



December 2, 2003

State of Utah  
Division of Oil, Gas & Mining  
Attn: Diana Whitney  
1594 West North Temple - Suite 1210  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

RE: Applications for Permit to Drill: Federal 10-1-9-17, Blackjack Federal 9-9-9-17, and Blackjack Federal 16-9-9-17..

Dear Diana:

Enclosed find APD's on the above referenced wells. The 10-1-9-17 is an Exception Location. I have notified Patsy Barreau in our Land Department. She will send you the Exception Location letter. If you have any questions, feel free to give either Brad or myself a call.

Sincerely,

  
Mandie Crozier  
Regulatory Specialist

mc  
enclosures

RECEIVED

DEC 03 2003

DIV. OF OIL, GAS & MINING

001

Form 3160-3  
(September 2001)

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. <b>UTU-74806</b>	
6. If Indian, Allottee or Tribe Name <b>N/A</b>	
7. If Unit or CA Agreement, Name and No. <b>Blackjack</b>	
8. Lease Name and Well No. <b>Blackjack Federal 9-9-17</b>	
9. API Well No. <b>43-013-32517</b>	
1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	10. Field and Pool, or Exploratory <b>Monument Butte</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone	11. Sec., T., R., M., or Blk. and Survey or Area <b>NE/SE Sec. 9, T9S R17E</b>
2. Name of Operator <b>Inland Production Company</b>	12. County or Parish <b>Duchesne</b>
3a. Address <b>Route #3 Box 3630, Myton UT 84052</b>	13. State <b>UT</b>
3b. Phone No. (include area code) <b>(435) 646-3721</b>	14. Distance in miles and direction from nearest town or post office* <b>Approximatley 14.4 miles southeast of Myton, Utah</b>
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At surface <b>NE/SE 2035' FSL 688' FEL 4432-894 Y 40.04389</b> At proposed prod. zone <b>584972 X -110.00394</b>	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 632' f/lease, 632 f/unit <b>Approx. 1354'</b>
16. No. of Acres in lease <b>119.26</b>	17. Spacing Unit dedicated to this well <b>40 Acres</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>Approx. 1354'</b>	19. Proposed Depth <b>6500'</b>
20. BLM/BIA Bond No. on file <b>#4488944</b>	21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5196' GR</b>
22. Approximate date work will start* <b>3rd Quarter 2004</b>	23. Estimated duration <b>Approximately seven (7) days from spud to rig release.</b>

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, shall be attached to this form:

- 1. Well plat certified by a registered surveyor.
- 2. A Drilling Plan.
- 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- 5. Operator certification.
- 6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature 	Name (Printed/Typed) <b>Mandie Crozier</b>	Date <b>12/2/03</b>
Title <b>Regulatory Specialist</b>		
Approved by (Signature) 	Name (Printed/Typed) <b>BRADLEY G. HILL</b>	Date <b>12-04-03</b>
Title <b>ENVIRONMENTAL SCIENTIST III</b>		

**Federal Approval of this Action is Necessary**

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

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.

