

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

5. LEASE DESIGNATION AND SERIAL NO.  
**U-7206**

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
**River Bend**

8. FARM OR LEASE NAME

9. WELL NO.  
**RBU 13-11F**

10. FIELD AND POOL, OR WILDCAT  
**Wildcat**

11. SEC., T., B., M., OR BLK. AND SURVEY OR AREA  
**Sec 11, T. 10 S., R. 20 E.**

12. COUNTY OR PARISH  
**Uintah**

13. STATE  
**UT**

1a. TYPE OF WORK  
**DRILL  DEEPEN  PLUG BACK**

b. TYPE OF WELL  
OIL WELL  GAS WELL  OTHER  SINGLE ZONE  MULTIPLE ZONE

2. NAME OF OPERATOR  
**MAPCO Production Co.**

3. ADDRESS OF OPERATOR  
**1643 Lewis Ave., Suite 202, Billings, Mt 59102**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)  
At surface **315' FWL & 96' FSL, SE SW, Sec. 11, T. 10 S., R. 20 E.**  
At proposed prod. zone **Same SW**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE  
**10 miles south of Ouray, Utah**

15. DISTANCE FROM PROPOSED\* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) **96'**

16. NO. OF ACRES IN LEASE **DIVISION OF OIL, GAS & MINING**

17. NO. OF ACRES ASSIGNED TO THIS WELL **320**

18. DISTANCE FROM PROPOSED LOCATION\* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. **4400'**

19. PROPOSED DEPTH **6480' Wildcat Butte**

20. ROTARY OR CABLE TOOLS  
**Rotary**

21. ELEVATIONS (Show whether DF, RT, GR, etc.)  
**5009' GL**

22. APPROX. DATE WORK WILL START\*  
**Aug. 15, 1981**

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12-1/4"	8-5/8"	24#	400'	Cmt to surface
7-7/8"	4-1/2"	11.6#	6480'	Cmt to surface

1. Drill a 12-1/4" hole with an air rig to 400'. Run 8-5/8", 24# K-55 casing and cement to surface.
2. NU and pressure test BOP stack (see Fig. 1) prior to drilling out below surface pipe.
3. Test pipe rams daily and blind rams as possible.
4. Drill a 7-7/8" hole to 6480' with a salt water mud system. No cores are planned. DST's will be run as needed to evaluate unexpected shows.
5. Run logs. Set 4-1/2", 11.6#, K-55 and N80 casing as dictated by drilling shows, tests and logs. Release drilling rig. Casing program may be modified to provide added burst strength if needed for frac program.
6. Primary zones of interest are the Upper Wasatch and Chapita Wells sections of the Wasatch.
7. RU completion rig to test in a normal, prudent manner, all zones that indicate a potential for economically, recoverable reserves.  
(See back for log tops)

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM. If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Richard Baumann TITLE Engr. Tech. DATE 4-30-81

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY \_\_\_\_\_ TITLE \_\_\_\_\_

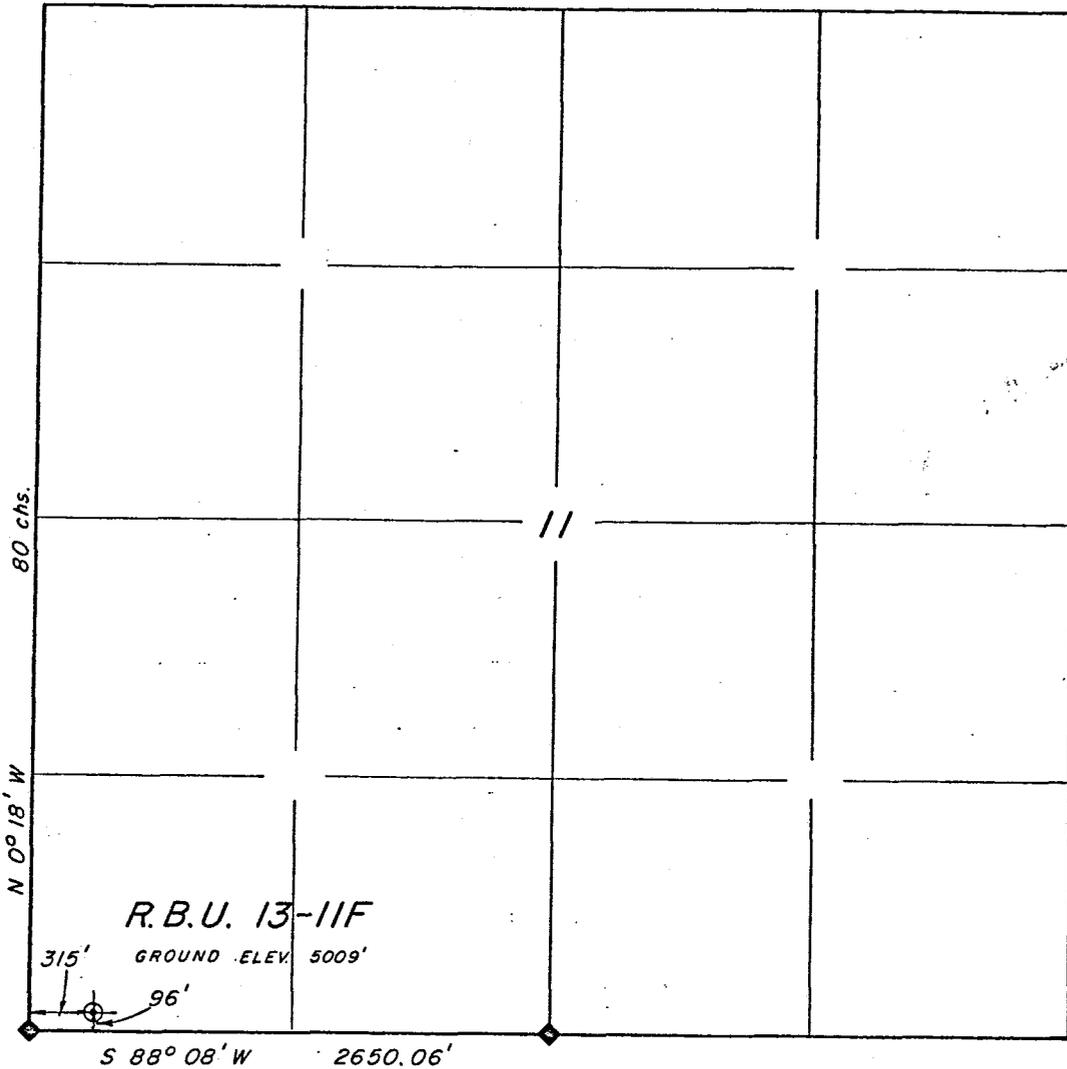
CONDITIONS OF APPROVAL, IF ANY:

**APPROVED BY THE STATE  
OF UTAH DIVISION OF  
OIL, GAS, AND MINING**  
DATE: 6-9-81  
BY: M. J. Minder

\*See Instructions On Reverse Side

**MAPCO, INC.**  
**WELL LOCATION PLAT**  
**R.B.U. 13-11F**

LOCATED IN THE SW $\frac{1}{4}$  OF THE SW $\frac{1}{4}$  OF SECTION 11, T10S, R20E, S.L.B.&M.



SCALE: 1"=1000'

Exhibit  
A.

**LEGEND & NOTES**

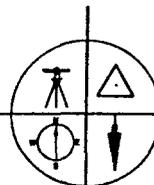
◆ FOUND ORIGINAL CORNER MONUMENTS USED FOR THIS SURVEY.

THE GENERAL LAND OFFICE PLAT WAS USED FOR REFERENCE AND CALCULATIONS.

**SURVEYOR'S CERTIFICATE**

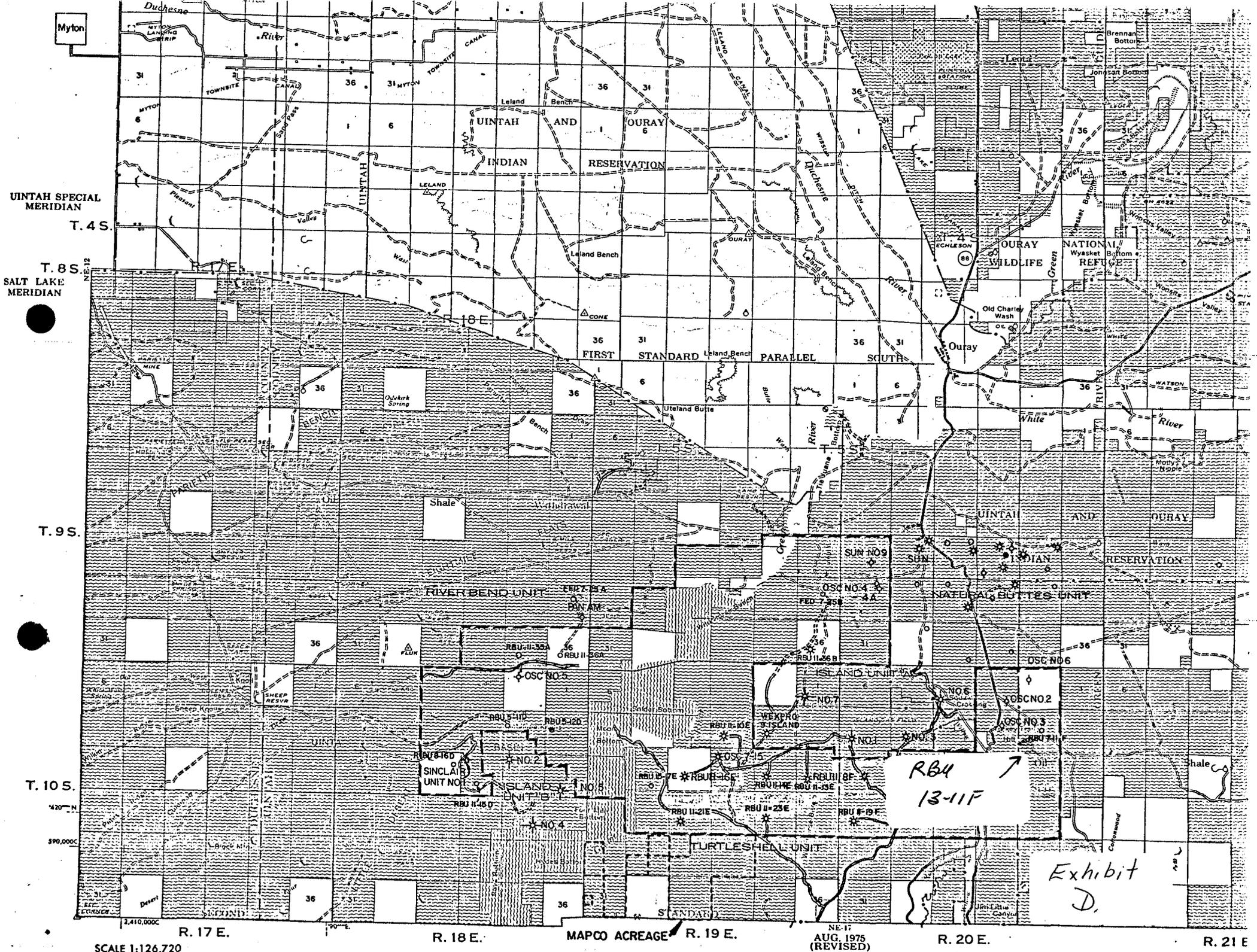
I hereby certify that this plat was prepared from field notes of an actual survey performed by me, during which the shown monuments were found or established.

*Jerry D. Allred*  
 Jerry D. Allred, Registered Land Surveyor, Cert. No. 3817 (Utah)



**JERRY D. ALLRED & ASSOCIATES**  
 Surveying & Engineering Consultants

121 North Center Street  
 P.O. Drawer C  
 DUCHESNE, UTAH 84021  
 (801) 738-5352



Myton

UINTAH SPECIAL  
MERIDIAN  
T. 4 S.

T. 8 S.  
SALT LAKE  
MERIDIAN

T. 9 S.

T. 10 S.

420' N  
390,000'

SCALE 1:126,720

R. 17 E.

R. 18 E.

MAPCO ACREAGE R. 19 E.

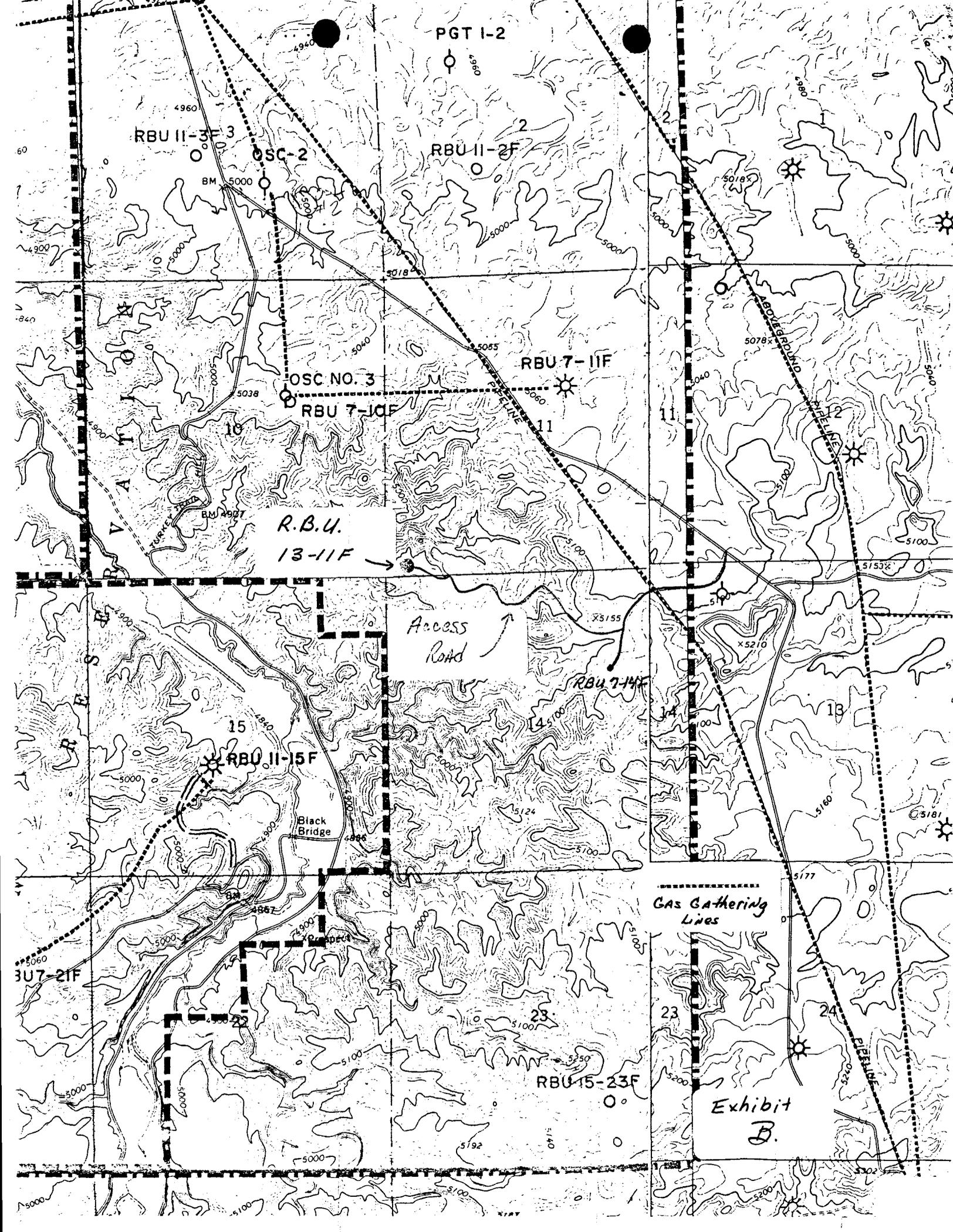
NE 17  
AUG. 1975  
(REVISED)

R. 20 E.

R. 21 E.

RB4  
13-11F

Exhibit  
D.



PGT 1-2

RBU 11-3-3

OSC-2

RBU 11-2F

OSC NO. 3

RBU 7-11F

RBU 7-10F

R.B.U.  
13-11F

Access Road

RBU 11-15F

Black Bridge

RBU 7-14F

3U7-21F

RBU 15-23F

Gas Gathering Lines

Exhibit B

TEN-POINT COMPLIANCE PROGRAM OF NTL-6  
APPROVAL OF OPERATIONS

Attached to Form 9-331C  
Company: MAPCO PRODUCTION COMPANY  
Well: RBU 13-11F  
Well Location: 315' FWL & 96' FSL  
Section 11, T. 10 S., R. 20 E.  
County: Uintah State: UT

1. Geologic Surface Formation

UINTAH

2. Estimated Important Geologic Markers

<u>Formation</u>	<u>Depth</u>
Uintah	Surface
Green River	1203'
Wasatch	4601'
Chapita Wells	5239'
Uteland Buttes	6277'

3. Estimated Depths of Anticipated Water, Oil, Gas or Minerals

<u>Formation</u>	<u>Depth</u>	<u>Remarks</u>
Chapita Wells	5239'	Gas

4. The Proposed Casing Program

<u>SIZE OF CASING</u>	<u>WEIGHT &amp; GRADE</u>	<u>SETTING DEPTH</u>	<u>QUANTITY OF CEMENT</u>
8-5/8"	24# K-55	± 400'	Cmt to Surface
4-1/2"	11.6# K-55	±6480'	Cmt to Surface

5. The Operator's Minimum Specifications for Pressure Control

See Figure #1, attached.

BOP stack has a 3000 psi working pressure. BOP's will be pressure tested before drilling casing cement plugs.

Pipe rams will be operated daily and blind rams as possible.

6. The Type and Characteristics of the Proposed Circulating Muds

The well is to be drilled with a saltwater mud system maintaining a weight of approximately 9#/gal with weighting material on location sufficient to weight-up for pressure control.

7. The Auxiliary Equipment to be Used

- 1.) Kelly cock.
- 2.) Full opening valve on floor with DP connection for use when Kelly is not in string.
- 3.) Pit volume totalizer equipment will be used.

8. The Testing, Logging, and Coring Programs to be Followed

A two (2) man mud logging unit will be in operation from surface to T.D. The following open hole logs will be run:

- 1.) GR-DLL
- 2.) FDC-CNL-Caliper

Exact logging detail and procedures will be prepared prior to reaching logging depth.

9. Any Anticipated Abnormal Pressures or Temperatures Expected

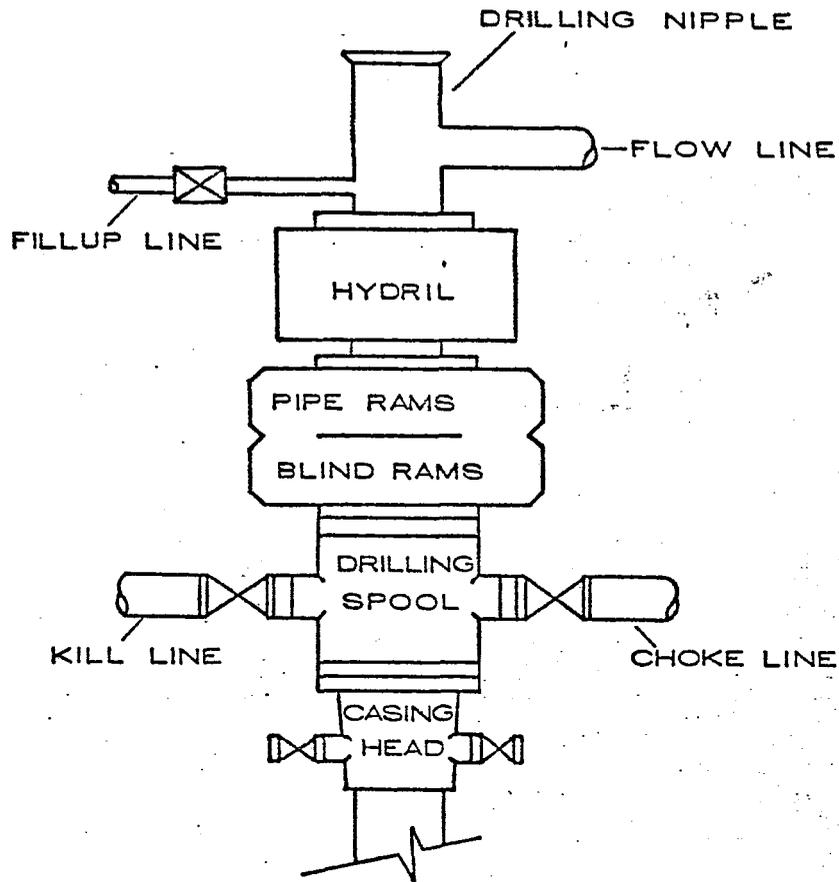
No abnormal pressures are anticipated nor is the area known for abnormal temperatures. The formations to be penetrated do not contain H<sub>2</sub>S gas.

10. The Anticipated Starting Date and Duration of the Operations

Starting Date: Aug. 15, 1981

Duration: 15 days

# BOP STACK



# CHOKER MANIFOLD

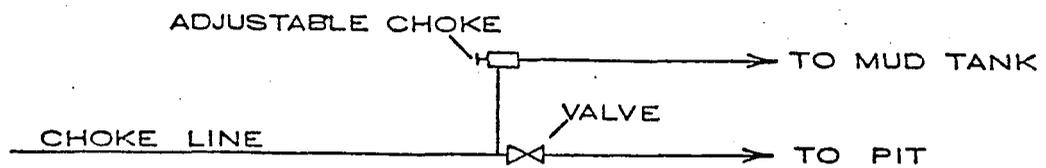


FIGURE 1

MULTI-POINT REQUIREMENTS TO ACCOMPANY APD

Attached to Form 9-331C

COMPANY: MAPCO PRODUCTION COMPANY

WELL: RBU 13-11F

WELL LOCATION: 315' FWL & 96' FSL

Section 11, T. 10 S., R. 20 E.

County: Uintah State: UT

1. Existing Roads

- A. The proposed well site and elevation plat is shown as Exhibit A.
- B. Location is as shown in Exhibit B.
- C. An access road of about 1 mile will be needed to reach the location from the existing road as shown in Exhibit B.
- D. All existing roads are shown on Exhibits B & D.
- E. There is no anticipated construction on any existing roads.

2. Planned Access Roads

1. Width: Maximum of 30' right-of-way with road bed being approximately 16'-18', and remainder of right-of-way to be used for borrow ditches.
2. Maximum grade: 8%
3. Turnouts: None
4. Drainage design: Drain ditches along either side of the road, where necessary for drainage with material from borrow ditch used to build crown of road. As per meeting with BLM, BIA & USGS on May 3, 1979. No speed curves on hills.
5. Culverts: None
6. Surface materials: Native dirt.
7. Gates, cattleguards, fence cuts: None

3. Location of Existing Wells

All existing wells known in the area are shown directly on Exhibit B within the one-mile radius.

1. Water wells: None
2. Abandoned wells: One OSC #3
3. Temporarily abandoned wells: None
4. Disposal wells: None
5. Drilling wells: None
6. Producing wells: Two RBU 7-11F, RBU 11-15F
7. Shut-in wells: None
8. Injection wells: None
9. Monitoring or observation wells: None

4. Location of Existing and/or Proposed Facilities

A. The location of existing and/or proposed facilities, if any, owned or controlled by lessee/operator within the 1-mile radius will be shown on Exhibit B.

1. Tank batteries: None
2. Production facilities: RBU 7-11F, RBU 11-15F
3. Oil gathering lines: None
4. Gas gathering lines: -----

5. Injection Lines: None
6. Disposal Lines: None

B. It is contemplated that, in the event of production, all new facilities will be easily accommodated on the drill pad on the solid base of cut and not placed on the fill areas.

1. No flagging then will be needed.

2. The dimensions of the production facilities and the location of facilities is drafted on Exhibit C. If production is obtained, then the unused areas will be restored as later described.
  3. Concrete as needed and any gravels needed will be purchased from private sources.
  4. All pits will be fenced to minimize any hazard to sheep, cattle, antelope and other animals that graze the area. Flagging material will be used as needed, if water or other fluid is produced.
- C. Rehabilitaion, whether the well is productive or dry, will be accomplished as soon as possible in those areas already described, and in accordance with Item 10 following.

5. Water Supply

- A. Water will be hauled by truck from privately permitted locations on existing and proposed roads.
- B. No pipelines are anticipated. Hauling will be on the road(s) shown in Exhibit D.
- C. No water well is anticipated to be drilled at this time.

6. Source of Construction Materials

- A. No construction material, insofar as drilling, will be needed.
- B. No construction materials will be obtained from Federal or Indian land.
- C. The native materials that will be used in the construction of this location site and access road will consist of sandy-clay soils and sandstone and shale materials gathered in actual construction of the road and location.
- D. Access roads crossing federal lands are shown under Items 1 & 2.

7. Handling Waste Disposals

1. Drill cuttings will be buried in the reserve pit when covered.
2. Drilling fluids will be handled in the reserve pit.
3. Any produced fluids during drilling tests or while making production tests will be collected in reserve pit.

4. Any sewage will be covered or removed and chemical toilets will be provided.
5. Garbage and other waste material will be enclosed in a wire mesh container, and then disposed of in an approved waste disposal facility.
6. After the rig moves out, all materials will be cleaned up and no adverse materials will be left on location. Any dangerous open pit will be fenced or covered.

8. Ancillary Facilities

No proposed airstrip, camp, or other facility will be constructed during the drilling or completion of this well.

9. Well Site Layout

1. Exhibit E is the drill pad layout on a scale of 1" = 40'.
2. & 3. Exhibit E is a layout of the drilling rig, pits, and burn pits. Parking and trailers will be along the NW side of the area as shown. The access road will be from the NE. Soil stockpiles are also shown on Exhibit E.
4. The reserve pit will not be lined. Steel mud pits may be used, at least in part, during drilling operations.

10. Plans for Restoration

1. Backfilling, leveling and gentle sloping is planned and will be accomplished as soon as possible after plugging or setting of production casing. Waste disposal and spoils materials will be buried or hauled away immediately after operations cease from drilling and/or completion.
2. The soil banked materials will be spread over the area and gentle sloping or contouring to meet the existing terrain. Revegetation will be by planting of native vegetation to the area or some other combination as recommended by The Bureau of Land Management.  
  
The access road to the drill pad will be revegetated, if needed. Any damage to present existing roads will be repaired as needed.
3. Prior to rig release, the pits will be fenced on the fourth side and so maintained until cleanup is accomplished. The reserve pit will have fencing on three sides during drilling.

4. If any oil is on the pits, and is not immediately removed after operations cease, then the pit will be flagged overhead to keep birds and fowl out.
5. The commencement of rehabilitation operations will begin as soon as possible after drilling ceases. Planting will be planned as suggested by BLM.

11. Other Information

1. Topography: See notes on exhibit E.

Soil Characteristics and Geologic features: The soils of this semi-arid area are of the Uinta and Duchesne River formation (The Fluvial Sandstone & Mudstone) from the Eocene Epoch and Quaternary Epoch (gravel surfaces) and the visible geologic structures consists of light brownish-gray clays (OL) to sandy soils (SM-ML) with poorly graded gravels and shales with out crops of rock (sandstone, mudstone, conglomerates and shales).

Flora: Areas of sagebrush, rabbitbrush, some grasses and cacti, and large areas of bare soils devoid of any growth.

Fauna: Is sparse but consists predominantly of the mule deer, coyotes, pronghorn antelope, rabbits, and varieties of small ground squirrels and other types of rodents, and various reptiles common to the area. Birds of the area are raptors, finches, ground sparrows, mag pies, crows and jays.

2. Type of surface use activity: Primary purpose is grazing domestic livestock.

Surface ownership of all involved lands: BLM

3. Proximity of usable water (Shown on Exhibit D): Private Source

Occupied dwellings (if any, shown on Exhibit B): None

Archaeological or historical sites (if any, shown on Exhibit B):  
None is needed. Please refer to AERC paper No. 18. A 40-acre transect was done on the area in question.

12. Lessee's or Operator's Representative

James D. Holliman  
Manager of Operations  
MAPCO Production Company  
Alpine Executive Center  
1643 Lewis Ave., Suite 202  
Billings, Montana 59102

or

Darwin Kulland  
District Superintendent  
MAPCO Production Company  
P.O. Box 1360  
Roosevelt, Utah 84066

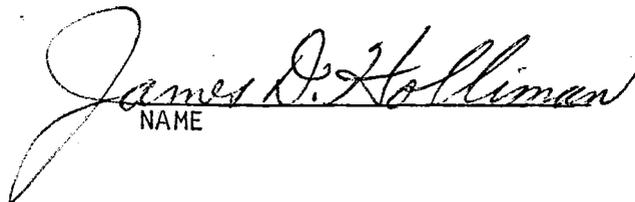
Phone: (406) 248-7406  
or  
(406) 656-8435

Phone : (801) 722-4521

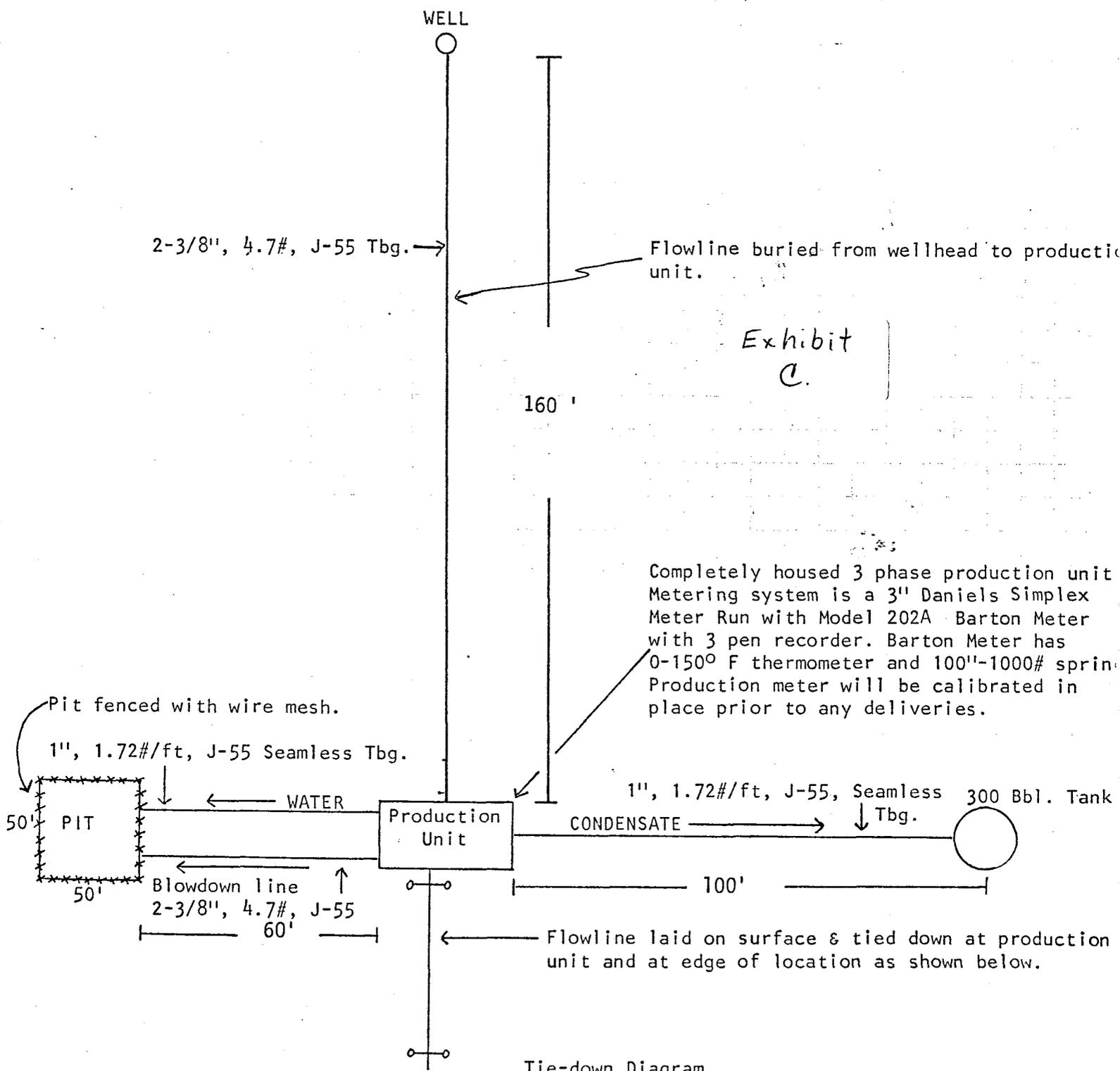
13. Certification

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the condition which presently exists; that the statements made in this plan are, to the best of my knowledge true and correct; and, that the work associated with the operations proposed herein will be performed by MAPCO PRODUCTION COMPANY and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

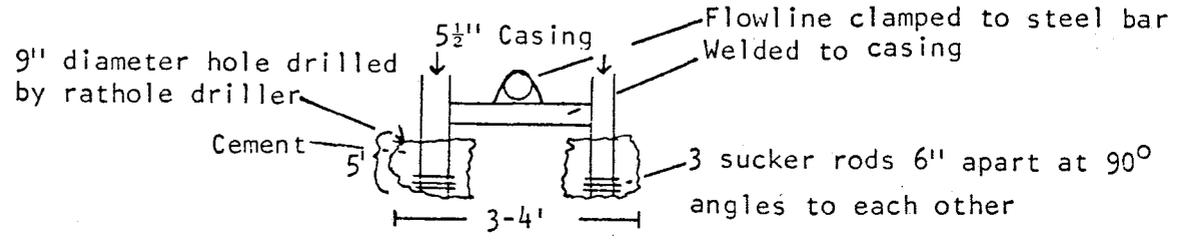
April 30, 1981  
DATE

  
NAME

Manager of Operations  
TITLE



Tie-down Diagram



\*\* FILE NOTATIONS \*\*

DATE: 5/29/81  
OPERATOR: Mapco Production Co.  
WELL NO: RBU 13-11F  
Location: Sec. 11 T. 10S R. 20E County: Wintah

File Prepared:  Entered on N.I.D:   
Card Indexed:  Completion Sheet:

API Number 43-047-30973

CHECKED BY:

Petroleum Engineer: M. J. Minder 6-9-81

Director: \_\_\_\_\_

Administrative Aide: In RBU - ok on budrys. for gas well. all forms. Unitized

APPROVAL LETTER:

Bond Required:  Survey Plat Required:   
Order No. \_\_\_\_\_ O.K. Rule C-3   
Rule C-3(c), Topographic Exception - company owns or controls acreage within a 660' radius of proposed site   
Lease Designation  Plotted on Map   
Approval Letter Written   
Hot Line  P.I.

**DUPLICATE**  
UNITED STATES

SUBMIT IN THIS COPY  
(Other Instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R1425.

DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK  
 DRILL       DEEPEN       PLUG BACK

b. TYPE OF WELL  
 OIL WELL       GAS WELL       OTHER       SINGLE ZONE       MULTIPLE ZONE

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 MAPCO Production Co.

3. ADDRESS OF OPERATOR  
 1643 Lewis Ave., Suite 202, Billings, Mt 59102

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 At proposed prod. zone Same

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17. NO. OF ACRES ASSIGNED TO THIS WELL 320

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19. PROPOSED DEPTH 6480'

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21. ELEVATIONS (Show whether DF, RT, GR, etc.) 5009' GL

22. APPROX. DATE WORK WILL START\* Aug. 15, 1981

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7. UNIT AGREEMENT NAME  
 River Bend

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 Sec 11, T. 10 S., R. 20 E.

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 Uintah UT

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IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. SIGNED Richard Baumann TITLE Engr. Tech. DATE 4-30-81

(This space for Federal or State office use)

PERMIT NO. \_\_\_\_\_ APPROVAL DATE \_\_\_\_\_

APPROVED BY [Signature] FOR E. W. GUYNN DISTRICT ENGINEER DATE JUN 10 1981

CONDITIONS OF APPROVAL, IF ANY:

CONDITIONS OF APPROVAL ATTACHED TO OPERATOR'S COPY

NOTICE OF APPROVAL

\*See Instructions On Reverse Side

FLARING OR VENTING OF GAS IS SUBJECT TO NTL 4-A DATED 1/1/80

*State of Utah*

United States Department of the Interior  
Geological Survey  
2000 Administration Bldg.  
1745 West 1700 South  
Salt Lake City, Utah 84104

NEPA CATEGORICAL EXCLUSION REVIEW

PROJECT IDENTIFICATION

Operator Mapco Production Company  
Project Type Gas Well  
Project Location 315' FWL 96' FSL Section 11, T. 10S, R. 20E (SW SW)  
Well No. RBU #13-11F Lease No. U-7206  
Date Project Submitted May 4, 1981

FIELD INSPECTION

Date May 21, 1981

Field Inspection  
Participants

Greg Darlington USGS, Vernal

Cory Bodman BLM, Vernal

Darwin Kulland Mapco Production

Related Environmental Documents: Unit Resource Analysis, Seep Ridge Planning  
Unit, BLM, Vernal

I have reviewed the proposal in accordance with the categorical exclusion review guidelines. This proposal would not involve any significant effects and, therefore, does not represent an exception to the categorical exclusions.

June 5, 1981  
Date Prepared

Gregory Darlington  
Environmental Scientist

I concur  
JUN 08 1981  
Date

W.P. Montee FOR E. W. GUYNN  
District Supervisor DISTRICT ENGINEER

Typing In 6-5-81 Typing Out 6-5-81

PROPOSED ACTIONS:

Mapco Production Company plans to drill the RBU #13-11 F well, a 6480' gas test of the Chapita Wells formation. An access road of about 1.0 mile length will be required. A pad 190' by 400' and a reserve pit with sides 175', 190', 215', and 100' are planned for the location. About 4.5 acres of new surface disturbance will be involved in the planned project.

RECOMMENDED APPROVAL CONDITIONS:

The operator agrees to accept and adhere to the following conditions in addition to the plans outlined in the APD:

1. BLM Stipulations
2. Lease Stipulations
3. Provide adequate logs for the identification of other minerals as requested in the Mineral Evaluation Report and Mining Report.

FIELD NOTES SHEET

Date of Field Inspection: May 21, 1981

Well No.: 13-11 F

Lease No.: V-7206

Approve Location: ✓

Approve Access Road: ✓

Modify Location or Access Road: Very close to a section line and 96' within 315 feet of the reservation.

1 mile of access road irregular shaped pit as in layout diagram

Evaluation of Criteria for Categorical Exclusion

1. Public Health and Safety
2. Unique Characteristics
3. Environmentally Controversial Items
4. Uncertain and Unknown Risks
5. Establishes Precedents
6. Cumulatively Significant
7. National Register Historic Places
8. Endangered/Threatened Species
9. Violate Federal, State, Local, or Tribal Laws

If this project is not eligible for Categorical Exclusion circle the numbers of the above criteria requiring the preparation of an EA.

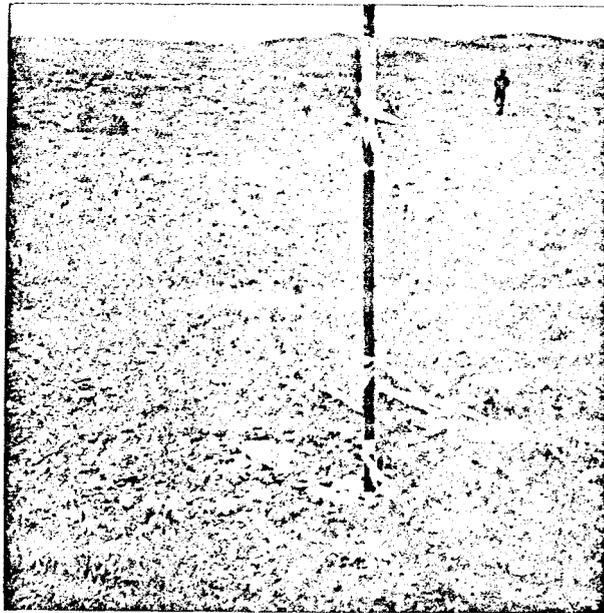
Comments and special conditions of approval discussed at onsite: (include local topography) Plans adequate

Road takes off from 7-14 F well Close to Reservation boundary.



CATEGORICAL EXCLUSION REVIEW COMMON REFERENCE LEGEND

1. Surface Management Agency Input
2. Reviews Reports, or information received from Geological Survey  
(Conservation Division, Geological Division, Water Resource Division,  
Topographic Division)
3. Lease Stipulations/Terms
4. Application Permit to Drill
5. Operator Correspondence
6. Field Observation
7. Private Rehabilitation Agreement
8. *USGS conditions of approval.*



*North View  
Mapco 13-11F*



# United States Department of the Interior

IN REPLY REFER TO

T & R  
U-802

BUREAU OF LAND MANAGEMENT  
VERNAL DISTRICT OFFICE  
170 South 500 East  
Vernal, Utah 84078

May 22, 1981

Ed Guynn, District Engineer  
USGS, Conservation Division  
2000 Administration Building  
1745 West 1700 South  
Salt Lake City, Utah 84104

Re: Mapco Production Co.  
Well #13-11F Sec 11,  
T10S R20E  
Well #1-23E Sec 23,  
T10S R19E  
Well #1-10E Sec 10,  
T10S R19E  
Well #4-19F Sec 19,  
T10S R20E

Dear Mr. Guynn:

A joint examination was made on May 21, 1981, of the above referenced well site locations and proposed access roads. We feel that the surface use and operating plans are adequate with the following stipulations:

1. Construction and maintenance of roads, rehabilitation of disturbed areas, and construction of pipeline routes, shall be in accordance with surface use standards as set forth in the brochure, "Surface Operating Standards for Oil and Gas Exploration and Development."
2. Traveling off access road rights-of-way will not be allowed. The maximum width of access road (both existing and planned) will be 30 feet total disturbed area, except where backslopes and fills require additional area. Turnouts will not be required. The road will be crowned and bar ditches will be installed where necessary.
3. It was agreed upon by all parties present that the applied for pad sizes are of adequate size to handle all drilling and fracturing operations.
4. The BLM must be contacted at least 24 hours prior to any construction activities.



