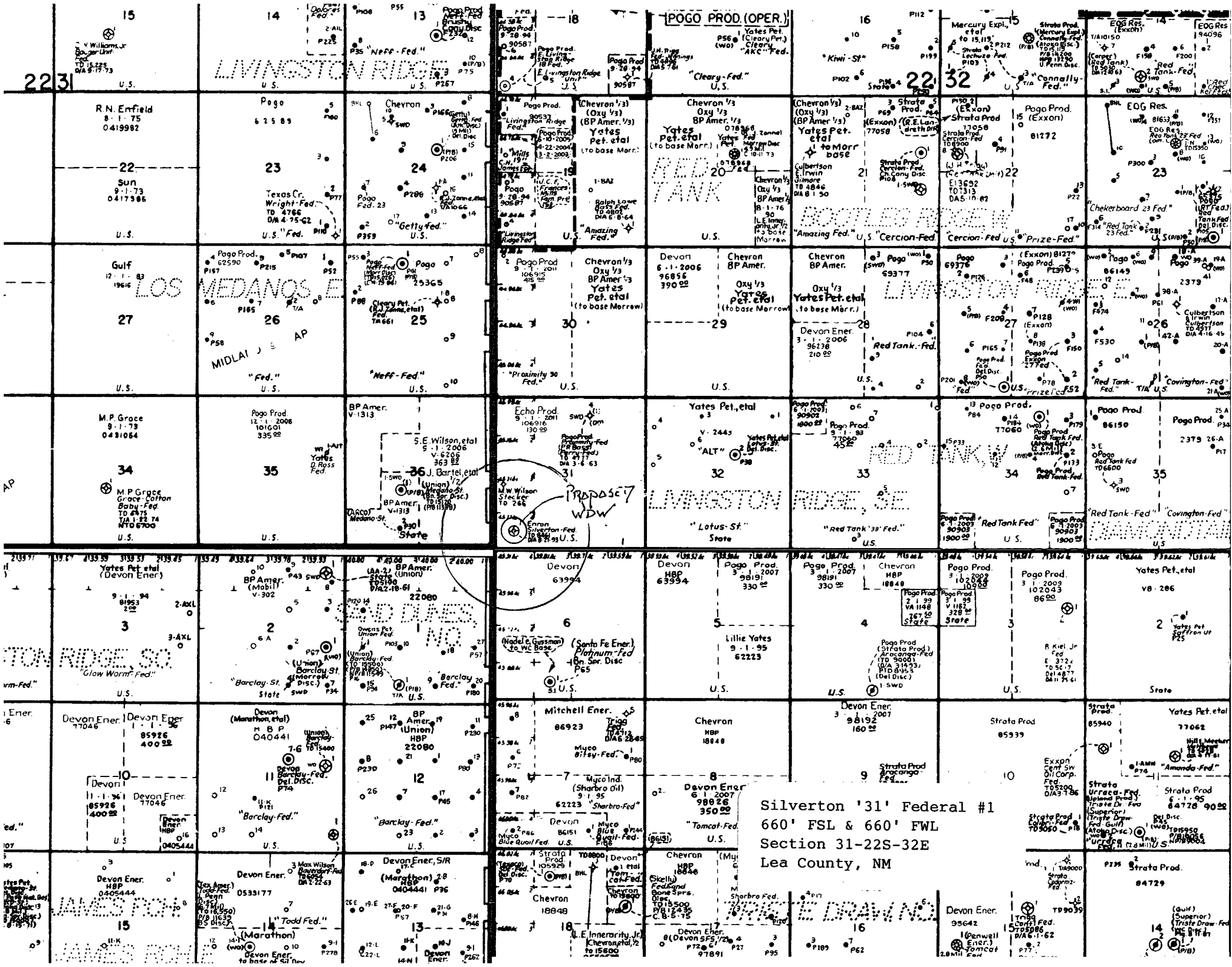
Additional Data

1. Is this a new well drilled for injection? Yes x No
If no, for what purpose was the well originally drilled? Delaware producing well was not
productive and was P&A
2. Name of the Injection Formation: Bell Canyon
3. Name of Field or Pool (if applicable):
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. Lower Delaware
8201-35' & 8335-50'. CIBP set @ 8034' w/ 35' of cmt on top.
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area:
Overlying - none
Underlying - Brushy Canyon (Lower Delaware) @ +8200' to 8350'

Form C-108
Silverton '31' Federal #1
660' FSL & 660' FWL
Section 31-22S-32E
Lea County, NM