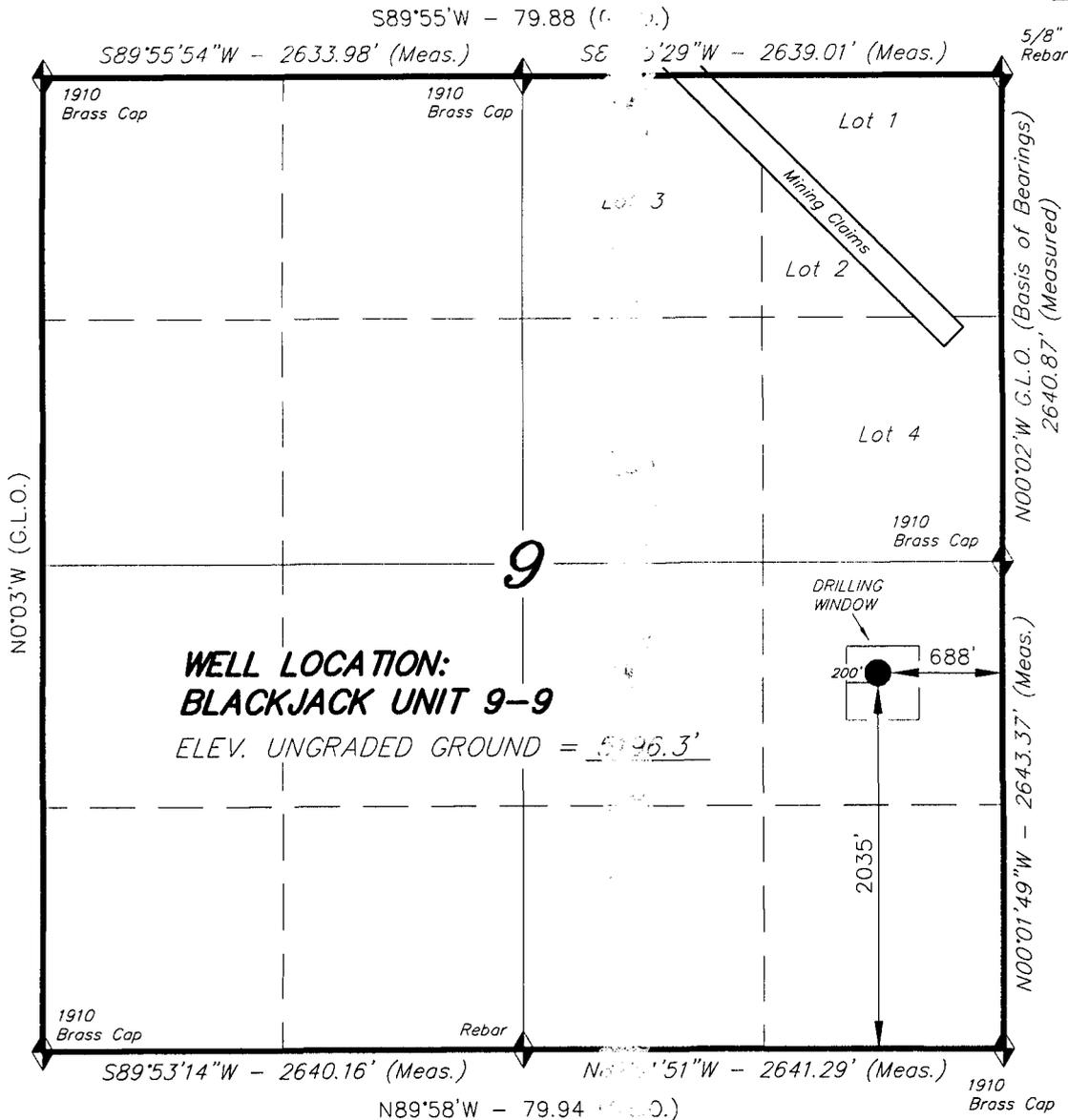
\*(Instructions on reverse)

RECEIVED  
DEC 03 2003  
DIV. OF OIL, GAS & MINING

# T9S, R17E, S. B.&M.

## INLAND PRODUCTION COMPANY

WELL LOCATION, BLACKJACK UNIT 9-9,  
 LOCATED AS SHOWN IN THE NE 1/4 SE  
 1/4 OF SECTION 9, T9S, R17E, S.L.B.&M.  
 DUCHESNE COUNTY, UTAH.



**WELL LOCATION:  
 BLACKJACK UNIT 9-9**

ELEV. UNGRADED GROUND = 5196.3'



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
 PREPARED FROM FIELD NOTES OF LAND SURVEYS  
 MADE BY ME OR UNDER MY SUPERVISION AND THAT  
 THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
 MY KNOWLEDGE AND BELIEF.