5. The BLM will be contacted at least 24 hours prior to any rehabilitation activities. The operator may be informed of any additional needed seeding and restoration requirements.
6. Burn pits will not be constructed. There will be no burning or burying of trash or garbage at the well sites. Refuse must be contained and hauled to an approved disposal site.
7. A wire mesh or net type of fence, topped with at least one strand of barbed wire, will be used around the reserve pits.
8. The top 2-4 inches of topsoil will be gathered and stockpiled as addressed in the applicants A.P.D.
9. All production facilities shall be painted with an earth tone color so that said facilities will blend in with the surrounding environment.

We have received a cultural resource report. The proposed activity does not jeopardize any cultural resources.

The proposed activity does not jeopardize listed, threatened or endangered flora/fauna or their habitat.

The BLM representative will be Cory Bodman, 789-1362.

Sincerely,

*For Karl J. Wright*  
Dean L. Evans  
Area Manager  
Bookcliffs Resource Area

cc:  
USGS, Vernal

U. S. GEOLOGICAL SURVEY - CONSERVATION DIVISION

FROM: DISTRICT GEOLOGIST, SALT LAKE CITY, UTAH

TO: DISTRICT ENGINEER, O&G, SALT LAKE CITY, UTAH

SUBJECT: APD MINERAL EVALUATION REPORT

LEASE NO. U-7206

OPERATOR: Mapco

WELL NO. RBU 13-11F

LOCATION: SW 1/4 SW 1/4 SW 1/4 sec. 11, T. 10S., R. 20E, SLM

Uintah County, Utah

1. Stratigraphy:

Uintah	surface
Green River	1200'
Wasatch	4600'
<u>TD</u>	<u>6480'</u>

2. Fresh Water:

Fresh water may be present in the Uintah and in upper Green River sandstones.

3. Leasable Minerals:

Oil shale: Green River (~1200' to ~3000'). The Mahogany zone should occur at ~2000'.

Saline Minerals: Green River. These may occur as pods in a 800' rock interval immediately overlying the Mahogany

Oil/Gas: lower Green River, Wasatch.

4. Additional Logs Needed: Adequate

5. Potential Geologic Hazards: None expected

6. References and Remarks:

Signature: Gregory W. Wood Date: 5-7-81

June 18, 1981

Mapco Production Co.  
1643 Lewis Ave., Suite #202  
Billings, Montana 59102

RE: WELL NO. RIVER BEND UNIT #13-11F  
Sec. 11, T. 10S, R. 20E, SW SW  
Uintah County, Utah

Insofar as this office is concerned, approval to drill the above referred to gas well is hereby granted in accordance with Section 40-6-11, Utah Code Annotated 1953; and predicated on Rule A-3, General Rules and Regulations and Rules of Practice and Procedure.

Should you determine that it will be necessary to plug and abandon this well, you are hereby requested to immediately notify the following:

MICHAEL T. MINDER - Petroleum Engineer  
Office: 533-5771  
Home: 876-3001

Enclosed please find Form OGC-8-X, which is to be completed whether or not water sands (aquifers) are encountered during drilling. Your cooperation in completing this form will be appreciated.

Further, it is requested that this Division be notified within 24 hours after drilling operations commence, and that the drilling contractor and rig number be identified.

The API number assigned to this well is 43-047-30973

Sincerely,

DIVISION OF OIL, GAS, AND MINING

*M. T. Minder*  
Michael T. Minder  
Petroleum Engineer

NTM/ko  
cc:

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
(FORM 9-329)  
(2/76)  
OMB 42-RO 356

MONTHLY REPORT  
OF  
OPERATIONS

Lease No. U-7206  
Communitization Agreement No. NA  
Field Name \_\_\_\_\_  
Unit Name River Bend  
Participating Area \_\_\_\_\_  
County Uintah State Utah  
Operator MAPCO Production Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of January, 19 82

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
RBU 13-11F	SW SW Sec. 11	10S	20E	Drg					Spudded well 1-11-82. Drld a 12 1/4" hole to 400'. Set 8-5/8", 24#, K-55 csg @ 400'. Cmtd w/190 sx Drld to 3886' in the Green River Fm.

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXXXX

Authorized Signature: R. E. Zaumann Address: \_\_\_\_\_  
Title: Engineering Technician Page \_\_\_\_\_ of \_\_\_\_\_

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
(FORM 9-329)  
(2/76)  
OMB 42-RO 356

MONTHLY REPORT  
OF  
OPERATIONS

Lease No. U-7206  
Communitization Agreement No. NA  
Field Name \_\_\_\_\_  
Unit Name River Bend  
Participating Area \_\_\_\_\_  
County Uintah State Utah  
Operator MAPCO Production Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of February, 19 82

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
RBU 13-11F	SW SW Sec. 11	10S	20E	DRG					WOCT
<p>Reached T.D. of 6490' on 2-6-82. Set 5 1/2", 17#, N-80 &amp; K-55 csg @ 6378' with 1029 sx cmt. Rig released 4:00 AM, 2-11-82.</p> <p>* 1073 MCF from RBU 7-11F used as rig fuel.</p>									

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXXXX
*Used on Lease	_____	1073*	XXXXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXXXX

Authorized Signature: R. E. Baumann Address: 1643 Lewis Ave, Ste 202, Billings, MT

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
(FORM 9-329)  
(2/76)  
OMB 42-RO 356

MONTHLY REPORT  
OF  
OPERATIONS

Lease No. U-720  
Communitization Agreement No. NA  
Field Name W.C.  
Unit Name River Bend  
Participating Area \_\_\_\_\_  
County Uintah State Utah  
Operator MAPCO Production Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of March, 19 82

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
RBU 13-11F	SW SW Sec. 11	10S	20E	DRG					WOCT 43-047-30973

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXX

Authorized Signature: R. C. Baumann Address: 1643 Lewis Ave, Ste 202, Billings, MT

NOTICE OF SPUD

Company: Mapco Production

Caller: Darwin Kulland

Phone: \_\_\_\_\_

Well Number: RB44 13-11F

Location: SWSW Sec. 11-10S-20E

County: Utah State: Utah

Lease Number: U-7206

Lease Expiration Date: \_\_\_\_\_

Unit Name (If Applicable): \_\_\_\_\_

Date & Time Spudded: 9:00 AM 1-5-82

Dry Hole Spudder/Rotary: \_\_\_\_\_

Details of Spud (Hole, Casing, Cement, etc.) \_\_\_\_\_  
12 1/4" to 400 feet

Rotary Rig Name & Number: Ram Drilling

Approximate Date Rotary Moves In: about 45 days

FOLLOW WITH SUNDRY NOTICE

Call Received By: Deane

Date: 1-6-82

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
(FORM 9-329)  
(2/76)  
OMB 42-RO 356

MONTHLY REPORT  
OF  
OPERATIONS

Lease No. U-720  
Communitization Agreement No. NA  
Field Name \_\_\_\_\_  
Unit Name River Bend  
Participating Area \_\_\_\_\_  
County Uintah State Utah  
Operator MAPCO Production Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of APRIL, 19 82

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & ¼ of ¼	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
RBU 13-11F	SW SW Sec. 11	10S	20E	DRG					Waiting on completion tools.

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXX

Authorized Signature: Richard Beumann Address: 1643 Lewis Ave, Ste 202, Billings, MT  
Title: \_\_\_\_\_ by ju Page \_\_\_\_\_ of \_\_\_\_\_ 59102

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
(FORM 9-329)  
(2/76)  
OMB 42-RO 356

MONTHLY REPORT  
OF  
OPERATIONS

Lease No. U-720  
Communitization Agreement No. NA  
Field Name \_\_\_\_\_  
Unit Name River Bend  
Participating Area \_\_\_\_\_  
County Uintah State Utah  
Operator MAPCO Production Company

Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of MAY, 1982

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & ¼ of ¼	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
RBU 13-11F	SW SW Sec. 11	10S	20E	DRG					W.O.C.T. 43-0417-30973

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXXXX

Authorized Signature: RE Baumann by JLU Address: 1643 Lewis Ave, Ste 202, Billings, MT  
Title: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_ 59102

MAP

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 GEOLOGICAL SURVEY  
 (FORM 9-329)  
 (2/76)  
 OMB 42-RO 356

MONTHLY REPORT  
 OF  
 OPERATIONS

Lease No. U-72  
 Communitization Agreement No. NA  
 Field Name \_\_\_\_\_  
 Unit Name River Bend  
 Participating Area \_\_\_\_\_  
 County Uintah State Utah  
 Operator MAPCO Production Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of June, 19 82

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
RBU 13-11F	SW SW Sec. 11	10S	20E	DRG					Waiting on Completion Tools. 43-047-30973

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXX

Authorized Signature: R. C. Baumann Address: 1643 Lewis Ave, Ste 202, Billings, MT  
 Title: \_\_\_\_\_ Page \_\_\_\_\_ of \_\_\_\_\_ 59102

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
(FORM 9-329)  
(2/76)  
OMB 42-RO 356

MONTHLY REPORT  
OF  
OPERATIONS

Lease No. U-720  
Communitization Agreement No. NA  
Field Name \_\_\_\_\_  
Unit Name River Bend  
Participating Area \_\_\_\_\_  
County Utah State Utah  
Operator MAPCO Production Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of July, 1982

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
✓RBU 13-11F	SW SW Sec. 11	10S	20E	DRG					WOCT 43-047-30973

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXX

Authorized Signature: R. E. Baumann Address: 1643 Lewis Ave, Ste 202, Billings, MT

MHP

UNITED STATES DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY (FORM 9-329) (2/76) OMB 42-RO 356

MONTHLY REPORT OF OPERATIONS

Lease No. U-720
Communitization Agreement No. NA
Field Name Wildcat
Unit Name River Bend
Participating Area
County Uintah State Utah
Operator MAPCO Production Company
Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of August, 19 82

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Table with columns: Well No., Sec. & 1/4 of 1/4, TWP, RNG, Well Status, Days Prod., \*Barrels of Oil, \*MCF of Gas, \*Barrels of Water, Remarks. Includes entry for RBU 13-11F SW SW Sec. 11 with status DRG and production details for 8/7, 8/11, 8/16, and 8/20.

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

Table for production disposition with columns: Oil & Condensate (BBLs), Gas (MCF), Water (BBLs). Rows include: \*On hand, Start of Month; \*Produced; \*Sold; \*Spilled or Lost; \*Flared or Vented; \*Used on Lease; \*Injected; \*Surface Pits; \*Other (Identify); \*On hand, End of Month; \*API Gravity/BTU Content.

Authorized Signature: R.C. Baumann Address: 1643 Lewis Ave, Ste 202, Billings, MT
Title:
Page of 59102

UNITED STATES  
 DEPARTMENT OF THE INTERIOR  
 GEOLOGICAL SURVEY  
 (FORM 9-329)  
 (2/76)  
 OMB 42-RO 356

MONTHLY REPORT  
 OF  
 OPERATIONS

Lease No. U-720 080422  
 Communitization Agreement No. NA  
 Field Name \_\_\_\_\_  
 Unit Name River Bend  
 Participating Area \_\_\_\_\_  
 County Uintah State Utah  
 Operator MAPCO Production Company  
 Amended Report

The following is a correct report of operations and production (including status of all unplugged wells) for the month of September, 1982

(See Reverse of Form for Instructions)

This report is required by law (30 U.S.C. 189, 30 U.S.C. 359, 25 U.S.C. 396 d), regulation (30 CFR 221.60), and the terms of the lease. Failure to report can result in the assessment of liquidated damages (30 CFR 221.54 (j)), shutting down operations, or basis for recommendation to cancel the lease and forfeit the bond (30 CFR 221.53).

Well No.	Sec. & 1/4 of 1/4	TWP	RNG	Well Status	Days Prod.	*Barrels of Oil	*MCF of Gas	*Barrels of Water	Remarks
RBU 13-11F	SW SW Sec. 11	10S	20E	GSI					43.047.30973
	9/8	RIH with 194 jts 2-3/8" 8rd tbg; set @ 6255'							COPY
		Currently waiting on pipeline hookup.							

\*If none, so state.

DISPOSITION OF PRODUCTION (Lease, Participating Area, or Communitized Area basis)

	Oil & Condensate (BBLs)	Gas (MCF)	Water (BBLs)
*On hand, Start of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Produced	_____	_____	_____
*Sold	_____	_____	XXXXXXXXXXXXXXXXXXXX
*Spilled or Lost	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*Flared or Vented	XXXXXXXXXXXXXXXXXXXX	_____	XXXXXXXXXXXXXXXXXXXX
*Used on Lease	_____	_____	XXXXXXXXXXXXXXXXXXXX
*Injected	_____	_____	_____
*Surface Pits	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX	_____
*Other (Identify)	_____	_____	_____
*On hand, End of Month	_____	XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX
*API Gravity/BTU Content	_____	_____	XXXXXXXXXXXXXXXXXXXX

Authorized Signature: R. E. Baumann Address: 1643 Lewis Ave, Ste 202, Billings, MT  
 Title: Engineering Technician Page \_\_\_\_\_ of \_\_\_\_\_ 59102

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY**

SUBMIT IN DUPLICATE\*

(See other instructions on reverse side)

Form approved.  
Budget Bureau No. 42-R355.5.

3  
13

5. LEASE DESIGNATION AND SERIAL NO.  
U-7206

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME  
River Bend

8. FARM OR LEASE NAME  
RBU

9. WELL NO.  
13-11F

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA  
Sec 11, T10S, R20E

12. COUNTY OR PARISH  
Uintah

13. STATE  
UT

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG\***

1a. TYPE OF WELL: OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

b. TYPE OF COMPLETION: NEW WELL  WORK OVER  DEEP-EN  PLUG BACK  DIFF. RESVR.  Other \_\_\_\_\_

2. NAME OF OPERATOR  
MAPCO Production Co.

3. ADDRESS OF OPERATOR  
1643 Lewis Ave., Ste. 202, Billings, MT 59102

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)\*  
At surface 315' FWL & 96' FSL, SW SW, Sec. 11, T10S, R20E  
At top prod. interval reported below Same  
At total depth Same

14. PERMIT NO. 43-047-30973      DATE ISSUED 6-18-81

15. DATE SPUNDED 1-11-82      16. DATE T.D. REACHED 2-06-82      17. DATE COMPL. (Ready to prod.) 9-08-82      18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 5009 GL      19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 6378'      21. PLUG, BACK T.D., MD & TVD 6320'      22. IF MULTIPLE COMPL., HOW MANY\*      23. INTERVALS DRILLED BY Surface-TD      ROTARY TOOLS      CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)\*  
Chapita Wells 5770-5776, 5788-5806, & 6264-6268'

25. WAS DIRECTIONAL SURVEY MADE  
No

26. TYPE ELECTRIC AND OTHER LOGS RUN  
DLL-GR, FDC-CNL-GR w/Cal

27. WAS WELL CORED  
No

28. CASING RECORD (Report all strings set in well)

CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24	400	12-1/4"	190 SX	
5-1/2"	17	6360	7-7/8"	1020 SX	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)

30. TUBING RECORD

SIZE	DEPTH SET (MD)	PACKER SET (MD)
2-3/8"	6255'	

31. PERFORATION RECORD (Interval, size and number)  
See Attached

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
See attached	

33.\* PRODUCTION

DATE FIRST PRODUCTION WOPL      PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing      WELL STATUS (Producing or shut-in) WO Pipeline

DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
9-12-82	24	16	→	0	2353	0	

FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)
	1500 psi	→	0	2353	0	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Flared      TEST WITNESSED BY Mitch Hall

35. LIST OF ATTACHMENTS  
Record of perforations and frac jobs

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED R. E. Baumann      TITLE Engr. Tech.      DATE 2-25-83

\*(See Instructions and Spaces for Additional Data on Reverse Side)



MAPCO PRODUCTION COMPANY RBU 13-11F  
COMPLETION REPORT  
ATTACHMENT

<u>Interval and Depth</u>	<u>Perforation Record Size</u>	<u>Holes</u>	<u>Acid, Shot, Fracture, Cement Squeeze Amount and Kind of Material Used</u>
Chapita Wells 6264-6286'	.43"	22	Frac'd with 22,690 gal foam 32,000# 12/20 sand
Chapita Wells 5770-5776' 5788-5806'	.43"	24	Frac'd with 28,070 gal foam 55,000# 12/20 sand



STATE OF UTAH  
NATURAL RESOURCES & ENERGY  
Oil, Gas & Mining

Scott M. Matheson, Governor  
Temple A. Reynolds, Executive Director  
Cleon B. Feight, Division Director

4241 State Office Building • Salt Lake City, UT 84114 • 801-533-5771

March 12, 1983

Mapco Production Company  
Alpine Executive Center  
1643 Lewis Avenue, Suite # 202  
Billings, Montana 59102

Re: Well No. River Bend Unit #16-3F  
Sec. 3, T. 10S, R. 20E.  
Uintah County, Utah

Well No. River Bend Unit # 13-11F  
Sec. 11, T. 10S, R. 20E.  
Uintah County, Utah

Gentlemen:

This letter is to advise you that the Well Completion or Recompletion Report and Log for the above mentioned wells are due and have not been filed with this office as required by our rules and regulations.

Please complete the enclosed Form OGC-3, in duplicate, and forward them to this office as soon as possible.

We will be happy to acknowledge receipt of response to this notice if you will include an extra copy of the transmittal letter with a place for our signature, and a self addressed envelope for the return. Such acknowledgement should avoid unnecessary mailing of a firm second notice from our agency.

Your prompt attention to the above will be greatly appreciated.

Respectfully,

DIVISION OF OIL, GAS AND MINING

Cari Furse  
Well Records Specialist

CF/cf  
Enclosure

Board/Charles R. Henderson, Chairman • John L. Bell • E. Steele McIntyre • Edward T. Beck  
Robert R. Norman • Margaret R. Bird • Herm Olsen



**MAPCO**

**PRODUCTION COMPANY**

March 18, 1983

State of Utah  
Natural Resources & Energy  
Oil, Gas & Mining  
4241 State Office Bldg.  
Salt Lake City, UT 84114

Attn: Cari Furse

Re: RBU 16-3F  
RBU 13-11F

Dear Ms. Furse:

Completion reports on the above mentioned wells were mailed to your office on February 25, 1983.

If you need any further information please notify me.

Very truly yours,

MAPCO Production Company

*R. E. Baumann*

R. E. Baumann  
Engr. Tech.

REB/ch

Acknowledge Receipt:

---



**CNG PRODUCING COMPANY**  
TULSA DIVISION

**RECEIVED**

FEB 22 1985

February 15, 1985

**DIVISION OF OIL  
& GAS & MINING**

State of Utah  
Division of Oil, Gas and Mining  
335 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203

Re: Transfer of Ownership and  
Operations  
Oil and Gas Wells  
State of Utah

Gentlemen:

This letter is to inform you that:

CNG Producing Company  
705 S. Elgin Ave., P. O. Box 2115  
Tulsa, Oklahoma 74101-2115

has acquired the ownership and operations of oil and gas wells formerly  
owned and operated by:

MAPCO Oil & Gas Company  
Tulsa, Oklahoma

Attached is a listing of wells involved in the transfer. Should  
there be any question regarding this matter, I may be contacted at  
(918)599-4005.

Sincerely,

Greg Bechtol  
Sr. Engineering Technician

GB/sr  
Attachment



**CNG PRODUCING COMPANY**  
TULSA DIVISION

**RECEIVED**

FEB 27 1985

February 25, 1985

**DIVISION OF OIL  
GAS & MINING**

State of Utah  
Division of Oil & Gas Mining  
355 W. North Temple  
3 Triad Center - Suite 350  
Salt Lake City, Utah 84180-1203

Gentlemen:

Effective January 1, 1985, CNG Producing Company, New Orleans, LA., purchased the oil and gas properties of MAPCO Oil & Gas Company located in the state of Utah. Attached is a list of the properties sold for which CNG will now be responsible.

Please direct any future correspondence concerning these wells to the address shown below:

CNG Producing Company - Tulsa Division  
P. O. Box 2115  
Tulsa, OK 74101-2115  
Attention: Joe C. Lineback

Yours truly,

Joe C. Lineback.  
Manager of Accounting

JCL/cf

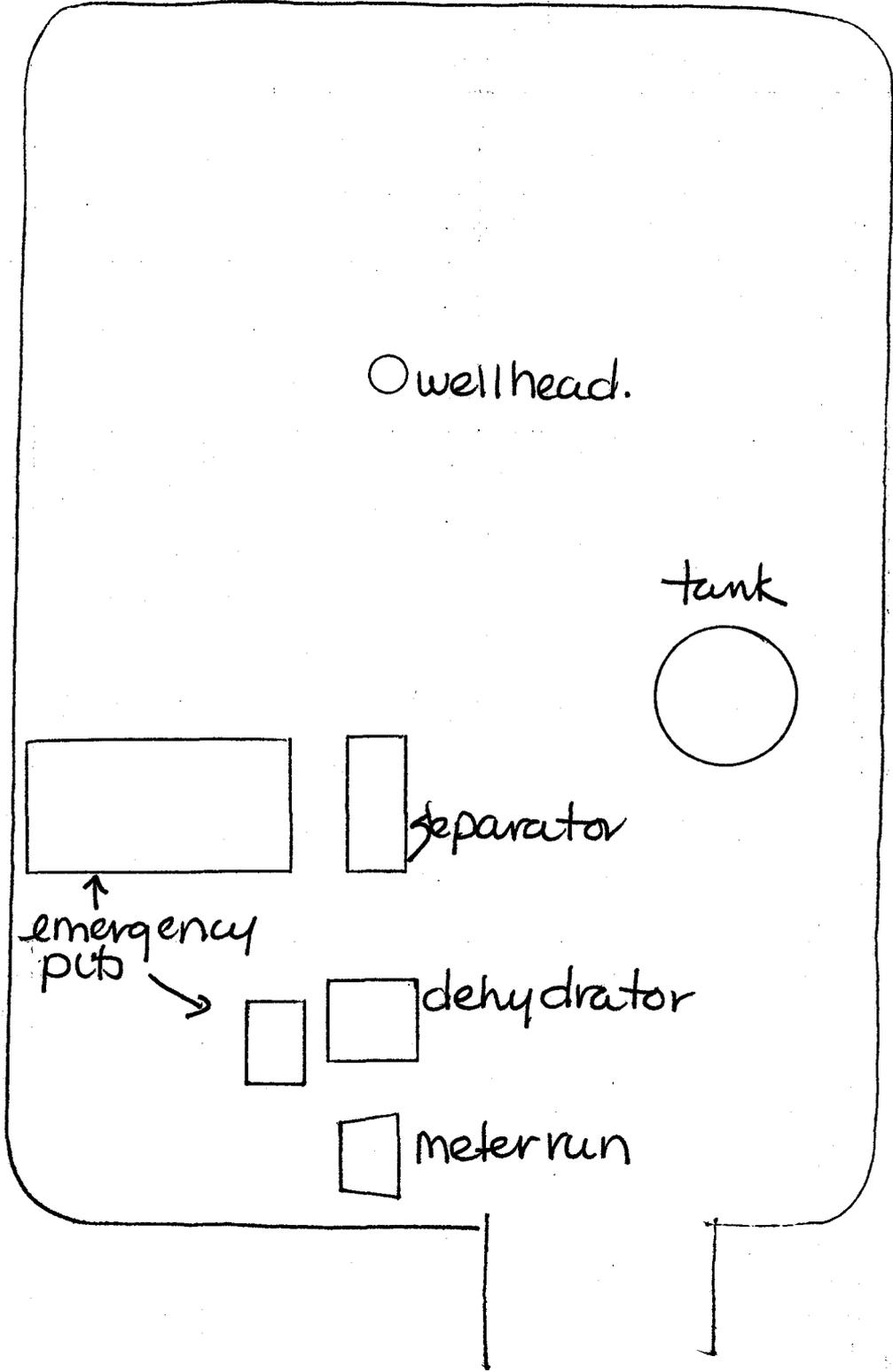
Attachment

RIVER BEND UNIT NO. 14-08-0001-16035  
 UINTAH COUNTY, UTAH

Status of All Wells Located Within the River Bend Unit

<u>Well Name</u>	<u>Location</u>	<u>Status</u>
1. OSC No. 1	SE NW Sec. 17-T10S-R20E	Water supply well
2. OSC No. 2	NW SE Sec. 3-T01S-R20E	Suspended gas well
3. OSC No. 3	SW NE Sec. 10-T10S-R20E	Plugged & abandoned
4. OSC No. 4	NW NE Sec. 30-T 9S-R20E	Suspended gas well
5. OSC No. 4A	NW NE Sec. 30-T 9S-R20E	Suspended gas well
6. OSC No. 5	NE NE Sec. 2-T10S-R18E	Producing oil well
7. Natural 1-2	SE NW Sec. 2-T10S-R20E	Plugged & abandoned
8. OSC No. 7-15	SW NW Sec. 15-T10S-R19E	Producing gas well
9. RBU 11-16E	NE SW Sec. 16-T10S-R19E	Producing gas well
10. RBU 11-18F	NE SW Sec. 18-T10S-R20E	Producing gas well
11. RBU 11-13E	NE SW Sec. 13-T10S-R19E	Producing gas well
12. RBU 7-21F	SW NE Sec. 21-T10S-R20E	Producing gas well
13. RBU 11-15F	NE SW Sec. 15-T10S-R20E	Producing gas well
14. RBU 11-19F	NE SW Sec. 19-T10S-R20E	Producing gas well
15. RBU 11-10E	NE SW Sec. 10-T10S-R19E	Producing gas well
16. RBU 11-23E	NE SW Sec. 23-T10S-R19E	Producing gas well
17. RBU 11-21E	NE SW Sec. 21-T10S-R19E	Producing oil well
18. RBU 11-14E	NE SW Sec. 14-T10S-R19E	Producing gas well
19. RBU 11-16F	NE SW Sec. 16-T10S-R20E	Producing gas well
20. RBU 11-36B	NE SW Sec. 36-T 9S-R19E	Plugged & abandoned
21. FED 7-25B	SW NE Sec. 25-T 9S-R19E	Producing oil well
22. RBU 7-11F	SW NE Sec. 11-T10S-R20E	Producing gas well
23. RBU 11-17F	NE SW Sec. 17-T10S-R20E	Suspended gas well
24. RBU 5-11D	SW NW Sec. 11-T10S-R18E	Producing gas well
25. RBU 11-22E	NE SW Sec. 22-T10S-R19E	Producing gas well
26. RBU 4-11D	NW NW Sec. 11-T10S-R18E	Producing oil well
27. RBU 15-23F	SW SE Sec. 23-T10S-R20E	Plugged & abandoned
28. RBU 11-3F	NE SW Sec. 3-T10S-R20E	Producing gas well
29. RBU 11-2F	NE SW Sec. 2-T10S-R20E	Producing oil well
30. RBU 7-22F	SW NE Sec. 22-T10S-R20E	Producing gas well
31. RBU 8-14F	SE NE Sec. 14-T10S-R20E	Producing gas well
32. RBU 6-20F	SE NW Sec. 20-T10S-R20E	Producing gas well
33. RBU 11-24E	NE SW Sec. 24-T10S-R19E	Producing gas well
34. RBU 7-10F	SW NE Sec. 10-T10S-R20E	Producing gas well
35. RBU 1-10E	NE NE Sec. 10-T10S-R19E	Producing gas well
36. RBU 1-15E	NE NE Sec. 15-T10S-R19E	Producing gas well
37. RBU 1-22E	NE NE Sec. 22-T10S-R19E	Producing gas well
38. RBU 1-14E	NE NE Sec. 14-T10S-R19E	Producing gas well
39. RBU 1-23E	NE NE Sec. 23-T10S-R19E	Producing gas well
40. RBU 2-11D	NW NE Sec. 11-T10S-R18E	Producing oil well
41. RBU 4-19F	NW NW Sec. 19-T10S-R20E	Producing gas well
42. RBU 16-3F	SE SE Sec. 3-T10S-R20E	Producing gas well
43. RBU 13-11F	SW SW Sec. 11-T10S-R20E	Producing gas well
44. RBU 16-16F	SE SE Sec. 16-T10S-R20E	Producing gas well
45. RBU 6-2D	SE NW Sec. 2 T10S-R18E	Producing oil well

FRBU 13-11F Sec. 11, T105, R20E Buhly 12/8/88



O wellhead.

tank

↑  
emergency  
pub

separator

dehydrator

meter run

DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

6. Case Designation and Serial Number  
0-7206

7. Indian Allottee or Tribe Name

8. Unit or Communication Agreement

River Bend Unit

9. Well Name and Number

RBU 13-11F

10. API Well Number

43-047-30973

11. Field and Pool, or Wildcat

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill new well, deepen existing wells, or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT - for such proposals

1. Type of Well

Oil Well  Gas Well  Other (specify)

2. Name of Operator

CNG Producing Company

3. Address of Operator

1450 Poydras St., New Orleans, LA 70112-6000

4. Telephone Number

(504) 593-7260

5. Location of Well

Footage : 315' FWL & 96' FSL  
QQ, SEC., T., R., M.: SW SW of Sec. 11-T10S-R20E

County : Uintah  
State : UTAH

**12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

NOTICE OF INTENT  
(Submit in Duplicate)

- |  |   |
|--|---|
| <input type="checkbox"/> Abandonment             | <input type="checkbox"/> New Construction     |
| <input type="checkbox"/> Casing Repair           | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans         | <input type="checkbox"/> Recompletion         |
| <input type="checkbox"/> Conversion to Injection | <input type="checkbox"/> Shoot or Acidize     |
| <input type="checkbox"/> Fracture Treat          | <input type="checkbox"/> Vent or Flare        |
| <input type="checkbox"/> Multiple Completion     | <input type="checkbox"/> Water Shut-Off       |
| <input type="checkbox"/> Other _____             |   |

Approximate Date Work Will Start \_\_\_\_\_

SUBSEQUENT REPORT  
(Submit Original Form Only)

- |   |   |
|---|---|
| <input type="checkbox"/> Abandonment *                                | <input type="checkbox"/> New Construction     |
| <input type="checkbox"/> Casing Repair                                | <input type="checkbox"/> Pull or Alter Casing |
| <input type="checkbox"/> Change of Plans                              | <input type="checkbox"/> Shoot or Acidize     |
| <input type="checkbox"/> Conversion to Injection                      | <input type="checkbox"/> Vent or Flare        |
| <input type="checkbox"/> Fracture Treat                               | <input type="checkbox"/> Water Shut-Off       |
| <input checked="" type="checkbox"/> Other <u>Annual Status Report</u> |   |

Date of Work Completion \_\_\_\_\_

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

\* Must be accompanied by a cement verification report.

13. DESCRIBE PROPOSED OR COMPLETION OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

STATUS OF WELL

Shut-in

EXPLANATION FOR STATUS OF WELL

Under evaluation

FUTURE PLANS

Possible workover or recompletion

**RECEIVED**

MAR 01 1993

DIVISION OF  
OIL GAS & MINING

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

Name & Signature

*Scott Childress*  
W. Scott Childress

Title

Supervisor, Prod. Engineering

Date January 29, 1993

(State Use Only)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0135  
EXPIRES: July 31, 1996

**SUNDRY NOTICES AND REPORTS ON WELLS**  
Do not use this form for proposals to drill or to deepen or re-enter an  
abandoned well. Use form 3160-3 (APD) for such proposals.

**SUBMIT IN TRIPLICATE - Other instruction on reverse side**

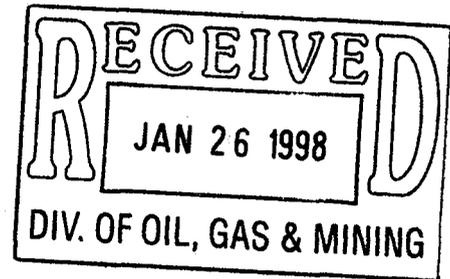
1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. U-7206
2. Name of Operator CNG PRODUCING COMPANY		6. If Indian, Allottee or Tribe Name
3a. Address 1450 POYDRAS ST, NEW ORLEANS, LA 70112-6000	3b. Phone No. (include area code) (504) 593-7000	7. If Unit or CA/ Agreement, Name and/or No. RIVER BEND UNIT
4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  315' FWL & 96' FSL of Sec. 11-T10S-R20E		8. Well Name and No. 13-11F
		9. API Well No. 43-047-30973
		10. Field and Pool, or Exploratory Area NATURAL BUTTES 630
		11. County or Parish, State UINTAH, UTAH

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" 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"/> Recomplete	<input checked="" type="checkbox"/> Other <u>PLUNGER LIFT</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandonment	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operations (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 recomplate 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.)

Installed plunger lift equipment on above well. Well on plunger as of 1/12/98.



14. I hereby certify that the forgoing is true and correct Name (Printed/Typed)  SUSAN H. SACHITANA	Title COORDINATOR, REGULATORY REPORTS
	Date 980120

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

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

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



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155

In Reply Refer To:  
3100  
U-01470-A et al  
(UT-932)

JUN 2 2000

### NOTICE

Dominion Exploration & Production, Inc. : Oil and Gas Leases  
1450 Poydras Street :  
New Orleans, LA 70112-6000 :

#### Name Change Recognized

Acceptable evidence has been received in this office concerning the change of name of CNG Producing Company to Dominion Exploration & Production, Inc. on Federal oil and gas leases.

The oil and gas lease files identified on the enclosed exhibit have been noted as to the name change. The exhibit was compiled from your list of leases and a list of leases obtained from our automated records system. We have not abstracted the lease files to determine if the entity affected by the name change holds an interest in the leases identified nor have we attempted to identify leases where the entity is the operator on the ground maintaining no vested record title or operating rights interests. We are notifying the Minerals Management Service and all applicable Bureau of Land Management offices of the name change by a copy of this notice. If additional documentation for changes of operator are required by our Field Offices, you will be contacted by them.

The following lease on your list is closed on the records of this office: U-029277.

Due to the name change, the name of the principal on the bond is required to be changed from CNG Producing Company to Dominion Exploration & Production, Inc. on Bond No. 524 7050 (BLM Bond No. WY1898). You may accomplish this name change either by consent of the surety on the original bond or by a rider to the original bond. Otherwise, a replacement bond with the new name should be furnished to the Wyoming State Office.

**/s/ Robert Lopez**

Robert Lopez  
Chief, Branch of  
Minerals Adjudication

Enclosure  
Exhibit of Leases

**RECEIVED**

JUN 05 2000

DIVISION OF  
OIL, GAS AND MINERAL

cc: Wyoming State Office  
New Mexico State Office  
Moab Field Office  
Vernal Field Office  
MMS—Reference Data Branch, MS 3130, Box 5860, Denver, CO 80217  
State of Utah, DOGM, Attn: Jim Thompson (Ste. 1210), Box 145801, SLC, UT 84114-5801  
Irene Anderson (UT-932)  
Teresa Thompson (UT-931)  
LaVerne Steah (UT-942)

Dominion Exploration & Production, Inc.  
1450 Poydras Street, New Orleans, LA 70112-6000  
Phone: 504-593-7000



June 27, 2000

Mr. Jimmy Thompson  
Utah Board of Oil Gas & Mining  
1594 West North Temple  
Suite 1210  
Salt Lake City, UT 84114-5801

RE: Name Change Documentation for CNG Producing Company

Dear Mr. Thompson:

CNG Producing Company has become Dominion Exploration & Production, Inc. effective April 12, 2000. Enclosed please find a sundry regarding the name change with an attached listing of all the permits in the name of CNG Producing Company to be changed to Dominion Exploration & Production, Inc. Also enclosed please find a Form UIC 5 for the Transfer of Authority to Inject for the Federal #1-26B well.

If you have any questions or require any additional information, please contact me at (504) 593-7260.

Sincerely,

DOMINION EXPLORATION & PRODUCTION, INC.

Susan H. Sachitana  
Regulatory Reports Administrator

Enclosure

cc: Nelda Decker

**RECEIVED**

**JUN 29 2000**

**DIVISION OF  
OIL, GAS AND MINING**

STATE OF UTAH  
DIVISION OF OIL, GAS & MINING

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells or to reenter plugged and abandoned wells.  
Use APPLICATION FOR PERMIT TO DRILL OR DEEPEN form for such proposals.

1. Type of Well : OIL <input type="checkbox"/> GAS <input type="checkbox"/> OTHER:	5. Lease Designation and Serial Number: VARIOUS
2. Name of Operator: DOMINION EXPLORATION & PRODUCTION, INC.	6. If Indian, Allottee or Tribe Name:
3. Address and Telephone Number: 1460 Poydras Street, New Orleans, LA 70112-6000 (504) 593-7260	7. Unit Agreement Name:
4. Location of Well Footages: QQ, Sec, T., R., M.:	8. Well Name and Number: VARIOUS
	9. API Well Number
	10. Field and Pool, or Wildcat: Natural Buttes 630
	County: UINTAH State: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (SUBMIT IN DUPLICATE)	SUBSEQUENT REPORT (Submit Original Form Only)
<input type="checkbox"/> Abandon	<input type="checkbox"/> Abandon*
<input type="checkbox"/> Repair Casing	<input type="checkbox"/> Repair Casing
<input type="checkbox"/> Change of Plans	<input type="checkbox"/> Change of Plans
<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Convert to Injection
<input type="checkbox"/> Fracture Treat or Acidize	<input type="checkbox"/> Fracture Treat or Acidize
<input type="checkbox"/> Multiple Completion	<input checked="" type="checkbox"/> Other <u>OPERATOR NAME CHANGE FOR WELLS</u>
<input type="checkbox"/> Other _____	
Approximate date work will start _____	Date of work completion _____
	Report results of Multiple Completion and Recompletion to different reservoirs on WELL COMPLETION OR RECOMPLETION REPORT AND LOG form.
	*Must be accompanied by a cement verification report.

12. DESCRIBE PROPOSED OR COMPLETION OPERATIONS (Clearly State all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

Please be advised that effective April 12, 2000, CNG Producing Company has changed its name to Dominion Exploration & Production, Inc. and would like to transfer the well permits into the name of Dominion Exploration & Production, Inc. Our new bond has been filed and is pending approval with the State of Utah. The bond number is 76S 63050 361.

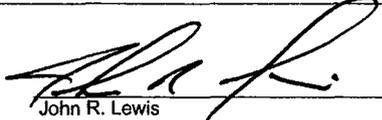
  
John R. Lewis  
Sr. Vice-President - CNG Producing Company

**RECEIVED**

JUN 29 2000

**DIVISION OF  
OIL, GAS AND MINING**

13.

Name & Signature:  Title: Sr. Vice-President - Dominion Expl. & Prod., Inc. Date: June 26, 2000

(This space for State use only)



State of Utah
DEPARTMENT OF COMMERCE
Division of Corporations & Commercial Code

552894
CO 106990
File Number

Table with 2 columns: Check Appropriate Box, Fee Amount. Rows include Foreign Profit Corporation (\$35.00), Foreign Non-Profit Corporation (\$35.00), Foreign Limited Partnership (\$25.00), Foreign Limited Liability Company (\$35.00).

Application To Amend The
CERTIFICATE OF AUTHORITY OR
REGISTRATION of

CNG Producing Company
Business Entity Name

Delaware
Name of Home State

I. AMENDING THE BUSINESS NAME

The business name is changed to: Dominion Exploration & Production, Inc.

The corporation shall use as its name in Utah: Dominion Exploration & Production, Inc.

(The corporation shall use its name as set forth on #1, unless this name is not available)

NOTE: If the business name has changed its name in the home state, a copy of the Certificate of Amendment or a certified copy of the amendment must accompany this application.

Check the following:

- [X] The name of the corporation is changing its name in Utah to the new name of the corporation in the home state.
[] The name of the corporation is being changed in Utah to comply with Utah State Insurance Regulations.

II. AMENDING THE DURATION OF THE BUSINESS EXISTENCE

The businesses period of duration is changed to:

III. AMENDING THE STATE OR COUNTRY OF INCORPORATION/REGISTRATION

The corporation's state or country of incorporation/registration is changed to:

IV. Other:

(Limited Partnership changing General Partners, Limited Companies changing Members or Managers, Change of statement who is managing, etc.)
Use an attached sheet if needed.

Under penalties of perjury, I declare this Application to Amend the Certificate of Authority or Registration to be, to the best of my knowledge and belief, true and correct.

Signature

Vice President & Corporate Secretary
Title

April 20 2000
Date

State of Utah
Department of Commerce
Division of Corporations and Commercial Code

I Hereby certify that the foregoing has been filed and approved on this 25 day of April 2000 in the office of this Division and hereby issue this Certificate thereof.

