

ABOVE THIS LINE FOR DIVISION USE ONLY

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

Check One Only for [B] or [C]

- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR

- [D] Other: Specify _____

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or ☐ Does Not Apply

- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
[B] ☐ Offset Operators, Leaseholders or Surface Owner
[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,
[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.

Print or Type Name

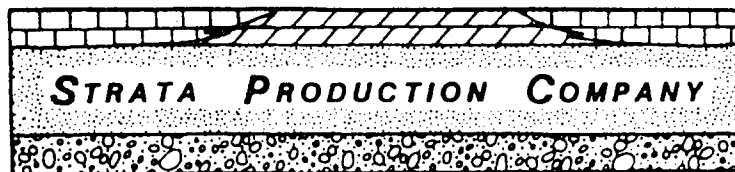
Signature

Title

Date

e-mail Address

POST OFFICE DRAWER 1030
ROSWELL, NM 88202-1030



200 WEST FIRST STREET, ROSWELL PETROLEUM BUILDING, SUITE 700
ROSWELL, NEW MEXICO 88203

TELEPHONE (505) 622-1127
FACSIMILE (505) 623-3533

RECEIVED

October 7, 2004

OCT 12 2004

OIL CONSERVATION
DIVISION

New Mexico Oil Conservation Division
ATTN: David Catanach
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: C-108 Application For Authorization To Inject
Remuda Basin "20" Federal #1
330' FNL & 660' FWL
Section 20-23S-30E
Eddy County, New Mexico

Gentlemen:

Strata Production Company respectfully requests administrative approval for the attached C-108 application on its Remuda Basin "20" Federal #1 well for the purpose of disposing of produced fluids in the non-commercial Bell Canyon and Cherry Canyon intervals. This work will allow Strata, to supplement the disposal for the Nash Draw Unit and dispose of produced water that is anticipated from work to be performed on wells in the 49'er Ridge Unit. The installation of the proposed disposal well will lower the current economic limit on each well and ultimately allow Strata to recover additional oil & gas reserves that would otherwise be left in place.

Strata respectfully requests that this application be approved administratively, or through an NMOCD sponsored hearing scheduled at the earliest possible time. This is requested so that the necessary operations can be advanced in a prudent manner. If you have any questions concerning the application, please contact me at 505-624-2800.

Sincerely,

Kelly Britt for Bruce Stubbs

Bruce A. Stubbs
Consulting Engineer

Attachments

cc: Tim Gum - NMOCD, Artesia, NM

APPLICATION FOR AUTHORIZATION TO INJECT

- I. PURPOSE: Secondary Recovery Pressure Maintenance X Disposal Storage
Application qualifies for administrative approval? X Yes No
- II. OPERATOR: Strata Production Company
ADDRESS: P. O. Box 1030, Roswell, NM 88202-1030
CONTACT PARTY: Bruce Stubbs PHONE: 505-624-2800
- 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.).
- *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: Bruce A. Stubbs TITLE: Consulting Engineer
SIGNATURE: *B. A. Stubbs* DATE: 9/24/04
E-MAIL ADDRESS: _____
- * 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: _____

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.

INJECTION WELL DATA SHEET

OPERATOR: Strata Production CompanyWELL NAME & NUMBER: Remuda Basin 20 Federal #1WELL LOCATION: 330' FNL & 660' FWLUNIT LETTER D SECTION 20 TOWNSHIP 23S RANGE 30E

FOOTAGE LOCATION

WELLBORE SCHEMATICWELL CONSTRUCTION DATASurface CasingHole Size: 14 3/4" Casing Size: 11 3/4"Cemented with: 400 sx. or ft³Top of Cement: Circ. Method Determined: Intermediate CasingHole Size: 11" Casing Size: 8 5/8"Cemented with: 900 sx. or ft³Top of Cement: Circ. Method Determined: Production CasingHole Size: 7 7/8" Casing Size: 5 1/2"Cemented with: 1400 sx. or ft³Top of Cement: 3000' Method Determined: CalculatedTotal Depth: 7500'Set Closer CIBP(Ball & Cherry Canyon)
Infection Interval4124

feet to

4774Perforated with 1 jsp
(Perforated or Open Hole; indicate which)

INJECTION WELL DATA SHEET

Tubing Size: 2 7/8" Lining Material: Plastic

Type of Packer: Nickel plated 5 1/2" Arrow Type "H" Packer

Packer Setting Depth: +/- 4000 ft.

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

Additional Data

1. Is this a new well drilled for injection? _____ Yes ☐ No ☒
 If no, for what purpose was the well originally drilled? Oil Well
2. Name of the Injection Formation: Bell Canyon and Cherry 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. 6608-6706' and 7162-7242'
A CIBP will be set at 6575' and capped with 35 ft. of cement.
5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: Brushy Canyon 5600'-7250'

Set in - instead
and then CIBP

9-23-04

NEW MEXICO OIL CONSERVATION DIVISION - Form C-108

III. SALT WATER DISPOSAL WELL DATA

Remuda Basin "20" Federal #1: Bell Canyon and Cherry Canyon Intervals

Unit Letter D, 330' FNL & 660 FWL, Section 20, T-23-S, R-30-E Eddy County, New Mexico.

All pertinent data for the above proposed salt water disposal well is included on the well schematic sheets in this application.

V. SUBJECT AREA MAPS AND AREA OF REVIEW

A map of the subject area, Remuda Basin "20" Federal #1 lease, including all wells within a 2 mile radius is attached. Also attached is a map showing the subject well's area of-review (or ½ mile radius circle).