REGISTERED LAND SURVEYOR  
 No. 189377  
 STACY W.  
 REGISTERED LAND SURVEYOR  
 REGISTRATION No. 189377  
 STATE OF UTAH

**TRI STATE LAND SURVEYING & CONSULTING**  
 180 NORTH VERNAL AVE. - VERNAL, UTAH 84078  
 (435) 781-2501

◆ = SECTION CORNERS LOCATED  
 BASIS OF ELEV; U.S.G.S. 7-1/2 min QUAD (MYTON SE)

SCALE: 1" = 1000'	SURVEYED BY: K.G.S.
DATE: 9-10-03	DRAWN BY: F.T.M.
NOTES:	FILE #

**INLAND PRODUCTION COMPANY  
BLACKJACK FEDERAL #9-9-9-17  
NE/SE SECTION 9, T9S, R17E  
DUCHESNE COUNTY, UTAH**

**ONSHORE ORDER NO. 1**

**DRILLING PROGRAM**

**1. GEOLOGIC SURFACE FORMATION:**

Uinta formation of Upper Eocene Age

**2. ESTIMATED TOPS OF IMPORTANT GEOLOGIC MARKERS:**

Uinta	0' – 1640'
Green River	1640'
Wasatch	5900'

**3. ESTIMATED DEPTHS OF ANTICIPATED WATER, OIL, GAS OR MINERALS:**

Green River Formation 1640' – 6500' - Oil

**4. PROPOSED CASING PROGRAM**

Please refer to the Monument Butte Field Standard Operation Procedure (SOP).

**5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:**

Please refer to the Monument Butte Field SOP. See Exhibit "C".

**6. TYPE AND CHARACTERISTICS OF THE PROPOSED CIRCULATION MUDS:**

Please refer to the Monument Butte Field SOP.

**7. AUXILIARY SAFETY EQUIPMENT TO BE USED:**

Please refer to the Monument Butte Field SOP.

**8. TESTING, LOGGING AND CORING PROGRAMS:**

Please refer to the Monument Butte Field SOP.

**9. ANTICIPATED ABNORMAL PRESSURE OR TEMPERATURE:**

The anticipated maximum bottom hole pressure is 2000 psi. It is not anticipated that abnormal temperatures will be encountered.

**10. ANTICIPATED STARTING DATE AND DURATION OF THE OPERATIONS:**

Please refer to the Monument Butte Field SOP.

**INLAND PRODUCTION COMPANY  
BLACKJACK FEDERAL #9-9-9-17  
NE/SE SECTION 9, T9S, R17E  
DUCHESNE COUNTY, UTAH**

**ONSHORE ORDER NO. 1**

**MULTI-POINT SURFACE USE & OPERATIONS PLAN**

**1. EXISTING ROADS**

See attached Topographic Map "A"

To reach Inland Production Company well location site Blackjack Federal #9-9-9-17 located in the NE 1/4 SE 1/4 Section 9, T9S, R17E, Duchesne County, Utah:

Proceed southwesterly out of Myton, Utah along Highway 40 - 1.6 miles  $\pm$  to the junction of this highway and UT State Hwy 53; proceed southeasterly along Hwy 53 - 11.7 miles  $\pm$  to its junction with an existing dirt road to the southwest; proceed southwesterly - 0.5 miles  $\pm$  to its junction with an existing road to the southeast; proceed southeasterly - 0.6 miles  $\pm$  to its junction with the beginning of the proposed access road; proceed easterly along the proposed access road 865'  $\pm$  to the proposed well location.

**2. PLANNED ACCESS ROAD**

See Topographic Map "B" for the location of the proposed access road.

**3. LOCATION OF EXISTING WELLS**

Refer to Exhibit "B".

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES**

Please refer to the Monument Butte Field Standard Operating Procedure (SOP).

**5. LOCATION AND TYPE OF WATER SUPPLY**

Please refer to the Monument Butte Field SOP. See Exhibit "A".

**6. SOURCE OF CONSTRUCTION MATERIALS**

Please refer to the Monument Butte Field SOP.

**7. METHODS FOR HANDLING WASTE DISPOSAL**

Please refer to the Monument Butte Field SOP.

**8. ANCILLARY FACILITIES**

Please refer to the Monument Butte Field SOP.

9. **WELL SITE LAYOUT**

See attached Location Layout Diagram.

10. **PLANS FOR RESTORATION OF SURFACE**

Please refer to the Monument Butte Field SOP.