Examiner

Date



Signature of Jenson

Date: 04/25/2000

Receipt Number: 22156

Amount Paid: \$60.00

STATE OF UTAH
DIVISION OF CORPORATIONS
AND COMMERCIAL CODE
160 East 300 South / Box 146705
Salt Lake City, UT 84114-6705
Service Center: (801) 530-4849
Web Site: http://www.commerce.state.ut.us

FILED

APR 25 2000

Well Name	Api Well Code	Operator Name	Production Status	Lease Type
EVANS FEDERAL #32-25	4304732406	DOMINION EXPLORATION & PR	PR	BLM
RBU #1-25B	4304732445	DOMINION EXPLORATION & PR	LA	BLM
RBU #5-25B	4304732453	DOMINION EXPLORATION & PR	LA	BLM
RBU #11-25B	4304732482	DOMINION EXPLORATION & PR	LA	BLM
RBU #16-14EO	4304732507	DOMINION EXPLORATION & PR	LA	BLM
RBU #8-23EO	4304732508	DOMINION EXPLORATION & PR	LA	BLM
RBU #8-14EO	4304732514	DOMINION EXPLORATION & PR	LA	BLM
RBU #15-13EO	4304732599	DOMINION EXPLORATION & PR	LA	BLM
RBU #9-23EO	4304732601	DOMINION EXPLORATION & PR	LA	BLM
<del>STATE #2-36E</del>	<del>4304732607</del>	<del>DOMINION EXPLORATION &amp; PR</del>	PR	STATE
STATE #2-36E	4304732979	DOMINION EXPLORATION & PR	LA PGW	STATE
STATE #1-36E	4304733181	DOMINION EXPLORATION & PR	PR	STATE
RBU #1-16F	4304733360	DOMINION EXPLORATION & PR	DR	STATE
RBU #5-3F	4304733361	DOMINION EXPLORATION & PR	FUT	BLM
RBU #5-16F	4304733363	DOMINION EXPLORATION & PR	PR	BLM
RBU #10-23F	4304733367	DOMINION EXPLORATION & PR	DR	BLM
EVANS FEDERAL #15-26E	4304733508	DOMINION EXPLORATION & PR	FUT	BLM
EVANS FEDERAL #9-26E	4304733509	DOMINION EXPLORATION & PR	FUT	BLM
EVANS FEDERAL #10-25E	4304733510	DOMINION EXPLORATION & PR	FUT	BLM
EVANS FEDERAL #14-25E	4304733511	DOMINION EXPLORATION & PR	FUT	BLM
FEDERAL #13-30B	4304733581	DOMINION EXPLORATION & PR	FUT	BLM
STATE #13-36A	4304733598	DOMINION EXPLORATION & PR	FUT	STATE
RBU #1-1D	4304733599	DOMINION EXPLORATION & PR	FUT	BLM
OSC #1-17 *	430472030800S1	DOMINION EXPLORATION & PR	SIEC	BLM
OSC #2 *	430473008700S1	DOMINION EXPLORATION & PR	PR	BLM
OSC #4 *	430473011300S1	DOMINION EXPLORATION & PR	TA	BLM
OSC #4A-30 *	430473012200S1	DOMINION EXPLORATION & PR	SIEC	BLM
OSC #7-15E *	430473021100S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-16E	430473026000S1	DOMINION EXPLORATION & PR	PR	STATE
RBU #11-18F	430473026600S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-13E	430473037400S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-15F	430473037500S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #7-21F	430473037600S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-19F	430473040500S1	DOMINION EXPLORATION & PR	PR	BLM
FEDERAL #7-25B	430473040600S01	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-10E	430473040800S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #5-11D	430473040900S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-14E	430473041000S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-23E	430473041100S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-16F	430473041200S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-17F	430473058400S1	DOMINION EXPLORATION & PR	PA	BLM
RBU #7-11F	430473058500S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #8-16D	4304730608	DOMINION EXPLORATION & PR	PR	BLM
FEDERAL #7-25A	430473062400S01	DOMINION EXPLORATION & PR	PA	STATE
RBU #11-3F	430473068900S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-22E	430473069800S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #4-11D	430473071800S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #16-23F	4304730719	DOMINION EXPLORATION & PR	PA	BLM
RBU #7-3E	430473072000S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-24E	430473075900S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #11-2F	430473076000S1	DOMINION EXPLORATION & PR	PR	STATE
RBU #7-10F	430473076100S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #6-20F	430473076200S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #7-22F	430473076800S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #8-14F	430473082500S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #2-11D	430473082600S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #16-3F	430473088700S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #1-15E	430473091500S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #1-14E	430473092600S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #1-22E	430473092700S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #1-23E	430473097000S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #4-19F	430473097100S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #13-11F	430473097300S1	DOMINION EXPLORATION & PR	PR	BLM
RBU #1-10E	430473104600S1	DOMINION EXPLORATION & PR	PR	BLM



LA PGW

BLM

BLM

BLM

BLM

BLM

BLM

BLM

**OPERATOR CHANGE WORKSHEET**

<input type="checkbox"/>	4-KAS <input checked="" type="checkbox"/>
2-CDW <input checked="" type="checkbox"/>	5-SJ
3-JLT	6-FILE

Check each listed item when completed. Write N/A if item is not applicable.

Change of Operator (Well Sold)                      Designation of Agent  
**X Operator Name Change Only**                      Merger

The operator of the well(s) listed below has changed, effective: 4-12-00

**TO:**(New Operator) DOMINION EXPL & PROD INC.  
 Address: 1450 POYDRAS STREET  
NEW ORLEANS, LA 70112-6000  
 Phone: 1-(504)-593-7000  
 Account No. N1095

**FROM:**(Old Operator) CNG PRODUCING COMPANY  
 Address: 1450 POYDRAS STREET  
NEW ORLEANS, LA 70112-6000  
 Phone: 1-(504)-593-7000  
 Account No. N0605

WELL(S):	CA Nos.	or	RIVER BEND	Unit
Name: <u>RBU 11-3F</u>	API: <u>43-047-30689</u>	Entity: <u>7050</u>	S <u>03</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-013767</u>
Name: <u>RBU 11-22E</u>	API: <u>43-047-30698</u>	Entity: <u>7050</u>	S <u>22</u> T <u>10S</u> R <u>19E</u>	Lease: <u>U-013792</u>
Name: <u>RBU 4-11D</u>	API: <u>43-047-30718</u>	Entity: <u>7070</u>	S <u>11</u> T <u>10S</u> R <u>18E</u>	Lease: <u>U-013818-A</u>
Name: <u>RBU16-23F</u>	API: <u>43-047-30719</u>	Entity: <u>7050</u>	S <u>23</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-7369</u>
Name: <u>RBU 7-3E</u>	API: <u>43-047-30720</u>	Entity: <u>7050</u>	S <u>03</u> T <u>10S</u> R <u>19E</u>	Lease: <u>U-013765</u>
Name: <u>RBU 11-24E</u>	API: <u>43-047-30759</u>	Entity: <u>7050</u>	S <u>24</u> T <u>10S</u> R <u>19E</u>	Lease: <u>U-013794</u>
Name: <u>RBU 7-10F</u>	API: <u>43-047-30761</u>	Entity: <u>7050</u>	S <u>10</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-7206</u>
Name: <u>RBU 6-20F</u>	API: <u>43-047-30762</u>	Entity: <u>7050</u>	S <u>20</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-013793-A</u>
Name: <u>RBU 8-14F</u>	API: <u>43-047-30825</u>	Entity: <u>7050</u>	S <u>14</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-013793-A</u>
Name: <u>RBU 2-11D</u>	API: <u>43-047-30826</u>	Entity: <u>7070</u>	S <u>11</u> T <u>10S</u> R <u>18E</u>	Lease: <u>U-013429-A</u>
Name: <u>RBU 16-3F</u>	API: <u>43-047-30887</u>	Entity: <u>7050</u>	S <u>03</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-037164</u>
Name: <u>RBU 1-15E</u>	API: <u>43-047-30915</u>	Entity: <u>7050</u>	S <u>15</u> T <u>10S</u> R <u>19E</u>	Lease: <u>U-013766</u>
Name: <u>RBU 1-14E</u>	API: <u>43-047-30926</u>	Entity: <u>7050</u>	S <u>14</u> T <u>10S</u> R <u>19E</u>	Lease: <u>U-013792</u>
Name: <u>RBU 1-22E</u>	API: <u>43-047-30927</u>	Entity: <u>7050</u>	S <u>22</u> T <u>10S</u> R <u>19E</u>	Lease: <u>U-013792</u>
Name: <u>RBU 1-23E</u>	API: <u>43-047-30970</u>	Entity: <u>7050</u>	S <u>23</u> T <u>10S</u> R <u>19E</u>	Lease: <u>U-013766</u>
Name: <u>RBU 4-19F</u>	API: <u>43-047-30971</u>	Entity: <u>7050</u>	S <u>19</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-013769-A</u>
Name: <u>RBU 13-11F</u>	API: <u>43-047-30973</u>	Entity: <u>7050</u>	S <u>11</u> T <u>10S</u> R <u>20E</u>	Lease: <u>U-7206</u>

**OPERATOR CHANGE DOCUMENTATION**

- YES 1. A pending operator change file has been set up.
- YES 2. (R649-8-10) Sundry or other legal documentation has been received from the **FORMER** operator on 6-29-00.
- YES 3. (R649-8-10) Sundry or other legal documentation has been received from the **NEW** operator on 6-29-00.
- YES 4. The new company has been looked up in the **Department of Commerce, Division of Corporations Database** if the new operator above is not currently operating any wells in Utah. Is the operator registered with the State? **Yes/No** If yes, the company file number is SEE ATTACHED. If no, Division letter was mailed to the new operator on \_\_\_\_\_.

- YES 5. **Federal and Indian Lease Wells.** The BLM or the BIA has approved the merger, **name change** or operator change for all wells listed above involving Federal or Indian leases on 6-2-00.
- N/A 6. **Federal and Indian Units.** The BLM or the BIA has approved the successor of unit operator for all wells listed above involving unit operations on \_\_\_\_\_.
- N/A 7. **Federal and Indian Communitization Agreements ("CA").** The BLM or the BIA has approved the operator change for all wells listed above involved in the CA on \_\_\_\_\_.
- N/A 8. **Underground Injection Control ("UIC") Program.** The Division has approved UIC Form 5, Transfer of Authority to Inject, for the enhanced/secondary recovery unit/project and/or for the water disposal well(s) listed above.
- YES 9. Changes have been entered in the **Oil and Gas Information System** for each well listed on 7-26-00.
- YES 10. Changes have been included on the **Monthly Operator Change letter** on 7-26-00.

**STATE BOND VERIFICATION**

- N/A 1. State Well(s) covered by Bond No. \_\_\_\_\_.

**FEE WELLS - BOND VERIFICATION / LEASE INTEREST OWNER NOTIFICATION**

- N/A 1. (R649-3-1) The **NEW** operator of any fee lease well(s) listed above has furnished a proper bond.
- N/A 2. A **copy of this form** has been placed in the **new and former operator's bond files** on \_\_\_\_\_.
- N/A 3. The **FORMER** operator has requested a release of liability from their bond as of todays date \_\_\_\_\_? If yes, Division response was made to this request by letter dated \_\_\_\_\_. (see bond file).
- N/A 4. (R649-2-10) The **Former** operator of any Fee lease wells listed above has been contacted and informed by letter dated \_\_\_\_\_, of their responsibility to notify all interest owners of this change.
- N/A 5. Bond information added to **RBDMS** on \_\_\_\_\_.
- N/A 6. Fee wells attached to bond in **RBDMS** on \_\_\_\_\_.

**FILMING**

- \_\_\_\_ 1. All attachments to this form have been **microfilmed** on 2.22.01.

**FILING**

- \_\_\_\_ 1. **Originals/Copies** of all attachments pertaining to each individual well have been filed in each **well file**.
- \_\_\_\_ 2. The **original of this form** has been filed in the operator file and a copy in the old operator file.

**COMMENTS**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

REGION 8  
999 18th STREET - SUITE 300  
DENVER, CO 80202-2466  
<http://www.epa.gov/region08>

APR - 8 2004

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Timothy Haddican  
Dominion Exploration & Production, Inc.  
1400 North State Street  
Roosevelt, UT 84066

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

RECEIVED  
APR 12 2004  
DIV. OF OIL, GAS & MINING

Re: Underground Injection Control Program  
Permit for the RBU 13-11F SWD Well  
Uintah County, UT  
EPA Permit No. UT20961-06292

Dear Mr Haddican:

Enclosed is a Draft Underground Injection Control (UIC) Permit for the RBU 13-11F SWD well. Also enclosed are a Statement of Basis which discusses development of the Permit, a copy of the Public Notice and any required Aquifer Exemption.

Environmental Protection Agency (EPA) regulations and procedures for issuing UIC Permits are found in Title 40 of the Code of Federal Regulations Part 124 (40 CFR 124). These regulations and procedures require Public Notice and the opportunity for the public to comment on a proposed UIC Permit and Agency decision.

Public Notice will be published in the following publication(s) to inform the public of their opportunity to comment on this proposed UIC Permit. The comment period will run for thirty (30) days from the latest date of publication. You may call Ms. Jo Taylor at (800) 227-8917 ext. 6152 to obtain the exact deadline for comments.

Vernal Express, Vernal  
Ute Bulletin, Ft. Duchesne

The enclosed copies of the Draft Permit, Statement of Basis, and Public Notice are being sent to you so that you have an opportunity to comment on the Draft Permit during the comment period. Notice of the EPA's intent to issue this Permit also may be sent to any surface landowner who could be affected by this proposed Permit decision.

The Final Permit decision will not be made until after the comment period has closed, and all relevant comments will be taken into consideration. If any substantial comments are received or if any substantial changes are made from the Draft Permit to the Final Permit, the Effective Date of the Final Permit will be delayed for an additional thirty (30) days. This delay is required by 40 CFR 124.15 (b) to allow for potential appeal of the Final Permit decision.

If you have any questions or comments about the enclosed Draft Permit or Statement of Basis please write to Emmett Schmitz at the letterhead address citing "Mail Code 8-P-W-GW", or telephone (800) 227-8917, ext. 6174.

Sincerely,

*Sandra A. Stavnes*

Sandra A. Stavnes  
Director  
Ground Water Program

enclosure: Draft Permit  
Draft Statement of Basis  
Public Notice

cc: Maxine Natchees  
Chairperson  
Uintah & Ouray Business Committee  
Ute Indian Tribe  
P.O. Box 190  
Fort Duchesne, UT 84026

Elaine Willie  
Environmental Coordinator  
Ute Indian Tribe  
P.O. Box 460  
Fort Duchesne, UT 84026

Mr. Chester Mills  
Superintendent  
Bureau of Indian Affairs  
Uintah & Ouray Agency  
P.O. Box 130  
Fort Duchesne, UT 84026

Donna Trotter  
Agent for Dominion Expl. & Prod., Inc.  
1620 West 750 North  
Vernal, UT 84078

Richard Brown  
Consulting Engineer  
14000 Quail Springs Parkway  
Suite 600  
Oklahoma City, OK 73134-2600

Gil Hunt  
Technical Services Manager  
State of Utah - Natural Resources  
Division of Oil, Gas, and Mining  
1594 West North Temple - Suite 1220  
Salt Lake City, UT 84111

Jerry Kenczka  
Petroleum Engineer  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078

# UNDERGROUND INJECTION CONTROL PROGRAM

## PUBLIC NOTICE AND OPPORTUNITY TO COMMENT

### PROPOSED UNDERGROUND INJECTION CONTROL (UIC) PERMIT

Dominion Exploration & Production, Inc  
1450 Poydras Street  
New Orleans, LA 70112

### PURPOSE OF PUBLIC NOTICE

The purpose of this notice is to solicit public comment on a proposal by the Region 8 Ground Water Program office of the U.S. Environmental Protection Agency (EPA) to issue an Underground Injection Control (UIC) Permit that will authorize the underground injection of fluid via the following Class II injection well:

RBU 13-11F SWD  
96' FSL & 314' FWL  
SWSW S11, T10S, R20E  
Uintah County, UT

### BACKGROUND

The well is proposed for injection of fluid (water or brine) produced during conventional oil or natural gas production, and it may be commingled with waste water from gas plants which are an integral part of production operations unless that water is classified as a hazardous waste at the time of injection.

A Draft Permit has been prepared in accordance with provisions of the Safe Drinking Water Act (SDWA) as amended (42 USC et seq) and other lawful standards and regulations. The EPA has made a preliminary determination that all underground sources of drinking water will be protected. The Permit will be issued for the life of the well unless modified or terminated.

This Permit, once issued, will authorize the conversion of a non-injection well to an injection well and its operation as an injection well. Operation of the well will be governed by the requirements and conditions specified in the Permit.

### PUBLIC COMMENTS

The requirements and conditions of the Draft Permit are tentative, and are open to comment from any interested party. Persons wishing to comment upon or object to any aspect of proposed Permit decision are invited to submit comments, IN WRITING, within 30 days of this notice to:

Emmett Schmitz

U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
999 18th Street, Suite 300  
Denver, Colorado 80202-2466  
Telephone: 1-800-227-8917 ext. 6174

The Administrative Record, including the application, the Draft Permit and Statement of Basis prepared by the EPA, and public comments received, is available for public inspection at the above location(s) weekdays from 8:00 a.m. to 4:00 p.m.

### **PUBLIC HEARING**

Within the thirty (30) day period, any interested person may request a public hearing as provided by 40 CFR §124.12. A request for a hearing must be made IN WRITING to the above address and must state the nature of the issues proposed to be raised at the hearing. A public hearing will be held only if significant interest is shown.

### **FINAL PERMIT DECISION**

All comments received within the thirty (30) day period will be considered in the Final Permit decision. The decision may be to: issue, modify, deny, or revoke and reissue the Permit. The Final Permit decision shall become effective thirty (30) days after issuance unless no commenters requested changes to the Draft Permit, in which case the Permit shall become effective immediately upon issuance.

### **APPEALS**

Within thirty (30) days after a Final Permit decision has been issued, any person who filed comments on the Draft Permit or who participated in a public hearing may petition the Administrator to review the final decision. Any person who failed to file comments or failed to participate in the public hearing may petition for administrative review only to the extent of the changes from the Draft to the Final Permit decision. Commenters are referred to 40 CFR §§ 124.15 through 124.20 for procedural requirements of the appeal process.

---

Date of Publication

# STATEMENT OF BASIS

**DOMINION EXPLORATION & PRODUCTION, INC**

**RBU 13-11F SWD  
UINTAH COUNTY, UT**

**EPA PERMIT NO. UT20961-06292**

**CONTACT:** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
999 18th Street, Suite 300  
Denver, Colorado 80202-2466  
Telephone: 1-800-227-8917 ext. 6174

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

UIC Permits specify the conditions and requirements for construction, operation, monitoring and reporting, and plugging of injection wells to prevent the movement of fluids into underground sources of drinking water (USDWs). Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the conversion and operation of a "new" injection well or wells governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

Dominion Exploration & Production, Inc  
1450 Poydras Street  
New Orleans, LA 70112

on

November 18, 2003

submitted an application for an Underground Injection Control (UIC) Program Permit for the following injection well or wells:

RBU 13-11F SWD  
96' FSL& 314' FWL, SWSW S11, T10S, R20E  
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The Permit application, including the required information and data necessary to issue a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed by EPA and determined to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

TABLE 1.1 WELL STATUS / DATE OF OPERATION		
CONVERSION WELLS		
Well Name	Well Status	Date of Operation
RBU 13-11F SWD	Conversion	N/A

## PART II. Permit Considerations (40 CFR 146.24)

### Geologic Setting (TABLE 2.1)

**TABLE 2.1  
GEOLOGIC SETTING  
RBU 13-11F SWD**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Green River Fm: Brown Zone	4,028.00	4,100.00	67,080.00	Sandstone and Limestone

**Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by the confining zone which is free of known open faults or fractures within the Area of Review.

**TABLE 2.2  
INJECTION ZONES  
RBU 13-11F SWD**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River Fm: Brown Zone	4,028.00	4,128.00	67,080.00	0.735		N/A

- \* C - Currently Exempted
- E - Previously Exempted
- P - Proposed Exemption
- N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

**TABLE 2.3  
CONFINING ZONES  
RBU 13-11F SWD**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River Fm: Brown Zone	Shale	3,896.00	4,028.00

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**RBU 13-11F SWD**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta & Green River Formations	Sand and Shale	0.00	2,500.00	< 10,000.00

**PART III. Well Construction (40 CFR 146.22)**

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**RBU 13-11F SWD**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Longstring	7.88	5.50	0.00 - 6,360.00	950.00 - 6,490.00
Surface	12.25	8.66	0.00 - 400.00	0.00 - 400.00

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

**Casing and Cementing (TABLE 3.1)**

The construction plan for this well proposed for conversion to an injection well was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction and conversion details for this well are shown in TABLE 3.1.

**Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

**Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

**Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment allowing for monitoring pressures and providing access for sampling the injected fluid. This equipment includes: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) pressure gauges attached to the injection tubing and the TCA to monitor the injection and TCA pressure; and 4) a tap on the injection line,

isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

#### **PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)**

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

##### **Area Of Review**

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

##### **Corrective Action Plan**

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

TABLE 4.1 lists the wells in the AOR, and shows the well type, operating status, depth, top of casing cement and whether a CAP is required for this well.

#### **PART V. Well Operation Requirements (40 CFR 146.23)**

<b>Formation Name</b>	<b>Depth Used to Calculate MAIP (ft)</b>	<b>Fracture Gradient (psi/ft)</b>	<b>Initial MAIP (psi)</b>
Green River Fm: Brown Zone	4,028.00	0.735	1,135

##### **Approved Injection Fluid**

The approved injection fluid will be limited to a produced water mixture which meets requirements pursuant to 40 CFR § 144.6(b). The well also may be used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Non-exempt wastes,

including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are not approved.

### **Injection Pressure Limitation**

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs.

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit,

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

- FP = formation fracture pressure (measured at surface)
- fg = fracture gradient (from submitted data or tests)
- sg = specific gravity (of injected fluid)
- d = depth to top of injection zone (or top perforation)

### **Injection Volume Limitation**

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

### **Mechanical Integrity (40 CFR 146.8)**

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packern (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependant upon well-specific conditions as explained below:

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures

must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, injection flow rate and cumulative fluid volume, and the maximum and average value for each must be determined for each month. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, this well must be plugged with cement in a manner which will not allow the movement of fluids either into or between USDWs. The plugging and abandonment plan is described in Appendix E of the Permit.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Surety Bond, received July 12, 2000
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Evidence of continuing financial responsibility is required to be submitted to the Director annually.



**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: March 2004

**Permit No. UT20961-06292**

Class II Salt Water Disposal Well

**RBU 13-11F SWD  
Uintah County, UT**

**DRAFT**

Issued To

**Dominion Exploration Production, Inc**

1450 Poydras Street  
New Orleans, LA 70112

## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Dominion Exploration & Production, Inc  
1450 Poydras Street  
New Orleans, LA 70112

is authorized to construct and to operate the following Class II injection well or wells:

RBU 13-11F SWD  
96' FSL& 314' FWL, SWSW S11, T10S, R20E  
Uintah County, UT

Permit requirements herein are based on regulations found in 40 CFR Parts 124, 144, 146, and 147 which are in effect on the Effective Date of this Permit.

This Permit is based on representations made by the applicant and on other information contained in the Administrative Record. Misrepresentation of information or failure to fully disclose all relevant information may be cause for termination, revocation and reissuance, or modification of this Permit and/or formal enforcement action. This Permit will be reviewed periodically to determine whether action under 40 CFR 144.36(a) is required.

This Permit is issued for the life of the well unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for this program is delegated to an Indian Tribe or a State. Upon the effective date of delegation, all reports, notifications, questions and other compliance actions shall be directed to the Indian tribe or State Program Director or designee.

Issue Date: ~~\_\_\_\_\_~~ **DRAFT**

Effective Date \_\_\_\_\_

**DRAFT**

\_\_\_\_\_  
Stephen S. Tuber  
Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## PART II. SPECIFIC PERMIT CONDITIONS

### Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of this Permit. Authorization to construct and operate shall expire and the Permit may be terminated under 40 CFR 144.40 if the well has not been constructed within one year of the Effective Date of the Permit unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate can be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to the injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. Demonstration of Mechanical Integrity (MI).**

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. Mechanical Integrity Test Methods and Criteria**

EPA-approved methods shall be used to demonstrate mechanical integrity. A current copy of Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are provided at issuance of this Permit.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. Notification Prior to Testing.**

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. Loss of Mechanical Integrity.**

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit), and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

**INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

### **1. Requirements Prior to Commencing Injection.**

Injection operation may commence only after all construction and pre-injection requirements herein have been met and approved. Except for new wells authorized by an Area Permit under 40 CFR 144.33 (c), the Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

### **2. Injection Interval.**

Injection is permitted only within the approved injection interval listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injected or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). The well also may be used to inject approved Class II wastes brought to the surface such as drilling fluids and spent well completion, treatment and stimulation fluids. Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved. This well is NOT approved for commercial brine or other fluid disposal operation.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The Permittee shall retain records at the location designated in APPENDIX D.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D. The report of fluids injected during the year must identify each new fluid source by well name and location, and the field name or facility name.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

### **1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning the well, 2) converting to a non-injection well, or 3) in the case of an Area Permit, before closure of the project.

### **2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which prevents the movement of fluids into or between underground sources of drinking water. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director. The well shall be plugged in accordance with the approved plugging and abandonment plan and with 40 CFR 146.10.

### **3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

### **4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning the well and provide notice of any anticipated change to the approved plugging and abandonment plan.

### **5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

### **6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;

## **PART III. CONDITIONS APPLICABLE TO ALL PERMITS**

### **Section A. EFFECT OF PERMIT**

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### **Section B. CHANGES TO PERMIT CONDITIONS**

#### ***1. Modification, Reissuance, or Termination.***

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### ***2. Conversions.***

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### ***3. Transfer of Permit.***

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

**2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

**3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

**4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

**5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

**6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

**7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

**8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

**9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

**10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

**11. Reporting Requirements.**

- (a) Planned changes. The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) Anticipated noncompliance. The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) Monitoring Reports. Monitoring results shall be reported at the intervals specified in this Permit.
- (d) Compliance schedules. Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) Twenty-four hour reporting. The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### ***1. Method of Providing Financial Responsibility.***

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### ***2. Insolvency.***

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

See diagram.

#### FORMATION DATA:

- \* Base of Underground Sources of Drinking Water (USDW) in Green River Formation: Surface to 2510 feet. Permittee cites top of cement (TOC) as 950 feet by Temperature Log.
- \* Confining Zone: Thirty-two (32) feet of shale (3896 feet to 4028 feet) directly overlying the top proposed perforated interval 4028 feet to 4042 feet.
- \* Permitted Injection Zone: Proposed gross injection interval 4028 feet to 4100 feet. Lithology is limestone.
- \* Well Total Depth: Driller Total Depth 6490 feet in Chapita Wells Member of the Wasatch Formation. Original Plug Back Total Depth (PBSD) 6311 feet in the Chapita Wells Member.

Proposed PBSD will be 5587 feet following setting 10K cement retainer at 5675 feet with 75 sacks of Class "G" cement squeezed through retainer, and 10 sacks of cement spotted on top of the retainer.

#### WELL CONSTRUCTION:

- \* 8-5/8 inch surface casing set at 400 feet in a 12-1/4 inch hole. Casing was cemented to the surface with 190 sacks of Class "G" cement.
- \* 5-1/2 inch longstring set at 6360 feet in a 7-7/8 inch hole with 480 sacks of Class "G" cement and 540 sacks of RFC.
- \* 2-3/8 inch tubing to be set with a packer, with the packer no higher than 100 feet above the top perforation.
- \* By Temperature Log, the permittee cites top of annulus cement at 950 feet, No Cement Bond Log was run from which the EPA can evaluate the effectiveness of cement across the Confining Zone.

#### WELLHEAD EQUIPMENT:

- \* Sampling tap located to enable the sampling of fluid in the injection tubing.
- \* Sampling tap located to enable the sampling of fluid in the tubing/casing annulus.

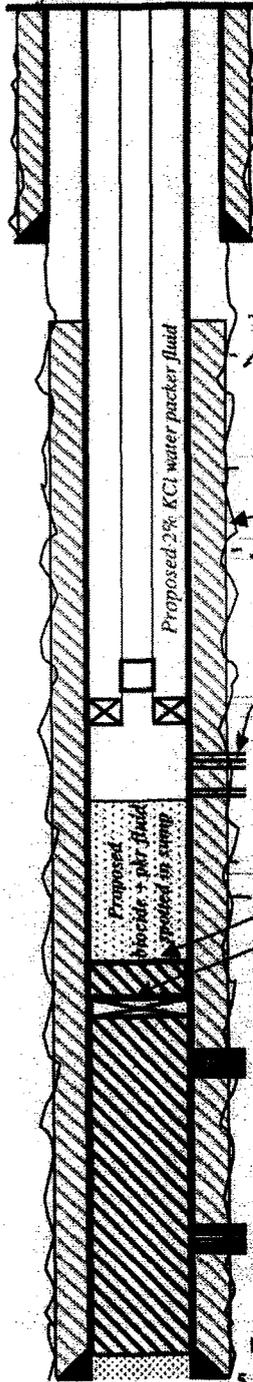
**DOMINION EXPLORATION & PRODUCTION, Inc.**  
**RIVER BEND UNIT 13-11F**  
 315' FWL & 96' FSL, Section 11-T10S-R20E, Uintah Co., Utah  
 API: 43-047-30973

SPUDDED: 1/11/82  
 COMPLETED: 9/8/82

Datum: KB 12' AGL  
 KBE: 5021'  
 GLE: 5009'

*Proposed Condition  
 for SWD Service*

**NOTE: Unless Stated All Depths  
 are Measured.  
 NOT DRAWN TO SCALE.**



12 1/4" bit  
*Uintah Frn. @ Surface*  
 8 5/8", 24# K-55 @ 400'. Cmt'd w/190 sx Class G - BJ Hughes 1/11/82

TOC @ 950' (temp svy) Lyles 2/24/82  
*1996 Green River Frn*  
 5 1/2" Casing Detail  
 17#, N80, LTC?, 8rd Surface to 2101'  
 17#, K55, LTC?, 8rd 2101' to 6360'

*2500 Est. Base USDW's*  
 7 7/8" bit  
*3264 Douglas Creek Mem - Green River Frn*

Proposed 2 3/8", 4.7#, J55, EUE, 8rd, internally coated tubing  
 Proposed \_\_\_\_\_ packer w/ "C" valve and On/Off Tool @ 3970'

*3896-4028 Confining Zone*  
 Green River Brown zone  
 Proposed perfs: 4028'-42', 14', 4 spf, 90 deg ph, 0.50" dia, 56 shots  
 4046'-48', 2', 4 spf, 90 deg ph, 0.50" dia, 8 shots  
 4053'-60', 7', 4 spf, 90 deg ph, 0.50" dia, 28 shots  
 4083'-4100', 17', 4 spf, 90 deg ph, 0.50" dia, 68 shots

*4465 Green River Lime (Base Carbonat)* 160 shots  
*4600 Washatch Frn*  
 Proposed PBD 5587  
 Proposed 10K cement retainer @ 5675' w/ 75 sx Class G cmt squeezed through retainer and 10 sx cmt spotted on top via tbg (BLM requires minimum of 50' of cmt fill on top of retainer if using tubing)

**Interval #2 Chapita Wells**  
 Perfs: 5770-5776, 5788-5806 1 SPF, 120 deg ph, 0.43" dia (25 holes), GO 8/16/82  
 Frac: 55,000# 12/20 sd, 208 BF, 8/20/82  
 Test: 1538 MCFD FCP 1800 psi 12/64" Ck 8/21/82

**Interval #1 Chapita Wells**  
 Perfs: 6264-6286 1 spf, 120 deg ph, 0.43" dia (22 Holes), GO 8/7/82  
 Frac: 32,000# 12/20 sd, 151 BF + 517 Mscf N2, AIR 14 BPM @ 3100# via 2 3/8" x 5 1/2" ann, ISIP 3500# (foam-no details) Halliburton 8/11/82  
 Test: 1025 MCFD FCP 1200 psi 10/64" Ck 8/12/82

PBD 6311' (5/27/82)  
 5 1/2", 17#, K55/N-80 @ 6360'. Cmt'd w/480 sx Class G + 540 sx RFC,  
 lost circ'n w/135 bbl displ pumped. Dowell 2/11/82

LTD 6450'  
 DTD 6490'

PREPARED BY: Kevin Rupert  
 RBL 13-11F.pdf  
 Revised by: KABPEI/RAB 8-24-03

## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

WELL NAME: RBU 13-11F SWD	
TYPE OF TEST	DATE DUE
Step Rate Test	Within 3 to 6 months after receiving Authorization to Inject
Standard Annulus Pressure	Prior to receiving Authorization to Inject
Pore Pressure	Prior to receiving Authorization to Inject
Radioactive Tracer Survey (1)	Within 180 days after receiving Authorization to Inject

## APPENDIX C

### OPERATING REQUIREMENTS

#### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
RBU 13-11F SWD	1,135

#### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: RBU 13-11F SWD	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
	FORMATION NAME	4,028.00	4,128.00
Green River Fm: Brown Zone			

#### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. Of this permit.

#### MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE WEEKLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
<b>OBSERVE AND RECORD</b>	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
<b>ANALYZE</b>	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
<b>REPORT</b>	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

**Dominion Exploration & Production Company**  
**1400 North State Street**  
**Roosevelt, UT 84066**

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

All cement plugs will be placed with tubing . 9.2 ppg plugging gel or fresh water weighted with bentonite or treated brine will be placed bewteen all plugs. The EPA has modified the P&A Plan submitted by the permittee. The EPA has added a cement plug at the base of the USDWs (Plug No. 2) and has modified the two plugs within the 5-1/2 inch casing to just one plug.

**PLUG NO. 1:** Set 10K cement retainer at 4000 feet with 50 sacks of Class "G" cement squeezed through the retainer. Spot 10 sacks of cement on top of retainer.

**PLUG NO. 2:** Set 10K cement retainer at approximately 2500 feet, which is the estimated base of the underground sources of drinking water less than 10,000 mg/l. Set 10 sacks of Class "G" cement on top of retainer.

**PLUG NO. 3:** Set a 10K cement retainer at approximately 1600 feet which is the interface of the Uintah and Green River Formations. Set 10 sacks of Class "G" cement on top of retainer.

**PLUG NO. 4:** Set a cement plug in the annulus between the 5-1/2 inch casing and the 8-5/8 inch casing from the surface to 450 feet.

**PLUG NO. 5:** Set a cement plug inside of the 5-1/2 inch casing from the surface to a depth of 450 feet.



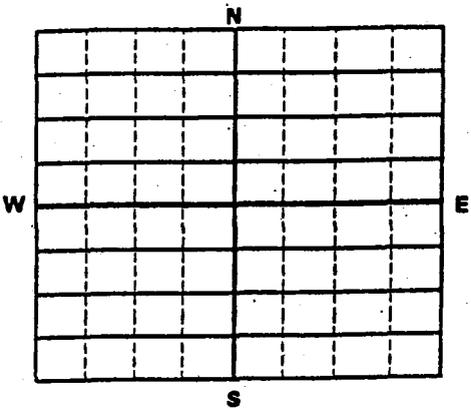
United States Environmental Protection Agency  
Washington, DC 20460

### Application To Transfer Permit

Name and Address of Existing Permittee

Name and Address of Surface Owner

Locate Well and Outline Unit on  
Section Plat- 640 Acres.



State

County

Permit Number

Surface Location Description

1/4 of 1/4 of 1/4 of 1/4 of Section Township Range

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location ft. from (N/S) Line of quarter section  
and ft. from (E/W) Line of quarter section.

Well Activity

Well Status

Type of Permit

Class I

Operating

Individual

Class II

Modification/Conversion

Area

Brine Disposal

Proposed

Number of Wells

Enhanced Recovery

Hydrocarbon Storage

Class III

Other

Lease Number

Well Number

Name(s) and Address(es) of New Owners(s)

Name and Address of New Operator

*Attach to this application a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them.*

*The new permittee must show evidence of financial responsibility by the submission of a surety bond, or other adequate assurance, such as financial statements or other materials acceptable to the Director.*

### Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Signature

Date Signed







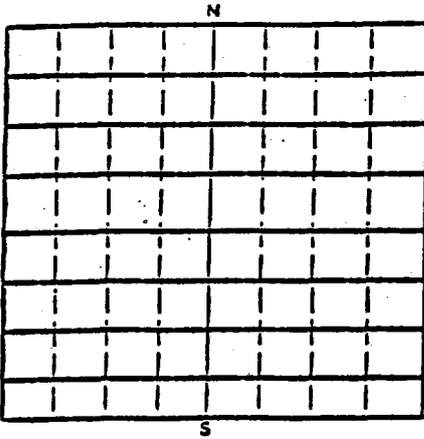


# PLUGGING RECORD

NAME AND ADDRESS OF PERMITTEE

NAME AND ADDRESS OF CEMENTING COMPANY

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT - 640 ACRES



STATE \_\_\_\_\_ COUNTY \_\_\_\_\_

PERMIT NUMBER \_\_\_\_\_

SURFACE LOCATION DESCRIPTION

1/4 OF \_\_\_\_\_ 1/4 OF \_\_\_\_\_ 1/4 SECTION \_\_\_\_\_ TOWNSHIP \_\_\_\_\_ RANGE \_\_\_\_\_

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location \_\_\_\_\_ ft. from (N/S) \_\_\_\_\_ Line of quarter section  
and \_\_\_\_\_ ft. from (E/W) \_\_\_\_\_ Line of quarter section

TYPE OF AUTHORIZATION

- Individual Permit
- Area Permit
- Rule

Number of Wells \_\_\_\_\_

Lease Name \_\_\_\_\_

Describe in detail the manner in which the fluid was placed and the method used in introducing it into the hole

### CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT(LB./FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	HOLE SIZE

WELL ACTIVITY

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- CLASS I
- CLASS II
- Brine Disposal
- Enhanced Recovery
- Hydrocarbon Storage
- CLASS III

- The Balance Method
- The Gumbo Baker Method
- The Two-Plug Method
- Other

### CEMENTING TO PLUG AND ABANDON DATA:

	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in which Plug Will Be Placed (inches)							
Depth to Bottom of Tubing or Drill Pipe (ft.)							
Sacks of Cement To Be Used (each plug)							
Slurry Volume To Be Pumped (cu. ft.)							
Calculated Top of Plug (ft.)							
Measured Top of Plug (if tagged ft.)							
Slurry Wt. (Lb./Gal.)							
Volume Cement or Other Material (Class III)							

### LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS

From	To	From	To

Signature of Cementer or Authorized Representative

Signature of EPA Representative

### CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. (REF. 40 CFR 122.22)

NAME AND OFFICIAL TITLE (Please type or print)

SIGNATURE

DATE SIGNED



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

999 18th STREET - SUITE 300

DENVER, CO 80202-2466

<http://www.epa.gov/region08>

JUN 10 2004

Ref: 8P-W-GW

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Timothy Haddican  
Dominion Exploration & Production, Inc.  
1400 North State Street  
Roosevelt, UT, 84066

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

Re: Underground Injection Control Program  
Permit for the RBU 13-11F SWD Well  
Uintah County, UT  
EPA Permit No. UT20961-06292

Dear Mr Haddican:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed RBU 13-11F SWD, in Duchesne County, Utah. A Statement of Basis, which discusses development of the conditions and requirements of the Permit, also is included.

The Public Comment period ended May 20, 2004. There were no comments on the Draft Permit received during the Public Notice period, and therefore the Final Permit becomes effective on the date of issuance. All conditions set forth herein refer to Title 40 Parts 124, 144, 146, and 147 of the Code of Federal Regulations (CFR) and are regulations that are in effect on the date that this Permit becomes effective.

Please note that under the terms of the Final Permit, you are authorized only to construct the proposed injection well, and must fulfill the "Prior to Commencing Injection" requirements of the Permit, Part II Section C Subpart 1 and obtain written Authorization to Inject prior to commencing injection. It is your responsibility to be familiar with and to comply with all provisions of the Final Permit.

The Permit and the authorization to inject are issued for the operating life of the well unless terminated (Part III, Section B). The EPA will review this Permit at least every five (5) years to determine whether action under 40 CFR § 144.36(a) is warranted.

RECEIVED

JUN 14 2004

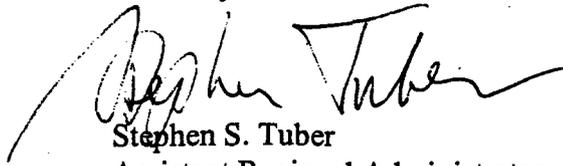
DIV. OF OIL, GAS & MINING



Printed on Recycled Paper

If you have any questions on the enclosed Final Permit or Statement of Basis, please call Emmett Schmitz of my staff at (303) 312-6174, or toll-free at (800) 227-8917, ext. 6174.

Sincerely,



Stephen S. Tuber  
Assistant Regional Administrator  
Office of Partnerships and Regulatory Assistance

enclosure: Final UIC Permit  
Statement of Basis  
Form 7520-7 Application to Transfer Permit  
Form 7520-10 Completion Report  
Form 7520-11 Monitoring Report  
Form 7520-12 Well Rework Record  
Form 7520-14 Plugging Record  
Groundwater Section Guidance 34  
Groundwater Section Guidance 35  
Groundwater Section Guidance 37  
Groundwater Section Guidance 39

cc: Maxine Natchees  
Chairperson  
Uintah & Ouray Business Council  
Ute Indian Tribe  
P.O. Box 19  
Fort Duchesne, UT 84026

Elaine Willie  
Environmental Coordinator  
Ute Indian Tribe  
P.O. Box 460  
Fort Duchesne, UT 84026

Chester Mills  
Superintendent  
Bureau of Indian Affairs  
Uintah & Ouray Indian Agency  
P.O. Box 130  
Fort Duchesne, UT 84026

Donna Trotter  
Agent for Dominion Expl. & Prod., Inc.  
1620 West 750 North  
Vernal, UT 84078

Richard Brown  
Consulting Engineer  
14000 Quail Springs Parkway  
Suite 600  
Oklahoma City, OK 73134-02600

Gil Hunt  
Technical Services Manager  
State of Utah - Natural Resources  
Division of Oil, Gas and Mining  
1594 West North Temple - Suite 1220  
Salt Lake City, UT 84111

Jerry Kenczka  
Petroleum Engineer  
Bureau of Land Management  
170 South 500 East  
Vernal, UT 84078



# STATEMENT OF BASIS

**DOMINION EXPLORATION & PRODUCTION, INC**

**RBU 13-11F SWD  
UINTAH COUNTY, UT**

**EPA PERMIT NO. UT20961-06292**

**CONTACT:** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
999 18th Street, Suite 300  
Denver, Colorado 80202-2466  
Telephone: 1-800-227-8917 ext. 6174

This STATEMENT OF BASIS gives the derivation of site-specific UIC Permit conditions and reasons for them. Referenced sections and conditions correspond to sections and conditions in the Permit.