VI. TABULATION OF DATA ON WELLS WITHIN AREA OF REVIEW

To date, the following wells are within a half mile radius of the proposed salt water disposal well:

T-23-S, R-30-E

SE/4 Section 18: None

SW/4 Section 17: None

NE/4 Section 19: 2 Wells: Remuda Basin "19" Federal #1 (A) and #2 (B) ✓

SE/4 Section 19: None

N/2 Section 20: None

Attached is a schematic and summary report for each well within the area of review.

VII. PROPOSED OPERATION

Currently, Strata Production Company operates the Nash Draw Unit and the Forty-Niner Ridge Unit producing approximately 300 BOPD, 2,500 MCFPD and 1,000 BWPD. The proposed well will be converted as soon as possible to facilitate water disposal. Attached is a schematic of the subject disposal well and its proposed completion and tubing/packer arrangement.

The intent of this application is to seek approval, either through a NMOCD administrative approval, or through a New Mexico Oil Conservation Commission sponsored hearing to convert the subject well to salt water disposal. This application is pursuant to the continuation of development and production on Strata's Nash Draw Unit and the Forty-Niner Ridge Unit, which produce from the Bell Canyon, Cherry Canyon and Brushy Canyon intervals. The approval of this application will enhance

Strata's efforts to operate the subject lease as optimally as possible and increase the reserve potential by lowering the economic limit on each producing well.

The proposed completion within the Remuda Basin "20" #1 wellbore will be in the Bell Canyon and Cherry Canyon interval with perforations between 4124' and 4774'. The packer will be placed within approximately 50' to 100' above the top perforation at +/- 4000'. The tubing will be internally plastic coated. The proposed maximum salt water disposal rate is expected to be 1,000 BWPD. The initial disposal rate is expected to be 500 BWPD. Maximum injection pressure will not exceed 825 psig (0.2 psi/ft OCD allowable rate) until a step rate test establishes a higher limit. Injected fluids will be produced fluids from the Bell Canyon, Cherry Canyon and Brushy Canyon intervals. These zones and the proposed injection interval (Bell Canyon and Cherry Canyon) all contain saline waters with total dissolved solids (TDS) and salinity above 10,000 ppm (mg/l). A chemical analysis of the disposed water is included. The system will be closed. ✓

VIII. GEOLOGICAL DATA

The injection interval consists of an interbedded, fine to medium grain of sorted sandstone reservoir. The saturation within the reservoir show a low oil saturation which is non-mobile making the formation non-commercial. The Bell Canyon and Cherry Canyon interval has a total thickness of approximately 2100' within the subject area. It overlays the Brushy Canyon and Bone Spring intervals which are the main productive interval within the subject area.

The known sources of fresh water within the subject area exist from approximately 120' to 400' deep in windmills that are approximately 250' deep. Based on a current geological and engineering data and a petrophysical rock-properties evaluation, there is no evidence of any natural or artificially created open faults within the unitized interval, or above, which would communicate salt water to the shallow fresh water strata. A representative shallow water analysis is included with the application. ✓

IX. PROPOSED STIMULATION PROGRAM

The subject wells will be stimulated using 4,000 to 10,000 gallons of 7 1/2% NeFe HCl acid. Rock salt blocks or ball sealers will be utilized during the acid job(s). A potential hydraulic frac job will be performed using a 2% KCL crosslinked borate gel carrying 16/30 Ottawa sand. The necessity of a frac job and it's appropriate size will be determined after reworking and acidizing is completed.

STATEMENT OF SURFACE OWNER AND OFFSET OPERATOR

40 ACRE SURFACE OWNER **Bureau of Land Management**

OFFSET OPERATORS OR MINERAL INTEREST LEASEE:

Section 17: All, T20S-R30E

Devon Energy Production Company
20 N. Broadway, Suite 1500
Oklahoma City, OK 73102-8260

Section 20: NE/4, S/2 NW/4, NE/NW, T20S-R30E

Texaco Exploration & Production Company
Box 46513
Denver, Colorado 80201-6513

Section 19: NW/4, T20S-R30E

Texaco Exploration & Production Company
Box 46513
Denver, Colorado 80201-6513

XTO Energy, Inc.
3000 N. Garfield, Suite 175
Midland, TX 79705

Nash Unit - Section 18: E/2, T20S-R30E

Strata Production Company (Sub Operator Surface to Base of Bone Spring)
P. O. Box 1030
Roswell, New Mexico 88202-1030

Murchison Oil & Gas Inc. (Operator below the Bone Spring)
Attn: Michael Daugherty
1100 Mira Vistra Blvd.
Plano, Texas 75093-4698

Section 19: SE/4, T20S-R30E

Yates Petroleum Corporation
105 S. 4th Street
Artesia, New Mexico 88210

Remuda Basin 20 Federal #1
330' FNL & 660' FEL, D-20-23S-30E
Eddy County, New Mexico

9/23/04

Add Bell Canyon and Cherry Canyon Injection Intervals

Well Data

Tubing:	2-7/8"	Casing:	17# & 15.5#, 5-1/2" @ 7500'		
TD:	7500'	PBTD:	7408'	Elevation:	3153'GR12'KB

Injection Perforations:

Bell Canyon	4124-36', 4140-48', 4180-90', 4196-4212'
Cherry Canyon	4296-4308', 4380-90', 4414-20', 4540-48', 4572-82', 4594-4603', 4614-20', 4634-46', 4682-90', 4696-4712', 4738-74'