11. **SURFACE OWNERSHIP** - Bureau Of Land Management

12. **OTHER ADDITIONAL INFORMATION**

The Archaeological Resource Survey and Paleontological Resource Survey for this area are attached. MOAC Report #03-62, 6/20/03. Paleontological Resource Survey prepared by, Wade E. Miller, 5/8/03. See attached report cover pages, Exhibit "D".

For the Federal #9-9-9-17 Inland Production Company requests a 390' ROW in Least U-61052 to allow for construction of the proposed access road as well as the gas and water lines. **Refer to Topographic Map "B" and Topographic Map "C"**. For a ROW plan of development, please refer to the Monument Butte Field SOP.

Inland Production Company requests a 60' ROW for the Blackjack Federal #9-9-9-17 to allow for construction of a 6" gas gathering line, and a 3" poly fuel gas line. Both lines will tie in to the existing pipeline infrastructure. **Refer to Topographic Map "C."** For a ROW plan of development, please refer to the Monument Butte Field SOP.

Inland Production Company also requests a 60' ROW be granted for the Blackjack Federal #9-9-9-17 to allow for construction of a 3" steel water injection line and a 3" poly water return line. **Refer to Topographic Map "C."** For a ROW plan of development, please refer to the Monument Butte Field SOP.

**Water Disposal**

Please refer to the Monument Butte Field SOP.

**Reserve Pit Liner**

Please refer to the Monument Butte Field SOP.

**Location and Reserve Pit Reclamation**

Please refer to the Monument Butte Field SOP.

The following seed mixture will be used on the topsoil stockpile, the recontoured surface of the reserve pit, and for final reclamation: (All poundages are in pure live seed)

Gardner Saltbush	<i>Artiplex gardneri</i>	4 lbs/acre
Green Molly Summer Cyress	<i>Kochia American</i>	4 lbs/acre
Galleta Grass	<i>Artiplex canescens</i>	4 lbs/acre

**Details of the On-Site Inspection**

The proposed Blackjack Federal #9-9-9-17 was on-sited on 4/9/03. The following were present; Jon Holst (permitting agent), Brad Mecham (Inland Production), Byron Tolman (Bureau of Land Management), and a SWCA representative. Weather conditions were clear.

13. LESSEE'S OR OPERATORS REPRESENTATIVE AND CERTIFICATION

Representative

Name: Brad Mecham  
Address: Route #3 Box 3630  
Myton, UT 84052  
Telephone: (435) 646-3721

Certification

Please be advised that INLAND PRODUCTION COMPANY is considered to be the operator of well #9-9-9-17 NE/SE Section 9, Township 9S, Range 17E: Lease UTU-74806 Duchesne County, Utah: and is responsible under the terms and conditions of the lease for the operations conducted upon the leased lands. Bond coverage is provided by Hartford Accident #4488944.