UIC Permits specify the conditions and requirements for construction, operation, monitoring and reporting, and plugging of injection wells to prevent the movement of fluids into underground sources of drinking water (USDWs). Under 40 CFR 144 Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General Permit conditions for which content is mandatory and not subject to site-specific differences (40 CFR Parts 144, 146 and 147) are not discussed in this document.

Upon the Effective Date when issued, the Permit authorizes the conversion and operation of a "new" injection well or wells governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well unless terminated for reasonable cause under 40 CFR 144.39, 144.40 and 144.41. The Permit is subject to EPA review at least once every five (5) years to determine if action is required under 40 CFR 144.36(a).

## PART I. General Information and Description of Facility

Dominion Exploration & Production, Inc  
1450 Poydras Street  
New Orleans, LA 70112

on

November 18, 2003

submitted an application for an Underground Injection Control (UIC) Program Permit for the following injection well or wells:

RBU 13-11F SWD  
96' FSL& 314' FWL, SWSW S11, T10S, R20E  
Uintah County, UT

Regulations specific to Uintah-Ouray Indian Reservation injection wells are found at 40 CFR 147 Subpart TT.

The Permit application, including the required information and data necessary to issue a UIC Permit in accordance with 40 CFR Parts 144, 146 and 147, was reviewed by EPA and determined to be complete.

The Permit will expire upon delegation of primary enforcement responsibility (primacy) for applicable portions of the UIC Program to the Ute Indian Tribe or the State of Utah unless the delegated agency has the authority and chooses to adopt and enforce this Permit as a Tribal or State Permit.

TABLE 1.1 shows the status of the well or wells as "New", "Existing", or "Conversion" and for Existing shows the original date of injection operation. Well authorization "by rule" under 40 CFR Part 144 Subpart C expires automatically on the Effective Date of an issued UIC Permit.

TABLE 1.1		
WELL STATUS / DATE OF OPERATION		
CONVERSION WELLS		
Well Name	Well Status	Date of Operation
RBU 13-11F SWD	Conversion	N/A

## PART II. Permit Considerations (40 CFR 146.24)

### Geologic Setting (TABLE 2.1)

**TABLE 2.1  
GEOLOGIC SETTING  
RBU 13-11F SWD**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Green River Fm: Brown Zone	4,028.00	4,100.00	67,080.00	Sandstone and Limestone

**Proposed Injection Zone(s) (TABLE 2.2)**

An injection zone is a geological formation, group of formations, or part of a formation that receives fluids through a well. The proposed injection zones are listed in TABLE 2.2.

Injection will occur into an injection zone that is separated from USDWs by the confining zone which is free of known open faults or fractures within the Area of Review.

**TABLE 2.2  
INJECTION ZONES  
RBU 13-11F SWD**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River Fm: Brown Zone	4,028.00	4,128.00	67,080.00	0.735		N/A

- \* C - Currently Exempted
- E - Previously Exempted
- P - Proposed Exemption
- N/A - Not Applicable

**Confining Zone(s) (TABLE 2.3)**

A confining zone is a geological formation, part of a formation, or a group of formations that limits fluid movement above the injection zone. The confining zone or zones are listed in TABLE 2.3.

**TABLE 2.3  
CONFINING ZONES  
RBU 13-11F SWD**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Green River Fm: Brown Zone	Shale	3,896.00	4,028.00

**Underground Sources of Drinking Water (USDWs) (TABLE 2.4)**

Aquifers or the portions thereof which contain less than 10,000 mg/l total dissolved solids (TDS) and are being or could in the future be used as a source of drinking water are considered to be USDWs. The USDWs in the area of this facility are identified in TABLE 2.4.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**RBU 13-11F SWD**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta & Green River Formations	Sand and Shale	0.00	2,500.00	< 10,000.00

**PART III. Well Construction (40 CFR 146.22)**

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**RBU 13-11F SWD**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Longstring	7.88	5.50	0.00 - 6,360.00	950.00 - 6,490.00
Surface	12.25	8.66	0.00 - 400.00	0.00 - 400.00

The approved well completion plan will be incorporated into the Permit as APPENDIX A and will be binding on the Permittee. Modification of the approved plan is allowed under 40 CFR 144.52(a)(1) provided written approval is obtained from the Director prior to actual modification.

**Casing and Cementing (TABLE 3.1)**

The construction plan for this well proposed for conversion to an injection well was evaluated and determined to be in conformance with standard practices and guidelines that ensure well injection does not result in the movement of fluids into USDWs. Well construction and conversion details for this well are shown in TABLE 3.1.

**Tubing and Packer**

Injection tubing is required to be installed from a packer up to the surface inside the well casing. The packer will be set above the uppermost perforation. The tubing and packer are designed to prevent injection fluid from coming into contact with the outermost casing.

**Tubing-Casing Annulus (TCA)**

The TCA allows the casing, tubing and packer to be pressure-tested periodically for mechanical integrity, and will allow for detection of leaks. The TCA will be filled with fresh water treated with a corrosion inhibitor or other fluid approved by the Director.

**Monitoring Devices**

The permittee will be required to install and maintain wellhead equipment allowing for monitoring pressures and providing access for sampling the injected fluid. This equipment includes: 1) shut-off valves located at the wellhead on the injection tubing and on the TCA; 2) a flow meter that measures the cumulative volume of injected fluid; 3) pressure gauges attached to the injection tubing and the TCA to monitor the injection and TCA pressure; and 4) a tap on the injection line,

isolated by shut-off valves, for sampling the injected fluid.

All sampling and measurement taken for monitoring must be representative of the monitored activity.

#### **PART IV. Area of Review, Corrective Action Plan (40 CFR 144.55)**

TABLE 4.1 lists the wells in the Area of Review ("AOR") and shows the well type, operating status, depth, top of casing cement ("TOC") and whether a Corrective Action Plan ("CAP") is required for the well.

##### **Area Of Review**

Applicants for Class I, II (other than "existing" wells) or III injection well Permits are required to identify the location of all known wells within the injection well's Area of Review (AOR) which penetrate the injection zone, or in the case of Class II wells operating over the fracture pressure of the formation, all known wells within the area of review that penetrate formations which may be affected by increased pressure. Under 40 CFR 146.6 the AOR may be a fixed radius of not less than one quarter (1/4) mile or a calculated zone of endangering influence. For Area Permits, a fixed width of not less than one quarter (1/4) mile for the circumscribing area may be used.

##### **Corrective Action Plan**

For wells in the AOR which are improperly sealed, completed, or abandoned, the applicant shall develop a Corrective Action Plan (CAP) consisting of the steps or modifications that are necessary to prevent movement of fluid into USDWs.

The CAP will be incorporated into the Permit as APPENDIX F and become binding on the permittee.

TABLE 4.1 lists the wells in the AOR, and shows the well type, operating status, depth, top of casing cement and whether a CAP is required for this well.

#### **PART V. Well Operation Requirements (40 CFR 146.23)**

<b>Formation Name</b>	<b>Depth Used to Calculate MAIP (ft)</b>	<b>Fracture Gradient (psi/ft)</b>	<b>Initial MAIP (psi)</b>
Green River Fm: Brown Zone	4,028.00	0.735	1,135

##### **Approved Injection Fluid**

The approved injection fluid will be limited to a produced water mixture which meets requirements pursuant to 40 CFR § 144.6(b). The well also may be used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Non-exempt wastes,

including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are not approved.

### **Injection Pressure Limitation**

Injection pressure, measured at the wellhead, shall not exceed a maximum calculated to assure that the pressure used during injection does not initiate new fractures or propagate existing fractures in the confining zones adjacent to the USDWs:

The applicant submitted injection fluid density and injection zone data which was used to calculate a formation fracture pressure and to determine the maximum allowable injection pressure (MAIP), as measured at the surface, for this Permit,

TABLE 5.1 lists the fracture gradient for the injection zone and the approved MAIP, determined according to the following formula:

$$FP = [fg - (0.433 * sg)] * d$$

FP = formation fracture pressure (measured at surface)

fg = fracture gradient (from submitted data or tests)

sg = specific gravity (of injected fluid)

d = depth to top of injection zone (or top perforation)

### **Injection Volume Limitation**

Cumulative injected fluid volume limits are set to assure that injected fluids remain within the boundary of the exempted area. Cumulative injected fluid volume is limited when injection occurs into an aquifer that has been exempted from protection as a USDW.

### **Mechanical Integrity (40 CFR 146.8)**

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packern (Part I); and
2. there is no significant fluid movement into a USDW through vertical channels adjacent to the injection well bore (Part II).

The Permit prohibits injection into a well which lacks mechanical integrity.

The Permit requires that the well demonstrate mechanical integrity prior to injection and periodically thereafter. A demonstration of mechanical integrity includes both internal (Part I) and external (Part II). The methods and frequency for demonstrating Part I and Part II mechanical integrity are dependant upon well-specific conditions as explained below:

## **PART VI. Monitoring, Recordkeeping and Reporting Requirements**

### **Injection Well Monitoring Program**

At least once a year the permittee must analyze a sample of the injected fluid for total dissolved solids (TDS), specific conductivity, pH, and specific gravity. This analysis shall be reported to EPA annually as part of the Annual Report to the Director. Any time a new source of injected fluid is added, a fluid analysis shall be made of the new source.

Instantaneous injection pressure, injection flow rate, cumulative fluid volume and TCA pressures

must be observed on a weekly basis. A recording, at least once every thirty (30) days, must be made of the injection pressure, injection flow rate and cumulative fluid volume, and the maximum and average value for each must be determined for each month. This information is required to be reported annually as part of the Annual Report to the Director.

## **PART VII. Plugging and Abandonment Requirements (40 CFR 146.10)**

### **Plugging and Abandonment Plan**

Prior to abandonment, this well must be plugged with cement in a manner which will not allow the movement of fluids either into or between USDWs. The plugging and abandonment plan is described in Appendix E of the Permit.

## **PART VIII. Financial Responsibility (40 CFR 144.52)**

### **Demonstration of Financial Responsibility**

The permittee is required to maintain financial responsibility and resources to close, plug, and abandon the underground injection operation in a manner prescribed by the Director. The permittee shall show evidence of such financial responsibility to the Director by the submission of a surety bond, or other adequate assurance such as financial statements or other materials acceptable to the Director. The Regional Administrator may, on a periodic basis, require the holder of a lifetime permit to submit a revised estimate of the resources needed to plug and abandon the well to reflect inflation of such costs, and a revised demonstration of financial responsibility if necessary. Initially, the operator has chosen to demonstrate financial responsibility with:

Surety Bond, received July 12, 2000

Evidence of continuing financial responsibility is required to be submitted to the Director annually.



**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: May 2004

**Permit No. UT20961-06292**

Class II Salt Water Disposal Well

**RBU 13-11F SWD,  
Uintah County, UT**

Issued To

**Dominion Exploration Production, Inc**

1450 Poydras Street  
New Orleans, LA 70112

## Part I. AUTHORIZATION TO CONSTRUCT AND OPERATE

Under the authority of the Safe Drinking Water Act and Underground Injection Control (UIC) Program regulations of the U. S. Environmental Protection Agency (EPA) codified at Title 40 of the Code of Federal Regulations (40 CFR) Parts 2, 124, 144, 146, and 147, and according to the terms of this Permit,

Dominion Exploration & Production, Inc  
1450 Poydras Street  
New Orleans, LA 70112

is authorized to construct and to operate the following Class II injection well or wells:

RBU 13-11F SWD  
96' FSL& 314' FWL, SWSW S11, T10S, R20E  
Uintah County, UT

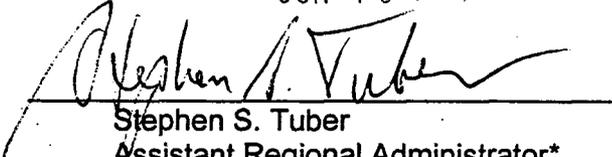
Permit requirements herein are based on regulations found in 40 CFR Parts 124, 144, 146, and 147 which are in effect on the Effective Date of this Permit.

This Permit is based on representations made by the applicant and on other information contained in the Administrative Record. Misrepresentation of information or failure to fully disclose all relevant information may be cause for termination, revocation and reissuance, or modification of this Permit and/or formal enforcement action. This Permit will be reviewed periodically to determine whether action under 40 CFR 144.36(a) is required.

This Permit is issued for the life of the well unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for this program is delegated to an Indian Tribe or a State. Upon the effective date of delegation, all reports, notifications, questions and other compliance actions shall be directed to the Indian tribe or State Program Director or designee.

Issue Date: JUN 10 2004

Effective Date JUN 10 2004

  
Stephen S. Tuber  
Assistant Regional Administrator\*  
Office of Partnerships and Regulatory Assistance

\*NOTE: The person holding this title is referred to as the "Director" throughout this Permit.

## PART II. SPECIFIC PERMIT CONDITIONS

### Section A. WELL CONSTRUCTION REQUIREMENTS

These requirements represent the approved minimum construction standards for well casing and cement, injection tubing, and packer.

Details of the approved well construction plan are incorporated into this Permit as APPENDIX A. Changes to the approved plan that may occur during construction must be approved by the Director prior to being physically incorporated.

#### **1. Casing and Cement.**

The well or wells shall be cased and cemented to prevent the movement of fluids into or between underground sources of drinking water. The well casing and cement shall be designed for the life expectancy of the well and of the grade and size shown in APPENDIX A. Remedial cementing may be required if shown to be inadequate by cement bond log or other attempted demonstration of Part II (External) mechanical integrity.

#### **2. Injection Tubing and Packer.**

Injection tubing is required, and shall be run and set with a packer at or below the depth indicated in APPENDIX A. The packer setting depth may be changed provided it remains below the depth indicated in APPENDIX A and the Permittee provides notice and obtains the Director's approval for the change.

#### **3. Sampling and Monitoring Devices.**

The Permittee shall install and maintain in good operating condition:

- (a) a "tap" at a conveniently accessible location on the injection flow line between the pump house or storage tanks and the injection well, isolated by shut-off valves, for collection of representative samples of the injected fluid; and
- (b) one-half (1/2) inch female iron pipe fitting, isolated by shut-off valves and located at the wellhead at a conveniently accessible location, for the attachment of a pressure gauge capable of monitoring pressures ranging from normal operating pressures up to the Maximum Allowable Injection Pressure specified in APPENDIX C:
  - (i) on the injection tubing; and
  - (ii) on the tubing-casing annulus (TCA); and
- (c) a pressure actuated shut-off device attached to the injection flow line set to shut-off the injection pump when or before the Maximum Allowable Injection Pressure specified in APPENDIX C is reached at the wellhead; and
- (d) a non-resettable cumulative volume recorder attached to the injection line.

#### **4. Well Logging and Testing**

Well logging and testing requirements are found in APPENDIX B. The Permittee shall ensure the log and test requirements are performed within the time frames specified in APPENDIX B. Well logs and tests shall be performed according to current EPA-approved procedures. Well log and test results shall be submitted to the Director within sixty (60) days of completion of the logging or testing activity, and shall include a report describing the methods used during logging or testing and an interpretation of the test or log results.

#### **5. Postponement of Construction or Conversion**

The Permittee shall complete well construction within one year of the Effective Date of this Permit. Authorization to construct and operate shall expire and the Permit may be terminated under 40 CFR 144.40 if the well has not been constructed within one year of the Effective Date of the Permit unless the Permittee has notified the Director and requested an extension prior to expiration. Notification shall be in writing, and shall state the reasons for the delay and provide an estimated completion date. Once Authorization has expired under this part, the complete permit process including opportunity for public comment may be required before Authorization to construct and operate can be reissued.

#### **6. Workovers and Alterations**

Workovers and alterations shall meet all conditions of the Permit. Prior to beginning any addition or physical alteration to the injection well that may significantly affect the tubing, packer or casing, the Permittee shall give advance notice to the Director and obtain the Director's approval. The Permittee shall record all changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workover, logging, or test data to EPA within sixty (60) days of completion of the activity.

A successful demonstration of Part I MI is required following the completion of any well workover or alteration which affects the casing, tubing, or packer. Injection operations shall not be resumed until the well has successfully demonstrated mechanical integrity and the Director has provided written approval to resume injection.

### **Section B. MECHANICAL INTEGRITY**

The Permittee is required to ensure each injection well maintains mechanical integrity at all times. The Director, by written notice, may require the Permittee to comply with a schedule describing when mechanical integrity demonstrations shall be made.

An injection well has mechanical integrity if:

- (a) There is no significant leak in the casing, tubing, or packer (Part I); and
- (b) There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore (Part II).

### **1. Demonstration of Mechanical Integrity (MI).**

The operator shall demonstrate MI prior to commencing injection and periodically thereafter. Well-specific conditions dictate the methods and the frequency for demonstrating MI and are discussed in the Statement of Basis. The logs and tests are designed to demonstrate both internal (Part I) and external (Part II) MI as described above. The conditions present at this well site warrant the methods and frequency required in Appendix B of this Permit.

In addition to these regularly scheduled demonstrations of MI, the operator shall demonstrate internal (Part I) MI after any workover which affects the tubing, packer or casing.

The Director may require additional or alternative tests if the results presented by the operator are not satisfactory to the Director to demonstrate there is no movement of fluid into or between USDWs resulting from injection activity. Results of MI tests shall be submitted to the Director as soon as possible but no later than sixty (60) days after the test is complete.

### **2. Mechanical Integrity Test Methods and Criteria**

EPA-approved methods shall be used to demonstrate mechanical integrity. A current copy of Ground Water Section Guidance No. 34 "Cement Bond Logging Techniques and Interpretation", Ground Water Section Guidance No. 37, "Demonstrating Part II (External) Mechanical Integrity for a Class II injection well permit", and Ground Water Section Guidance No. 39, "Pressure Testing Injection Wells for Part I (Internal) Mechanical Integrity" are provided at issuance of this Permit.

The Director may stipulate specific test methods and criteria best suited for a specific well construction and injection operation.

### **3. Notification Prior to Testing.**

The Permittee shall notify the Director at least 30 days prior to any scheduled mechanical integrity test. The Director may allow a shorter notification period if it would be sufficient to enable EPA to witness the mechanical integrity test. Notification may be in the form of a yearly or quarterly schedule of planned mechanical integrity tests, or it may be on an individual basis.

### **4. Loss of Mechanical Integrity.**

If the well fails to demonstrate mechanical integrity during a test, or a loss of mechanical integrity becomes evident during operation (such as presence of pressure in the TCA, water flowing at the surface, etc.), the Permittee shall notify the Director within 24 hours (see Part III Section E Paragraph 11(e) of this Permit), and the well shall be shut-in within 48 hours unless the Director requires immediate shut-in.

Within five days, the Permittee shall submit a follow-up written report that documents test results, repairs undertaken or a proposed remedial action plan.

Injection operations shall not be resumed until after the well has successfully been repaired and demonstrated mechanical integrity, and the Director has provided approval to resume injection.

## **Section C. WELL OPERATION**

**INJECTION BETWEEN THE OUTERMOST CASING PROTECTING UNDERGROUND SOURCES OF DRINKING WATER AND THE WELL BORE IS PROHIBITED.**

Injection is approved under the following conditions:

### **1. Requirements Prior to Commencing Injection.**

Injection operation may commence only after all construction and pre-injection requirements herein have been met and approved. Except for new wells authorized by an Area Permit under 40 CFR 144.33 (c), the Permittee may not commence injection until construction is complete, and

- (a) The Permittee has submitted to the Director a notice of completion of construction and a completed EPA Form 7520-12; all applicable logging and testing requirements of this Permit (see APPENDIX B) have been fulfilled and the records submitted to the Director; mechanical integrity pursuant to 40 CFR 146.8 and Part II Section B of this Permit has been demonstrated; and
  - (i) The Director has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the Permit; or
  - (ii) The Permittee has not received notice from the Director of his or her intent to inspect or otherwise review the new injection well within 13 days of the date of the notice in Paragraph 1a, in which case prior inspection or review is waived and the Permittee may commence injection.

### **2. Injection Interval.**

Injection is permitted only within the approved injection interval listed in APPENDIX C. Additional individual injection perforations may be added provided that they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6.

### **3. Injection Pressure Limitation**

- (a) The permitted Maximum Allowable Injection Pressure (MAIP), measured at the wellhead, is found in APPENDIX C. Injection pressure shall not exceed the amount the Director determines is appropriate to ensure that injection does not initiate new fractures or propagate existing fractures in the confining zone adjacent to USDWs. In no case shall injection pressure cause the movement of injected or formation fluids into a USDW.
- (b) The Permittee may request a change of the MAIP, or the MAIP may be increased or decreased by the Director in order to ensure that the requirements in Paragraph (a) above are fulfilled. The Permittee may be required to conduct a step rate injection test or other suitable test to provide information for determining the fracture pressure of the injection zone. Change of the permitted MAIP by the Director shall be by modification of this Permit and APPENDIX C.

#### **4. Injection Volume Limitation.**

Injection volume is limited to the total volume specified in APPENDIX C.

#### **5. Injection Fluid Limitation.**

Injected fluids are limited to those which are brought to the surface in connection with conventional oil or natural gas production and may be commingled with waste waters from gas plants which are an integral part of production operations unless those waters are classified as a hazardous waste at the time of injection, pursuant to 40 CFR 144.6(b). The well also may be used to inject approved Class II wastes brought to the surface such as drilling fluids and spent well completion, treatment and stimulation fluids. Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved. This well is NOT approved for commercial brine or other fluid disposal operation.

#### **6. Tubing-Casing Annulus (TCA)**

The tubing-casing annulus (TCA) shall be filled with water treated with a corrosion inhibitor, or other fluid approved by the Director. The TCA valve shall remain closed during normal operating conditions and the TCA pressure shall be maintained at zero (0) psi.

If TCA pressure cannot be maintained at zero (0) psi, the Permittee shall follow the procedures in Ground Water Section Guidance No. 35 "Procedures to follow when excessive annular pressure is observed on a well."

### **Section D. MONITORING, RECORDKEEPING, AND REPORTING OF RESULTS**

#### **1. Monitoring Parameters, Frequency, Records and Reports.**

Monitoring parameters are specified in APPENDIX D. Pressure monitoring recordings shall be taken at the wellhead. The listed parameters are to be monitored, recorded and reported at the frequency indicated in APPENDIX D even during periods when the well is not operating.

Monitoring records must include:

- (a) the date, time, exact place and the results of the observation, sampling, measurement, or analysis, and;
- (b) the name of the individual(s) who performed the observation, sampling, measurement, or analysis, and;
- (c) the analytical techniques or methods used for analysis.

#### **2. Monitoring Methods.**

- (a) Monitoring observations, measurements, samples, etc. taken for the purpose of complying with these requirements shall be representative of the activity or condition being monitored.

- (b) Methods used to monitor the nature of the injected fluids must comply with analytical methods cited and described in Table 1 of 40 CFR 136.3 or Appendix III of 40 CFR 261, or by other methods that have been approved in writing by the Director.
- (c) Injection pressure, annulus pressure, injection rate, and cumulative injected volumes shall be observed and recorded at the wellhead under normal operating conditions, and all parameters shall be observed simultaneously to provide a clear depiction of well operation.
- (d) Pressures are to be measured in pounds per square inch (psi).
- (e) Fluid volumes are to be measured in standard oil field barrels (bbl).
- (f) Fluid rates are to be measured in barrels per day (bbl/day).

### **3. Records Retention.**

- (a) Records of calibration and maintenance, and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit shall be retained for a period of AT LEAST THREE (3) YEARS from the date of the sample, measurement, report, or application. This period may be extended anytime prior to its expiration by request of the Director.
- (b) Records of the nature and composition of all injected fluids must be retained until three (3) years after the completion of any plugging and abandonment (P&A) procedures specified under 40 CFR 144.52(a)(6) or under Part 146 Subpart G, as appropriate. The Director may require the Permittee to deliver the records to the Director at the conclusion of the retention period. The Permittee shall continue to retain the records after the three (3) year retention period unless the Permittee delivers the records to the Director or obtains written approval from the Director to discard the records.
- (c) The Permittee shall retain records at the location designated in APPENDIX D.

### **4. Annual Reports.**

Whether the well is operating or not, the Permittee shall submit an Annual Report to the Director that summarizes the results of the monitoring required by Part II Section D and APPENDIX D. The report of fluids injected during the year must identify each new fluid source by well name and location, and the field name or facility name.

The first Annual Report shall cover the period from the effective date of the Permit through December 31 of that year. Subsequent Annual Reports shall cover the period from January 1 through December 31 of the reporting year. Annual Reports shall be submitted by February 15 of the year following data collection. EPA Form 7520-11 may be copied and shall be used to submit the Annual Report, however, the monitoring requirements specified in this Permit are mandatory even if EPA Form 7520-11 indicates otherwise.

## **Section E. PLUGGING AND ABANDONMENT**

### **1. Notification of Well Abandonment, Conversion or Closure.**

The Permittee shall notify the Director in writing at least forty-five (45) days prior to: 1) plugging and abandoning the well, 2) converting to a non-injection well, or 3) in the case of an Area Permit, before closure of the project.

### **2. Well Plugging Requirements**

Prior to abandonment, the injection well shall be plugged with cement in a manner which prevents the movement of fluids into or between underground sources of drinking water. Prior to placement of the cement plug(s) the well shall be in a state of static equilibrium with the mud weight equalized top to bottom, either by circulating the mud in the well at least once or by a comparable method prescribed by the Director. The well shall be plugged in accordance with the approved plugging and abandonment plan and with 40 CFR 146.10.

### **3. Approved Plugging and Abandonment Plan.**

The approved plugging and abandonment plan is incorporated into this Permit as APPENDIX E. Changes to the approved plugging and abandonment plan must be approved by the Director prior to beginning plugging operations. The Director also may require revision of the approved plugging and abandonment plan at any time prior to plugging the well.

### **4. Forty Five (45) Day Notice of Plugging and Abandonment.**

The Permittee shall notify the Director at least forty-five (45) days prior to plugging and abandoning the well and provide notice of any anticipated change to the approved plugging and abandonment plan.

### **5. Plugging and Abandonment Report.**

Within sixty (60) days after plugging a well, the Permittee shall submit a report (EPA Form 7520-13) to the Director. The plugging report shall be certified as accurate by the person who performed the plugging operation. Such report shall consist of either:

- (a) A statement that the well was plugged in accordance with the approved plugging and abandonment plan; or
- (b) Where actual plugging differed from the approved plugging and abandonment plan, an updated version of the plan, on the form supplied by the Director, specifying the differences.

### **6. Inactive Wells.**

After any period of two years during which there is no injection the Permittee shall plug and abandon the well in accordance with Part II Section E Paragraph 2 of this Permit unless the Permittee:

- (a) Provides written notice to the Director;

## **PART III. CONDITIONS APPLICABLE TO ALL PERMITS**

### **Section A. EFFECT OF PERMIT**

The Permittee is allowed to engage in underground injection in accordance with the conditions of this Permit. The Permittee shall not construct, operate, maintain, convert, plug, abandon, or conduct any other activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR 142 or may otherwise adversely affect the health of persons. Any underground injection activity not authorized by this Permit or by rule is prohibited. Issuance of this Permit does not convey property rights of any sort or any exclusive privilege; nor does it authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Compliance with the terms of this Permit does not constitute a defense to any enforcement action brought under the provisions of Section 1431 of the Safe Drinking Water Act (SDWA) or any other law governing protection of public health or the environment, for any imminent and substantial endangerment to human health or the environment, nor does it serve as a shield to the Permittee's independent obligation to comply with all UIC regulations. Nothing in this Permit relieves the Permittee of any duties under applicable regulations.

### **Section B. CHANGES TO PERMIT CONDITIONS**

#### ***1. Modification, Reissuance, or Termination.***

The Director may, for cause or upon a request from the Permittee, modify, revoke and reissue, or terminate this Permit in accordance with 40 CFR 124.5, 144.12, 144.39, and 144.40. Also, this Permit is subject to minor modification for causes as specified in 40 CFR 144.41. The filing of a request for modification, revocation and reissuance, termination, or the notification of planned changes or anticipated noncompliance on the part of the Permittee does not stay the applicability or enforceability of any condition of this Permit.

#### ***2. Conversions.***

The Director may, for cause or upon a written request from the Permittee, allow conversion of the well from a Class II injection well to a non-Class II well. Conversion may not proceed until the Permittee receives written approval from the Director. Conditions of such conversion may include but are not limited to, approval of the proposed well rework, follow up demonstration of mechanical integrity, well-specific monitoring and reporting following the conversion, and demonstration of practical use of the converted configuration.

#### ***3. Transfer of Permit.***

Under 40 CFR 144.38, this Permit is transferable provided the current Permittee notifies the Director at least thirty (30) days in advance of the proposed transfer date (EPA Form 7520-7) and provides a written agreement between the existing and new Permittees containing a specific date for transfer of Permit responsibility, coverage and liability between them. The notice shall adequately demonstrate that the financial responsibility requirements of 40 CFR 144.52(a)(7) will be met by the new Permittee. The Director may require modification or revocation and reissuance of the Permit to change the name of the Permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act; in some cases, modification or revocation and reissuance is mandatory.

#### **4. Permittee Change of Address.**

Upon the Permittee's change of address, or whenever the operator changes the address where monitoring records are kept, the Permittee must provide written notice to the Director within 30 days.

#### **5. Construction Changes, Workovers, Logging and Testing Data**

The Permittee shall give advance notice to the Director, and shall obtain the Director's written approval prior to any physical alterations or additions to the permitted facility. Alterations or workovers shall meet all conditions as set forth in this permit. The Permittee shall record any changes to the well construction on a Well Rework Record (EPA Form 7520-12), and shall provide this and any other record of well workovers, logging, or test data to EPA within sixty (60) days of completion of the activity.

Following the completion of any well workovers or alterations which affect the casing, tubing, or packer, a successful demonstration of mechanical integrity (Part III, Section F of this permit) shall be made, and written authorization from the Director received, prior to resuming injection activities.

### **Section C. SEVERABILITY**

The Provisions of this Permit are severable, and if any provision of this Permit or the application of any provision of this Permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this Permit shall not be affected thereby.

### **Section D. CONFIDENTIALITY**

In accordance with 40 CFR Part 2 and 40 CFR 144.5, information submitted to EPA pursuant to this Permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, EPA may make the information available to the public without further notice. If a claim is asserted, the validity of the claim will be assessed in accordance with the procedures in 40 CFR Part 2 (Public Information). Claims of confidentiality for the following information will be denied:

- The name and address of the Permittee, and
- information which deals with the existence, absence or level of contaminants in drinking water.

### **Section E. GENERAL PERMIT REQUIREMENTS**

#### **1. Duty to Comply.**

The Permittee must comply with all conditions of this Permit. Any noncompliance constitutes a violation of the Safe Drinking Water Act (SDWA) and is grounds for enforcement action; for Permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application; except that the Permittee need not comply with the provisions of this Permit to the extent and for the duration such noncompliance is authorized in an emergency permit under 40 CFR 144.34. All violations of the SDWA may subject the Permittee to penalties and/or criminal prosecution as specified in Section 1423 of the SDWA.

## **2. Duty to Reapply.**

If the Permittee wishes to continue an activity regulated by this Permit after the expiration date of this Permit, under 40 CFR 144.37 the Permittee must apply for a new permit prior to the expiration date.

## **3. Need to Halt or Reduce Activity Not a Defense.**

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

## **4. Duty to Mitigate.**

The Permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this Permit.

## **5. Proper Operation and Maintenance.**

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit.

## **6. Permit Actions.**

This Permit may be modified, revoked and reissued or terminated for cause. The filing of a request by the Permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

## **7. Property Rights.**

This Permit does not convey any property rights of any sort, or any exclusive privilege.

## **8. Duty to Provide Information.**

The Permittee shall furnish to the Director, within a time specified, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The Permittee shall also furnish to the Director, upon request, copies of records required to be kept by this Permit. The Permittee is required to submit any information required by this Permit or by the Director to the mailing address designated in writing by the Director.

## **9. Inspection and Entry.**

The Permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and other documents as may be required by law, to:

- (a) Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;
- (c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and,
- (d) Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the SDWA, any substances or parameters at any location.

**10. Signatory Requirements.**

All applications, reports or other information submitted to the Director shall be signed and certified according to 40 CFR 144.32. This section explains the requirements for persons duly authorized to sign documents, and provides wording for required certification.

**11. Reporting Requirements.**

- (a) **Planned changes.** The Permittee shall give notice to the Director as soon as possible of any planned changes, physical alterations or additions to the permitted facility, and prior to commencing such changes.
- (b) **Anticipated noncompliance.** The Permittee shall give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.
- (c) **Monitoring Reports.** Monitoring results shall be reported at the intervals specified in this Permit.
- (d) **Compliance schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit shall be submitted no later than 30 days following each schedule date.
- (e) **Twenty-four hour reporting.** The Permittee shall report to the Director any noncompliance which may endanger human health or the environment, including:
  - (i) Any monitoring or other information which indicates that any contaminant may cause endangerment to a USDW; or
  - (ii) Any noncompliance with a permit condition or malfunction of the injection system which may cause fluid migration into or between USDWs.

Information shall be provided, either directly or by leaving a message, within twenty-four (24) hours from the time the permittee becomes aware of the circumstances by telephoning (800) 227-8917 and requesting EPA Region VIII UIC Program Compliance and Technical Enforcement Director, or by contacting the EPA Region VIII Emergency Operations Center at (303) 293-1788.

In addition, a follow up written report shall be provided to the Director within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance including exact dates and times, and if the noncompliance has not been corrected the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

- (f) Oil Spill and Chemical Release Reporting: The Permittee shall comply with all reporting requirements related to the occurrence of oil spills and chemical releases by contacting the National Response Center (NRC) at (800) 424-8802, (202) 267-2675, or through the NRC website <http://www.nrc.uscg.mil/index.htm>.
- (g) Other Noncompliance. The Permittee shall report all instances of noncompliance not reported under paragraphs Part III, Section E Paragraph 11(b) or Section E, Paragraph 11(e) at the time the monitoring reports are submitted. The reports shall contain the information listed in Paragraph 11(e) of this Section.
- (h) Other information. Where the Permittee becomes aware that it failed to submit any relevant facts in the permit application, or submitted incorrect information in a permit application or in any report to the Director, the Permittee shall promptly submit such facts or information to the Director.

## **Section F. FINANCIAL RESPONSIBILITY**

### **1. Method of Providing Financial Responsibility.**

The Permittee shall maintain continuous compliance with the requirement to maintain financial responsibility and resources to close, plug, and abandon the underground injection well(s). No substitution of a demonstration of financial responsibility shall become effective until the Permittee receives written notification from the Director that the alternative demonstration of financial responsibility is acceptable. The Director may, on a periodic basis, require the holder of a permit to revise the estimate of the resources needed to plug and abandon the well to reflect changes in such costs and may require the Permittee to provide a revised demonstration of financial responsibility.

### **2. Insolvency.**

In the event of:

- (a) the bankruptcy of the trustee or issuing institution of the financial mechanism; or
- (b) suspension or revocation of the authority of the trustee institution to act as trustee; or

- (c) the institution issuing the financial mechanism losing its authority to issue such an instrument

the Permittee must notify the Director in writing, within ten (10) business days, and the Permittee must establish other financial assurance or liability coverage acceptable to the Director within sixty (60) days after any event specified in (a), (b), or (c) above.

The Permittee must also notify the Director by certified mail of the commencement of voluntary or involuntary proceedings under Title 11 (Bankruptcy), U.S. Code naming the owner or operator as debtor, within ten (10) business days after the commencement of the proceeding. A guarantor, if named as debtor of a corporate guarantee, must make such a notification as required under the terms of the guarantee.

## APPENDIX A

### WELL CONSTRUCTION REQUIREMENTS

See diagram.

#### FORMATION DATA:

- \* Base of Underground Sources of Drinking Water (USDW) in Green River Formation: Surface to 2510 feet. Permittee cites top of cement (TOC) as 950 feet by Temperature Log.
- \* Confining Zone: Thirty-two (32) feet of shale (3896 feet to 4028 feet) directly overlying the top proposed perforated interval 4028 feet to 4042 feet.
- \* Permitted Injection Zone: Proposed gross injection interval 4028 feet to 4100 feet. Lithology is limestone.
- \* Well Total Depth: Driller Total Depth 6490 feet in Chapita Wells Member of the Wasatch Formation. Original Plug Back Total Depth (PBSD) 6311 feet in the Chapita Wells Member.

Proposed PBSD will be 5587 feet following setting 10K cement retainer at 5675 feet with 75 sacks of Class "G" cement squeezed through retainer, and 10 sacks of cement spotted on top of the retainer.

#### WELL CONSTRUCTION:

- \* 8-5/8 inch surface casing set at 400 feet in a 12-1/4 inch hole. Casing was cemented to the surface with 190 sacks of Class "G" cement.
- \* 5-1/2 inch longstring set at 6360 feet in a 7-7/8 inch hole with 480 sacks of Class "G" cement and 540 sacks of RFC.
- \* 2-3/8 inch tubing to be set with a packer, with the packer no higher than 100 feet above the top perforation.
- \* By Temperature Log, the permittee cites top of annulus cement at 950 feet, No Cement Bond Log was run from which the EPA can evaluate the effectiveness of cement across the Confining Zone.

#### WELLHEAD EQUIPMENT:

- \* Sampling tap located to enable the sampling of fluid in the injection tubing.
- \* Sampling tap located to enable the sampling of fluid in the tubing/casing annulus.

**DOMINION EXPLORATION & PRODUCTION, Inc.**  
**RIVER BEND UNIT 13-11F**

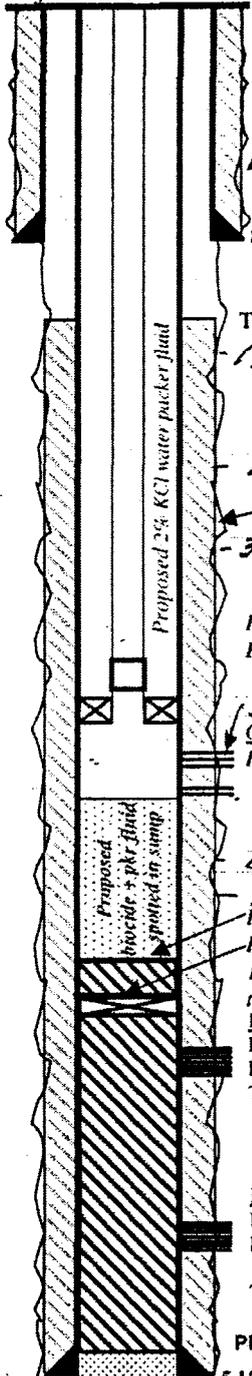
SPUDDED: 1/11/82  
 COMPLETED: 9/8/82

315' FWL & 96' FSL, Section 11-T10S-R20E, Uintah Co., Utah  
 API: 43-047-30973

Datum: KB 12' AGL  
 KBE: 5021'  
 GLE: 5009'

*Proposed Condition  
 for SWD Service*

**NOTE: Unless Stated All Depths  
 are Measured.  
 NOT DRAWN TO SCALE.**



*Uintah Fm @ Surface*

8 5/8" 24# K-55 @ 400'. Cmt'd w/190 sx Class G BJ Hughes 1/11/82

TOC @ 950' (temp svy) Lyles 2/24/82

*1996' Green River Fm*  
 5 1/2" Casing Detail

17# N80 LTC? 8rd Surface to 2101'  
 17# K55 LTC? 8rd 2101' to 6360'

*2500' Est. Base USDW's*

7 7/8" bit

*3264' Douglas Creek mem - Green River Fm*

Proposed 2 3/8" 4.7# J55 EUE 8rd internally coated tubing  
 Proposed \_\_\_\_\_ packer w/ "C" valve and On/Off Tool @ 3970'

*3896'-4028' Confining Zone*  
 Green River Brown zone

Proposed perfs: 4028'-42', 14', 4 spf, 90 deg ph, 0.50" dia, 56 shots  
 4046'-48', 2', 4 spf, 90 deg ph, 0.50" dia, 8 shots  
 4053'-60', 7', 4 spf, 90 deg ph, 0.50" dia, 28 shots  
 4083'-4100', 17', 4 spf, 90 deg ph, 0.50" dia, 68 shots

*4465' Green River Lime (Lager Carbonate)*

*4128'-4465' Wasatch Tongue*

*4608' Wasatch Fm*

Proposed PBTD 5587'  
 Proposed 10K cement retainer @ 5675' w/ 75 sx Class G cmt squeezed through retainer and 10 sx cmt spotted on top via tbg (BLM requires minimum of 50' of cmt fill on top of retainer if using tubing)

Interval #2 Chapita Wells  
 Perfs: 5770-5776, 5788-5806' 1 SPF, 120 deg ph, 0.43" dia (25 holes), GO 8/16/82  
 Frac: 55,000# 12/20 sd, 208 BF, 8/20/82  
 Test: 1538 MCFD FCP 1800 psi 12/64" Ck 8/21/82

Interval #1 Chapita Wells  
 Perfs: 6264-6286' 1 spf, 120 deg ph, 0.43" dia (22 Holes), GO 8/7/82  
 Frac: 32,000# 12/20 sd, 151 BF + 517 Mscf N2, AIR 14 BPM @ 3100# via 2 3/8" x 5 1/2" ann, ISIP 3500# (foam-no details) Halliburton 8/11/82  
 Test: 1025 MCFD FCP 1200 psi 10/64" Ck 8/12/82

PBTD 6311' (5/27/82)  
 5 1/2" 17# K55/N-80 @ 6360'. Cmt'd w/480 sx Class G + 540 sx RFC,  
 lost circ'n w/135 bbl displ pumped. Dowell 2/11/82

LTD 6450'  
 DTD 6490'

PREPARED BY: Kevin Rupert  
 RBU 13-11F.ppt  
 Revised by: RABPEI / RAB 8-24-03

## APPENDIX B

### LOGGING AND TESTING REQUIREMENTS

#### Logs.

Logs will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well logging required as a condition of this permit.