CIBP at 6575' with 35' of cement on top

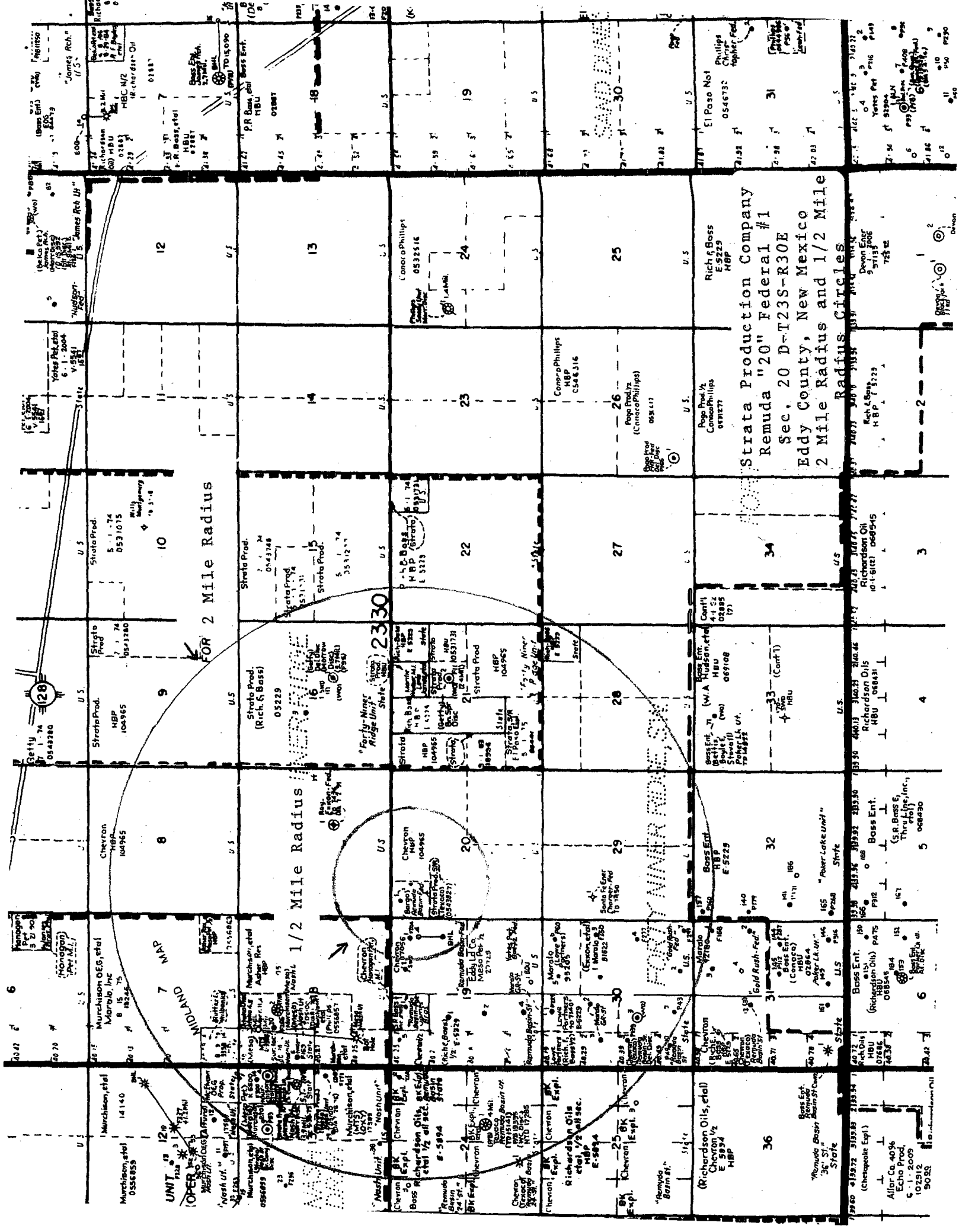
Plugged Back Perforations:

Brushy Canyon: 6608-12', 6616-20', 6702-06', 7162-66', 7194-7204', 7216-34', 7240-42'

Procedure

1. Rig up pulling unit. ND wellhead. NU BOP. P.O.H. with tubing and production equipment.
2. TIH with bit and scrapper on 2-7/8" workstring. TIH to 6600'. Set CIBP at 6575' and cap with 35' of cement. Test casing at 1000 psi for 30 minutes.
3. Rig up Schlumberger. Run GR/CBL log from 4900' to 3800' to check cement bond. Perforate 4124-36', 4140-48', 4180-90', 4196-4212', 4296-4308', 4380-90', 4414-20', 4540-48', 4572-82', 4594-4603', 4614-20', 4634-46', 4682-90', 4696-4712', 4738-74', 1 jspf, 170 shots. Rig down Schlumberger.
4. TIH with 5-1/2" X 2-7/8", 15.5# - 17# full bore treating packer on 2-7/8" workstring. Set packer at +/- 4500'.
5. Acidize Cherry Canyon perforations 4540-48', 4572-82', 4594-4603', 4614-20', 4634-46', 4682-90', 4696-4712', 4738-74' with 3,000 gal 7-1/2% HCl with ball sealers as diverter. Average injection rate should be 4 to 6 BPM. Flush acid to bottom perforation with 2% KCL water. TOH with workstring and treating packer.

6. TIH with 5-1/2" X 2-7/8", 15.5# - 17# full bore treating packer and RBP on 2-7/8" workstring. Set RBP at +/- 4500'. Set packer at +/- 4000'.
7. Acidize Bell Canyon perforations 4124-36', 4140-48', 4180-90', 4196-4212' with 3,000 gal 7-1/2% HCl with rock salt as diverter. Average injection rate should be 3 to 4 BPM. Flush acid to bottom perforation with 2% KCL water. Unset treating packer and RBP, TOH with workstring, treating packer, and RBP.
8. TIH with injection packer and plastic lined tubing. Set packer at +/- 4,000'. ND BOP. NU wellhead.
9. Put well on injection. Maximum injection rate is 1000 BWIPD at a maximum pressure of 825 psig at surface. RD pulling unit. Monitor surface injection pressure and rate.