- VI. There are no wells within the area of review, which penetrate the proposed injection zone.
- VII.
 - 1. The proposed average injection rate is 1000 BPD and the maximum is 1500 BPD.
 - 2. The system is closed.
 - 3. The average injection pressure is estimated at 650 PSI and the maximum is 930 PSI.
 - 4. The source of the injection water will be from the Lower Delaware from wells Echo will be drilling in Sec 31-22S-32E. Since these wells have not been drilled a water analysis submitted by Pogo for the disposal well they permitted in Sec 31-22S-32E is attached.
 - 5. Water analysis for subject well is not available since it has not been completed. The water analysis submitted by Pogo for their Proximity '31' Federal #4 SWD permit is attached.
- VIII. The disposal zone is the Bell Canyon (Delaware) which is encountered at 4590' to 5626' with a thickness of 1036'. It is a light gray, fine grained, poorly consolidated silty sandstone. There are no fresh water sources underlying the proposed disposal zone and the overlying fresh water source would be the Santa Rosa at a depth to the bottom of the zone at $\pm 600'$.
- IX. Well will be acidized with 2000 to 4000 gals of 10% HCl with ball sealers for diversion.
- X. The well never produced so data is not available. Well logs were previously filed.
- XI. There are no fresh water wells within a mile of the subject well.
- XII. Logs and well data do not indicate any hydrologic connection between the proposed Bell Canyon disposal zone and any underground sources of drinking water. One well in the same section has already been approved for disposal and is presently active.
- XIII. A copy of the letters of notification to offset operators are attached. The surface is Federal and a copy of the application and a Sundry Notice (enclosed) was mailed to the BLM.

A copy of the ad placed in the Hobbs News – Sun is also enclosed.



ANALYSIS - BRUSHY CANYON
PRODUCED WATER

WATER ANALYSIS REPORT

Company : POGO PRODUCING
Address : MIDLAND, TEXAS
Lease : RED TANK FED. 28
Well : #1 *Brushy Canyon (Del)*
Sample Pt. : WELLHEAD

Date : 01/08/93
Date Sampled : 01/04/93
Analysis No. : 005

ANALYSIS		mg/L		* meq/L
-----		----		-----
1. pH	6.2			
2. H2S	3 PPM			
3. Specific Gravity	1.160			
4. Total Dissolved Solids		279018.4		
5. Suspended Solids		NR		
6. Dissolved Oxygen		NR		
7. Dissolved CO2		80 PPM		
8. Oil In Water		NR		
9. Phenolphthalein Alkalinity (CaCO3)				
10. Methyl Orange Alkalinity (CaCO3)		60.0		
11. Bicarbonate	HCO3	73.2	HCO3	1.2
12. Chloride	Cl	170409.6	Cl	4807.0
13. sulfate	SO4	1000.0	SO4	20.8
14. Calcium	Ca	16881.7	Ca	842.4
15. Magnesium	Mg	1186.3	Mg	97.6
16. Sodium (calculated)	Na	89409.6	Na	3889.1
17. Iron	Fe	58.0		
18. Barium	Ba	NR		
19. Strontium	Sr	NR		
20. Total Hardness (CaCO3)		47042.3		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter		Compound	Equiv wt X meq/L	= mg

842 *Ca <----- *HCO3	1	Ca(HCO3)2	81.0	1.2
----- /----->		CaSO4	68.1	20.8
98 *Mg -----> *SO4	21	CaCl2	55.5	820.4
----- <----- /		Mg(HCO3)2	73.2	
3889 *Na -----> *Cl	4807	MgSO4	60.2	
-----		MgCl2	47.6	97.6
Saturation Values Dist. Water 20 C		NaHCO3	84.0	
CaCO3	13 mg/L	Na2SO4	71.0	
CaSO4 * 2H2O	2090 mg/L	NaCl	58.4	3889.1
BaSO4	2.4 mg/L			22727

REMARKS:
----- L. MALLETT / FILE

ROSWELL GEOLOGICAL SOCIETY SIMPOSIUM

FORM C-108

ITEM VII(5)

ANALYSIS - INJECTION ZONE

PRODUCED WATER

TYPICAL CORE ANALYSIS OF A PAY INTERVAL IN THIS FIELD: No cores taken

Perm. in millidarcys		% Porosity	Liquid Saturation (% of pore space)	
Horizontal	Vertical		Water	Oil

OTHER SHOWS ENCOUNTERED IN THIS FIELD: None

TRAP TYPE: Stratigraphic, sand pinchout

NATURE OF OIL: 37.8° gravity, sweet

NATURE OF GAS: sweet

NATURE OF PRODUCING ZONE WATER: Salt

						Resistivity:		ohm-meters @		°F.	
	Total Solids	Na+K	Ca	Mg	Fe	SO ₄	Cl	CO ₃	HCO ₃	OH	H ₂ S
ppm		47,700	6160	2060	100	1500	89,400		160		neg

INITIAL FIELD PRESSURE: Unknown

TYPE OF DRIVE: Unknown

NORMAL COMPLETION PRACTICES: Set through, perforate & sand frac.

PRODUCTION DATA:

Year	Type	No. of wells @ yr. and		Production	
		Producing	Shut in or Abnd.	Oil in barrels Gas in MMCF	
				Annual	Cumulative
1956	oil				
	gas				
1957	oil				
	gas				
1958	oil				
	gas				
1959	oil				
	gas				
1960*	oil	0	1 **	631.5	631.5
	gas				

* 1960 Figure is production to July 1, 1960.