#### NO LOGGING REQUIREMENTS

#### Tests.

Tests will be conducted according to current UIC guidance. It is the responsibility of the permittee to obtain and use guidance prior to conducting any well test required as a condition of this permit.

WELL NAME: RBU 13-11F SWD	
TYPE OF TEST	DATE DUE
Step Rate Test	Within 3 to 6 months after receiving Authorization to Inject
Standard Annulus Pressure	Prior to receiving Authorization to Inject
Pore Pressure	Prior to receiving Authorization to Inject
Radioactive Tracer Survey (1)	Within 180 days after receiving Authorization to Inject

# APPENDIX C

## OPERATING REQUIREMENTS

### MAXIMUM ALLOWABLE INJECTION PRESSURE:

Maximum Allowable Injection Pressure (MAIP) as measured at the surface shall not exceed the pressure(s) listed below.

WELL NAME	MAXIMUM ALLOWED INJECTION PRESSURE (psi)
	ZONE 1 (Upper)
RBU 13-11F SWD	1,135

### INJECTION INTERVAL(S):

Injection is permitted only within the approved injection interval listed below. Injection perforations may be altered provided they remain within the approved injection interval and the Permittee provides notice to the Director in accordance with Part II, Section A, Paragraph 6. Specific injection perforations can be found in Appendix A.

WELL NAME: RBU 13-11F SWD	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
FORMATION NAME			
Green River Fm: Brown Zone	4,028.00	4,128.00	0.735

### ANNULUS PRESSURE:

The annulus pressure shall be maintained at zero (0) psi as measured at the wellhead. If this pressure cannot be maintained, the Permittee shall follow the procedures listed under Part II, Section C. 6. Of this permit.

### MAXIMUM INJECTION VOLUME:

There is no limitation on the number of barrels per day (bbls/day) of water that shall be injected into this well, provided further that in no case shall injection pressure exceed that limit shown in Appendix C.

## APPENDIX D

### MONITORING AND REPORTING PARAMETERS

This is a listing of the parameters required to be observed, recorded, and reported. Refer to the permit Part II, Section D, for detailed requirements for observing, recording, and reporting these parameters.

OBSERVE WEEKLY AND RECORD AT LEAST ONCE EVERY THIRTY DAYS	
<b>OBSERVE AND RECORD</b>	Injection pressure (psig)
	Annulus pressure(s) (psig)
	Injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbls)

ANNUALLY	
<b>ANALYZE</b>	Injected fluid total dissolved solids (mg/l)
	Injected fluid specific gravity
	Injected fluid specific conductivity
	Injected fluid pH

ANNUALLY	
<b>REPORT</b>	Each month's maximum and averaged injection pressures (psig)
	Each month's maximum and averaged annulus pressure(s) (psig)
	Each month's averaged injection rate (bbl/day)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

Records of all monitoring activities must be retained and made available for inspection at the following location:

**Dominion Exploration & Production Company**  
**1400 North State Street**  
**Roosevelt, UT 84066**

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

All cement plugs will be placed with tubing. 9.2 ppg plugging gel or fresh water weighted with bentonite or treated brine will be placed between all plugs. The EPA has modified the P&A Plan submitted by the permittee. The EPA has added a cement plug at the base of the USDWs (Plug No. 2) and has modified the two plugs within the 5-1/2 inch casing to just one plug.

PLUG NO. 1: Set 10K cement retainer at 4000 feet with 50 sacks of Class "G" cement squeezed through the retainer. Spot 10 sacks of cement on top of retainer.

PLUG NO. 2: Set 10K cement retainer at approximately 2500 feet, which is the estimated base of the underground sources of drinking water less than 10,000 mg/l. Set 10 sacks of Class "G" cement on top of retainer.

PLUG NO. 3: Set a 10K cement retainer at approximately 1600 feet which is the interface of the Uintah and Green River Formations. Set 10 sacks of Class "G" cement on top of retainer.

PLUG NO. 4: Set a cement plug in the annulus between the 5-1/2 inch casing and the 8-5/8 inch casing from the surface to 450 feet.

PLUG NO. 5: Set a cement plug inside of the 5-1/2 inch casing from the surface to a depth of 450 feet.

EPA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

PLUGGING AND ABANDONMENT PLAN

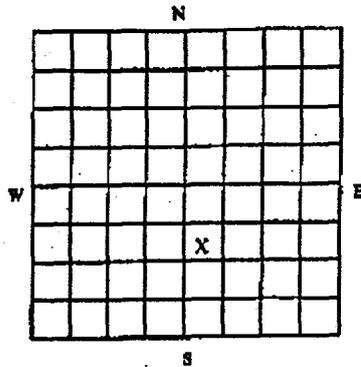
NAME AND ADDRESS OF FACILITY

McCAW WATER DISPOSAL WELL #2  
LA PLATA COUNTY, COLORADO

NAME AND ADDRESS OF OWNER/OPERATOR

AMOCO PRODUCTION COMPANY  
380 AIRPORT ROAD  
DUBANGO, CO 81303

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT - 640 ACRES



STATE COUNTY PERMIT NUMBER  
CO LA PLATA

SURFACE LOCATION DESCRIPTION

1/4 of SW 1/4 of NW 1/4 of SE 1/4 of Section 20 Township 34 North Range 6 West

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION & DRILLING UNIT

Surface  
Location 2260 ft. from (N/S) South line of quarter section  
and 1780 ft. from (E/W) East line of quarter section

TYPE OF AUTHORIZATION

- Individual Permit
  - Area Permit
  - Rule
- Number of Wells 1

WELL ACTIVITY

- CLASS I
  - CLASS II
  - Brine Disposal
  - Enhanced Recovery
  - Hydrocarbon Storage
  - CLASS III
- Well Number 2

Lease Name: McCaw Water Disposal

CASING AND TUBING RECORD AFTER PLUGGING

SIZE	WT (Lb/FT)	TO BE PUT IN WELL (FT)	TO BE LEFT IN WELL (FT)	MOLE SIZE
9 5/8	32.3	450	450	13 1/2
7	23	5900	5900 **	8 3/4

METHOD OF EMPLACEMENT OF CEMENT PLUGS

- The Balance Method
- The Dump Bailer Method
- The Two-Plug Method
- Other

CEMENTING TO PLUG AND ABANDON DATA	PLUG #1	PLUG #2	PLUG #3	PLUG #4	PLUG #5	PLUG #6	PLUG #7
Size of Hole or Pipe in Which Plug Will be Placed (inches)	7	7	7	7	7	7	7
Depth to Bottom of Tubing or Drill Pipe (ft)							
Sacks of Cement to be Used (each plug)	225	20	20	20	20	20	10
Slurry Volume to be Pumped (cu. ft.)	265	24	24	24	24	24	12
Calculated Top of Plug (ft)	5100	.	.	.	.	.	Surface
Measured Top of Plug (if tagged - ft)							
Slurry Wt. (lb/Gal)	15.6	15.6	15.6	15.6	15.6	15.6	15.6
Type Cement or Other Material (Class III)	B	B	B	B	B	B	B

LIST ALL OPEN HOLE AND/OR PERFORATED INTERVALS AND INTERVALS WHERE CASING WILL BE VARIED (if any)

From	To	From	To
5100' - 5800' (proposed) **		Perforated interval will be abandoned by spotting a Class B cement plug from the bottom of the casing to 100' above the top of the top Mesaverde perforation.	

Estimated Cost to Plug Wells \$10,000 \* 100' of cement coverage above the Pictured Cliffs, Fruitland, Farmington, Kirtland, and Animas formations.  
\*\* Estimated depths

CERTIFICATION

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.52)

NAME AND OFFICIAL TITLE (Please type or print)  
DARYL ERICKSON - ENGINEER

SIGNATURE  
*Daryl Erickson*

DATE SIGNED  
5/3/2001

EPA Form 7520-14

7520-14 P&A.tif

United States Environmental Protection Agency  
Washington, DC 20460

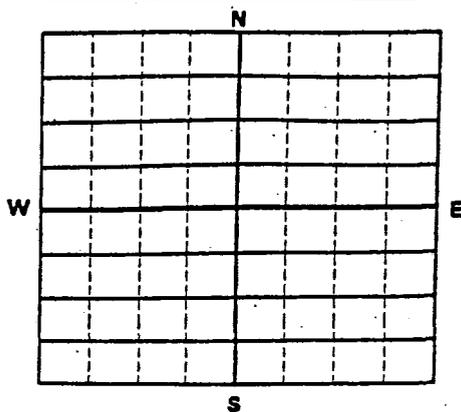


# Application To Transfer Permit

Name and Address of Existing Permittee

Name and Address of Surface Owner

Locate Well and Outline Unit on  
Section Plat- 640 Acres



State

County

Permit Number

Surface Location Description

\_\_\_ 1/4 of \_\_\_ 1/4 of \_\_\_ 1/4 of \_\_\_ 1/4 of Section \_\_\_ Township \_\_\_ Range \_\_\_

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface

Location \_\_\_ ft. from (N/S) \_\_\_ Line of quarter section  
and \_\_\_ ft. from (E/W) \_\_\_ Line of quarter section.

Well Activity

Well Status

Type of Permit

\_\_\_ Class I

\_\_\_ Operating

\_\_\_ Individual

\_\_\_ Class II

\_\_\_ Modification/Conversion

\_\_\_ Area

\_\_\_ Brine Disposal

\_\_\_ Proposed

Number of Wells \_\_\_

\_\_\_ Enhanced Recovery

\_\_\_ Hydrocarbon Storage

\_\_\_ Class III

\_\_\_ Other

Lease Number

Well Number

Name(s) and Address(es) of New Owners(s)

Name and Address of New Operator

*Attach to this application a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility, coverage, and liability between them.*

*The new permittee must show evidence of financial responsibility by the submission of a surety bond, or other adequate assurance, such as financial statements or other materials acceptable to the Director.*

## Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32)

Name and Official Title (Please type or print)

Signature

Date Signed



**COMPLETION REPORT FOR BRINE DISPOSAL,  
HYDROCARBON STORAGE, OR ENHANCED RECOVERY WELL**

Approval Expires 6-30-98

NAME AND ADDRESS OF EXISTING PERMIT

NAME AND ADDRESS OF SURFACE OWNER

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT — 640 ACRES

STATE

COUNTY

PERMIT NUMBER

SURFACE LOCATION DESCRIPTION

1/4 of 1/4 of 1/4 of 1/4 of Section Township Range

LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT

Surface Location \_\_\_\_\_ ft. from (N/S) \_\_\_\_\_ Line of quarter section  
and \_\_\_\_\_ ft. from (E/W) \_\_\_\_\_ Line of quarter section

WELL ACTIVITY

TYPE OF PERMIT

- Brine Disposal       Individual  
 Enhanced Recovery       Area  
 Hydrocarbon Storage      Number of Wells \_\_\_\_\_

Estimated Fracture Pressure  
of Injection Zone

Anticipated Daily Injection Volume (Bbls)

Injection Interval

Average

Maximum

Feet

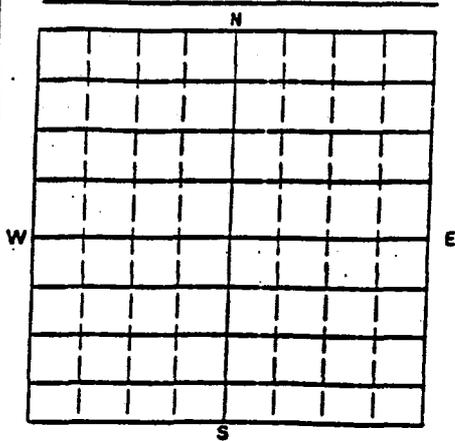
to Feet

Anticipated Daily Injection Pressure (PSI)

Depth to Bottom of Lowermost Freshwater Formation (Feet)

Average

Maximum



Type of Injection Fluid (Check the appropriate block(s))

- Salt Water       Brackish Water       Fresh Water  
 Liquid Hydrocarbon       Other

Lessee Name

Well Number

Name of Injection Zone

Date Drilling Began

Date Well Completed

Permeability of Injection Zone

Date Drilling Completed

Porosity of Injection Zone

**CASING AND TUBING**

**CEMENT**

**HOLE**

OD Size	Wt/Pt — Grade — New or Used	Depth	Secks	Class	Depth	Bit Diameter

**INJECTION ZONE STIMULATION**

**WIRE LINE LOGS, LIST EACH TYPE**

Interval Treated	Materials and Amount Used	Log Types	Logged Intervals

Complete Attachments A — E listed on the reverse.

**CERTIFICATION**

*I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).*

NAME AND OFFICIAL TITLE (Please type or print)

DATE SIGNED





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

**WELL REWORK RECORD**

NAME AND ADDRESS OF PERMITTEE

NAME AND ADDRESS OF CONTRACTOR

LOCATE WELL AND OUTLINE UNIT ON SECTION PLAT - 640 ACRES

N									
S									

STATE	COUNTY	PERMIT NUMBER
SURFACE LOCATION DESCRIPTION 1/4 of 1/4 of 1/4 of 1/4 of Section ___ Township ___ Range ___		
LOCATE WELL IN TWO DIRECTIONS FROM NEAREST LINES OF QUARTER SECTION AND DRILLING UNIT Surface Location ___ ft. from (N/S) ___ Line of quarter section and ___ ft. from (E/W) ___ Line of quarter section		
<b>WELL ACTIVITY</b> <input type="checkbox"/> Brine Disposal <input type="checkbox"/> Enhanced Recovery <input type="checkbox"/> Hydrocarbon Storage  Lease Name _____	Total Depth Before Rework _____ Total Depth After Rework _____ Date Rework Commenced _____ Date Rework Completed _____	<b>TYPE OF PERMIT</b> <input type="checkbox"/> Individual <input type="checkbox"/> Area Number of Wells _____  Well Number _____

**WELL CASING RECORD -- BEFORE REWORK**

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

**WELL CASING RECORD -- AFTER REWORK (Indicate Additions and Changes Only)**

Casing		Cement		Perforations		Acid or Fracture Treatment Record
Size	Depth	Sacks	Type	From	To	

DESCRIBE REWORK OPERATIONS IN DETAIL  
USE ADDITIONAL SHEETS IF NECESSARY

**WIRE LINE LOGS, LIST EACH TYPE**

Log Types	Logged Intervals

**CERTIFICATION**

*I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR 144.32).*

NAME AND OFFICIAL TITLE (Please type or print)	SIGNATURE	DATE SIGNED





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500  
DENVER, COLORADO 80202-2466

APR 19 1994

SUBJECT: GROUND WATER SECTION GUIDANCE NO. 34  
Cement bond logging techniques and interpretation

FROM: Tom Pike, Chief *[Signature]*  
UIC Direct Implementation Section

TO: All Section Staff  
Montana Operations Office

These procedures are to be followed when running and interpreting cement bond logs for injection and production (area of review) wells.

PART I - PREPARE THE WELL

Allow cement to cure for a sufficient time to develop full compressive strength. A safe bet is to let the cement cure for 72 hours. If you run the bond log before the cement achieves its maximum compressive strength, the log may show poor bonding. Check cement handbooks for curing times.

Circulate the hole with a fluid (either water or mud) of uniform consistency. Travel times are influenced by the type of fluid in the hole. If the fluid changes between two points, the travel times may "drift," causing difficulty in interpretation and quality control.

Be prepared to run the cement bond log under pressure to reduce the effects of micro-annulus. Micro-annulus may be caused by several reasons, but the existence of a micro-annulus does not necessarily destroy the cement's ability to form a hydraulic seal. If the log shows poor bonding, rerun the log with the slightly more pressure on the casing as was present when the cement cured. This will cause the casing to expand against the cement and close the micro-annulus.

PART II - PARAMETERS TO LOG

**Amplitude (mV)** - This curve shows how much acoustic signal reaches a receiver and is an important indicator of cement bond. Record the amplitude on the 3 foot spaced receiver.

**Travel time ( $\mu$ s)** - This curve shows the amount of time it takes an acoustic signal to travel between the source and a receiver. For free pipe of a given size and weight, the travel time between points is very predictable, although variable among different company's tools. Service companies should be able to provide accurate estimates of travel times for free pipe of a given size and weight. Travel time is required as a quality control measurement. Record the travel time on the 3 foot spaced receiver.

Variable density (VDL) - Pipe signals, formation signals, and fluid signals are usually easy to recognize on the VDL. If these signals can be identified, a practical determination for the presence or absence of cement can be made. VDL is logged on the 5 foot spaced receiver.

Casing collar locator (CCL) - Used to correlate the bond log with cased hole logs and to match casing collars with the collars that show up on the VDL portion of the display.

Gamma ray - Used to correlate the bond log with other logs.

### PART III - LOGGING TECHNIQUE

Calibrate the tool in free pipe at the shop, prior to, and following the log run. Include calibration data with log.

Run receivers spaced 3 feet and 5 feet from transmitter.

Run at least 3 bow-type or rigid aluminum centralizers in vertical holes, 6 centralizers in directional holes. A CCL is not an adequate centralizer.

Complete log header with casing/cement data, tool/panel data, gate settings and tool sketch showing centralizers.

Set the amplitude gate so that skipping does not occur at amplitudes greater than 5 mV.

Record amplitude with fixed gate and note position on log.

Record amplified amplitude on a 5X scale for low amplitudes.

Record amplitude and travel time on the 3 foot receiver.

Record travel time on a 100  $\mu$ s scale (150 - 250, 200 - 300).

Logging speed should be approximately 30 ft/min.

Log repeat sections.

### PART IV - QUALITY CONTROL

Compare the tool calibration data to see if the tool "drifts" during logging. Differences in the calibration data may require you to re-log the well to obtain reliable data.

Compare repeat sections to see if logging results are repeatable.

Check the logged free pipe travel times with the service company charts for the specific tool and casing size used. Since the travel times depend on such factors as casing weight, type of fluid in the hole, etc., these charts should be used only as guidelines. When you are confident of the

free-pipe travel times as seen on the log, use them. When interpreting the log, a decrease in travel time (faster times) with simultaneous reduction of amplitude may show a de-centered tool. A 4 to 5 micro-second ( $\mu s$ ) decrease in travel time corresponds to about a 35% loss of amplitude. A decrease in travel time more than 4 to 5  $\mu s$  is unacceptable.

#### PART V - LOG INTERPRETATION

Do not rely on the service company charts for amplitudes corresponding to a good bond. These amplitudes depend on many factors: type of cement used, fluid in the hole, etc.

To estimate bond index, choose intervals on the log that correspond to 0% bond and 100% bond. Read the amplitude corresponding to 100% bond from the best-bonded interval on the log (NOTE: the accuracy of this amplitude reading is very critical to the bond index calculations). Next, find the amplitude corresponding to 0% bond. Some bond logs may not include a section with free pipe. In this instance, choose the appropriate free-pipe travel time from the service company charts for your specific tool, or from the generalized chart (TABLE 2) at the end of this guidance. To calculate a bond index of 80%, use the following equation:

$$A_{80} = 10^{[(0.2)\log(A_0) + (0.8)\log(A_{100})]}$$

where:

$A_{80}$  = Amplitude at 80% bond (mV)  
 $A_0$  = Amplitude at 0% bond (mV)  
 $A_{100}$  = Amplitude at 100% bond (mV)

#### EXAMPLE

As an example, consider a bond log showing the following conditions:

- Free pipe (0% bond) amplitude at 81 mV.
- 100 % bond amplitude at 1 mV.

Substituting the above values into the equation results in:

$$A_{80} = 10^{[(0.2)\log(81) + (0.8)\log(1)]}$$

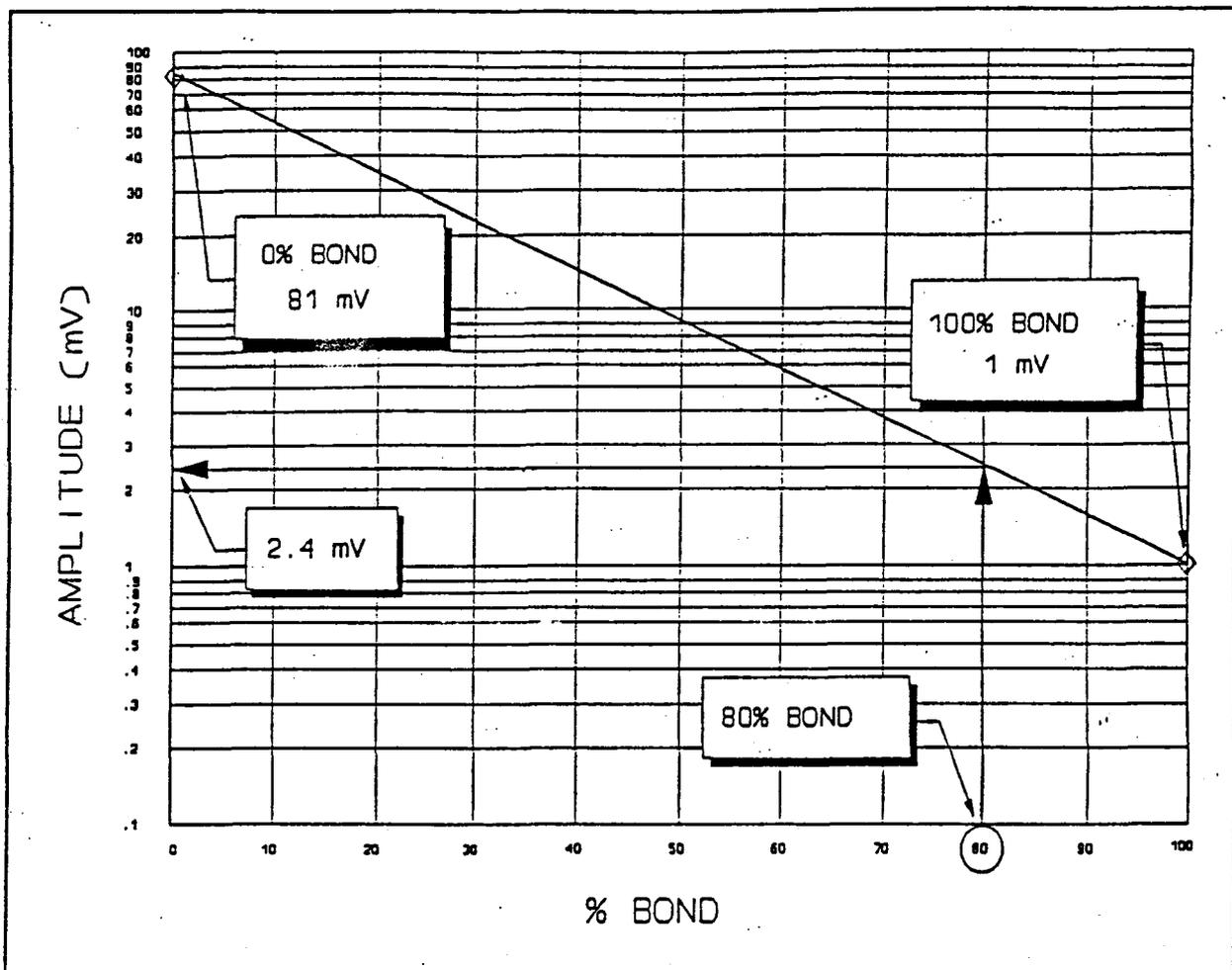
$$A_{80} = 2.41 mV$$

Another way to calculate the amplitude at 80% bond is by plotting these same log readings on a semi-log chart.

Plot the values for 0% Bond and 100% Bond vs. their respective Amplitudes on a semi-log chart - amplitudes on the log scale (y-axis), and bond indices on the linear scale (x-axis). Then, connect the points with a straight line.

To estimate the amplitude corresponding to an 80% Bond Index, enter the graph on the x-axis at 80% bond. Draw a straight line upward until you reach the diagonal line connecting the 0% and 100% points. Continue by drawing a horizontal line to the y-axis. This point on the y-axis is the amplitude corresponding to an 80% Bond Index.

Using the values from the example above, your chart will look like that shown below:



In this example, 80% bond shows an amplitude of 2.4 mV.

A convenient way to evaluate the log is to draw a line on the bond log's amplified amplitude (5X) track corresponding to the calculated 80% bond amplitude. Whenever the logged amplified amplitude (5X) curve drops below (to the left of) the drawn line, this indicates a bond of 80% or more.

## PART IV - CONCLUSIONS - REMINDERS

Different pipe weights and cement types will affect the log readings, so be mindful of these factors in wells with varying pipe weights and staged cement or squeeze jobs.

Collars generally do not show up on the VDL track in well-bonded sections of casing.

Longer (slower) travel time due to cycle skipping or cycle stretch usually suggests good bonding.

Shorter (faster) travel times indicate a de-centered tool or a fast formation and will provide erroneous amplitude readings that make evaluation impossible through that section of the log. Fast formations do not assure that the cement contacts the formation all around the borehole.

Although the bond index is important, you should not base your assessment of the cement quality on that one factor alone. You should use the VDL to support any indication of bonding. Also, you must know how each portion of the CBL (VDL, travel time, amplitude, etc.) influences another.

Most 3'-5' CBL's cannot identify a 1/2" channel in cement. Therefore, you also need to consider the thickness of a cemented section needed to provide zone isolation. For adequate isolation in injection wells, the log should indicate a continuous 80% or greater bond through the following intervals as seen in TABLE 1, below:

TABLE 1 - INTERVALS FOR ADEQUATE BOND

PIPE DIAMETER (in)	CONTINUOUS INTERVAL WITH BOND $\geq$ 80% (ft)
4-1/2	15
5	15
5-1/2	18
7	33
7-5/8	36
9-5/8	45
10-3/4	54

Adequately bonded cement by itself will not prevent fluid movement. If the bond log shows adequate bond through an interval where the geology allows fluid to move (permeable and/or fractured zones), fluids may move around perfectly bonded cement by travelling through the formation. Always cross-check your bond log with open hole logs to see that you have adequate bonding through the proper interval(s).

TABLE 2 - TRAVEL TIMES AND AMPLITUDES FOR FREE PIPE  
(3 FT RECEIVER)

CASING SIZE (in)	CASING WEIGHT (lb/ft)	TRAVEL TIME ( $\mu$ s)		AMPLITUDE (mV)
		1-11/16" TOOL	3-5/8" TOOL	
4-1/2	9.5	252	233	81
	11.6	250	232	81
	13.5	249	230	81
5	15.0	257	238	76
	18.0	255	236	76
	20.3	253	235	76
5-1/2	15.5	266	248	72
	17.0	265	247	72
	20.0	264	245	72
	23.0	262	243	72
7	23.0	291	271	62
	26.0	289	270	62
	29.0	288	268	62
	32.0	286	267	62
	35.0	284	265	62
	38.0	283	264	62
7-5/8	26.4	301	281	59
	29.7	299	280	59
	33.7	297	278	59
	39.0	295	276	59
9-5/8	40.0	333	313	51
	43.5	332	311	51
	47.0	330	310	51
	53.5	328	309	51
10-3/4	40.5	354	333	48
	45.5	352	332	48
	51.0	350	330	48
	55.5	349	328	48

SUBJECT: GROUND WATER SECTION GUIDANCE NO. 35  
Procedures to follow when excessive annular pressure is  
observed on a well.

FROM: Tom Pike, Chief  
UIC Direct Implementation Section

TO: All Section Staff  
Montana Operations Office

The following procedure is intended as an aid to UIC field inspectors when they encounter excessive annular pressure on a well. Excessive annular pressure is defined as 100 psi or 10% of the tubing pressure, whichever is less.

Usually, annular pressure is a direct indication of a loss of mechanical integrity. In some instances, recurring annular pressure may be caused by fluctuations in the temperature of the injected fluid. These temperature fluctuations may cause the annular pressure to increase when a hot fluid is being injected and decrease as the temperature of the injected fluid cools. The presence of temperature-induced pressure on the annulus does not indicate a malfunction in the casing/tubing/packer system and is not considered a loss of mechanical integrity. Wells exhibiting recurring temperature-induced annular pressure may be allowed to continue injecting if a temperature monitoring program is approved and followed.

This guidance was written to help determine the cause of annular pressure. When the procedures in this guidance are followed, any major mechanical integrity problems (a breach in the casing/tubing/packer system) will become apparent quickly. A quick determination will allow the operator to begin follow-up procedures immediately to prevent contamination to USDWs.

Use Section Guidance No. 35 to determine if the well has experienced a loss of mechanical integrity. If you find that there is a loss of mechanical integrity, use *Headquarters Guidance No. 76. - Follow-up to loss of Mechanical Integrity for Class II Wells* to bring the well back into compliance. The use of Section Guidance No. 35 is not to be confused with, nor does it supersede any provision of *Headquarters Guidance No. 76*. Instead, the two guidance documents are meant to work together to identify and to remedy any potential mechanical integrity failure.

A flowchart for Section Guidance No. 35 is included for quick reference in the field.

PROCEDURES TO FOLLOW WHEN EXCESSIVE ANNULAR PRESSURE IS OBSERVED

During field inspections, the following procedures should be followed when excessive annular pressure is observed. Excessive annular pressure is defined as 100 psi or 10% of the tubing pressure, whichever is less.

NOTE CONDITIONS AT THE WELL

Note tubing and annular pressure readings, and the operating status of the well (injecting, shut-in, etc.) on the UIC inspection form.

SEE IF ANNULUS PRESSURE WILL BLEED-OFF

Attempt to bleed the pressure from the annulus by having the operator open the annulus (for a maximum of sixty seconds).

It is the operator's responsibility to collect and dispose of any fluids bled from the annulus.

DID THE ANNULAR PRESSURE BLEED TO 0 PSI WITHIN SIXTY SECONDS?

YES

NO

Have the operator close the annulus.

Have the operator close the annulus.

On your inspection form note the volume of fluid (or gas) bled from the annulus during the sixty seconds, and the tubing and annulus pressures.

On your inspection form note the volume of fluid (or gas) bled from the annulus during the sixty seconds, and the tubing and annulus pressures.

Have the operator shut the well in for 2 hours, and if possible, bleed pressure from the injection tubing. Record the tubing and annulus pressure after two hours.

Bleed off the annulus for 60 seconds. Record the tubing and annulus pressures after bleed-off, and estimate the volume bled off.

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

END PROCEDURE.

SEE IF PRESSURE RETURNS WITHIN 15 MINUTES

Continue to monitor the well for annulus pressure return for at least 15 minutes after the annulus valve is closed.

DOES PRESSURE  
RETURN TO THE  
ANNULUS AFTER 15  
MINUTES?

YES

NO

On your inspection form, note the annulus and tubing pressures recorded after 15 minutes.

Have the operator shut the well in for 2 hours, and if possible, bleed pressure from the injection tubing. Record the tubing and annulus pressure after two hours.

Bleed off the annulus for 60 seconds. Record the tubing and annulus pressures after bleed-off, and estimate the volume bled off.

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

END PROCEDURE.

Require the operator to monitor and report to EPA with the annulus and tubing pressures for at least 14 days to see if pressure returns to the annulus.

Instruct the operator to contact EPA as soon as any pressure returns to the annulus.

DOES PRESSURE  
RETURN TO THE  
ANNULUS WITHIN  
14 DAYS?

YES

NO

EPA Technical Expert will design a proper Mechanical Integrity test.

Compliance officer will require the operator to conduct the test within 14 days.

The well is considered to have mechanical integrity.

END PROCEDURE.

DOES THE WELL  
PASS THE MIT?

YES

NO

Require the operator to monitor and report to EPA with the annulus and tubing pressures for at least 14 days to see if pressure returns to the annulus.

Instruct the operator to contact EPA as soon as any pressure returns to the annulus.

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

END PROCEDURE.

DOES PRESSURE  
RETURN TO THE  
ANNULUS WITHIN  
14 DAYS?

YES

NO

EPA Technical Expert will design a proper Monitoring Program to determine the cause of recurrent annular pressure.

The well is considered to have mechanical integrity.

END PROCEDURE.

Compliance officer will require the operator to begin the Monitoring program within 14 days.

Conduct unannounced inspections at the well during the Monitoring Program.

IS THE ANNULUS  
PRESSURE CAUSED  
BY TEMPERATURE?

YES

NO

EPA Technical Expert will design a proper Temperature Monitoring Program that allows injection to continue while tracking relationship between temperature and recurrent annulus pressure.

INFORM THE OPERATOR THAT THE WELL HAS AN APPARENT MECHANICAL INTEGRITY FAILURE and provide the operator with the guidance that discusses OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES.

Compliance officer will require the operator to cease injection immediately if the operator fails to follow the Temperature Monitoring Program.

END PROCEDURE.

Compliance officer will require the operator to cease injection immediately if recurrent annular pressures cannot be explained by the results of the Temperature Monitoring Program.

Compliance officer will require annual Mechanical Integrity Tests using the standard pressure method.

## 14-DAY PRESSURE MONITORING

Please use this form to report data for a 14-day period after pressure is bled from the tubing-casing annulus. Please telephone EPA in Denver as soon as possible when/if pressure returns to the annulus. This data will be used to determine the cause(s) of recurrent annular pressure.

**NOTE:** DO NOT BLEED PRESSURE FROM ANNULUS DURING THE 14-DAY MONITORING PERIOD.

	DATE	TIME	ANNULUS PRESSURE (psi)	TUBING PRESSURE (psi)	WELL INJECTING (YES/NO)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					

WELL NAME: \_\_\_\_\_

ATOR: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_





## OPERATOR RESPONSIBILITIES FOLLOWING MECHANICAL INTEGRITY FAILURES

- 1) IMMEDIATELY - Cease injection and shut-in the well as rapidly as feasible. In no case shall the well remain in operation beyond 48 hours unless Tom Pike, Chief, Underground Injection Control Implementation (UIC-I) Section [(303) 293-1544] allows for temporary operation of the well.
- 2) WITHIN 24 HOURS - Verbally notify the UIC-I Section Chief of MIT failure even in cases where the failure is detected during a test which was witnessed by a UIC inspector.
- 3) WITHIN 5 DAYS - Submit a written follow-up report documenting test results, remediation taken or a proposed remediation plan and any limits established by the Director on appropriate volume or time for continued injection operation.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 300  
DENVER, COLORADO 80202-2466

**SUBJECT:** GROUND WATER SECTION GUIDANCE NO. 37  
Demonstrating Part II (external) Mechanical Integrity  
for a Class II injection well permit.

**FROM:** Tom Pike, Chief  
UIC Direct Implementation Section

**TO:** All Section Staff  
Montana Operations Office

During the review for a Class II injection well permit, consideration must be given to the mechanical integrity (MI) of the well. MI demonstrates that the well is in sound condition and that the well is constructed in a manner that prevents injected fluids from entering any formation other than the authorized injection formation.

A demonstration of MI is a two part process:

PART I - INTERNAL MECHANICAL INTEGRITY is an assurance that there are no significant leaks in the casing/tubing/packer system.

PART II - EXTERNAL MECHANICAL INTEGRITY demonstrates that after fluid is injected into the formation, the injected fluids will not migrate out of the authorized injection interval through vertical channels adjacent to the wellbore.

A Class II injection well may demonstrate Part II MI by showing that injected fluids remain within the authorized injection interval. This may be accomplished as follows:

- 1) Cement bond log showing 80% bond through the an appropriate interval (Section Guidance 34),
- 2) Radioactive tracer survey conducted according to a EPA-approved procedure, or
- 3) Temperature survey conducted according to a EPA-approved procedure (Section Guidance 38).

For each test option above, the operator of the injection well should submit a plan for conducting the test. The plan will then be approved (or modified and approved) by EPA. EPA's pre-approval of the testing method will assure the operator that the



test is conducted consistent with current EPA guidance, and that the test will provide meaningful results.

Part II MI may be demonstrated either before or after issuing the Final Permit. However, if Part II is to be demonstrated after the Final Permit is issued, a provision in the permit will require the demonstration of Part II MI. The well will also be required to pass Part II MI prior to granting authorization to inject.

Radioactive tracer surveys and temperature surveys require that the well be allowed to inject fluids as part of the procedure. In these cases, a well that has shown no other demonstration of Part II MI will be allowed to inject only that volume of fluid that is necessary to conduct the appropriate test.

After the results of the test proves that the well has passed Part II MI, the well will be given authorization to begin full injection operations.

If any of the tests show a lack of Part II MI, the well will be repaired and retested, or plugged (See Headquarters Guidance #76).



# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program, UIC Direct Implementation Program 8P-W-GW  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Test conducted by: \_\_\_\_\_

Others present: \_\_\_\_\_

Well Name: _____	Type: ER SWD	Status: AC TA UC
Field: _____		
Location: _____	Sec: _____ T _____ N/S R _____ E/W	County: _____ State: _____
Operator: _____		
Last MIT: ____/____/____	Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test? [ ] Yes [ ] No

Initial test for permit? [ ] Yes [ ] No

Test after well rework? [ ] Yes [ ] No

Well injecting during test? [ ] Yes [ ] No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: \_\_\_\_\_ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	psig	psig	psig
End of test pressure	psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	psig	psig	psig
5 minutes	psig	psig	psig
10 minutes	psig	psig	psig
15 minutes	psig	psig	psig
20 minutes	psig	psig	psig
25 minutes	psig	psig	psig
30 minutes	psig	psig	psig
minutes	psig	psig	psig
minutes	psig	psig	psig
<b>RESULT</b>	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test? [ ] Yes [ ] No



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VIII

999 18th STREET - SUITE 500  
DENVER, COLORADO 80202-2466

SUBJECT: GROUND WATER SECTION GUIDANCE NO. 39  
Pressure testing injection wells for Part I (internal)  
Mechanical Integrity

FROM: Tom Pike, Chief  
UIC Direct Implementation Section

TO: All Section Staff  
Montana Operations Office

Introduction

The Underground Injection Control (UIC) regulations require that an injection well have mechanical integrity at all times (40 CFR 144.28 (f)(2) and 40 CFR 144.51 (q)(1)). A well has mechanical integrity (40 CFR 146.8) if:

- (1) There is no significant leak in the tubing, casing or packer; and
- (2) There is no significant fluid movement into an underground source of drinking water (USDW) through vertical channels adjacent to the injection wellbore.

Definition: Mechanical Integrity Pressure Test for Part I. A pressure test used to determine the integrity of all the downhole components of an injection well, usually tubing, casing and packer. It is also used to test tubing cemented in the hole by using a tubing plug or retrievable packer. Pressure tests must be run at least once every five years. If for any reason the tubing/packer is pulled, the injection well is required to pass another mechanical integrity test of the tubing casing and packer prior to recommencing injection regardless of when the last test was conducted. Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on either the attached form or an equivalent form containing the necessary information. A pressure recording chart documenting the actual annulus test pressures must be attached to the form.

This guidance addresses making a determination of Part I of Mechanical Integrity (no leaks in the tubing, casing or packer). The Region's policy is: 1) to determine if there are significant leaks in the tubing, casing or packer; 2) to assure that the casing can withstand pressure similar to that which



would be applied if the tubing or packer fails; 3) to make the Region's test procedure consistent with the procedures utilized by other Region VIII Primacy programs; and 4) to provide a procedure which can be easily administered and is applicable to all class I and II wells. Although there are several methods allowed for determining mechanical integrity, the principal method involves running a pressure test of the tubing/casing annulus. Region VIII's procedure for running a pressure test is intended to aid UIC field inspectors who witness pressure tests for the purpose of demonstrating that a well has Part I of Mechanical Integrity. The guidance is also intended as a means of informing operators of the procedures required for conducting the test in the absence of an EPA inspector.

### Pressure Test Description

#### Test Frequency

The mechanical integrity of an injection well must be maintained at all times. Mechanical integrity pressure tests are required at least every five (5) years. If for any reason the tubing/packer is pulled, however, the injection well is required to pass another mechanical integrity test prior to recommencing injection regardless of when the last test was conducted. The Regional UIC program must be notified of the workover and the proposed date of the pressure test. The well's test cycle would then start from the date of the new test if the well passes the test and documentation is adequate. Tests may be required on a more frequent basis depending on the nature of the injectate and the construction of the well (see Section guidance on MITs for wells with cemented tubing and regulations for Class I wells).

Region VIII's criteria for well testing frequency is as follows:

1. Class I hazardous waste injection wells; initially [40 CFR 146.68(d)(1)] and annually thereafter;
2. Class I non-hazardous waste injection wells; initially and every two (2) years thereafter, except for old permits (such as the disposal wells at carbon dioxide extraction plants which require a test at least every five years);
3. Class II wells with tubing, casing and packer; initially and at least every five (5) years thereafter;
4. Class II wells with tubing cemented in the hole; initially and every one (1) or two (2) years thereafter



depending on well specific conditions (See Region VIII UIC Section Guidance #36);

5. Class II wells which have been temporarily abandoned (TAd) must be pressure tested after being shut-in for two years; and
6. Class III uranium extraction wells; initially.

#### Test Pressure

To assure that the test pressure will detect significant leaks and that the casing is subjected to pressure similar to that which would be applied if the tubing or packer fails, the tubing/casing annulus should be tested at a pressure equal to the maximum allowed injection pressure or 1000 psig whichever is less. The annular test pressure must, however, have a difference of at least 200 psig either greater or less than the injection tubing pressure. Wells which inject at pressures of less than 300 psig must test at a minimum pressure of 300 psig, and the pressure difference between the annulus and the injection tubing must be at least 200 psi.