LEASE NAME	WELL#	PRODUCTION ID	API	OPERATOR NAME	PROD ZONE NAME	LEASE CODE	COUNTY					
REMUDA BASIN 19 FEDERAL	2	1300220152890140000	30-015-289010000	TEXACO EXPL & PROD. INC.	BRUSHY CANYON	18768	EDDY					
REMUDA BASIN 19 FEDERAL	2	1300220152890196769	30-015-289010000	CHEVRON USA INC.	BELL CANYON	18768	EDDY					
REMUDA BASIN 19 FEDERAL	2	1300220152890147545	30-015-289010000	XTO ENERGY INC.								
REMUDA BASIN 19 FEDERAL	1	1300220152890240000	30-015-289020000	TEXACO EXPL & PROD. INC.	BRUSHY CANYON	18768	EDDY					
REMUDA BASIN 19 FEDERAL	1	1300220152890247545	30-015-289020000	CHEVRON USA INC.	BRUSHY CANYON	18768	EDDY					
REMUDA BASIN 20 FEDERAL	1		30-015-289020000	XTO ENERGY INC.								
REMUDA BASIN 20 FEDERAL	1	1300220152954940000	30-015-295490000	STRATA PROD. CO.	BRUSHY CANYON	20817	EDDY					
REMUDA BASIN 19 FEDERAL	4	1300220153222547545	30-015-322250000	CHEVRON USA INC.	BRUSHY CANYON		EDDY					
REMUDA BASIN 19 FEDERAL	4		30-015-322250000	XTO ENERGY INC.								
REMUDA BASIN 19 FEDERAL	3		30-015-322240000	CHEVRON USA INC.								
REMUDA BASIN 19 FEDERAL	2	19B-23S-30E	NASH DRA	11,523	32,530	55,792	INA	7,640	UPPER PERF	7,105	LOWER PERF	7,169
REMUDA BASIN 19 FEDERAL	2	19B-23S-30E	SWD			18,220	INA					
REMUDA BASIN 19 FEDERAL	2	19B-23S-30E										
REMUDA BASIN 19 FEDERAL	1	19A-23S-30E	NASH DRA	78,113	311,056	152,558	ACT	7,650	7,105	7,169		
REMUDA BASIN 19 FEDERAL	1	19A-23S-30E	NASH DRA	94,294	397,902	190,625	ACT	7,650	7,056	7,099		
REMUDA BASIN 19 FEDERAL	1	19A-23S-30E										
REMUDA BASIN 20 FEDERAL	1	20D-23S-30E	NASH DRA	3,173	14,090	67,605	INA	7,800	6,608	7,242		
REMUDA BASIN 19 FEDERAL	4	19A-23S-30E	NASH DRA	13,625	96,366	70,708	ACT					
REMUDA BASIN 19 FEDERAL	4	19A-23S-30E										
REMUDA BASIN 19 FEDERAL	3	19B-23S-30E										
REMUDA BASIN 19 FEDERAL	2	OIL YTD	GAS YTD	WTR YTD	OIL LATEST MONTH	GAS LATEST MONTH	WATER LATEST MONTH	FIRST PROD MONTH	LAST PROD MONTH			
REMUDA BASIN 19 FEDERAL	2							06/01/96	05/31/97			
REMUDA BASIN 19 FEDERAL	1	8,501	36,564	29,166	797	1,410	2,560	05/01/96	10/31/01			
REMUDA BASIN 19 FEDERAL	1	2,210	11,853	5,732	360	1817	1120	05/1966	06/2004			
REMUDA BASIN 19 FEDERAL	1											
REMUDA BASIN 20 FEDERAL	1							07/01/97	08/31/98			
REMUDA BASIN 19 FEDERAL	4	2,251	17,900	15,484	311	3,075	2,220	05/2002	06/2004			
REMUDA BASIN 19 FEDERAL	4											
REMUDA BASIN 19 FEDERAL	3											

11 3/4" @ 400'
400 SX.

REMUDA BASIN 19 FED. #1
660' FNL & 660' FEL
SEC. 19-T23S-R30E
EDDY COUNTY, NM
API # 30-015-28901
SPUD DATE: 4/20/96

B. SALT 3390'
T. DELAWARE SD 3414'

8 5/8" @ 3225'
900 SX.

T. CHERRY CANYON 4206'

T. BRUSHY CANYON 5510'

2 7/8" @ 7002'

T. BONE SPRING 7185'

7105-48', 7150-57', 7166-69'; BRUSHY CANYON

5 1/2" @ 7640'
1700 SX

11 3/4" @ 400'
400 SX., CIRC.

REMUDA BASIN 19 FED. #2
510' FNL & 1580' FEL
SEC. 19-T23S-R30E
EDDY COUNTY, NM
API # 30-015-28902
SPUD DATE: 4/5/96

SALTWATER DISPOSAL APPROVED WITH
ADMINISTRATIVE ORDER No. SWD-626

B. SALT 3364'
T. DELAWARE SD 3382'

8 5/8" @ 3209'
900 SX., CIRC.

T. CHERRY CANYON 4160'

4048-95', 4012-4035'

4255-80', 4165-92'

4609-4634', 4579-88', 4555-75'

CIBP @ 4700'

T. BRUSHY CANYON 5478'

2 7/8" @ 6993

CIBP @ 6525' WITH 35' OF CEMENT

7056-7099'; BRUSHY CANYON

T. BONE SPRING 7152'

5 1/2" @ 7650'
1600 SX

5 1/2" 7 7/8" = 1.1733 CU.FT./FT.
9100' FILL W/ 25% EXCESS

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES

ARTESIA DISTRICT

LABORATORY REPORT

No. W121, W122, & W123-93

TO Strata Production
648 Petroleum Building
Roswell, NM 88201

Date March 25, 1993

This report is the property of Halliburton Services and neither it nor any part thereof, nor a copy thereof is to be published or disclosed without first securing the express written approval of laboratory management. It may however, be used in the course of regular business operations by any person or concern and employees thereof receiving such report from Halliburton Services.