** well shut in on April 19, 1960.

AFFIDAVIT OF PUBLICATION

State of New Mexico,
County of Lea.

I, KATHI BEARDEN

Publisher

of the Hobbs News-Sun, a
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

October 10 2003

and ending with the issue dated

October 10 2003

Kathi Bearden

Publisher

Sworn and subscribed to before

me this 10th day of

October 2003

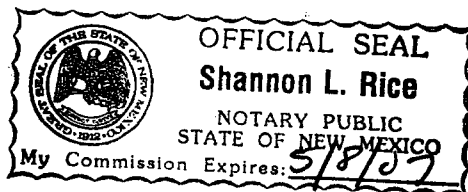
Shannon L. Rice

Notary Public.

My Commission expires

bad date

(Seal)



LEGAL NOTICE
October 10, 2003

NOTICE OF APPLICATION FOR
AUTHORIZATION TO INJECT

Echo Production, Inc., PO Box 1210, Graham, Texas 76450, has applied to the New Mexico Oil Conservation Division for authorization to dispose of produced water into the Silverton "31" Federal #1 located 660' FSL & 660' FWL Sec 31-22S-32E, Lea County, NM. The proposed disposal zone is the Bell Canyon from 4590' to 5626'. Maximum injection rate will be 1500 BWPD at a maximum injection pressure of 930#. The contact person for Echo Production, Inc. is Tom Golden at (940) 549-3292. Requests for hearing from affected parties or objections to any aspect of the application must be filed with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days of publication.
#20174

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

02105309000 67517181

Echo Production, Inc.
P.O. Box 1210
GRAHAM, TX 76450

Form 3160-5
(August 1999)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000**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.*5. Lease-Serial No.
NM 84891

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
Silverton '31' Federal #19. API Well No.
30-025-32093

10. Field and Pool, or Exploratory Area

11. County or Parish, State

Lea County, NM

SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other

2. Name of Operator

Echo Production, Inc.

3a. Address

PO Box 1210, Graham, TX 76450

3b. Phone No. (include area code)

(940) 549-3292

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

660' FSL & 660' FWL Sec 31 T22S R32E

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recombine	<input checked="" type="checkbox"/> Other re-enter
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input checked="" type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed 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 recompleat 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 site is ready for final inspection.)

Present Well Data: 11 3/4" csg @ 609' w/ 400 sx (circ), 8 5/8" csg @ 4497' w/ 1300 sx (circ), 5 1/2" csg 3050-8456' w/ 876 sx - TOC 3100'. Perfs 8201-35' shut off w/ CIBP @ 8034' & cmt to 7999'. Cement plugs 0-61', 571-671' & 2981-3131'.

Propose to: Drill out cmt plugs 0-61', 571-671' & 2981-3131' w/ workover rig, and reverse unit. Perforate various Bell Canyon zones from 4590-5626', acidize and convert to SWD thru 2 3/8" Salta lined tubing set on a Model 'R' DG pkr @ +4550'.

A copy of form C-108 that has been sent to the OCD is attached and an approved copy will be mailed when received.

BLM Bond Number 2692

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

Name (Printed/Typed)

Tom Golden

Title Operations Manager

Signature

Tom Golden

Date 10/13/03

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 and Title 43 U.S.C. Section 1212, make 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.

Echo Production, Inc.

PO Box 1210 Graham, Texas 76450 (940) 549-3292 Fax: (940) 549-5162

October 14, 2003

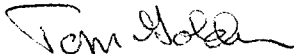
Wilson & Barr
500 W. Texas
Suite 1220
Midland, TX 79701

Re: Silverton '31' Federal #1
660' FSL & 660' FWL
Section 31-22S-32E
Lea County, New Mexico

Enclosed is a copy of the Oil Conservation Division Form C-108 "Application For Authorization To Inject", which Echo Production, Inc. has recently filed. This will serve as written notification of Echo's intention of converting the Silverton '31' Federal #1 to a saltwater disposal well.

If you have any questions please contact me at the above address or phone number.

Sincerely,



Tom Golden
Operations Manager

Echo Production, Inc.

PO Box 1210 Graham, Texas 76450 (940) 549-3292 Fax: (940) 549-5162

October 14, 2003

BP America Production Co.
Box 22048
Tulsa, OK 74121

Re: Silverton '31' Federal #1
660' FSL & 660' FWL
Section 31-22S-32E
Lea County, New Mexico

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Sincerely,



Tom Golden
Operations Manager

Echo Production, Inc.

PO Box 1210 Graham, Texas 76450 (940) 549-3292 Fax: (940) 549-5162

October 14, 2003

Yates Petroleum Corporation
105 S. Fourth Street
Artesia, NM 88210

Re: Silverton '31' Federal #1
660' FSL & 660' FWL
Section 31-22S-32E
Lea County, New Mexico

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