#### Test Criteria

1. The duration of the pressure test is 30 minutes.
2. Both the annulus and tubing pressures should be monitored and recorded every five (5) minutes.
3. If there is a pressure change of 10 percent or more from the initial test pressure during the 30 minute duration, the well has failed to demonstrate mechanical integrity and should be shut-in until it is repaired or plugged.
4. A pressure change of 10 percent or more is considered significant. If there is no significant pressure change in 30 minutes from the time that the pressure source is disconnected from the annulus, the test may be completed as passed.

#### Recordkeeping and Reporting

The test results must be recorded on the attached form. The annulus pressure should be recorded at five (5) minute intervals. Tests run by operators in the absence of an EPA inspector must be conducted according to these procedures and recorded on the attached form or an equivalent form and a pressure recording



chart documenting the actual annulus test pressures must be attached to the submittal. The tubing pressure at the beginning and end of each test must be recorded. The volume of the annulus fluid bled back at the surface after the test should be measured and recorded on the form. This can be done by bleeding the annulus pressure off and discharging the associated fluid into a five gallon container. The volume information can be used to verify the approximate location of the packer.

#### Procedures for Pressure Test

1. Scheduling the test should be done at least two (2) weeks in advance.
2. Information on the well completion (location of the packer, location of perforations, previous cement work on the casing, size of casing and tubing, etc.) and the results of the previous MIT test should be reviewed by the field inspector in advance of the test. Regional UIC Guidance #35 should also be reviewed. Information relating to the previous MIT and any well workovers should be reviewed and taken into the field for verification purposes.
3. All Class I wells and Class II SWD wells should be shut-in prior to the test. A 12 to 24-hour shut-in is preferable to assure that the temperature of the fluid in the wellbore is stable.
4. Class II enhanced recovery wells may be operating during the test, but it is recommended that the well be shut-in if possible.
5. The operator should fill the casing/tubing annulus with inhibited fluid at least 24 hours in advance, if possible. Filling the annulus should be undertaken through one valve with the second valve open to allow air to escape. After the operator has filled the annulus, a check should be made to assure that the annulus will remain full. If the annulus can not maintain a full column of fluid, the operator should notify the Director and begin a rework. The operator should measure and report the volume of fluid added to the annulus. If not already the case, the casing/tubing valves should be closed, at least, 24 hours prior to the pressure test.

Following steps are at the well:

6. Read tubing pressure and record on the form. If the



well is shut-in, the reported information on the actual maximum operating pressure should be used to determine test pressures.

7. Read pressure on the casing/tubing annulus and record value on the form. If there is pressure on the annulus, it should be bled off prior to the test. If the pressure will not bleed-off, the guidance on well failures (Region VIII UIC Section Guidance #35) should be followed.
8. Ask the operator for the date of the last workover and the volume of fluid added to the annulus prior to this test and record information on the form.
9. Hook-up well to pressure source and apply pressure until test value is reached.
10. Immediately disconnect pressure source and start test time (If there has been a significant drop in pressure during the process of disconnection, the test may have to be restarted). The pressure gages used to monitor injection tubing pressure and annulus pressure should have a pressure range which will allow the test pressure to be near the mid-range of the gage. Additionally, the gage must be of sufficient accuracy and scale to allow an accurate reading of a 10 percent change to be read. For instance, a test pressure of 600 psi should be monitored with a 0 to 1000 psi gage. The scale should be incremented in 20 psi increments.
11. Record tubing and annulus pressure values every five (5) minutes.
12. At the end of the test, record the final tubing pressure.
13. If the test fails, check the valves, bull plugs and casing head close up for possible leaks. The well should be retested.
14. If the second test indicates a well failure, the Region should be informed of the failure within 24 hours by the operator, and the well should be shut-in within 48 hours per Headquarters guidance #76. A follow-up letter should be prepared by the operator which outlines the cause of the MIT failure and proposes a potential course of action. This report should be submitted to EPA within five days.



15. Bleed off well into a bucket, if possible, to obtain a volume estimate. This should be compared to the calculated value obtained using the casing/tubing annulus volume and fluid compressibility values.
16. Return to office and prepare follow-up.

#### Alternative Test Option

While it is expected that the test procedure outlined above will be applicable to most wells, the potential does exist that unique circumstances may exist for a given well that precludes or makes unsafe the application of this test procedure. In the event that these exceptional or extraordinary conditions are encountered, the operator has the option to propose an alternative test or monitoring procedures. The request must be submitted by the operator in writing and must be approved in writing by the UIC-Implementation Section Chief or equivalent level of management.

Attachment



# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program, UIC Direct Implementation Program 8P-W-GW  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2466

EPA Witness: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Test conducted by: \_\_\_\_\_

Others present: \_\_\_\_\_

Well Name: _____	Type: ER SWD	Status: AC TA UC
Field: _____		
Location: _____	Sec: _____	T _____ N/S R _____ E/W County: _____ State: _____
Operator: _____		
Last MIT: ____/____/____	Maximum Allowable Pressure: _____	PSIG

Is this a regularly scheduled test? [ ] Yes [ ] No

Initial test for permit? [ ] Yes [ ] No

Test after well rework? [ ] Yes [ ] No

Well injecting during test? [ ] Yes [ ] No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: \_\_\_\_\_ psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	psig	psig	psig
End of test pressure	psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	psig	psig	psig
5 minutes	psig	psig	psig
10 minutes	psig	psig	psig
15 minutes	psig	psig	psig
20 minutes	psig	psig	psig
25 minutes	psig	psig	psig
30 minutes	psig	psig	psig
minutes	psig	psig	psig
minutes	psig	psig	psig
<b>RESULT</b>	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test? [ ] Yes [ ] No





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
999 18<sup>TH</sup> STREET - SUITE 300  
DENVER, CO 80202-2466  
<http://www.epa.gov/region08>

NOV 24 2004

Ref: 8P-W-GW

RECEIVED

NOV 29 2004

**CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

DIV. OF OIL, GAS & MINING

Mr. Timothy Haddican  
Dominion Exploration & Production, Inc.  
1400 North State Street  
Roosevelt, UT 84066

REF: UNDERGROUND INJECTION CONTROL (UIC)  
**Authority to Commence Injection**  
**Well Permit No. UT20961-06292**  
**RBU No. 13-11F SWD**  
Uintah County, Utah

105 20E 11  
43-047-30973

Accepted by the  
Utah Division of  
Oil, Gas and Mining  
**FOR RECORD ONLY**

Dear Mr. Haddican:

Dominion Exploration & Production, Inc. (Dominion) has satisfactorily fulfilled all the Environmental Protection Agency's (EPA) **Prior to Commencing Injection** requirements in the well specific Permit, UT20961-06292 (Effective June 10, 2004). All Prior to Injection Requirements, i.e., Part I (Internal) Mechanical Integrity Test, Well Rework Record (EPA Form No. 7520-12), and a pore pressure were reviewed and approved by the EPA on November 8, 2004.

Dominion, as of the date of this letter, is authorized to commence injection into the RBU No. 13-11F SWD. There will be no limitation on the number of barrels of water that will be injected into the Green River Formation interval 4028 feet to 4128 feet. Until such time that the permittee demonstrates through a Step-Rate Injectivity Test that the fracture gradient is other than 0.735 psi/ft, the RBU No. 13-11F SWD shall be operated at a **maximum allowable injection pressure no greater than 1135 psig**.

As of this approval, responsibility for Permit compliance and enforcement is transferred to the Region VIII UIC Technical Enforcement Program office. Therefore, please direct all future notification, reporting, monitoring and compliance correspondence to the following address, referencing your well name and UIC Permit number on all correspondence regarding this well:

Mr. Nathan Wiser  
Technical Enforcement Program - UIC  
U.S. EPA Region VIII: Mail Code 8ENF-UFO  
999-18th Street - Suite 300  
Denver, CO 80202-2466  
Phone: 1.800.227.8917 (Ext. 6211)

Please be reminded that it is your responsibility to be aware of and to comply with all conditions of Permit UT20961-06292. If you have any questions in regard to the above action, please contact Dan Jackson at 1.800.227.8917 (Ext. 6155).

Sincerely,



Sandra A. Stavnes  
Director  
Ground Water Program

cc: Maxine Natchees  
Chairwoman  
Uintah & Ouray Business Council  
Ute Indian Tribe  
P.O. Box 190  
Fort Duchesne, UT 84026

Elaine Willie  
Environmental Coordinator  
Ute Indian Tribe  
P.O. Box 460  
Fort Duchesne, UT 84026

Chester Mills  
Superintendent  
Bureau of Indian Affairs  
Uintah & Ouray Indian Agency  
P.O. Box 130  
Fort Duchesne, UT 84026

Donna Trotter  
Agent for Dominion Expl. & Prod., Inc.  
1620 West 750 North  
Vernal, UT 84078

Richard Brown  
Consulting Engineer  
14000 Quail Springs Parkway - Suite 600  
Oklahoma City, OK 73134-02600

Gary Dye  
Production Foreman  
Dominion Expl. & Prod., Inc.  
1400 North State Street  
Roosevelt, UT 84066

Gil Hunt  
Technical Services Manager  
State of Utah Natural Resources  
Division of Oil, Gas, and Mining  
1549 West North Temple  
Salt Lake City, UT 84114-5801

Mr. Don Forsman  
Sr. Petroleum Engineer  
Bureau of Land Management  
Vernal District Office  
170 South 500 East  
Vernal, UT 84078

Mr. Nathan Wisner, 8ENF-UFO

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

FORM APPROVED  
OMB NO. 1004-0137  
Expires: November 30, 2000

5. Lease Serial No.  
**U-7206**

1a. Type of Well  Oil Well  Gas Well  Dry  Other

b. Type of Completion:  New Well  Work Over  Deepen  Diff. Resvr.  
Other Disposal Well

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.  
**River Bend**

2. Name of Operator  
**Dominion Exploration & Production, Inc.**

8. Lease Name and Well No.  
**RBU 13-11F**

3. Address **14000 Quail Springs Parkway - Ste. 600 - Okla. City, OK 73134**

3a. Phone No. (include area code) **405-749-1300**

9. API Well No.  
**43-047-30973**

4. Location of Well (Report location clearly and in accordance with Federal requirements)\*

At surface

At top prod. interval reported below  
**315' FWL & 96' FSL**

At total depth

10. Basin Fruitland Coal/Pictured Cliffs

11. Sec., T., R., M., or Block and Survey or Area **11-10S-20E**

12. County or Parish **Uintah** 13. State **UT**

14. Date Spudded **1/11/1982**

15. Date T.D. Reached **2/6/1982**

16. Date Completed  D&A  Ready to prod. **12/4/2005**

17. Elevations (DF, RKB, RT, GL)\*  
**5009' GL**

18. Total Depth: MD **6378'** TVD

19. Plug Back T.D.: MD **5587'** TVD

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

22. Was well cored?  No  Yes (Submit analysis)  
Was DST run?  No  Yes (Submit report)  
Directional Survey?  No  Yes (Submit copy)

23. Casing and Liner Record (Report all string set in well)

Hole Size	Size/Grade	Wt. (#/ft)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Skis & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
12 1/4"	8 5/8"	24#	Surface	400'		190 sx		Surface	
7 7/8"	5 1/2"	17#	Surface	6360'		1020 sx			
CIBP @ 5,675', 15 sks of cmt on top.									

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 3/8"	3951'							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)			(4083- 100, 4053- 60, 4046- 48)			
B)			4028- 42)		160	Open
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
	<b>MAR</b>
	<b>DIV. OF OIL, GAS &amp; MIN.</b>

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

(See instructions and spaces for additional data on reverse side)

28b Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Description, Contents, etc.	Name	Top	
					Meas. Depth	

32. Additional remarks (include plugging procedure)

This well was converted to a disposal well. Set CIBP @ 5675', spot 15 sks of cmt., Perforate 4083 - 4100, 4053 - 60, 4046 - 48, 4028 - 42, 4 spf. - Green River Brown Zone.

33. Circle enclosed attachments:

- 1. Electrical/Mechanical Logs (1 full set req'd)
- 2. Geologic Report
- 3. DST Report
- 4. Directional Survey
- 5. Sundry Notice for plugging and cement verification
- 6. Core Analysis
- 7. Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Carla Christian Title Regulatory Specialist  
 Signature *Carla Christian* Date March 29, 2005

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.



Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET**

<b>ROUTING</b>
1. DJJ
2. CDW

**X - Change of Operator (Well Sold)**

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

7/1/2007

<b>FROM:</b> (Old Operator): N1095-Dominion Exploration & Production, Inc 14000 Quail Springs Parkway, Suite 600 Oklahoma City, OK 73134  Phone: 1 (405) 749-1300	<b>TO:</b> ( New Operator): N2615-XTO Energy Inc 810 Houston St Fort Worth, TX 76102  Phone: 1 (817) 870-2800
--	--

CA No.		Unit:		RIVER BEND				
WELL NAME	SEC	TWN	RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
SEE ATTACHED LIST								

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 8/6/2007
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 8/6/2007
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 8/6/2007
- a. Is the new operator registered in the State of Utah: \_\_\_\_\_ Business Number: 5655506-0143
- b. If **NO**, the operator was contacted on: \_\_\_\_\_
- a. (R649-9-2)Waste Management Plan has been received on: IN PLACE
- b. Inspections of LA PA state/fee well sites complete on: n/a
- c. Reports current for Production/Disposition & Sundries on: ok
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM BIA
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: \_\_\_\_\_
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: \_\_\_\_\_
- Underground Injection Control ("UIC")** The Division has approved UIC Form 5, **Transfer of Authority to Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: \_\_\_\_\_

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 9/27/2007
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 9/27/2007
- Bond information entered in RBDMS on: 9/27/2007
- Fee/State wells attached to bond in RBDMS on: 9/27/2007
- Injection Projects to new operator in RBDMS on: 9/27/2007
- Receipt of Acceptance of Drilling Procedures for APD/New on: 9/27/2007

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: UTB000138
- Indian well(s) covered by Bond Number: n/a
- a. (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number 104312762
- b. The **FORMER** operator has requested a release of liability from their bond on: 1/23/2008  
The Division sent response by letter on: \_\_\_\_\_

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: \_\_\_\_\_

**COMMENTS:**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER:
Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME:
2. NAME OF OPERATOR: XTO Energy Inc. <i>N2615</i>		8. WELL NAME and NUMBER: SEE ATTACHED
3. ADDRESS OF OPERATOR: 810 Houston Street CITY Fort Worth STATE TX ZIP 76102		9. API NUMBER: SEE ATTACHED
PHONE NUMBER: (817) 870-2800		10. FIELD AND POOL, OR WILDCAT: Natural Buttes
4. LOCATION OF WELL FOOTAGES AT SURFACE: SEE ATTACHED		COUNTY: Uintah
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input checked="" type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: _____
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.  
Effective July 1, 2007, XTO Energy Inc. has purchased the wells listed on the attachment from:

Dominion Exploration & Production, Inc. *N1095*  
14000 Quail Springs Parkway, Suite 600  
Oklahoma City, OK 73134

*James D. Abercrombie* (405) 749-1300  
James D. Abercrombie  
Sr. Vice President, General Manager - Western Business Unit

Please be advised that XTO Energy Inc. is considered to be the operator on the attached list and is responsible under the terms and conditions of the lease for the operations conducted upon the lease lands. Bond coverage is provided by Nationwide BLM Bond #104312750 and Department of Natural Resources Bond #104312762.

NAME (PLEASE PRINT) <u>Edwin S. Ryan, Jr.</u>	TITLE <u>Sr. Vice President - Land Administration</u>
SIGNATURE <i>Edwin S. Ryan, Jr.</i>	DATE <u>7/31/2007</u>

(This space for State use only)

**APPROVED** 9127107

*Earlene Russell*  
Division of Oil, Gas and Mining  
Earlene Russell, Engineering Technician

(See Instructions on Reverse Side)

**RECEIVED**

**AUG 06 2007**

**DIV. OF OIL, GAS & MINING**

N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

RIVER BEND UNIT

api	well_name	qtr	qtr	sec	twp	rng	lease_num	entity	Lease	well	stat
4304730087	OSCU 2	NWSE	03	100S	200E	U-037164	7050	Federal	GW	P	
4304730266	RBU 11-18F	NESW	18	100S	200E	U-013793	7050	Federal	GW	P	
4304730374	RBU 11-13E	NESW	13	100S	190E	U-013765	7050	Federal	GW	P	
4304730375	RBU 11-15F	NESW	15	100S	200E	U-7206	7050	Federal	GW	P	
4304730376	RBU 7-21F	SWNE	21	100S	200E	U-013793-A	7050	Federal	GW	P	
4304730405	RBU 11-19F	NESW	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304730408	RBU 11-10E	NESW	10	100S	190E	U-013792	7050	Federal	GW	P	
4304730410	RBU 11-14E	NESW	14	100S	190E	U-013792	7050	Federal	GW	P	
4304730411	RBU 11-23E	NESW	23	100S	190E	U-013766	7050	Federal	GW	P	
4304730412	RBU 11-16F	NESW	16	100S	200E	U-7206	7050	Federal	GW	P	
4304730585	RBU 7-11F	SWNE	11	100S	200E	U-01790	7050	Federal	GW	P	
4304730689	RBU 11-3F	NESW	03	100S	200E	U-013767	7050	Federal	GW	P	
4304730720	RBU 7-3E	SWNE	03	100S	190E	U-013765	7050	Federal	GW	P	
4304730759	RBU 11-24E	NESW	24	100S	190E	U-013794	7050	Federal	GW	P	
4304730761	RBU 7-10F	SWNE	10	100S	200E	U-7206	7050	Federal	GW	P	
4304730762	RBU 6-20F	SENE	20	100S	200E	U-013793-A	7050	Federal	GW	P	
4304730768	RBU 7-22F	SWNE	22	100S	200E	14-20-H62-2646	7050	Indian	GW	P	
4304730887	RBU 16-3F	SESE	03	100S	200E	U-037164	7050	Federal	GW	P	
4304730915	RBU 1-15E	NENE	15	100S	190E	U-013766	7050	Federal	GW	P	
4304730926	RBU 1-14E	NENE	14	100S	190E	U-013792	7050	Federal	GW	P	
4304730927	RBU 1-22E	NENE	22	100S	190E	U-013792	7050	Federal	GW	P	
4304730970	RBU 1-23E	NENE	23	100S	190E	U-013766	7050	Federal	GW	P	
4304730971	RBU 4-19F	NWNW	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304730973	RBU 13-11F	SWSW	11	100S	200E	U-7206	7050	Federal	WD	A	
4304731046	RBU 1-10E	NWNE	10	100S	190E	U-013792	7050	Federal	GW	S	
4304731115	RBU 16-16F	SESE	16	100S	200E	U-7206	7050	Federal	GW	P	
4304731140	RBU 12-18F	NWSW	18	100S	200E	U-013793	7050	Federal	GW	P	
4304731141	RBU 3-24E	NENW	24	100S	190E	U-013794	7050	Federal	GW	P	
4304731143	RBU 3-23E	NENW	23	100S	190E	U-013766	7050	Federal	GW	P	
4304731144	RBU 9-23E	NESE	23	100S	190E	U-013766	7050	Federal	GW	P	
4304731145	RBU 9-14E	NESE	14	100S	190E	U-013792	7050	Federal	GW	P	
4304731160	RBU 3-15E	NENW	15	100S	190E	U-013766	7050	Federal	GW	P	
4304731161	RBU 10-15E	NWSE	15	100S	190E	U-013766	7050	Federal	GW	P	
4304731176	RBU 9-10E	NESE	10	100S	190E	U-013792	7050	Federal	GW	P	
4304731196	RBU 3-14E	SENE	14	100S	190E	U-013792	7050	Federal	GW	P	
4304731252	RBU 8-4E	SENE	04	100S	190E	U-013792	7050	Federal	GW	P	
4304731322	RBU 1-19F	NENE	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304731323	RBU 5-10E	SWNW	10	100S	190E	U-013792	7050	Federal	GW	P	
4304731369	RBU 3-13E	NENW	13	100S	190E	U-013765	7050	Federal	GW	P	
4304731518	RBU 16-3E	SESE	03	100S	190E	U-035316	7050	Federal	GW	P	
4304731519	RBU 11-11F	NESW	11	100S	200E	U-7206	7050	Federal	GW	P	
4304731520	RBU 1-17F	NENE	17	100S	200E	U-013769-B	7050	Federal	GW	P	
4304731605	RBU 9-13E	NESE	13	100S	190E	U-013765	7050	Federal	GW	P	
4304731606	RBU 3-22E	NENW	22	100S	190E	U-013792	7050	Federal	GW	P	
4304731607	RBU 8-24E	SENE	24	100S	190E	U-013794	7050	Federal	GW	P	
4304731608	RBU 15-18F	SWSE	18	100S	200E	U-013794	7050	Federal	GW	P	

## N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

## RIVER BEND UNIT

api	well_name	qtr	qtr	sec	twp	rng	lease_num	entity	Lease	well	stat
4304731613	RBU 5-11F	SWNW	11	100S	200E	U-7206	7050	Federal	GW	P	
4304731615	RBU 4-22F	NWNW	22	100S	200E	U-0143521-A	7050	Federal	GW	S	
4304731652	RBU 6-17E	SWNW	17	100S	190E	U-03535	7050	Federal	GW	P	
4304731715	RBU 5-13E	SWNW	13	100S	190E	U-013765	7050	Federal	GW	P	
4304731717	RBU 13-13E	SWSW	13	100S	190E	U-013765	7050	Federal	GW	P	
4304731739	RBU 9-9E	NESE	09	100S	190E	U-03505	7050	Federal	GW	P	
4304732033	RBU 13-14E	SWSW	14	100S	190E	U-013792	7050	Federal	GW	P	
4304732037	RBU 11-3E	NESW	03	100S	190E	U-013765	7050	Federal	GW	P	
4304732038	RBU 6-18F	SENE	18	100S	200E	U-013769	7050	Federal	GW	P	
4304732040	RBU 15-24E	SWSE	24	100S	190E	U-013794	7050	Federal	GW	P	
4304732041	RBU 5-14E	SWNW	14	100S	190E	U-013792	7050	Federal	GW	P	
4304732050	RBU 12-20F	NWSW	20	100S	200E	U-0143520-A	7050	Federal	GW	P	
4304732051	RBU 7-13E	SWNE	13	100S	190E	U-013765	7050	Federal	GW	P	
4304732070	RBU 16-19F	SESE	19	100S	200E	U-013769-A	7050	Federal	WD	A	
4304732071	RBU 9-22E	NESE	22	100S	190E	U-013792	7050	Federal	GW	P	
4304732072	RBU 15-34B	SWSE	34	090S	190E	U-01773	7050	Federal	GW	P	
4304732073	RBU 11-15E	NESW	15	100S	190E	U-013766	7050	Federal	GW	P	
4304732074	RBU 13-21F	SWSW	21	100S	200E	U-0143520-A	7050	Federal	GW	P	
4304732075	RBU 10-22F	NWSE	22	100S	200E	U-01470-A	7050	Federal	GW	P	
4304732081	RBU 9-20F	NESE	20	100S	200E	U-0143520-A	7050	Federal	GW	P	
4304732082	RBU 15-23E	SWSE	23	100S	190E	U-013766	7050	Federal	GW	P	
4304732083	RBU 13-24E	SWSW	24	100S	190E	U-013794	7050	Federal	GW	P	
4304732095	RBU 3-21E	NENW	21	100S	190E	U-013766	7050	Federal	GW	P	
4304732103	RBU 15-17F	SWSE	17	100S	200E	U-013769-C	7050	Federal	GW	P	
4304732105	RBU 13-19F	SWSW	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304732107	RBU 1-21E	NENE	21	100S	190E	U-013766	7050	Federal	GW	P	
4304732128	RBU 9-21E	NESE	21	100S	190E	U-013766	7050	Federal	GW	P	
4304732129	RBU 9-17E	NESE	17	100S	190E	U-03505	7050	Federal	GW	P	
4304732133	RBU 13-14F	SWSW	14	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732134	RBU 9-11F	NESE	11	100S	200E	U-7206	7050	Federal	GW	P	
4304732138	RBU 5-21F	SWNW	21	100S	200E	U-013793	7050	Federal	GW	P	
4304732146	RBU 1-20E	NENE	20	100S	190E	U-03505	7050	Federal	GW	P	
4304732149	RBU 8-18F	SENE	18	100S	200E	U-013769	7050	Federal	GW	P	
4304732153	RBU 13-23E	SWSW	23	100S	190E	U-13766	7050	Federal	GW	P	
4304732154	RBU 5-24E	SWNW	24	100S	190E	U-013794	7050	Federal	GW	P	
4304732156	RBU 5-14F	SWNW	14	100S	200E	U-013793A	7050	Federal	GW	P	
4304732166	RBU 7-15E	SWNE	15	100S	190E	U-013766	7050	Federal	GW	P	
4304732167	RBU 15-13E	SWSE	13	100S	190E	U-013765	7050	Federal	GW	P	
4304732189	RBU 13-10F	SWSW	10	100S	200E	14-20-H62-2645	7050	Indian	GW	P	
4304732190	RBU 15-10E	SWSE	10	100S	190E	U-013792	7050	Federal	GW	P	
4304732191	RBU 3-17FX	NENW	17	100S	200E	U-013769-C	7050	Federal	GW	P	
4304732197	RBU 13-15E	SWSW	15	100S	190E	U-013766	7050	Federal	GW	P	
4304732198	RBU 7-22E	SWNE	22	100S	190E	U-013792	7050	Federal	GW	P	
4304732199	RBU 5-23E	SWNW	23	100S	190E	U-013766	7050	Federal	GW	P	
4304732201	RBU 13-18F	SWSW	18	100S	200E	U-013793	7050	Federal	GW	S	
4304732211	RBU 15-15E	SWSE	15	100S	190E	U-013766	7050	Federal	GW	P	

N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

RIVER BEND UNIT

api	well_name	qtr	qtr	sec	twp	rng	lease_num	entity	Lease	well	stat
4304732213	RBU 5-19F	SWNW	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304732217	RBU 9-17F	NESE	17	100S	200E	U-013769-C	7050	Federal	GW	P	
4304732219	RBU 15-14E	SWSE	14	100S	190E	U-013792	7050	Federal	GW	P	
4304732220	RBU 5-3E	SWNW	03	100S	190E	U-03505	7050	Federal	GW	P	
4304732228	RBU 9-3E	NESE	03	100S	190E	U-035316	7050	Federal	GW	P	
4304732239	RBU 7-14E	SWNE	14	100S	190E	U-103792	7050	Federal	GW	P	
4304732240	RBU 9-14F	NESE	14	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732242	RBU 5-22E	SWNW	22	100S	190E	U-013792	7050	Federal	GW	P	
4304732263	RBU 8-13E	SENE	13	100S	190E	U-013765	7050	Federal	GW	P	
4304732266	RBU 9-21F	NESE	21	100S	200E	U-0143520-A	7050	Federal	GW	P	
4304732267	RBU 5-10F	SWNW	10	100S	200E	U-7206	7050	Federal	GW	P	
4304732268	RBU 9-10F	NESE	10	100S	200E	U-7206	7050	Federal	GW	P	
4304732269	RBU 4-15F	NWNW	15	100S	200E	INDIAN	7050	Indian	GW	PA	
4304732270	RBU 14-22F	SESW	22	100S	200E	U-0143519	7050	Federal	GW	P	
4304732276	RBU 5-21E	SWNW	21	100S	190E	U-013766	7050	Federal	GW	P	
4304732289	RBU 7-10E	SWNE	10	100S	190E	U-013792	7050	Federal	GW	P	
4304732290	RBU 5-17F	SWNW	17	100S	200E	U-013769-C	7050	Federal	GW	P	
4304732293	RBU 3-3E	NENW	03	100S	190E	U-013765	7050	Federal	GW	P	
4304732295	RBU 13-22E	SWSW	22	100S	190E	U-013792	7050	Federal	GW	P	
4304732301	RBU 7-21E	SWNE	21	100S	190E	U-013766	7050	Federal	GW	P	
4304732309	RBU 15-21F	SWSE	21	100S	200E	U-0143520-A	7050	Federal	GW	P	
4304732310	RBU 15-20F	SWSE	20	100S	200E	U-0143520-A	7050	Federal	GW	P	
4304732312	RBU 9-24E	NESE	24	100S	190E	U-013794	7050	Federal	GW	P	
4304732313	RBU 3-20F	NENW	20	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732315	RBU 11-21F	NESW	21	100S	200E	U-0143520-A	7050	Federal	GW	P	
4304732317	RBU 15-22E	SWSE	22	100S	190E	U-013792	7050	Federal	GW	P	
4304732328	RBU 3-19FX	NENW	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304732331	RBU 2-11F	NWNE	11	100S	200E	U-01790	7050	Federal	GW	P	
4304732347	RBU 3-11F	NENW	11	100S	200E	U-7206	7050	Federal	GW	P	
4304732391	RBU 2-23F	NWNE	23	100S	200E	U-013793-A	7050	Federal	GW	S	
4304732392	RBU 11-14F	NESW	14	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732396	RBU 3-21F	NENW	21	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732407	RBU 15-14F	SWSE	14	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732408	RBU 4-23F	NWNW	23	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732415	RBU 3-10EX (RIG SKID)	NENW	10	100S	190E	UTU-035316	7050	Federal	GW	P	
4304732483	RBU 5-24EO	SWNW	24	100S	190E	U-013794	11719	Federal	OW	S	
4304732512	RBU 8-11F	SENE	11	100S	200E	U-01790	7050	Federal	GW	P	
4304732844	RBU 15-15F	SWSE	15	100S	200E	14-20-H62-2646	7050	Indian	GW	P	
4304732899	RBU 3-14F	NENW	14	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732900	RBU 8-23F	SENE	23	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732901	RBU 12-23F	NWSW	23	100S	200E	U-01470-A	7050	Federal	GW	P	
4304732902	RBU 1-15F	NENE	15	100S	200E	U-7260	7050	Federal	GW	S	
4304732903	RBU 3-15F	NENW	15	100S	200E	U-7260	7050	Federal	GW	P	
4304732904	RBU 9-15F	NESE	15	100S	200E	U-7260	7050	Federal	GW	P	
4304732934	RBU 3-10F	NENW	10	100S	200E	U-7206	7050	Federal	GW	P	
4304732969	RBU 11-10F	NESW	10	100S	200E	U-7206	7050	Federal	GW	P	

N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

RIVER BEND UNIT

api	well name	qtr	qtr	sec	twp	rng	lease num	entity	Lease	well	stat
4304732970	RBU 12-15F	NWSW	15	100S	200E	U-7206	7050	Federal	GW	P	
4304732971	RBU 15-16F	SWSE	16	100S	200E	U-7206	7050	Federal	GW	S	
4304732972	RBU 1-21F	NENE	21	100S	200E	U-013793-A	7050	Federal	GW	P	
4304732989	RBU 13-10E	SWSW	10	100S	190E	U-013792	7050	Federal	GW	P	
4304732990	RBU 13-18F2	SWSW	18	100S	200E	U-013793	7050	Federal	GW	P	
4304732991	RBU 6-19F	SENW	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304733033	RBU 7-23E	NWNE	23	100S	190E	U-013766	7050	Federal	GW	P	
4304733034	RBU 9-18F	NESE	18	100S	200E	U-013794	7050	Federal	GW	P	
4304733035	RBU 14-19F	SESW	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304733087	RBU 6-23F	SENW	23	100S	200E	U-013793-A	7050	Federal	GW	P	
4304733088	RBU 1-10F	NENE	10	100S	200E	U-7206	7050	Federal	GW	P	
4304733089	RBU 8-22F	SENE	22	100S	200E	U-0143521	7050	Federal	GW	P	
4304733090	RBU 11-22F	NESW	22	100S	200E	U-0143519	7050	Federal	GW	P	
4304733091	RBU 16-22F	SESE	22	100S	200E	U-01470-A	7050	Federal	GW	P	
4304733156	RBU 4-14E	NWNW	14	100S	190E	U-013792	7050	Federal	GW	P	
4304733157	RBU 7-19F	SWNE	19	100S	200E	U-013769-A	7050	Federal	GW	P	
4304733158	RBU 7-20F	SWNE	20	100S	200E	U-013793-A	7050	Federal	GW	P	
4304733159	RBU 7-24E	SWNE	24	100S	190E	U-013794	7050	Federal	GW	P	
4304733160	RBU 8-15E	SENE	15	100S	190E	U-013766	7050	Federal	GW	P	
4304733161	RBU 16-10E	SESE	10	100S	190E	U-013792	7050	Federal	GW	P	
4304733194	RBU 2-14E	NWNE	14	100S	190E	U-013792	7050	Federal	GW	P	
4304733272	RBU 13-3F	SWSW	03	100S	200E	U-013767	7050	Federal	GW	P	
4304733361	RBU 5-3F	SWNW	03	100S	200E	U-013767	7050	Federal	GW	P	
4304733362	RBU 15-10F	SWSE	10	100S	200E	U-7206	7050	Federal	GW	P	
4304733363	RBU 5-16F	SWNW	16	100S	200E	U-7206	7050	Federal	GW	P	
4304733365	RBU 12-14E	NWSW	14	100S	190E	U-013792	7050	Federal	GW	P	
4304733366	RBU 5-18F	SWNW	18	100S	200E	U-013769	7050	Federal	GW	P	
4304733367	RBU 10-23F	NWSE	23	100S	200E	U-01470-A	7050	Federal	GW	P	
4304733368	RBU 14-23F	SESW	23	100S	200E	U-01470-A	7050	Federal	GW	S	
4304733424	RBU 5-20F	SWNW	20	100S	200E	U-013793-A	7050	Federal	GW	P	
4304733643	RBU 2-13E	NWNE	13	100S	190E	U-013765	7050	Federal	GW	P	
4304733644	RBU 4-13E	NWNW	13	100S	190E	U-013765	7050	Federal	GW	P	
4304733714	RBU 4-23E	NWNW	23	100S	190E	U-013766	7050	Federal	GW	P	
4304733715	RBU 6-13E	SENW	13	100S	190E	U-013765	7050	Federal	GW	P	
4304733716	RBU 10-14E	NWSE	14	100S	190E	U-013792	7050	Federal	GW	P	
4304733838	RBU 8-10E	SENE	10	100S	190E	U-013792	7050	Federal	GW	P	
4304733839	RBU 12-23E	NWSW	23	100S	190E	U-013766	7050	Federal	GW	P	
4304733840	RBU 12-24E	NWSW	24	100S	190E	U-013794	7050	Federal	GW	P	
4304733841	RBU 14-23E	SESW	23	100S	190E	U-013766	7050	Federal	GW	P	
4304734302	RBU 1-23F	NENE	23	100S	200E	UTU-013793-A	7050	Federal	GW	P	
4304734661	RBU 16-15E	SESE	15	100S	190E	U-013766	7050	Federal	GW	P	
4304734662	RBU 10-14F	NWSE	14	100S	200E	U-013793-A	7050	Federal	GW	P	
4304734663	RBU 6-14E	SENW	14	100S	190E	U-013792	7050	Federal	GW	P	
4304734670	RBU 8-23E	NENE	23	100S	190E	U-013766	7050	Federal	GW	P	
4304734671	RBU 4-24E	NENE	23	100S	190E	U-013766	7050	Federal	GW	P	
4304734701	RBU 12-11F	SENW	11	100S	200E	U-7206	7050	Federal	GW	P	

N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

RIVER BEND UNIT

api	well_name	qtr_qtr	sec	tpw	rng	lease_num	entity	Lease	well	stat
4304734702	RBV 2-15E	NWNE	15	100S	190E	U-013766	7050	Federal	GW	P
4304734703	RBV 4-17F	NWNW	17	100S	200E	U-013769-C	7050	Federal	GW	P
4304734745	RBV 10-20F	NESE	20	100S	200E	U-0143520-A	7050	Federal	GW	P
4304734749	RBV 7-18F	SWNE	18	100S	200E	U-013769	7050	Federal	GW	P
4304734750	RBV 12-10F	SWSW	10	100S	200E	14-20-H62-2645	7050	Indian	GW	P
4304734810	RBV 10-13E	NWSE	13	100S	190E	U-013765	7050	Federal	GW	P
4304734812	RBV 1-24E	NENE	24	100S	190E	U-013794	7050	Federal	GW	P
4304734826	RBV 12-21F	NESE	20	100S	200E	U-0143520-A	7050	Federal	GW	P
4304734828	RBV 4-15E	NWNW	15	100S	190E	U-013766	7050	Federal	GW	P
4304734844	RBV 14-14E	SESW	14	100S	190E	U-013792	7050	Federal	GW	P
4304734845	RBV 10-24E	NWSE	24	100S	190E	U-013794	7050	Federal	GW	P
4304734888	RBV 4-21E	NWNW	21	100S	190E	U-013766	7050	Federal	GW	P
4304734889	RBV 16-24E	SESE	24	100S	190E	U-13794	7050	Federal	GW	P
4304734890	RBV 12-18F2	NWSW	18	100S	200E	U-013793	7050	Federal	GW	P
4304734891	RBV 10-23E	NESW	23	100S	190E	U-013766	7050	Federal	GW	P
4304734892	RBV 8-22E	SENE	22	100S	190E	U-013792	7050	Federal	GW	P
4304734906	RBV 6-22E	SESW	22	100S	190E	U-013792	7050	Federal	GW	P
4304734907	RBV 2-24E	NWNE	24	100S	190E	U-013794	7050	Federal	GW	P
4304734910	RBV 4-16F	NWNW	16	100S	200E	U-7206	7050	Federal	GW	P
4304734911	RBV 12-19F	NWSW	19	100S	200E	U-013769-A	7050	Federal	GW	P
4304734912	RBV 14-20F	SESW	20	100S	200E	U-0143520-A	7050	Federal	GW	P
4304734942	RBV 1-22F	NWNW	23	100S	200E	U-013793-A	7050	Federal	GW	P
4304734945	RBV 8-19F	SENE	19	100S	200E	U-013769-A	7050	Federal	GW	P
4304734946	RBV 8-20F	SENE	20	100S	200E	U-013793-A	7050	Federal	GW	P
4304734962	RBV 12-17F	NWSW	17	100S	200E	U-013769-C	7050	Federal	GW	P
4304734963	RBV 2-17F	NWNE	17	100S	200E	U-013769-C	14117	Federal	GW	P
4304734966	RBV 14-18F	SESW	18	100S	200E	U-013793	7050	Federal	GW	P
4304734967	RBV 10-18F	NWSE	18	100S	200E	U-013794	7050	Federal	GW	P
4304734968	RBV 10-19F	NWSE	19	100S	200E	U-013769-A	7050	Federal	GW	P
4304734969	RBV 10-3E	NWSE	03	100S	190E	U-035316	7050	Federal	GW	P
4304734970	RBV 12-3E	NWSW	03	100S	190E	U-013765	7050	Federal	GW	P
4304734971	RBV 15-3E	SWSE	03	100S	190E	U-35316	7050	Federal	GW	P
4304734974	RBV 12-10E	NWSW	10	100S	190E	U-013792	14025	Federal	GW	P
4304734975	RBV 14-10E	NENW	15	100S	190E	U-013766	7050	Federal	GW	P
4304734976	RBV 16-13E	SESE	13	100S	190E	U-013765	7050	Federal	GW	P
4304734977	RBV 8-14E	SENE	14	100S	190E	U-013792	7050	Federal	GW	P
4304734978	RBV 6-15E	SESW	15	100S	190E	U-013766	7050	Federal	GW	P
4304734979	RBV 12-15E	NWSW	15	100S	190E	U-013766	7050	Federal	GW	P
4304734981	RBV 16-17E	SESE	17	100S	190E	U-013766	7050	Federal	GW	P
4304734982	RBV 8-21E	SENE	21	100S	190E	U-013766	7050	Federal	GW	P
4304734983	RBV 4-22E	NWNW	22	100S	190E	U-013792	7050	Federal	GW	P
4304734986	RBV 2-20F	NWNE	20	100S	200E	U-03505	7050	Federal	GW	P
4304734987	RBV 9-20E	SWNW	21	100S	190E	U-03505	7050	Federal	GW	P
4304734989	RBV 7-20E	NENE	20	100S	190E	U-03505	7050	Federal	GW	P
4304734990	RBV 8-20E	SWNW	21	100S	190E	U-03505	14164	Federal	GW	P
4304735041	RBV 16-23E	SWSE	23	100S	190E	U-013766	7050	Federal	GW	P