Submitted by _____ Date Rec. _____


Well No. _____ Depth _____ Formation _____

Field _____ County _____ Source _____

	3-25-93 Nash Draw #10	3-24-93 Nash Draw #10	3-24-93 Fresh Water
Resistivity	0.050 @ 70°	0.051 @ 70°	4.18 @ 70°
Specific Gravity ..	1.204 @ 70°	1.1200 @ 70°	1.0016 @ 70°
pH	7.0	7.2	7.0
Calcium	33,040	29,901	2,478
Magnesium	3,607	4,008	902
Chlorides	188,000	184,000	600
Sulfates	600	800	200
Bicarbonates	275	244	153
Soluble Iron	250	250	0
KCL	Trace	1/2%	
.....			
.....			

Remarks:

MAR 29 1993


 Respectfully submitted
Analyst: Eric Jacobson - Operations Engineer

HALLIBURTON SERVICES

NOTICE:

This report is for information only and the content is limited to the sample described. Halliburton express or implied, as to the accuracy of the contents or results. Any user of this report agrees Halliburton for any loss or damage, regardless of cause, including any act or omission of Halliburton, results.

VII

XI

Offset Operators
Remuda Basin "20" Federal #1 SWD
NW/NW Section 20, T23S-R30E, Eddy County, NM

Section 17: All, T23S-R30E

Devon Energy Production Company
20 N. Broadway, Suite 1500
Oklahoma City, OK 73102-8260

Section 20: NE/4, S/2 NW/4, NE/NW, T23-R30E

Chevron U.S.A. Inc.
Texaco Exploration & Production Company
Box 46513
Denver, CO 80201-6513

Section 20: NW/NW, T23S-R30E

Chevron USA Inc.
P. O. Box 363666
Houston, TX 77236

Section 19: NW/4, T23S-R30E

Chevron U.S.A. Inc.
Texaco Exploration & Production Company
Box 46513
Denver, CO 80201-6513

XTO Energy, Inc.
3000 N. Garfield, Suite 175
Midland, TX 79705

Nash Unit - Section 18: E/2, T23S-R30E

Strata Production Company (Sub Operator to Base of Bone Spring)
P. O. Box 1030
Roswell, NM 88202-1030

Murchison Oil & Gas Inc. (Operator below the Bone Spring)
Attn: Michael Daugherty
1100 Mira Vista Blvd.
Plano, TX 75093-4698

Section 19: SE/4, T23S-R30E

Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Dawn Higgins, being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

October 2	2004
_____	2004
_____	2004
_____	2004

That the cost of publication is \$ 67.01
and that payment thereof has been made and will be
assessed as court costs.

Dawn Higgins

Subscribed and sworn to before me this

5 day of October, 2004
Stephanie Gibson

My commission expires 12-13-05

Notary Public

by additional drilling.

Water to be disposed will be injected into the Bell Canyon and Cherry Canyon formation of the Delaware Mountain group at an interval between 4124 feet to 4774 feet beneath the surface.

The minimum injection rate is expected to be approximately 500 barrels of water per day. The maximum injection rate is expected to be approximately 1000 barrels of water per day.

Minimum injection pressure is expected to be approximately 300 PSI. The maximum injection pressure is expected to be approximately 825 PSI.

Any interest party may file an objection to the Application or may request a public hearing. Any objection or request for hearing must be filed with the Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87504-2088 within 15 days from the date of publication.

Strata Production
Company

By: Bruce Stubbs
P.O. Box 1030
Roswell, New Mexico
88202-1030
Telephone 505-624-2800

October 2, 2004

LEGAL NOTICE

APPLICATION FOR WATER DISPOSAL

Strata Production Company, P.O. Box 1030, Roswell, New Mexico 88202-1030, (Contact: Bruce Stubbs, 505-624-2800), has filed Application with the Oil Conservation Division, Energy, Minerals and Natural Resources Department, State of New Mexico, for Administrative Approval and authority to inject salt water into the Remuda Basin "20" Fed. #1 well located 330' FNL and 660' FWL of Section 20, Township 23 South, Range 30 East, NMPM, Eddy County, New Mexico.

The purpose of the water injection well is to dispose of salt water produced from the Nash Draw Delaware field as currently designated by the Oil Conservation Division and as may be extended

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Rever Energy Prod. Company
30 N. Broadway, Suite 1500
Oklahoma City, OK 73104-8260

COMPLETE THIS SECTION ON DELIVERY

A. Signature *X* *Harfield* ☐ Agent ☐ Addressee

B. Received by (Printed Name) _____ C. Date of Delivery _____

☒ Is delivery address different from item 1? ☐ Yes
if YES, enter delivery address below: _____

3. Service Type ☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

7002 0860 0004 9561 3977

PS Form 3811, August 2001

Domestic Return Receipt

2ACPRI-03-Z-098

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Charm USA Inc.
P.O. Box 363666
Houston, Texas 77064

COMPLETE THIS SECTION ON DELIVERY

A. Signature *X* *McLaren* ☐ Agent ☐ Addressee

B. Received by (Printed Name) _____ C. Date of Delivery _____

☒ Is delivery address different from item 1? ☐ Yes
if YES, enter delivery address below: _____

3. Service Type ☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number
(Transfer from service label)

7002 0860 0004 9561 4028

PS Form 3811, August 2001

Domestic Return Receipt

2ACPRI-03-Z-098

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

X 20 Energy, Inc.
3000 N. Harpelle, Suite 175
Midland, TX 79705

2. Article Number

(Transfer from service label)

PS Form 3811, August 2001

Domestic Return Receipt

7002 0860 0004 9561 4011

2ACPRI-03-Z-098

COMPLETE THIS SECTION ON DELIVERY

A. Signature

Kathy Donaghy Agent ☒ Agent ☐ Addressee

B. Received by (Printed Name) *KATHY DONAGHY* C. Date of Delivery *9-27-01*D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Yates Petroleum Corporation
105 S. 4th Street
Artesia, NM 88210
Attn: Dave Boreau

2. Article Number

(Transfer from service label)

PS Form 3811, August 2001

Domestic Return Receipt

7002 0860 0004 9561 3991

2ACPRI-03-Z-098

COMPLETE THIS SECTION ON DELIVERY

A. Signature

Kathy Donaghy Agent ☒ Agent ☐ Addressee

B. Received by (Printed Name) *KATHY DONAGHY* C. Date of Delivery *9-27-01*D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Murchison Oil & Gas Company
Attn: Michael Daugherty
1100 Mira Vista Blvd.
Plano, TX 75093-4698

COMPLETE THIS SECTION ON DELIVERY

- A. Signature [Signature] ☐ Agent ☐ Addressee
- B. Received by [Signature] Date of Delivery 9-27-01
- C. Is delivery address different from item 1? ☐ Yes ☐ NO
- D. If YES, enter delivery address below:



3. Service Type ☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.
4. Restricted Delivery? (Extra Fee) ☐ Yes ☐ NO

2. Article Number (Transfer from service label) **7002 0860 0004 9561 4004**

PS Form 3811, August 2001 Domestic Return Receipt 2ACPRI-03-Z-098

EXISTING

PROPOSED

14 3/4" HOLE

T. SALT 410'

11 3/4" @ 406'
400 SX.
CIRC.

REMUDA BASIN 20 FED. #1
330' FNL & 660' FWL
SEC. 20-T23S-R30E
EDDY COUNTY, NM
API # 30-015-29549
SPUD DATE: 4/29/97

CL

CL

B. SALT 1985'

11" HOLE

T.O.C. @ +/- 3000'

DELAWARE SD 3490'

8 5/8" @ 3400'
900 SX., CIRC.

LOAD ANNULUS WITH
PACKER FLUID

2 7/8" PLASTIC COATED TUBING

5 1/2" NICKLE PLATED PACKER
SET @ +/- 4000'

CHERRY CANYON 4266'

MANZANITA 4460'

7 7/8" HOLE

PERF. 4124-36', 4140-48',
4180-90', 4196-4212', 4296-4308'
4380-90', 4414-20', 4540-48'
4572-82', 4594-4603', 4614-20'
4634-46', 4682-90', 4696-4712'
4738-74', 1 JSPF, 170 SHOTS

ACIDIZE W/ 5000 GALS.
15% NEFE ACID + BALLS
FRAC W/ 60,000 GALS. +
100,000 # 16-30 SAND

SET CIBP @ 4950'
W/ 35' CEMENT

BRUSHY CANYON 5600'

6608-6612', 6616-20', 6702-06'

SET CIBP @ 6575'
W/ 35' CEMENT

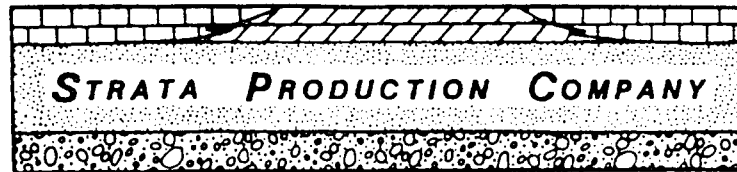
7162-66', 7194-7204', 7216-7234', 7240-7242',

BONE SPRING 7250'

5 1/2" @ 7500'
700 SX.
5 1/2" X 7 5/8" = .1733 CU. FT. / FT.
+/- 4500 FT. OF FILL

DUE
5014
1

POST OFFICE DRAWER 1030
ROSWELL, NM 88202-1030



TELEPHONE (505) 622-1127
FACSIMILE (505) 623-3533

200 WEST FIRST STREET, ROSWELL PETROLEUM BUILDING, SUITE 700
ROSWELL, NEW MEXICO 88203

October 22, 2004

CERTIFIED MAIL - RETURN RECEIPT REQUESTED
#7004 0750 0002 4669 7753

New Mexico Oil Conservation Division
Attn: Mr. Will Jones
1220 South Saint Frances Drive
Santa Fe, NM 87505

RE: C-108 Application for Authorization to Inject
Remuda Basin "20" Federal #1
330' FNL & 660' FWL
Section 20-23S-30E
Eddy County, NM

Dear Mr. Jones,

Per your telephone call with Bruce Stubbs on October 13th, please find attached a copy of the existing and proposed well bore diagram on the Remuda Basin "20" Federal #1 well. Also attached is a copy of the amended legal notice of the Application for Water Disposal and return receipt from the Bureau of Land Management.

If you have any questions concerning the above or need further documents please contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Kelly M. Britt".

Kelly M. Britt
Production Records

Attachments

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Brian & Jane Management
2909 W. 2nd Street
Roswell, NM 88201

COMPLETE THIS SECTION ON DELIVERY

A. Signature



☐ Agent

B. Received by (Printed Name)

☐ Addressee

C. Date of Delivery
10/14/14

D. Is delivery address different from item 1? ☐ Yes ☐ No

If YES, enter delivery address below:

3. Service Type

☒ Certified Mail ☐ Express Mail

☐ Registered ☐ Return Receipt for Merchandise

☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number

(Transfer from service label)

7002 0860 0004 9561 4080

PS Form 3811, August 2001

Domestic Return Receipt

2ACPR-03-Z-096

Affidavit of Publication

State of New Mexico,
County of Eddy, ss.