## N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

## RIVER BEND UNIT

api	well_name	qtr_qtr	sec	tpw	rng	lease_num	entity	Lease	well	stat
4304735042	RBU 12-22E	NWSW	22	100S	190E	U-013792	14165	Federal	GW	P
4304735058	RBU 7-23F	SWNE	23	100S	200E	U-013793-A	7050	Federal	GW	P
4304735059	RBU 12-13E	NWSW	13	100S	190E	U-013765	7050	Federal	GW	P
4304735060	RBU 14-13E	SESW	13	100S	190E	U-013765	7050	Federal	GW	P
4304735061	RBU 2-22E	NWNE	22	100S	190E	U-013792	7050	Federal	GW	P
4304735062	RBU 6-24E	SESW	24	100S	190E	U-013794	7050	Federal	GW	P
4304735082	RBU 4-17E	NWNW	17	100S	190E	U-03505	7050	Federal	GW	P
4304735086	RBU 16-14E	NENE	23	100S	190E	U-013792	7050	Federal	GW	P
4304735087	RBU 2-3E	NWNE	03	100S	190E	U-013765	7050	Federal	GW	P
4304735088	RBU 6-3E	SESW	03	100S	190E	U-03505	7050	Federal	GW	P
4304735100	RBU 10-10E	NWSE	10	100S	190E	U-013792	7050	Federal	GW	P
4304735101	RBU 16-22E	SESE	22	100S	190E	U-013792	7050	Federal	GW	P
4304735112	RBU 14-24E	SESW	24	100S	190E	U-013794	7050	Federal	GW	P
4304735129	RBU 6-21F	SESW	21	100S	200E	U-013793-A	7050	Federal	GW	P
4304735170	RBU 1-9E	NESE	09	100S	190E	U-03505	7050	Federal	GW	P
4304735171	RBU 16-9E	NESE	09	100S	190E	U-013765	7050	Federal	GW	P
4304735232	RBU 14-21F	SESW	21	100S	200E	U-0143520	7050	Federal	GW	P
4304735250	RBU 13-19F2	NWSW	19	100S	200E	U-013769-A	7050	Federal	GW	P
4304735251	RBU 15-19F	SWSE	19	100S	200E	U-013769-A	7050	Federal	GW	P
4304735270	RBU 16-21E	SESE	21	100S	190E	U-013766	7050	Federal	GW	P
4304735304	RBU 13-20F	SWSW	20	100S	200E	U-013769	7050	Federal	GW	P
4304735305	RBU 4-21F	NWNW	21	100S	200E	U-013793-A	7050	Federal	GW	P
4304735306	RBU 16-21F	SESE	21	100S	200E	U-0143520-A	7050	Federal	GW	P
4304735468	RBU 15-22F	SWSE	22	100S	200E	U-01470-A	7050	Federal	GW	P
4304735469	RBU 11-23F	SESW	23	100S	200E	U-01470A	7050	Federal	GW	P
4304735549	RBU 1-14F	NENE	14	100S	200E	UTU-013793-A	7050	Federal	GW	P
4304735640	RBU 2-21E	NWNE	21	100S	190E	U-013766	7050	Federal	GW	P
4304735644	RBU 10-17E	NWSE	17	100S	190E	U-013766	7050	Federal	GW	P
4304735645	RBU 12-21E	NWSW	21	100S	190E	U-013766	7050	Federal	GW	P
4304736200	RBU 8-17E	SWNE	17	100S	190E	U-013766	7050	Federal	GW	P
4304736201	RBU 15-17EX	SWSE	17	100S	190E	U-013766	7050	Federal	GW	P
4304736293	RBU 2-10E	NWNE	10	100S	190E	U-013792	7050	Federal	GW	P
4304736294	RBU 6-10E	NENW	10	100S	190E	U-013792	7050	Federal	GW	P
4304736296	RBU 6-21E	SESW	21	100S	190E	U-013766	7050	Federal	GW	P
4304736297	RBU 10-22E	NWSE	22	100S	190E	U-013792	7050	Federal	GW	P
4304736318	RBU 14-22E	SESW	22	100S	190E	U-013792	7050	Federal	GW	P
4304736427	RBU 9-15E	NESE	15	100S	190E	U-013766	7050	Federal	GW	DRL
4304736428	RBU 2-17E	NWNE	17	100S	190E	U-013766	7050	Federal	GW	P
4304736429	RBU 1-17E	NENE	17	100S	190E	U-013766	7050	Federal	GW	DRL
4304736432	RBU 3-19F2	NWNW	19	100S	200E	U-013769-A	15234	Federal	GW	P
4304736433	RBU 14-17F	SESW	17	100S	200E	U-03505	7050	Federal	GW	P
4304736434	RBU 2-19F	NWNE	19	100S	200E	U-013769-A	7050	Federal	GW	P
4304736435	RBU 5-19FX	SWNW	19	100S	200E	U-013769-A	15855	Federal	GW	P
4304736436	RBU 4-20F	NWNW	20	100S	200E	U-013793-A	7050	Federal	GW	P
4304736605	RBU 16-14F	SESE	14	100S	200E	U-013793A	7050	Federal	GW	P
4304736608	RBU 4-3E	NWNW	03	100S	190E	U-035316	7050	Federal	GW	P

N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

RIVER BEND UNIT

api	well_name	qtr_qtr	sec	twp	rng	lease_num	entity	Lease	well	stat
4304736609	RBU 8-3E	SENE	03	100S	190E	U-013765	7050	Federal	GW	P
4304736610	RBU 14-3E	SESW	03	100S	190E	U-013765	7050	Federal	GW	P
4304736686	RBU 13-3E	NWSW	03	100S	190E	U-013765	15235	Federal	GW	P
4304736810	RBU 1-3E	NENE	03	100S	190E	U-013765	7050	Federal	GW	DRL
4304736850	RBU 2-10F	NWNE	10	100S	200E	U-7206	7050	Federal	GW	P
4304736851	RBU 8-21F	SENE	21	100S	200E	U-013793-A	7050	Federal	GW	P
4304737033	RBU 4-10E	SWNW	10	100S	190E	U-035316	7050	Federal	GW	P
4304737057	RBU 11-17E	NWSE	17	100S	190E	U-03505	7050	Federal	GW	DRL
4304737058	RBU 3-17E	NENW	17	100S	190E	U-03505	7050	Federal	GW	P
4304737201	RBU 3-23F	NENW	23	100S	200E	U-013793-A	7050	Federal	OW	P
4304737341	RBU 11-20F	NESW	20	100S	200E	U-0143520-A	7050	Federal	GW	P
4304737342	RBU 5-15F	SWNW	15	100S	200E	U-7206	7050	Federal	OW	P
4304737343	RBU 10-16F	NWSE	16	100S	200E	U-7206	7050	Federal	OW	P
4304737344	RBU 9-16F	NESE	16	100S	200E	U-7206	7050	Federal	OW	S
4304737450	RBU 14-17E	SESW	17	100S	190E	U-03505	7050	Federal	GW	P
4304737747	RBU 15-9E	NWNE	16	100S	190E	U-013765	7050	Federal	GW	DRL
4304737893	RBU 9-4EA	SENE	04	100S	190E	U-03505	7050	Federal	GW	P
4304737998	RBU 13-23F	SWSW	23	100S	200E	U-01470-A	7050	Federal	GW	P
4304738181	RBU 12-4E	SWNW	04	100S	190E	U-03576	99999	Federal	GW	DRL
4304738182	RBU 11-4E	SE/4	04	100S	190E	U-03505	99999	Federal	GW	DRL
4304738294	RBU 2-4E	NWNE	04	100S	190E	U-013792	7050	Federal	GW	DRL
4304738295	RBU 5-4E	SWNW	04	100S	190E	U-03576	99999	Federal	GW	DRL
4304738543	RBU 28-18F	NESE	13	100S	190E	U 013793-A	7050	Federal	GW	DRL
4304738548	RBU 32-13E	NESE	13	100S	190E	U-013765	7050	Federal	GW	DRL
4304738555	RBU 27-18F	SWSW	18	100S	200E	U-013793	7050	Federal	GW	DRL
4304738556	RBU 27-18F2	SWSW	18	100S	200E	U-013793	7050	Federal	GW	DRL
4304738557	RBU 30-18F	SWSW	18	100S	200E	U-013793	7050	Federal	GW	P
4304738558	RBU 29-18F	SWSW	18	100S	200E	U-013793	7050	Federal	GW	DRL
4304738595	RBU 31-10E	NENE	15	100S	190E	U-013792	7050	Federal	GW	DRL
4304738596	RBU 17-15E	NENE	15	100S	190E	U-013766	7050	Federal	GW	DRL
4304738780	RBU 8B-17E	SENE	17	100S	190E	U-013766	7050	Federal	GW	DRL

N1095 DOMINION E and P, INC. to N2615 XTO ENERGY, INC.

RIVER BEND UNIT

api	well_name	qtr_qtr	sec	tpw	rng	lease_num	entity	Lease	well	stat
4304730153	NATURAL 1-2	SENW	02	100S	200E	ML-10716	11377	State	OW	PA
4304730260	RBU 11-16E	NESW	16	100S	190E	ML-13214	7050	State	GW	S
4304730583	RBU 11-36B	NESW	36	090S	190E	ML-22541	99998	State	NA	PA
4304730608	RBU 8-16D	SENE	16	100S	180E	ML-13216	99998	State	NA	PA
4304730760	RBU 11-2F	NESW	02	100S	200E	ML-10716	9966	State	OW	S
4304731740	RBU 1-16E	NENE	16	100S	190E	ML-13214	7050	State	GW	P
4304732026	RBU 16-2F	SESE	02	100S	200E	ML-10716	7050	State	GW	P
4304732042	RBU 9-16E	NESE	16	100S	190E	ML-13214	7050	State	GW	P
4304732108	RBU 14-2F	SESW	02	100S	200E	ML-10716	7050	State	GW	P
4304732136	RBU 8-2F	SENE	02	100S	200E	ML-10716	7050	State	GW	P
4304732137	RBU 5-16E	SWNW	16	100S	190E	ML-13214	7050	State	GW	P
4304732245	RBU 7-16E	SWNE	16	100S	190E	ML-13214	7050	State	GW	PA
4304732250	RBU 13-16E	SWSW	16	100S	190E	ML-13214	7050	State	GW	S
4304732292	RBU 15-16E	SWSE	16	100S	190E	ML-13214	7050	State	GW	PA
4304732314	RBU 10-2F	NWSE	02	100S	200E	ML-10716	7050	State	GW	P
4304732352	RBU 3-16F	NENW	16	100S	200E	ML-3393-A	7050	State	GW	P
4304733360	RBU 1-16F	NENE	16	100S	200E	ML-3393	7050	State	GW	P
4304734061	RBU 6-16E	SWNE	16	100S	190E	ML-13214	7050	State	GW	P
4304734167	RBU 1-2F	NENE	02	100S	200E	ML-10716		State	GW	LA
4304734315	STATE 11-2D	NESW	02	100S	180E	ML-26968		State	GW	LA
4304734903	RBU 14-16E	SWSW	16	100S	190E	ML-13214	7050	State	D	PA
4304735020	RBU 8-16E	SENE	16	100S	190E	ML-13214	7050	State	GW	P
4304735021	RBU 10-16E	SWSE	16	100S	190E	ML-13214	7050	State	GW	P
4304735022	RBU 12-16E	NESW	16	100S	190E	ML-13214	7050	State	GW	P
4304735023	RBU 16-16E	SWSW	15	100S	190E	ML-13214	7050	State	GW	P
4304735033	RBU 2-16E	NWNE	16	100S	190E	ML-13214	7050	State	GW	P
4304735081	RBU 15-2F	SWSE	02	100S	200E	ML-10716	7050	State	GW	P
4304735348	RBU 13-16F	NWNW	21	100S	200E	ML-3394	7050	State	GW	DRL
4304736169	RBU 4-16E	NENW	16	100S	190E	ML-13214	7050	State	GW	P
4304736170	RBU 3-16E	NENW	16	100S	190E	ML-13214	7050	State	GW	P



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155



IN REPLY REFER TO  
3180  
UT-922

Dominion Exploration & Production, Inc.  
Attn: James D. Abercrombie  
14000 Quail Springs Parkway, #600  
Oklahoma City, OK 73134-2600

August 10, 2007

Re: River Bend Unit  
Uintah County, Utah

Gentlemen:

On August 8, 2007, we received an indenture dated June 30, 2007, whereby Dominion Exploration & Production, Inc. resigned as Unit Operator and XTO Energy Inc. was designated as Successor Unit Operator for the River Bend Unit, Uintah County, Utah.

This indenture was executed by all required parties and the signatory parties have complied with Sections 5 and 6 of the unit agreement. The instrument is hereby approved effective August 15, 2007. In approving this designation, the Authorized Officer neither warrants nor certifies that the designated party has obtained all required approval that would entitle it to conduct operations under the River Bend Unit Agreement.

Your statewide oil and gas bond No. UTB000138 will be used to cover all operations within the River Bend Unit.

It is requested that you notify all interested parties of the change in unit operator. Copies of the approved instruments are being distributed to the appropriate federal offices, with one copy returned herewith.

Sincerely,

*/s/ Greg J. Noble*

Greg J. Noble  
Acting Chief, Branch of Fluid Minerals

Enclosure

RECEIVED  
AUG 16 2007  
DIV. OF OIL, GAS & MINING

**STATE OF UTAH**  
 DEPARTMENT OF NATURAL RESOURCES  
 DIVISION OF OIL, GAS AND MINING

UIC FORM 5

**TRANSFER OF AUTHORITY TO INJECT**

Well Name and Number RBU 13-11F	API Number 4304730973
Location of Well  Footage : 96' FSL & 315' FWL County : Uintah	Field or Unit Name Natural Buttes
QQ, Section, Township, Range: SWSW 11 10S 20E State : UTAH	Lease Designation and Number U-7206

EFFECTIVE DATE OF TRANSFER: 8/1/2007

**CURRENT OPERATOR**

Company: <u>Dominion Exploration &amp; Production, Inc.</u>	Name: <u>James D. Abercrombie</u>
Address: <u>14000 Quail Springs Pkwy, STE 600</u> <u>city Oklahoma City state OK zip 73134</u>	Signature: <u><i>James D. Abercrombie</i></u>
Phone: <u>(405) 749-1300</u>	Title: <u>Sr. Vice President, General Manager - WBU</u>
Comments:	Date: <u>8/1/2007</u>

**NEW OPERATOR**

Company: <u>XTO Energy Inc.</u>	Name: <u>Edwin S. Ryan, Jr.</u>
Address: <u>810 Houston Street</u> <u>city Fort Worth state TX zip 76102</u>	Signature: <u><i>Edwin S. Ryan, Jr.</i></u>
Phone: <u>817-370-2300</u>	Title: <u>Sr. Vice President - Land Administration</u>
Comments:	Date: <u>8/1/2007</u>

(This space for State use only)

Transfer approved by: *Dan Jensen*  
 Title: *UIC Geologist*

Comments:

Approval Date: 8/2/07

**RECEIVED**  
**AUG 06 2007**  
 DIV. OF OIL, GAS & MINING

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

		5. LEASE DESIGNATION AND SERIAL NUMBER: U-7206
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: N/A
		7. UNIT or CA AGREEMENT NAME: RIVER BEND UNIT
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		8. WELL NAME and NUMBER: RBU 13-11F
2. NAME OF OPERATOR: XTO ENERGY INC.		9. API NUMBER: 4304730973
3. ADDRESS OF OPERATOR: 382 CR 3100	CITY: AZTEC STATE: NM ZIP: 87410	10. FIELD AND POOL, OR WILDCAT: NATURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 3215' FWL & 96' FSL		COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWSW 11 10S 20E S		STATE: UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>3/15/2008</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>INJECTION TEST</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS: Clearly show all pertinent details including dates, depths, volumes, etc.

XTO Energy Inc. proposes to conduct an injection test on this well in the following manner:

1. MIRU WL. RU full lubricator. Set RBP @ +/- 4000' (ensure RBP not set in csg collar). PT RBP to 4250 psig. POH w/ setting tool.
2. Run GR/CCL/CBL fr/RBP (4000') to 399' (surf csg TD) or 100' above TOC. Correlate depth w/RBU #13-11F Schlumb. GR/CCL log, 10/4/04.  
WAIT FOR CONFIRMATION ON TOC BEFORE MOVING FORWARD
3. TIH w/RBP retrieving tool, 2 jts 2-7/8" tbg & +/- 3950' 3-1/2", 9.3#, J-55 EUE, 8rd tbg & 1 jt 3-1/2", 9.3#, N-80, EUE, 8rd tbg. Release RBP & circulate bottoms up (2500 gallons). TOH and lay down RBP.
4. TIH w/5-1/2" x 2-7/8" treating packer w/bypass, "X" profile nipple, 2 jts 2-7/8" tbg & +/- 3950' 3-1/2", 9.3#, J-55, EUE, 8rd tbg & 1 jt 3-1/2", 9.3#, N-80, EUE, 8rd tubing on top. Hydrotest tbg in hole to 5000 psig.
5. TOH to 3850'.
6. Set packer @ 3750'. Check CCL log to ensure packer is not set in csg collar.
7. PT annulus to 500 psig.
8. BD Green River perms & EIR w/2% KCl water w/additives. SD.
9. SWI for 24 hrs.
10. MIRU SLU. RIH w/tandem 5000 psig BHP & BHT bombs to 4060'.
11. MIRU pump crew to run step rate test on well as per attached schedule.

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

NAME (PLEASE PRINT) <u>HOLLY C. PERKINS</u>	TITLE <u>REGULATORY COMPLIANCE TECH</u>
SIGNATURE	DATE <u>2/28/2008</u>

(This space for State use only)

**RECEIVED**  
**MAR 03 2008**  
DIV. OF OIL, GAS & MINING

RBU 1311F  
43-9047-30973  
U-7206  
Injection Test Sundry  
Page Two

11. (Contd fr/Sundry): MIRU pump crew to run step rate test on well. Start pumping as slow as pump truck can pump. Try for initial rate step @ 0.25 BPM; must have three rate stops below frac point & 3 rate stops above frac point (max rate increment is 0.5 BPM). Pump each step until rate & pressures stabilize (minimum 5 minutes). Record time, injection rate, injection pressure, injection volume, Braden Head pressure, 5-1/2" x 8-5/8" casing annulus & TCA pressure. RDMO pump crew. **Use treated water only.**

**Preferred Step Intervals**

<b>Injection Rate</b>	<b>Surface Pressure</b>
0.25 bpm	
0.50 bpm	
0.75 bpm	
1.00 bpm	
1.50 bpm	
2.00 bpm	
2.50 bpm	
3.00 bpm	
3.50 bpm	
4.00 bpm	
5.00 bpm	
6.00 bpm	
7.00 bpm	
8.00 bpm	

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

**SUNDRY NOTICES AND REPORTS ON WELLS**

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		7. UNIT or CA AGREEMENT NAME: <b>RIVER BEND UNIT</b>
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		8. WELL NAME and NUMBER: <b>RBU 13-11F</b>
2. NAME OF OPERATOR: <b>XTO ENERGY INC.</b>		9. API NUMBER: <b>4304730973</b>
3. ADDRESS OF OPERATOR: <b>382 CR 3100</b>	CITY <b>AZTEC</b> STATE <b>NM</b> ZIP <b>87410</b>	10. FIELD AND POOL, OR WILDCAT: <b>NATURAL BUTTES</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>3215' FWL &amp; 96' FSL</b>		COUNTY: <b>UINTAH</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>SWSW 11 10S 20E S</b>		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: <u>3/15/2008</u>	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>INJECTION TEST</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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WAIT FOR CONFIRMATION ON TOC BEFORE MOVING FORWARD
3. TIH w/RBP retrieving tool, 2 jts 2-7/8" tbg & +/- 3950' 3-1/2", 9.3#, J-55 EUE, 8rd tbg & 1 jt 3-1/2", 9.3#, N-80, EUE, 8rd tbg. Release RBP & circulate bottoms up (2500 gallons). TOH and lay down RBP.
4. TIH w/5-1/2" x 2-7/8" treating packer w/bypass, "X" profile nipple, 2 jts 2-7/8" tbg & +/- 3950' 3-1/2", 9.3#, J-55, EUE, 8rd tbg & 1 jt 3-1/2", 9.3#, N-80, EUE, 8rd tubing on top. Hydrotest tbg in hole to 5000 psig.
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8. BD Green River perms & EIR w/2% KCl water w/additives. SD.
9. SWI for 24 hrs.
10. MIRU SLU. RIH w/tandem 5000 psig BHP & BHT bombs to 4060'.
11. MIRU pump crew to run step rate test on well as per attached schedule.

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Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

NAME (PLEASE PRINT) <u>HOLLY C. PERKINS</u>	TITLE <u>REGULATORY COMPLIANCE TECH</u>
SIGNATURE	DATE <u>2/28/2008</u>

(This space for State use only)

**RECEIVED**  
**MAR 03 2008**  
DIV. OF OIL, GAS & MINING

RBU 1311F  
43-9047-30973  
U-7206  
Injection Test Sundry  
Page Two

11. (Contd fr/Sundry): MIRU pump crew to run step rate test on well. Start pumping as slow as pump truck can pump. Try for initial rate step @ 0.25 BPM; must have three rate stops below frac point & 3 rate stops above frac point (max rate increment is 0.5 BPM). Pump each step until rate & pressures stabilize (minimum 5 minutes). Record time, injection rate, injection pressure, injection volume, Braden Head pressure, 5-1/2" x 8-5/8" casing annulus & TCA pressure. RDMO pump crew. **Use treated water only.**

**Preferred Step Intervals**

<b>Injection Rate</b>	<b>Surface Pressure</b>
0.25 bpm	
0.50 bpm	
0.75 bpm	
1.00 bpm	
1.50 bpm	
2.00 bpm	
2.50 bpm	
3.00 bpm	
3.50 bpm	
4.00 bpm	
5.00 bpm	
6.00 bpm	
7.00 bpm	
8.00 bpm	

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0137  
Expires July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Serial No. <b>U-7206</b>
2. Name of Operator <b>XTO Energy Inc.</b>	6. If Indian, Allottee or Tribe Name <b>N/A</b>
3a. Address <b>382 CR 3100 Aztec, NM 87410</b>	7. If Unit or CA/Agreement, Name and/or No. <b>RIVER BEND UNIT</b>
3b. Phone No. (include area code) <b>505-333-8100</b>	8. Well Name and No. <b>RBU 13-11F</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>315' FWL &amp; 96' FSL SWSW SEC 11-T10S-R20E</b>	9. API Well No. <b>43-047-30973</b>
	10. Field and Pool, or Exploratory Area <b>NATURAL BUTTES</b>
	11. County or Parish, State <b>UINTAH UT</b>

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize <input type="checkbox"/> Deepen <input type="checkbox"/> Production (Start/Resume) <input type="checkbox"/> Water Shut-Off
<input checked="" 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"/> Recomplete <input checked="" type="checkbox"/> Other <b>MIT</b>
	<input type="checkbox"/> Change Plans <input type="checkbox"/> Plug and Abandon <input type="checkbox"/> Temporarily Abandon
	<input 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 recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

4/1/08 TOH 2-3/8", N-80, 4.7#, int coated, EUE 8rd tbg & 5-1/2" pkr. TIH w/ 4-3/4" bit, 5-1/2" csg scr, safety sub w/float & CO to 5480'. RIH w/GR/CCL/CBL logging tls. Run log fr/4000' - 300' FS. Log indic TOC @ 1006' FS.

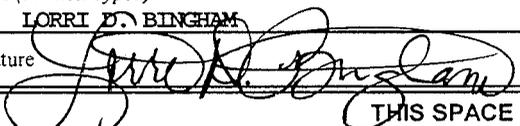
4/5/08 TIH w/5-1/2" Arrow-set 10K pkr, 2-7/8" XN nipple, 2 jts 2-7/8" L-80, 6.5#, EUE, 8rd tbg, 2-7/8" x 3-1/2" xo & 3-1/2", N-80, 9.3#, EUE, 8rd tbg. EOT @ 3956'.  
Set 5-1/2" Arrow set 10K pkr @ 3948'. RIH w/BHT & BHP bombs to mid perf @ 4060'. Perform SRT.

5/4/08 Acidize perfs dwn 3-1/2 tbg w/9,000 gals 20% HCL.

6/12/08 Rlsd 5-1/2" pkr & TOH & LD 99 jts 3-1/2" tbg. RIH w/btm sec of on/off t1, 5-1/2" Arrow-set pkr, 1.50" XN nip, 2-3/8"x 6' tb sub, 5K glass disc sub & WL re-entry guide. Set pkr w/ elements @ 3960'. TIH w/on/off t1, 1.50" X nip, 120 jts, 2-3/8",

7/2/08 PT & chart TCA to 1300 psig w/10 psig loss in 30". PT & chart tbg to 1500 psig w/0 psig loss in 30". RDMO B&C testers.  
1500 psig w/0 psig loss in 30". RDMO B&C testers.

Please see attached documents for further detail.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>LORRI D. BINGHAM</b>	Title <b>REGULATORY COMPLIANCE TECH</b>
Signature 	Date <b>7/11/08</b>

**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	

**RECEIVED**

**JUL 21 2008**

Title 18 U.S.C. Section 1001, and Title 43 U.S.C. Section 1212, 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.

**DOGMI COPY**

**DIV. OF OIL, GAS & MINING**

# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency  
Underground Injection Control Program  
999 18<sup>th</sup> Street, Suite 500 Denver, CO 80202-2406

EPA Witness: \_\_\_\_\_ Date: 7/2/08  
 Test conducted by: Jeff Kulland for XTO  
 Others present: \_\_\_\_\_

Well Name: <u>RBU 13-11F</u>	Type: ER <u>SWD</u>	Status: AC TA UC
Field: <u>Natural Buttes</u>		
Location: _____	Sec: <u>11 T 10 N/8 R 20E/W</u>	County: <u>Wintah</u> State: <u>Litah</u>
Operator: <u>XTO ENERGY INC.</u>		
Last MIT: <u>10/21/04</u>	Maximum Allowable Pressure: <u>1138</u>	PSIG

Is this a regularly scheduled test? [ ] Yes [  ] No  
 Initial test for permit? [ ] Yes [  ] No  
 Test after well rework? [  ] Yes [ ] No  
 Well injecting during test? [ ] Yes [  ] No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 1300 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>1500</u> psig	psig	psig
End of test pressure	<u>1500</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1300</u> psig	psig	psig
5 minutes	<u>1300</u> psig	psig	psig
10 minutes	<u>1300</u> psig	psig	psig
15 minutes	<u>1295</u> psig	psig	psig
20 minutes	<u>1295</u> psig	psig	psig
25 minutes	<u>1290</u> psig	psig	psig
30 minutes	<u>1290</u> psig	psig	psig
minutes	psig	psig	psig
minutes	psig	psig	psig
<b>RESULT</b>	[ <input checked="" type="checkbox"/> ] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test? [ ] Yes [  ] No

# MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

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Signature of Witness: *[Handwritten Signature]*

## OFFICE USE ONLY - COMPLIANCE FOLLOWUP

Staff: \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Do you agree with the reported test results?  YES  NO

If not, why?

Possible violation identified?  YES  NO

If YES, what

If YES - followup initiated?  YES

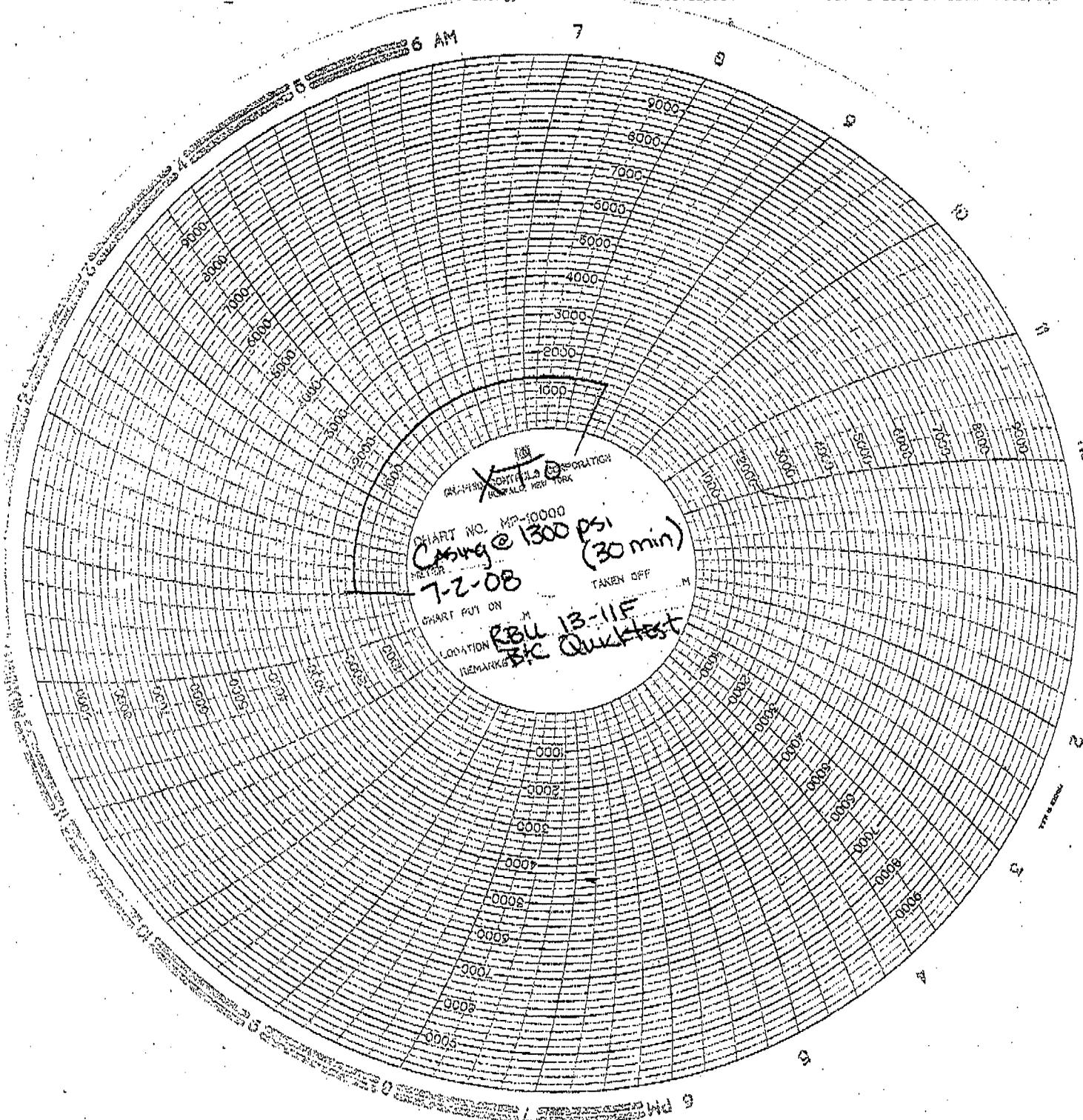
NO - why not?

Data Entry

Compliance Staff

2<sup>nd</sup> Data Entry

Hardcopy Filing



6 AM

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3

4

XTO CORPORATION  
 CHARLES DUNBAR CORPORATION  
 200 WALL STREET, NEW YORK  
 CHART NO. 72-00  
 METER 72-00 (30min)  
 CHART PUT ON \_\_\_\_\_ M  
 TAKEN OFF \_\_\_\_\_ M  
 LOCATION RB 13-4E  
 REMARKS B & C Overtest



# Tubing

Well Name: Riverbend Unit 13-11F

API/UVI 43047309730000	Location T10S-R20E-S11	Field Name Natural Buttes	Permit Number	State Utah	Well Configuration Type Vertical
Original KB Elevation (ft) 5,021.00	Ground Elevation (ft) 5,008.00	KB-Ground Distance (ft) 12.00	Spud Date 1/11/1982	Rig Release Date 2/11/1982	Total Depth (ftKB) 6,490.0

Depth (ft)	Original Hole	Original Hole	Original Hole	Tubing String	Set Depth (ftKB)	Run Date	Pull Date			
10				<b>Tubing - Water Injection</b>	<b>3,975.9</b>	<b>6/12/2008</b>				
12				<b>Tubing Components:</b>						
28				Item Description: Tubing Sub	Joints: 2	OD Nominal (in): 2 3/8	ID (in): 1.995	Wt (lbs/ft): 4.70	Grade: N-80	Length (ft): 18.74
400				Top Connection Thread: 8RD EUE	Inner Coating: Nickel plated	Condition Run: New	Top (ftKB): 10.5	Bottom (ftKB): 29.2		
850				Item Description: Tubing	Joints: 120	OD Nominal (in): 2 3/8	ID (in): 1.750	Wt (lbs/ft): 4.70	Grade: N-80	Length (ft): 3,926.62
890				Top Connection Thread: 8RD EUE	Inner Coating: HDPE	Condition Run: New	Top (ftKB): 29.2	Bottom (ftKB): 3,955.9		
1,571				Item Description: X nipple	Joints: 1	OD Nominal (in): 2 3/8	ID (in): 1.500	Wt (lbs/ft): 4.70	Grade:	Length (ft): 1.02
1,751				Top Connection Thread: 8RD EUE	Inner Coating: Nickel plated	Condition Run: New	Top (ftKB): 3,955.9	Bottom (ftKB): 3,958.9		
1,781				Item Description: Cross Over	Joints: 1	OD Nominal (in): 2 7/8	ID (in): 1.995	Wt (lbs/ft):	Grade:	Length (ft): 0.50
1,971				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,958.8	Bottom (ftKB): 3,957.4		
2,221				Item Description: On-Off Tool	Joints: 1	OD Nominal (in): 4 1/2	ID (in): 2.500	Wt (lbs/ft):	Grade:	Length (ft): 1.45
1,381				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,957.4	Bottom (ftKB): 3,958.8		
1,491				Item Description: X nipple	Joints: 1	OD Nominal (in): 2 7/8	ID (in): 2.310	Wt (lbs/ft):	Grade:	Length (ft): 1.00
1,851				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,958.8	Bottom (ftKB): 3,959.8		
1,951				Item Description: Packer	Joints: 1	OD Nominal (in): 2 1/2	ID (in): 4.750	Wt (lbs/ft):	Grade:	Length (ft): 7.00
1,981				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,959.8	Bottom (ftKB): 3,968.8		
1,981				Item Description: Change Over	Joints: 1	OD Nominal (in): 2 3/8	ID (in): 1.995	Wt (lbs/ft):	Grade:	Length (ft): 0.50
1,981				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,968.8	Bottom (ftKB): 3,967.3		
1,981				Item Description: XN Nipple	Joints: 1	OD Nominal (in): 2 3/8	ID (in): 1.500	Wt (lbs/ft):	Grade:	Length (ft): 1.00
1,021				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,967.3	Bottom (ftKB): 3,968.3		
1,041				Item Description: Tubing Sub	Joints: 1	OD Nominal (in): 2 3/8	ID (in): 1.995	Wt (lbs/ft): 4.70	Grade: N-80	Length (ft): 6.05
1,041				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,968.3	Bottom (ftKB): 3,974.4		
1,081				Item Description: Glass disc sub	Joints: 1	OD Nominal (in): 3 1/16	ID (in): 1.995	Wt (lbs/ft):	Grade:	Length (ft): 1.20
1,081				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,974.4	Bottom (ftKB): 3,975.6		
1,101				Item Description: WL re-entry guide	Joints: 1	OD Nominal (in): 3 1/16	ID (in): 1.995	Wt (lbs/ft):	Grade:	Length (ft): 0.36
1,121				Top Connection Thread: 8RD EUE	Inner Coating: "	Condition Run: New	Top (ftKB): 3,975.6	Bottom (ftKB): 3,975.9		
1,481				<b>PBTD</b>						
1,511				Original Hole			5,587.0			



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

1595 Wynkoop Street  
DENVER, CO 80202-1129  
Phone 800-227-8917  
<http://www.epa.gov/region08>

RECEIVED

AUG 07 2008

DIV. OF OIL, GAS & MINING

AUG - 4 2008

Ref: 8ENF-UFO

CERTIFIED MAIL 7005-1820-0005-4856-0322

RETURN RECEIPT REQUESTED

Mr. Mike Logan  
District Engineer  
XTO Energy  
382 County Road 3100  
Aztec, NM 87410

43 047 30973  
105 20E 11

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY**

Re: Underground Injection Control (UIC)  
Permission To Resume Injection  
Well Name: RBU 13-11F  
EPA Permit # UT20961-06292  
Island Oil Field  
Uintah County, Utah

Dear Mr. Logan:

On July 24, 2008, EPA received information from XTO Energy on the above referenced well concerning the workover to clean out tubing and acidize perforations and the follow up mechanical integrity test (MIT) conducted on July 2, 2008. The data submitted shows that the well passed the required MIT. Therefore, pursuant to Title 40 of the Code of Federal Regulations Section 144.51(q)(2) (40 C.F.R. §144.51(q)(2)), permission to resume injection is granted. Under continuous service, the next MIT will be due on or before July 2, 2013.

Pursuant to 40 C.F.R. §144.52(a)(6), if the well is not used for a period of at least two (2) years ("temporary abandonment"), it shall be plugged and abandoned unless EPA is notified and procedures are described to EPA ensuring the well will not endanger underground sources of drinking water ("non-endangerment demonstration") during its continued temporary abandonment. A successful MIT is an acceptable non-endangerment demonstration and would be necessary every two (2) years the well continues in temporary abandonment.

Failure to comply with a UIC Permit, or the UIC regulations found at 40 C.F.R. Parts 144 through 148 constitute one or more violations of the Safe Drinking Water Act, 42 U.S.C. §300h. Such non-compliance may subject you to formal enforcement by EPA, as codified at 40 C.F.R. Part 22.

If you have any questions concerning this letter, you may contact Nathan Wiser at (303) 312-6211. Please direct all correspondence to the attention of Nathan Wiser at Mail Code 8ENF-UFO.

Sincerely,



Mark A.R. Chalfant  
Director  
Technical Enforcement Program

cc: Curtis Cesspooch, Chairman  
Uintah & Ouray Business Committee  
P.O. Box 190  
Fort Duchesne, Utah 84026

Shaun Champoos, Director, Land Use Department  
Ute Indian Tribe  
P.O. Box 460  
Fort Duchesne, Utah 84026

Gil Hunt  
Utah Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114

FOR RECORD ONLY  
DIVISION OF OIL, GAS AND MINING  
ACCEPTED BY THE  
TO RECORD UNIT

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB NO. 1004-0137  
Expires July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**

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2. Name of Operator <b>XTO Energy Inc.</b>		6. If Indian, Allottee or Tribe Name <b>N/A</b>
3a. Address <b>382 CR 3100 Aztec, NM 87410</b>	3b. Phone No. (include area code) <b>505-333-3100</b>	7. If Unit or CA/Agreement, Name and/or No. <b>RIVER BEND UNIT</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>96' FSL &amp; 315' FWL SWSW SEC 11-T10S-R20E</b>		8. Well Name and No. <b>RBU 13-11F</b>
		9. API Well No. <b>43-047-30973</b>
		10. Field and Pool, or Exploratory Area <b>NATURAL BUTTES GREEN RIVER</b>
		11. County or Parish, State <b>UINTAH UT</b>

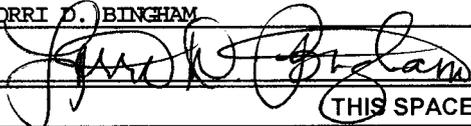
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<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>ADD PERFS</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

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XTO Energy Inc. added perfs to this well per the attached morning report.

RECEIVED  
SEP 16 2008  
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed) <b>LORRI D. BINGHAM</b>	Title <b>REGULATORY COMPLIANCE TECH</b>
Signature 	Date <b>9/10/08</b>

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	

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**DOGM COPY**

## Farmington Well Workover Report

<b>RIVERBEND UNIT</b>	<b>Well # 013-11F</b>	
-----------------------	-----------------------	--

**Objective:** Facilities

**First Report:** 08/16/2007

**AFE:** 714080

**8/17/07** First rpt for AFE #714080. MIRU Redhand Roustabout Service. Build pads for 2 - 400 bbl tks. Set (2) 12' x 20' Natco cone btm tks (SN 76032662-02) & (SN 76032453-02) w/500K hrs. NU 3" eqizer line & inst 1/2" stainless steel tr lines w/insulation & tin. Inst tk ring, insulation & tin. Put new tks into svc. RDMO Redhand Roustabout Service. Susp rpt pending further activity.

**11/2/07** SITP 929 psig. SICP 0 psig. MIRU Superior Well Service. RU & tst lines to 4,000 psig. Pmped 18 bbls of ac @ 1.2 BPM w/TP @ 1,280 psig. Pmped 16 bbls of ac @ 2.2 BPM w/TP @ 1,900 psig. Flush w/20 bbls of prod wtr. ISIP 1,130 psig, 5 min 1,109 psig, 10 min 1,075 psig, 15 min 1,057 psig. RDMO Superior Well Service. SWI for 3 hrs. RWT inj @ 3:00 p.m., 11-1-07.

**3/29/08** SITP 900 psig. SICP 0 psig. MIRU Temples WS #1. OWU & tst fld @ WH, monitors showing 10-40 PPM H2S. SWI & RU lines to flw back tnk & Bd well over weekend. Contact Oilind Safety for H2S equip. SDFWE.

**4/1/08** FTP 0 psig. SICP 0 psig. Recd 3,365 bbls injd wtr in 60 hrs flwg. Approx 56 BPH. Gas @ surf tstd 30 ppm H2S. Loaded tbg w/10 bbls 10# brine wtr. ND WH. NU BOP & strip head. Wrk tbg for 3 hrs to rls 5-1/2" Arrow-set 1X pkr @ 3933'. Could not pmp kill fld around pkr, any change in tbg or csg press would set pack-off element on pkr. Re-set 5-1/2" pkr @ 3925' & rlsd on-off tool. Kill tbg w/15 bbls trtd 10# brine wtr (All flds trtd w/biocide & H2S scavenger.). TOH w/28 jts 2-3/8", N-80, 4.7#, int coated, EUE, 8rd tbg. EOT @ 3028'. SWI & SDFN. Oillind H2S Safety on Loc.

**4/2/08** FTP 0 psig. SICP 0 psig. Recd 1360 bbls injd wtr in 24 hrs. Gas @ surf tstd 40-70 ppm H2S. Kill tbg w/10 bbls 10# brine wtr. Cont to TOH w/93 jts 2-3/8", N-80, 4.7#, int coated, EUE 8rd tbg & on-off tl. TIH w/on-off tl, 3' x 2-3/8" perf tbg sub, safety sub w/float & 121 jts tbg. Est circion w/trtd 10# brine wtr. Wash over & latch on-off tl. Rlsd 5-1/2" pkr @ 3925'. TOH w/tbg. LD on-off tl, pkr & BHA.. TIH w/ 4-3/4" bit, 5-1/2" csg scr, safety sub w/float & 121 jts tbg. EOT @ 3923'. SWI & SDFN

**4/3/08** SITP 0 psig. SICP 600 psig. Bd well. ND strip head. NU hydril. PU & TIH w/50 jts 2-3/8" tbg. (Rotate csg scr perms fr/4028'-4100'.) EOT @ 5480'. No sc BU felt as TIH. TOH & LD 50 jts of 2-3/8" wrk strg, 121 jts 2-3/8" interior coated tbg, csg scr & bit. MIRU WLU. RIH w/GR/CCL/CBL logging tls. Run log fr/4000' - 300' FS, using well press to hold 700 psig on csg. Log indic TOC @ 1006' FS. POH & LD logging tls. RDMO WLU. SWI & SDFN.