Dawn Higgins, being first duly sworn, on oath says:

That she is Business Manager of the Carlsbad Current-Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof on the date as follows, to wit:

<u>October 19</u>	<u>2004</u>
<u> </u>	<u>2004</u>
<u> </u>	<u>2004</u>
<u> </u>	<u>2004</u>

That the cost of publication is \$ 70.69
and that payment thereof has been made and will be
assessed as court costs.

Dawn Higgins

Subscribed and sworn to before me this

19 day of October, 2004

Stephanie Dobson

My commission expires 12-13-05

Notary Public

October 19, 2004

LEGAL NOTICE

AMENDED

APPLICATION FOR WATER DISPOSAL

Strata Production Company, P.O. Box 1030, Roswell, New Mexico 88202-1030, Contact: Bruce Stubbs, 505-624-2800, has filed Application with the Oil Conservation Division, Energy, Minerals and Natural Resources Department, State of New Mexico, for Administrative Approval and authority to inject salt water into the Remuda Basin "20" Fed. #1 well located 330' FNL and 660' FWL of Section 20, Township 23 South, Range 30 East, NMPM, Eddy County, New Mexico.

The purpose of the water injection well is to dispose of salt water produced from the Nash Draw Delaware field as currently designated by the Oil Conservation Division and as may be extended by additional drilling.

Water to be disposed will be injected into the Bell Canyon and Cherry Canyon formation of the Delaware Mountain group at

an interval between 4124 feet to 4774 feet beneath the surface.

The minimum injection rate is expected to be approximately 500 barrels of water per day. The maximum injection rate is expected to be approximately 1000 barrels of water per day.

Minimum injection pressure is expected to be approximately 300 PSI. The maximum injection pressure is expected to be approximately 825 PSI.

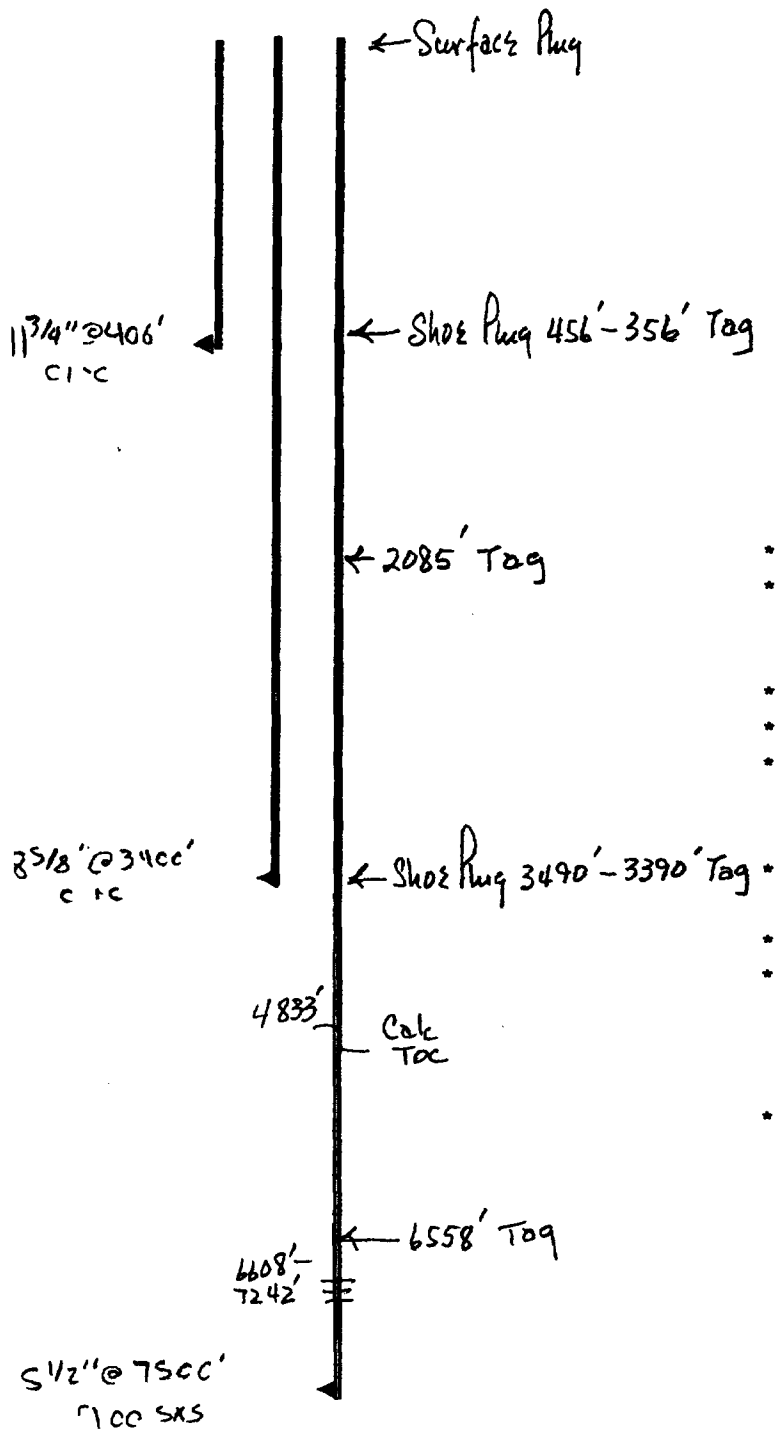
Any interest party may file an objection to the Application or may request a public hearing. Any objection or request for hearing must be filed with the Oil Conservation Division, 1220 South St. Francis Drive, Santa Fe, New Mexico 87505 within 15 days from the date of publication.

Strata Production
Company

By: **Kelly Britt for
Bruce Stubbs**
P. O. Box 1030
Roswell, New Mexico
88202-1030
Telephone
505-642-2800

TOPS

Salade	410 /
B Salt	1985 /
Delaware	3490 /
Bone Springs	7250 /



- * **Contact OCD 24 hrs. prior to any work done.**
- * **Salt gel mud consisting of 10# brine with 25# of gel per barrel must be placed between each plug.**
- * **Install dry hole marker as per Rule 202.B.2**
- * **Plugs are to be set from point indicated up.**
- * **Plugs must not be less than 100' or 25 Sacks of cement, whichever is greater, unless specifically indicated.**
- * **Shoe and stub plugs will be 50' above and below shoe or stub and tagged.**
- * **Surface plug will be from 0' - 60'**
- * **Where plugs are required, cement must be placed inside and outside of all casing string(s) in the correct footage or sacks required, if no cement exists.**
- * **Plugs to be tagged will be indicated.**

h

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.

Use "APPLICATION FOR PERMIT --" for such proposals.

SUBMIT IN TRIPLICATE

1. Type of Well: ☒ OIL WELL ☐ GAS WELL ☐ OTHER

2. Name of Operator

TEXACO EXPLORATION & PRODUCTION INC.

3. Address and Telephone No.

P.O. Box 2100, Denver Colorado 80201

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

Unit Letter D : 330 Feet From The NORTH Line and 660

WEST Line Section 20 Township 23-S Range 30-E

5. Lease Designation and Serial No.
NM 0543827

6. If Indian, Alottee or Tribe Name

7. If Indian, Agreement Designation

8. Well Name and Number

REMUDA BASIN '20' FEDERAL

9. API Well No.

10. Field and Pool, Exploratory Area

NASH DRAW BRUSHY CANYON, UNDESG. UP. BR

11. County or Parish, State

EDDY, NM

12. Check Appropriate Box(s) To Indicate Nature of Notice, Report, or Other Data

TYPE OF SUBMISSION

- ☐ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment Notice

TYPE OF ACTION

- ☐ Abandonment
☐ Recompletion
☐ Plugging Back
☐ Casing Repair
☐ Altering Casing
☒ OTHER: SPUD, SURF, INT, PROD CSG

- ☐ Change of Plans
☐ New Construction
☐ Non-Routine Fracturing
☐ Water Shut-Off
☐ Conversion to Injection
☐ Dispose Water

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

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

- PETERSON RIG #2 SPUD 14.750 INCH HOLE @ 10:00 PM 04-29-97. DRILLED TO 406'.
- RAN 10 JOINTS OF 11 3/4 INCH, 42#, WC-50, STC CASING SET @ 4060'. RAN 5 CENTRALIZERS.
- DOWELL CEMENTED WITH 400 SACKS CLASS C W/ 2% CACL2 (14.8 PPG, 1.34 CF/S). PLUG DOWN @ 11:30 AM 04-30-97. CIRCULATED 149 SACKS.
- NU BOP & TESTED TO 1000#. TESTED CASING TO 1200# FOR 30 MINUTES FROM 9:45 AM TO 10:15 AM 05-01-97.
- WOC TIME 24 HOURS FROM 11:30 AM 04-30-97 TO 11:30 AM 05-01-97.
- DRILLING 11 INCH HOLE.
- DRILLED 11 INCH HOLE TO 3402'. 05-05-97.
- RAN 12 JTS OF 8 5/8", 32# J-55 & 27 JTS OF 8 5/8" 32# CF-50, & 40 JTS OF 8 5/8" 24# WC-50, LTC CSG SET @ 3397'.
- DOWELL CEMENTED W/ 800 SACKS 35/65 POZ CLASS H W/ 6% GEL, 5% SALT, 1/4# FLOCELE (12.4 PPG, 2.14 CF/S). F/B 100 SACKS CLASS H NEAT (15.6 PPG, 1.18 CF/S). PLUG DOWN @ 11:45 AM. 05-06-97. CIRCULATED 120 SACKS.
- NU BOP AND TESTED TO 3000#. TESTED CASING TO 1000# FOR 30 MINUTES FROM 9:45 AM TO 10:15 AM 05-07-97.
- WOC TIME 22 HOURS FROM 11:45 AM 05-06-97 TO 9:45 AM 05-07-97.
- DRILLING 7.875 INCH HOLE.
- DRILLED 7.825 INCH HOLE TO 7800'. 05-14-97.
- RAN 172 JOINTS OF 5 1/2 INCH, 17#, WC-50, LTC CASING SET @ 7800'. DV # 5014'. NO CMT OFF DV.
- DOWELL CEMENTED: 600 SACKS 35/65 POZ CLASS H W/ 6% GEL, 5% SALT, 1/4# FLOCELE (12.8 PPG, 1.94 CF/S). F/B 100 SACKS CLASS H NEAT (15.6 PPG, 1.18 CF/S). PLUG DOWN @ 7:30 AM 05-14-97.
- ND. RELEASE RIG @ 2:00 PM 05-14-97.
- PREP TO COMPLETE.

(ORIG. SGD) DAVID R. GLASS

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

SIGNATURE C.P. Basham/SDH TITLE Eng. Assistant

TYPE OR PRINT NAME Sheilla D. Reed-High

(This space for Federal or State office use)

APPROVED

CONDITIONS OF APPROVAL, IF ANY:

TITLE

DATE

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