**4/4/08** SICP 700 psig. Bd well. Gas @ surf tstd 40 ppm H2S. RU handling & BOP equip for 3-1/2" tbg. WO BHA for 2 hrs. PU & TIH w/WL re-entry guide, 5K glass disc sub, 2-3/8"x 6' tbg sub, 5-1/2" Arrow-set 10K pkr, 2-7/8" XN nipple, 2 jts 2-7/8" L-80, 6.5#, EUE, 8rd tbg, 2-7/8" x 3-1/2" xo & 122 jts 3-1/2", N-80, 9.3#, EUE, 8rd tbg. EOT @ 3956'. SWI & SDFN

**4/5/08** SITP 0 psig. SICP 800 psig. Bd well. Displ TCA w/50 bbls trtd 2% KCl wtr. Set 5-1/2" Arrow set 10K pkr @ 3948'. ND BOP & hydril. NU 3" frac tree. MIRU Haliburton. Tstd TCA & pkr to 4000 psig, 10". Gd tst. Tstd 3-1/2" tbg & surf equip to 4500 psig, 5". Gd tst. MIRU SLU. RIH w/sbs & KO glass disc @ 3956'. POH w/sbs. RIH w/BHT & BHP bombs to mid perf @ 4060'. Perform step rate tst on GR perms fr/4028' - 4100' w/trtd 2% KCL wtr as follows: Starting tbg press 830 psig. .5 BPM for 25" avg psig 934, .75 BPM for

25" avg psig 1002, 1 BPM for 25" avg psig 1010, 1.5 BPM for 25" avg psig 1092, 2 BPM for 25" avg psig 1192, 3 BPM for 25" avg psig 1250, 4 BPM for 25" avg psig 1349, 5 BPM for 25" avg psig 1460, 6 BPM for 25" avg psig 1578 & 7 BPM for 25" avg psig 1778. ISIP 1440 psig, 5" SIP 1273 psig, 10" SIP 1222 psig & 15" SIP 1186 psig. Ttl fld ppd 778 bbls. SWI. RDMO Haliburton. SDFN.

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**4/6/08** SITP 850 psig. SICP 400 psig. POH w/ BHP & BHT bombs. ( Results sent to XTO & Halliburton office in Farmington) SWI. RDMO SLU. SDFWE.

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**4/8/08** SITP 850 psig. SICP 400 psig. RDMO Temples WS. WO frac procedure.

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**5/4/08** Cont rpt for AFE # 714080. SITP 880 psig. SICP 290 psig. MIRU Weatherford ac crew. Held safety mtg. Tstd surf lines to 3,500 psig. tstd gd . Rlsd press. A. UB perfs fr/4,022' - 4,100' dwn 3-1/2 tbg w/9,000 gals 20% HCl ac containing 5/1,000 WNE-352LN, 3/1,000 WCS-631LC, 10/1,000 WIC641L & 2/1,000 WAI 251LC as follows: 1,000 gal 2% KCl wtr, 3 - 2,000 gal stgs 20% ac, ea stg followed w/2,000 gals 2% KCl wtr, stg 4 - 3,000 gals 20% ac. Flshd w/1650 gals 2% KCl wtr. (All 2% KCl ppd containing 348LD non-emulsifier). ISIP 1,177 psig, 5" SIP 1,141 psig, 10" 1,104 psig, 15" 1,076 psig, ATP 1,158 psig. AIR 3.9 BPM. Max TP 1,300 psig. Max IR 5.5 BPM. 1,217 BLWTR. RDMO Weatherford. SWI. Susp rpts to further activity.

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**6/11/08** SITP 900 psig. SICP 0 psig. MIRU SLU. Attd to set pmp thru tbg plg in XN nip @ 3945' w/no results. RDMO SLU. MIRU BHWSrig #3. Displ tbg w/ 40 bbls trtd 2% KCl wtr. MIRU WLU. RIH & set 2-7/8" CIBP in tbg @ 4930'. POH & LD set tl. RDMO WLU. Bd tbg. ND WH. NU BOP & hydril. Rlsd 5-1/2" pkr @ 3946'. TOH & LD 99 jts 3-1/2" tbg. EOT @ 805'. Tbg & tls std floating. FCP 175 psig. Gas @ WH tstd 80 PPM H2S. SWI & SDFN.

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**6/12/08** SITP 900 psig. SICP 0 psig. Gas @ WH tstd 100 PPM H2S. Bd csg. Cont to TOH & LD 23 jts 3-1/2" tbg, 3-1/2"x 2-7/8" XO, 2 jts 2-7/8" tbg, XN nip, 5-1/2" pkr, 2-3/8"x 6' tbg sub, glass disc sub & WL re-entry guide. MIRU WLU. RIH w/btm sec of on/off tl, 5-1/2" Arrow-set pkr, 1.50" XN nip, 2-3/8"x 6' tb sub, 5K glass disc sub & WL re-entry guide. Set pkr w/ elements @ 3960'. POH & LD setting tl. RDMO WLU. RU 2-3/8" handling & BOP equip. SWI & SDFN.

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**6/13/08** SICP 0 psig. MIRU B&C testers, tst BOP's to 5000 psig, 10', gd tst. WO BHA (3 hrs). PU & TIH w/on/off tl, 1.50" X nip, 120 jts, 2-3/8", N-80, 4.7#, int coated, EUE 8rd tbg, 1-8' & 1-10'x 2-3/8" tbg subs (nickel plated). Displ well w/100 bbls pkr fld trtd w/biocide. Latch on/off tl @ 3960'. Ld tbg on hgr as follows: X nip @ 3957', Arrow-set pkr @ 3960' set w/10K comp, XN nip @ 3968', EOT @ 3975', UB perfs fr/4022'-4100' & CIBP @ 5675'. ND BOP, NU WH. PT & chart TCA to 1200 psig, 30", gd tst. PT & chart tbg to 1500 psig, 30", gd tst. (Chart results to be to EPA, attn: Nathan Wiser). RDMO B&C testers. SWI & SDFN.

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**6/14/08** SITP 0 psig. SICP 0 psig. MIRU SLU. RIH w/ 1-1/4" tls & knocked out glass rupture disc @ 3975'. POH & LD tls. SWI. SITP 900 psig. SICP 0 psig. RDMO SLU & BHWS #3. RWTP.

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<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> U-7206
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> RIVER BEND
<b>1. TYPE OF WELL</b> Water Disposal Well	<b>8. WELL NAME and NUMBER:</b> RBU 13-11F
<b>2. NAME OF OPERATOR:</b> XTO ENERGY INC	<b>9. API NUMBER:</b> 43047309730000
<b>3. ADDRESS OF OPERATOR:</b> 382 Road 3100 , Aztec, NM, 87410	<b>PHONE NUMBER:</b> 505 333-3159 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0096 FSL 0315 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 20.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: CHEMICAL TREATMENT
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 7/16/2009			
<input type="checkbox"/> SPUD REPORT Date of Spud:			
<input type="checkbox"/> DRILLING REPORT Report Date:			

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

XTO Energy Inc., performed a chemical treatment on this well per the following: 7/15/2009 MIRU Maverick Solutions and two water transports. Mix iron control and surfactant chem in 2% KCL in transports. Establish injection into well, 2.8 BPM 2000 psi. Fix chemical feed probs, then treat down tubing with 500 gal KCL spacer, 500 gal 15% HCL, 15 bbl KCL spacer, 100 bbl GIP at 3000 ppm, 15 bbl KCL spacer, 500 gal 15% HCL, 1000 gal KCL flush. Ave rate 2.5 BPM 1850 psi. 7/16/2009 Open well to flowback tank on 48/64 ck. Recover 600 BBL black water, no solids, no oil. Ave flow rate 135 BPH, H2S 8-12 ppm, 40-50 psi FTP. Haul flowback to evap pit. SWI.

**Accepted by the**  
**Utah Division of**  
**Oil, Gas and Mining**  
**FOR RECORD ONLY**  
 October 13, 2009

<b>NAME (PLEASE PRINT)</b> Dolena Johnson	<b>PHONE NUMBER</b> 505 333-3164	<b>TITLE</b> Regulatory Compliance Tech
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/12/2009	

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> U-7206
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> RIVER BEND
<b>1. TYPE OF WELL</b> Water Disposal Well	<b>8. WELL NAME and NUMBER:</b> RBU 13-11F
<b>2. NAME OF OPERATOR:</b> XTO ENERGY INC	<b>9. API NUMBER:</b> 43047309730000
<b>3. ADDRESS OF OPERATOR:</b> 382 Road 3100 , Aztec, NM, 87410	<b>PHONE NUMBER:</b> 505 333-3159 Ext
<b>4. LOCATION OF WELL FOOTAGES AT SURFACE:</b> 0096 FSL 0315 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 20.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

**11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start: 10/5/2009	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion:	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input checked="" type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input checked="" type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: CEMENT SQUEEZE

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**  
 XTO Energy Inc. requests permission to refrac and squeeze perms to improve the injection rate of this salt water disposal well per the attached procedure.

**Accepted by the Utah Division of Oil, Gas and Mining**

Date: October 15, 2009

By: *Derek Duff*

<b>NAME (PLEASE PRINT)</b> Barbara Nicol	<b>PHONE NUMBER</b> 505 333-3642	<b>TITLE</b> Regulatory Clerk
<b>SIGNATURE</b> N/A		<b>DATE</b> 10/13/2009



**The Utah Division of Oil, Gas, and Mining**

- State of Utah
- Department of Natural Resources

**Electronic Permitting System - Sundry Notices**

**Sundry Conditions of Approval Well Number 43047309730000**

**Conditioned on EPA Approval.**

**Accepted by the  
Utah Division of  
Oil, Gas and Mining**

**Date:** October 15, 2009  
**By:** *Darko Duvic*

**RBU 13-11F SWD  
Sec 11, T 10S, R 20 E  
Uintah County, Utah  
AFE #903534  
Frac Brown Zone  
Evaluate Birds Nest Zone**

**Surf csg:** 8-5/8", 24#, J-55, ST&C csg @ 400'.  
**Prod csg:** 5-1/2", 17#, N-80 & K-55 LT&C csg @ 6378'. PBD @ 5587'.  
**Tbg:** 2-3/8" 4.7# N-80 internally coated 1.75" ID tubing, 2 3/8" x 1.5" X nipple @ 3956',  
2 3/8" x 2 7/8" X-over, 2 7/8" on-off tool (upper half)  
**Inj Packer:** 2 7/8" on-off tool (lower half), 5 1/2" x 2 7/8" Arrowset 10K @ 3960',  
2 7/8" x 2 3/8" x-over, 2 3/8" x 1.50" XN nipple, 2 3/8" x 6' sub, glass disc sub,  
WL reentry guide @ 3976'  
**Perfs:** 4028'-4042', 4046'-4048', 4053'-4060', 4083'-4100' (164 holes total)  
**Purpose:** Frac to improve injection rate

**Procedure**

- 1) Set 6-500 BBL frac tanks. Rig 2-500 bbl tanks to accept flow back water from well while pulling injection string. Fill 4-500 BBL tanks with fresh water and KCL substitute.
- 2) MIRU slickline unit. Set blanking plug in 1.5" XN nipple beneath packer at 3967'. Open tubing to flow back tanks to verify plug is holding.
- 3) MIRU pulling unit. ND wellhead, NU BOP stack with blind and pipe rams, annular preventer and stripping head. Unseat & lay down tubing hangar. Release packer and evaluate flowback rates & pressures. Lower tubing to  $\pm$  4150' verify perfs are clear, then POH, standing back tubing. Shut blind rams, then remove annular preventer and stripping head. Rig down floor and install frac tree, prepare for frac.

- 4) MIRU Fractech Services. Pump frac down casing at 40 BPM per below schedule, max STP 4200 psi. Pump acid and ball sealers ahead of frac, surge back and allow balls to drop before starting frac. Shut well in overnight to allow gel to break. RDMO frac equipment.

Stage	Rate BPM	Volume Gal	Type	Fluid type	Pro p PPG	Comments
1	12	2,000	Acid	15% HCL	0	130 balls
2	12	5,000	Flush	Water w/ KCL sub.	0	Surge back balls
3	40	10,000	Pad	20# Crosslink Gel	0	
4	40	5,000	SLF	20# Crosslink Gel	1	16-30 White
5	40	6,000	SLF	20# Crosslink Gel	2	16-30 White
6	40	7,000	SLF	20# Crosslink Gel	3	16-30 White
7	40	8,000	SLF	20# Crosslink Gel	4	16-30 White
8	40	6,000	SLF	20# Crosslink Gel	5	16-30 White
9	40	3,891	Flush	Linear Gel	0	
Total		52891				

- 5) MIRU wireline unit. Set composite BP at  $\pm 1900'$ , test plug to 500 psi. Perforate "Birds Nest" zone 1751'-1752' with 4 shots. POH, RDMO wireline unit.
- 6) TIH with retrievable packer on unlined 2 3/8" tubing. Set packer at  $\pm 1710'$ , swab perforations to recover representative water sample from "birds nest" zone. Swab interval for 4-6 hrs, catch a total of 3 samples for full API water analysis at intervals through the swabbing. RD swab tools, RU Fractech for step rate test. RU slickline unit and run down hole pressure guage to 4065'; leave hanging on wireline to record pressures while pumping step rate test.
- 7) Perform step rate injection test with fresh water using single pump truck and frac van. Maintain rates as closely as possible with calibrated flow meter; record rates and pressures at surface. Injection steps are to be 45 minutes long, in the following increments: 0.25 BPM, 0.5BPM, 1.0BPM, 2.0BPM, 3.0 BPM, 4.0BPM, and 5.0BPM. All steps are to be identical in duration. RD wireline unit and Fractech.
- 8) Release packer and POH. TIH with cement retainer on tubing, set at  $\pm 1720'$ . Establish injection rate and pressure and prepare to cement squeeze.
- 9) RU Superior cementing services. Mix and pump 100 sx class "G" cement w/ 2% calcium chloride mixed at 15.8 PPG. Squeeze perfs down tubing, slowing rate and attempting to build squeeze pressure with last 10 BBL of slurry. If no increase in pumping pressure is

noted, overdisplace perforations by 3 BBL and reattempt squeeze following morning. When squeeze is obtained, close retainer and dump cement on top of retainer. Pull tubing 10' above retainer and reverse circulate clean. POH with tubing, lay down stinger, then pick up bit, bit sub and drill collars. Begin TIH for drill out.

10) Finish TIH and drill out cement squeeze. Pressure test to 1000 psi for 30 minutes. If test is good, POH and lay down drill collars. TIH with bit and bit sub, drill out composite BP and clean out to PBTD at 5587'. POH, laying down unlined tubing and BHA.

11) PU and run Arrowset injection packer BHA on wireline as follows (shown top down):

- On-off tool
- Arrowset 10K injection packer, nickel plated
- 2 7/8" x 2 3/8" x-over, nickel plated
- 2 3/8" XN nipple, stainless steel
- 2 3/8" x 4' tubing sub, nickel plated
- Glass disc sub
- WL re-entry guide

Set packer at ±3960' (packer must be within 100' of top perforation). Pressure test to 500 psi to verify packer is holding.

12) Trip in hole with 2 3/8" lined injection tubing with on-off tool. Circulate hole with packer fluid, engage on off tool, and land tubing on hanger. Pressure test annulus to 1500 psi for 30 minutes to verify mechanical integrity. Record test on EPA MIT test form, run pressure recorder to monitor test. Fax test results to Nathan Wiser, EPA Region 8, for MIT approval.

13) ND BOP, NU wellhead. RDMO pulling unit. RU slickline unit, RIH w/ 1 1/4" weight bar and break glass disc. Return well to injection service when approval is obtained from EPA.

### **Regulatory**

- Notify EPA region 8 enforcement of intent to work over. Submit record of well workover on EPA form 7520-12.
- Submit subsequent report of activity to BLM and Utah Division of Oil Gas & Mining. Include EPA MIT test form and chart

### **Services/Material**

- 4-500 BBL frac tanks filled w/ fresh water for frac
- 2-500 BBL frac tanks (empty) for flowback while pulling packer
- Injection string BHA, redressed and modified as necessary

<b>STATE OF UTAH</b> DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	<b>FORM 9</b>  <b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> U-7206
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.	<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>  <b>7. UNIT or CA AGREEMENT NAME:</b> RIVER BEND
<b>1. TYPE OF WELL</b> Water Disposal Well	<b>8. WELL NAME and NUMBER:</b> RBU 13-11F
<b>2. NAME OF OPERATOR:</b> XTO ENERGY INC	<b>9. API NUMBER:</b> 43047309730000
<b>3. ADDRESS OF OPERATOR:</b> 382 Road 3100 , Aztec, NM, 87410	<b>PHONE NUMBER:</b> 505 333-3159 Ext
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0096 FSL 0315 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 20.0E Meridian: S	<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES  <b>COUNTY:</b> UINTAH  <b>STATE:</b> UTAH

**11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> <b>NOTICE OF INTENT</b> Approximate date work will start:	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> <b>SUBSEQUENT REPORT</b> Date of Work Completion: 10/26/2009	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> <b>SPUD REPORT</b> Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> <b>DRILLING REPORT</b> Report Date:	<input type="checkbox"/> DEEPEN	<input checked="" type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> NEW CONSTRUCTION
	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> PLUG BACK
	<input type="checkbox"/> PRODUCTION START OR RESUME	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	<input type="checkbox"/> TEMPORARY ABANDON
	<input type="checkbox"/> TUBING REPAIR	<input type="checkbox"/> VENT OR FLARE	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> WATER SHUTOFF	<input type="checkbox"/> SI TA STATUS EXTENSION	<input type="checkbox"/> APD EXTENSION
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	<input checked="" type="checkbox"/> OTHER	OTHER: CMT SQZ & MIT

**12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.**  
 XTO Energy Inc. has completed the work to refrac this injection well per the attached Morning Report. Also, please see the attached MIT chart & casing pressure test.

Accepted by the  
 Utah Division of  
 Oil, Gas and Mining  
**FOR RECORD ONLY**  
 November 02, 2009

<b>NAME (PLEASE PRINT)</b> Barbara Nicol	<b>PHONE NUMBER</b> 505 333-3642	<b>TITLE</b> Regulatory Clerk
<b>SIGNATURE</b> N/A	<b>DATE</b> 10/29/2009	

EXECUTIVE SUMMARY REPORT

10/1/2009 - 10/27/2009
Report run on 10/27/2009 at 4:48 PM

Riverbend Unit 13-11F SWD

Section 11-10S-20E, Uintah, Utah, Roosevelt
Objective: Frac well
Date First Report: 10/5/2009

10/5/2009 First Rpt for Well Maintenance, RU Frac Tech PT srfc lines to 5000 psig. Pmp 1,250 gals of 7-1/2% NEFE HCL ac dwn tbg. Wait 30 mins. Flsd w/ 20 bls trtd 2%. 2 bpm & 1200 psig. SWI 4 hrs. OWU to test tnk 32/64 ck. F 25 bls water 800 psig. SWI. PT TCA to 3500 psig. 3 hrs. Dig out srfc cs vlv. Prep to replace vlv. in am.

10/7/2009 MIRU PLS WLU. Make several ( 3 ) attempts to set 1.5'' XN plug @ 3963' ( btm pkr). Plug would set but not seal. Make several ( 3 ) attempts to set 1.5'' X plug @ 3956' ( btm tbg). Plug would set but not seal. Set X plug @ 3956'. Hook to surface csg vlve. Fill w/ 3 bls trtd 2%. EIR 3/4 bpm @ 250 psi. Pmp 20 bls ttl. SWIFN

10/8/2009 MIRU Key # 6013. ND WH. NU bop. Unlnd hnger & unset pkr. TOH w/ 30jt's 2.375'', IC 4.7#, eue tbg. MIRU PLS retrieve X nipple plug. Pmpd 45 bls 16# mud dwn tbg. TOH w/ 90 jt's tbg, pkr, xn equipment. Turn well to test tank, unloaded drilling mud & injection water. Pull Injection BHA.

10/9/2009 MIRU Perf O Log WLU. RIH w/ 4.75'' GR. Tg 1395' of fill @ 4230'. POH Ld GR. MIRU Frac Tech. Held safety mtg & PT all surface lines to 5,000 psig, held gd. A. UB perfs fr/4028'-4100' w/1,500 gals of 15% NEFE HCL ac and 215 Bio-balls dwn 5.5'' csg. Poor BA. Max TP 350 psig incr. ISIP 1121 psig, surge balls off perfs & SD 5''. Fracd UB stg #1 perfs fr/4028'-4100' dwn 5.5'' csg. w/77,877gals Torquoise 20# fld carrying 199,820 # Jordan 16/30 sd. Flshd frac w/94 bbls 2% KCL wtr. Max DH sd conc 5 ppg. ISIP 1820 psig, 5" SIP 1547 psig. .88 FG. SWI & record tbg psig. SWIFWE frac Zone 1

10/12/2009 MIRU Perf O Log WLU. RIH w/5.5'' CBP. Set plg @ 3970'. PT to 2500 psig, tstd gd. PU & TIH w/SN & 115 jts 2-3/8'', 4.7#, J-55, EUE tbg. RU & RIH w/swb tls, make 6 runs & swb FL dwn to 1600' FS. TOH w/115 jts tbg. RIH w/3-1/8" csg guns loaded w/Titan EXP-3323-361T, 22.7 gm chrsgs. Perf Birds Nest stage #1 intv fr/1963' - 1964' w/4 JSPF (120 deg phasing, 0.41" EHD, 35.6 pene., 4 holes). POH & LD perf guns. SWI & SDFN Perf Birds nest

10/13/2009 OWU & Bd dwn press. Estab FR of 6 GPM. TIH w/5.5'' pkr, SN & 2-3/8'' EUE tbg. Set pkr @ 2000'. Water flow diverted up tbg ( Isolating Birds nest perfs @ 1963' - 64'). Rltd pkr, TIH testing @ 2700', 3370', 3915' & 3965'. All settings showed flow up tbg @ 6 GPM. Dropd SV & PT tbg to 2000 psig, tstd gd. TOH w/pkr & tbg. TIH w/TS RBP & set plg @ 2137'. Spot 2 sks ( 10' sd ) abv plg. TOH w/tbg. PU & TIH w/pkr & set @ 2015'. PT blank csg to 2500 psig. 15''. Rltd pkr & move to 1920'. PT TCA to 500 psig. RU & RIH w/swb tls, swb FL to SN @ 1920', 3 runs, recd 7 bbls. Wait 1 hr. Make swab run, no fluid entry. Fill tbg w/7 bbls trtd fresh wtr, BD perfs fr/1963' - 64' @ 2800 psig @ 1 BPM. Inject 1 BW. Rig up swb tls, swb FL to SN @ 1920', 3 runs. recd 7 BW. Wait 1 hr. Make swab run, no fluid entry. SWI & SDFN.

EXECUTIVE SUMMARY REPORT

10/1/2009 - 10/27/2009
Report run on 10/27/2009 at 4:48 PM

10/14/2009 RU & RIH w/swb tls. BFL @ 1600' FS. Made 1 run recd 3/4 BW. MIRU Frac Tech ac equip. A. Birds Nest perfs fr/1963' - 64' w/500 gals of 7-1/2% NEFE HCL ac, flshd ac w/10 bbls trtd fresh wtr. BD perfs @ 2800 psig. EIR of 3 BPM @ 900 psig. ISIP 300 psig. Wait 1 hr. RIH w/swb tsl, make 3 swab runs, BFL @ surf, recd 13 BLW, FFL @ SN. Made hourly swb runs w/little or no fld recd. SWI & SDFN.

10/15/2009 RU & RIH w/swb tls. BFL @ 1600' FS. Made 1 run recd 3/4 BW. MI SLU. RIH w/BHP & BHT SL tls. Set tls mid perf level @ 1963'. MIRU Frac Tech. PT surf lines to 5000 psig. Start SRT @ 10:00 a.m. SWI @ 2:50 p.m. SITP 181 psig. Ppd 888 bbls during 26 inj rate steps. SWI & SDFN.

10/16/2009 POH w/PLS BHPB. Rlstd & moved pkr to 1800', set pkr. MIRU ProPetro pmp equip. PT surf lines to 4000 psig. Sqzd Birds Nest perfs fr/1963' - 64' w/150 sks class G cmt w/2% CaCl .25# cello flake @ 15.8 ppg ( 30 bls). Pmp press incr fr/200 - 1400 psig. Displace cmt w/6 bls trtd fresh water @ 2 bpm. Rlstd pkr. TOH & LD pkr. Fill csg w/3 BFW. Stage 2 addl BW over 1 hr. Press fr/1000 - 400 psig. Last stage pressure held @ 600 psig. Est cement top 1750'. SWI & SDFWE.

10/19/2009 PT csg to 1500 psig, 30". Tstd gd. TIH w/4.75'' bit, 4 - 3-1/2'' DC & 73 jts 2.375'', 4.7#, J-55, EUE tbg. Tgd cmt @ 1775'. RU pwr swivel. DO cmt fr/1775' - 1975'. DO first 25' of cmt strgrs. Last 20' strgrs. BO cmt @ 1975' ( sqz Birds Nest perfs fr/1963' - 64' ). PT csg to 1500 psig. Lost 100 psig per min. Retest w/everything isolated. 100 psig per min bleed off. TOH w/4 jts tbg. SWI & SDFN

10/20/2009 TOH w/ tbg, DC, & bit. Fill TCA w/ 3 bls BFW. EIR into Birds nest @ 1963-64' @ 1300 psig & 1.25 bpm. PU & TIH w/ 32A pkr, 57 jt's tbg. Set pkr @ 1800'. PT TCA to 1000 psig. Tstd GD 30 mins. EIR 1.25 bpm & 1300 psig. into perfs @ 1963-64'. MIRU ProPetro pmp equip. PT surf lines to 4000 psig. Sqzd Birds Nest perfs fr/1963' - 64' w/100 sks class G cmt w/2% CaCl @ 15.8 ppg ( 20 bls). Pmp press incr fr/200 - 2000 psig. Displace cmt w/3 of 6 bls BFW @ 2 bpm. Locked up @ 3000 psig. Rlstd pkr. Pull 30' tbg. Rvrs circ 30 bls to cln up cmnt. TOH w/ 10 jt's tbg Reset pkr @ 1500'. Fill tbg w/1 BFW. Pressure up to 3000 psig. SWI. Est cement top 1775'. SWI & SDFWE.

10/21/2009 Bd dwn tbg & rlstd pkr. TOH w/tbg & LD pkr. TIH w/4.75'' bit, 4 - 3-1/2'' DC & 73 jts 2.375'' tbg. Tgd cmt @ 1760'. RU pwr swivel. DO cmt fr/1760' - 1975'. BOC @ 1975' ( sqzd Birds Nest perfs fr/1963' - 64' ). PT csg to 1700 psig. Tstd gd 30". TIH, tgd 10' sd @ 2027'. CO sd to TS RBP @ 2137'. TOH w/tbg, LD DC & bit. TIH w/retrv head & tbg. Latch onto & rlstd TS RBP @ 2137'. TOH w/tbg & LD plg. TIH w/4.75'' bit, BRS, SN & 125 jts tbg. Tg CBP @ 3970'. RU pwr swivel. SWI & SDFN.

10/22/2009 Estb circ & DO CBP @ 3970'. Contd TIH w/tbg. Tgd 1,525' fill @ 4100'. CO fr/ 4100' - 5300'. PBTd @ 5625'. Fill hard & unable to CO further. Circ cln & TOH w/160 jts tbg. LD SN, BRS & bit. SWI & SDFN.

10/23/2009 MIRU Perf O log WLU. RIH w/GR/CCL/CBL tls. Log well fr/5170' - 200' FS. Log indic TOC @ 1000' FS. LD logging tls. PU & RIH w/Nickel plated BHA as follows on WL: WL re-enrty, Glass disc sub, XN nip ( 1.50' I.D.), 8'-2.375'' sub & 5.5'' Arrow set Pkr w/ X nip (1.87'' I.D.), Set pkr @ 3950'. PT TCA to 1000 psig, 30". Tstd gd. RDMO WLU. TIH w/118 jts 2.375'' wrk strg. SWI & SDFWE.

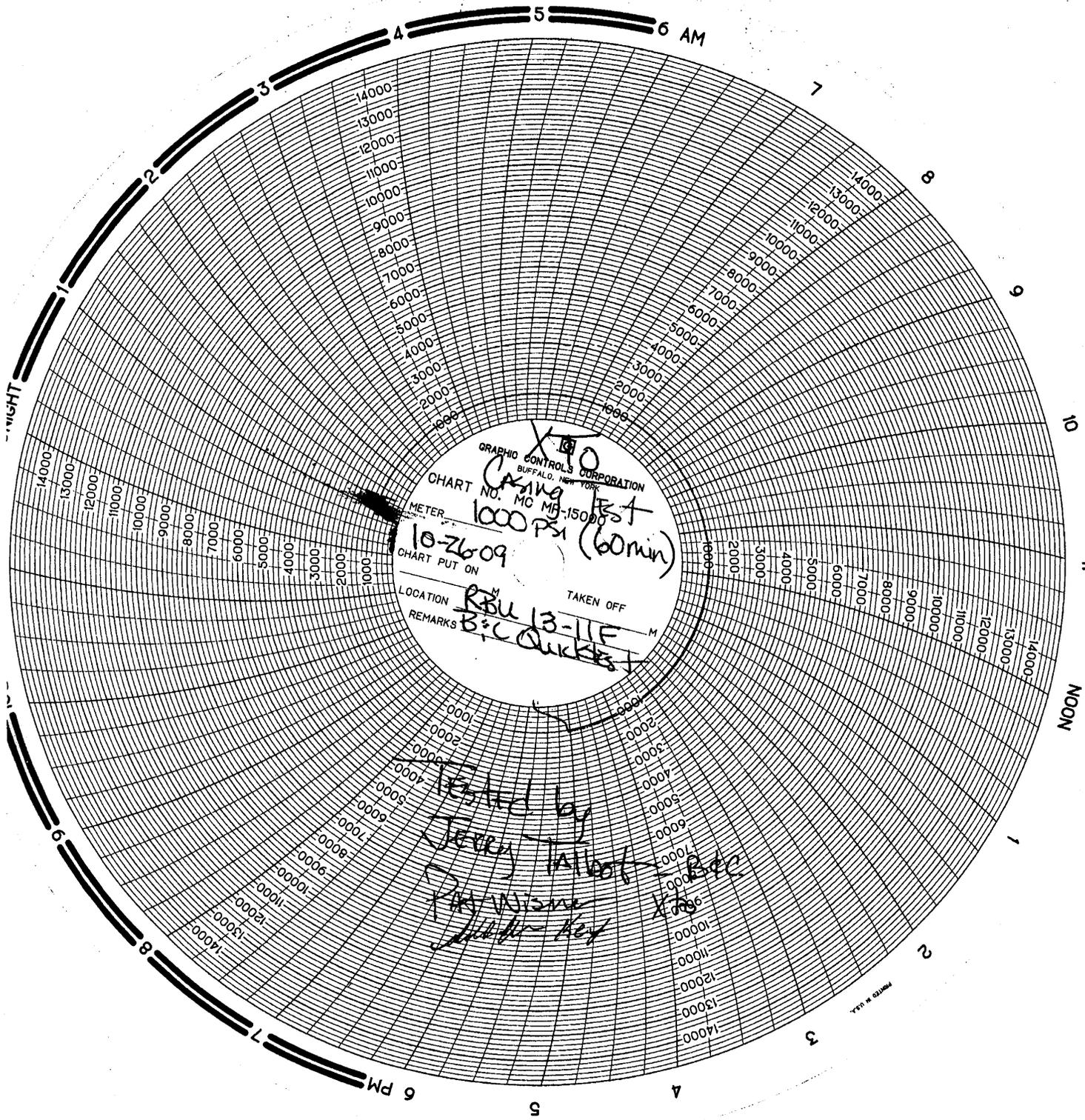
## EXECUTIVE SUMMARY REPORT

10/1/2009 - 10/27/2009  
Report run on 10/27/2009 at 4:48 PM

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10/26/2009

TOH & LD 174 jts of 2-3/8" wrk strg. TIH w/prod inj tbg strg as follows:  
ALL NICKEL PLATED & NEW. On/Off tool, 2'- 2-3/8" N-80 sub, X profile  
nipple (1.5"), 120 jt;s 2.375" 4.7#, N-80, Internal coated tbg ( 1.75" ID)  
2 - 2-3/8" 4.7#, N-80 subs ( 6' & 4") & plated tbg hgr. Pump 62 bbls trtd  
FW dwn TCA. Mix 1 bbl pkr fld to 55 bbls trtd FW & pmp dwn TCA. Latch onto  
pkr @ 3953'. Set tbg in 5k compression. ND BOP. NU WH. PT WH to 2000 psig  
30". PT tbg to 2000 psig, 30". Chart PT TCA to 1000 psig. 1 hour. All tstd  
gd. Top of pkr @ 3953', pkr elements @ 3955'. WL re-entry @ 3968'. RDMO Key  
Energy. SWI, WO approval to inject fr/ EPA.



# Mechanical Integrity Test

## Casing or Annulus Pressure Mechanical Integrity Test

U.S. Environmental Protection Agency Region 8  
Underground Injection Control Program  
1695 Wynkoop Street, Denver, CO 80202-1129

EPA Witness: None Date: 10 / 26 / 2009  
 Test conducted by: Jerry Talbot B&C Testing  
 Others present: Pat Wisener XTO Energy

Well Name: <u>RBU 13-11F</u>	Type: <u>SWD</u> Status: <u>AC TA UC</u>
Field: _____	
Location: <u>SW/SW</u> Sec: <u>11</u> T <u>10</u> S R <u>20</u> E County: <u>Uintah</u> State: _____	
Operator: _____	
Last MIT: <u>7 / 2 / 2008</u> Maximum Allowable Pressure: <u>1135</u> PSIG	

Is this a regularly scheduled test? [ ] Yes [X] No  
 Initial test for permit? [ ] Yes [X] No  
 Test after well rework? [X] Yes [ ] No  
 Well injecting during test? [ ] Yes [X] No If Yes, rate: \_\_\_\_\_ bpd

Pre-test casing/tubing annulus pressure: 1000 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	1000 psig	psig	psig
End of test pressure	1000 psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	1000 psig	psig	psig
5 minutes	1000 psig	psig	psig
10 minutes	1000 psig	psig	psig
15 minutes	1000 psig	psig	psig
20 minutes	1000 psig	psig	psig
25 minutes	1000 psig	psig	psig
30 minutes	1000 psig	psig	psig
minutes	psig	psig	psig
minutes	psig	psig	psig
<b>RESULT</b>	[X] Pass [ ] Fail	[ ] Pass [ ] Fail	[ ] Pass [ ] Fail

Does the annulus pressure build back up after the test ? [ ] Yes [X] No

**RECEIVED** October 29, 2009

# MECHANICAL INTEGRITY PRESSURE TEST

Additional comments for mechanical integrity pressure test, such as volume of fluid added to annulus and bled back at end of test, reason for failing test (casing head leak, tubing leak, other), etc.:

Pressured tubing /casing annulus to 1000 PSIG for 60 minute MIT test. Test held without pressure loss. Bled tubing / casing annulus pressure to 0 PSIG, flowed back 17 gal water.

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Signature of Witness: Pat Wisem XTO

## OFFICE USE ONLY - COMPLIANCE FOLLOWUP

Staff \_\_\_\_\_ Date: \_\_\_\_/\_\_\_\_/\_\_\_\_

Do you agree with the reported test results?  YES  NO

If not, why?

Possible violation identified?  YES  NO

If YES, what

If YES - followup initiated?  YES

NO - why not?

Data Entry

Compliance Staff

2<sup>nd</sup> Data Entry

Hardcopy Filing

**RBU 13-11F SWD  
T10S-R20E-Sec 11  
API # 43-047-30973**

**Stimulation Fluid Detail  
“Brown zone” 4028’-4100’  
One Stage Stimulation  
10/8/2009**

- a. Total liquid volume used:**
  - 1,500 Gal 15% HCL
  - 12,717 Gal fresh water w/ “Clay Treat”
  - 65,377 Gal Turquoise 20# gelled water.
  
- b. Chemical trade names & volumes:**
  - BJ Services “Clay Treat”- Quaternary Ammonium Chloride 13 Gal
  - Frac Tech Services “Turquoise” 20# cross link gel system:
    - HVG 01 Guar Gum gel 415 gal
    - BXL 02 Borate X-link 123 gal
    - LTB 01 Ammonium Persulphate breaker 185#
    - APB 01 Ammonium Persulphate breaker 27#
  
- c. Frac Fluid flow back:**
  - 42,000 gal (approx) flowed back during post frac clean out operations
  
- d. Frac Fluid flow back was trucked to RNI Seep Ridge road disposal evaporation pit**

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9	
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>  Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> U-7206	
		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>	
<b>1. TYPE OF WELL</b> Water Disposal Well		<b>7. UNIT or CA AGREEMENT NAME:</b> RIVER BEND	
<b>2. NAME OF OPERATOR:</b> XTO ENERGY INC		<b>8. WELL NAME and NUMBER:</b> RBU 13-11F	
<b>3. ADDRESS OF OPERATOR:</b> PO Box 6501, Englewood, CO, 80155		<b>9. API NUMBER:</b> 43047309730000	
<b>PHONE NUMBER:</b> 303 397-3727 Ext		<b>9. FIELD and POOL or WILDCAT:</b> NATURAL BUTTES	
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0096 FSL 0315 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: SWSW Section: 11 Township: 10.0S Range: 20.0E Meridian: S		<b>COUNTY:</b> UINTAH	
		<b>STATE:</b> UTAH	
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:  <input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 6/27/2013  <input type="checkbox"/> SPUD REPORT Date of Spud:  <input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> ACIDIZE  <input type="checkbox"/> CHANGE TO PREVIOUS PLANS  <input type="checkbox"/> CHANGE WELL STATUS  <input type="checkbox"/> DEEPEN  <input type="checkbox"/> OPERATOR CHANGE  <input type="checkbox"/> PRODUCTION START OR RESUME  <input type="checkbox"/> REPERFORATE CURRENT FORMATION  <input type="checkbox"/> TUBING REPAIR  <input type="checkbox"/> WATER SHUTOFF  <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING  <input type="checkbox"/> CHANGE TUBING  <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS  <input type="checkbox"/> FRACTURE TREAT  <input type="checkbox"/> PLUG AND ABANDON  <input type="checkbox"/> RECLAMATION OF WELL SITE  <input type="checkbox"/> SIDETRACK TO REPAIR WELL  <input type="checkbox"/> VENT OR FLARE  <input type="checkbox"/> SI TA STATUS EXTENSION  <input checked="" type="checkbox"/> OTHER	<input type="checkbox"/> CASING REPAIR  <input type="checkbox"/> CHANGE WELL NAME  <input type="checkbox"/> CONVERT WELL TYPE  <input type="checkbox"/> NEW CONSTRUCTION  <input type="checkbox"/> PLUG BACK  <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION  <input type="checkbox"/> TEMPORARY ABANDON  <input type="checkbox"/> WATER DISPOSAL  <input type="checkbox"/> APD EXTENSION  OTHER: <input type="text" value="MIT"/>
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.			
<p>XTO Energy Inc. conducted a MIT on this well 6/27/2013 per the following: MIRU B &amp; C Quik Test. NU to cag. PT line to 1,200 psig, gd tst. Pmp 3 gal TFW w/adds. PT csg to 700 psig (30") gd tst. Bleed off pressure. ND fr csg. ITP 1114 psig. SICP 0 psig. RDMO B &amp; C Quik Test. GR perms fr/4,028'-4,100. SN @ 3,967', EOT @ 3,968', CIBP @ 5,625'. MIT Chart is attached.</p>			
<p><b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 22, 2013</b></p>			
<b>NAME (PLEASE PRINT)</b> Barbara Nicol	<b>PHONE NUMBER</b> 303-397-3736	<b>TITLE</b> Regulatory Compliance Tech	
<b>SIGNATURE</b> N/A		<b>DATE</b> 6/28/2013	



STATE OF UTAH  
 Division of Oil, Gas and Mining  
 355 West North Temple  
 3 Triad Center, Suite 350  
 Salt Lake City, Utah 84180-1203

**INJECTION WELL - PRESSURE TEST**

Test Date: <u>6/27/13</u>	Well Owner/Operator: <u>XTO</u>
Disposal Well: <u>X</u>	Enhanced Recovery Well: _____ Other: _____
API No.: 43- <u>047-30973</u>	Well Name/Number: <u>RBU 13-11F</u>
Section: <u>11</u>	Township: <u>10S</u> Range: <u>20E</u>

**Initial Conditions:**

Tubing - Rate: 150 BPD Pressure: 1114 psi  
 Casing/Tubing Annulus - Pressure: 0 psi

**Conditions During Test:**

Time (Minutes)	Annulus Pressure	Tubing Pressure
0	<u>700</u>	<u>1114</u>
5	<u>700</u>	<u>1114</u>
10	<u>700</u>	<u>1114</u>
15	<u>700</u>	<u>1114</u>
20	<u>700</u>	<u>1114</u>
25	<u>700</u>	<u>1114</u>
30	<u>700</u>	<u>1114</u>

Results: Pass/Fail

**Conditions After Test:**

Tubing Pressure: 1114 psi  
 Casing/Tubing Annulus Pressure: 0 psi

**REMARKS:**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

[Signature]  
 Operator Representative

[Signature]  
 DOGM Witness