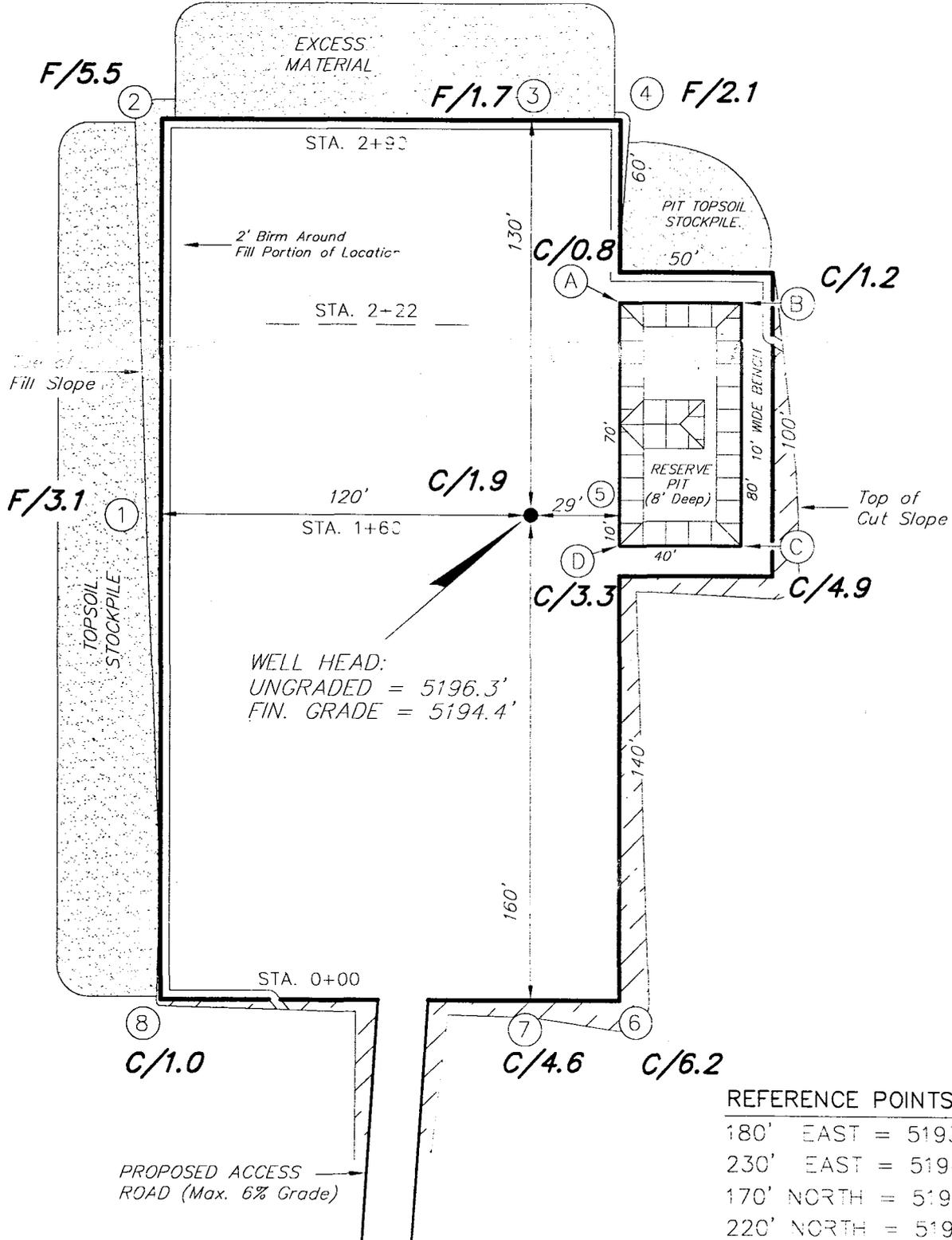
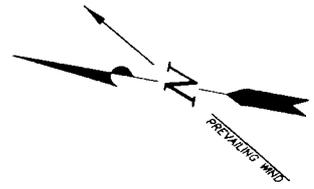
I hereby certify that the proposed drillsite and access route have been inspected, and I am familiar with the conditions which currently exist; that the statements made in this plan are true and correct to the best of my knowledge; and that the work associated with the operations proposed here will be performed by Inland Production Company and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

12/2/03  
Date

  
Mandie Crozier  
Regulatory Specialist

# INLAND PRODUCTION COMPANY

BLACKJACK UNIT 9-9  
SECTION 9, T9S, R17E, S.L.B.&M.



SURVEYED BY: K.G.S.

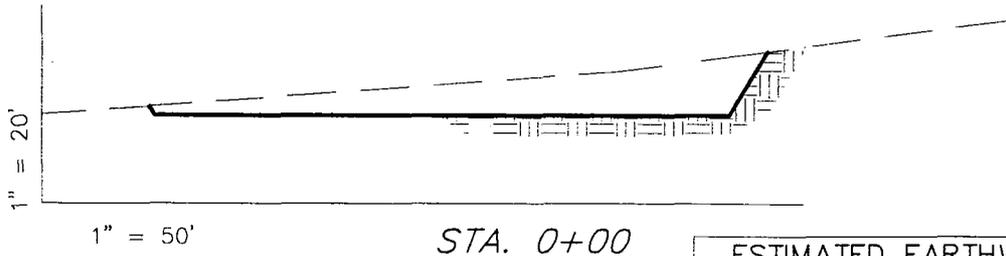
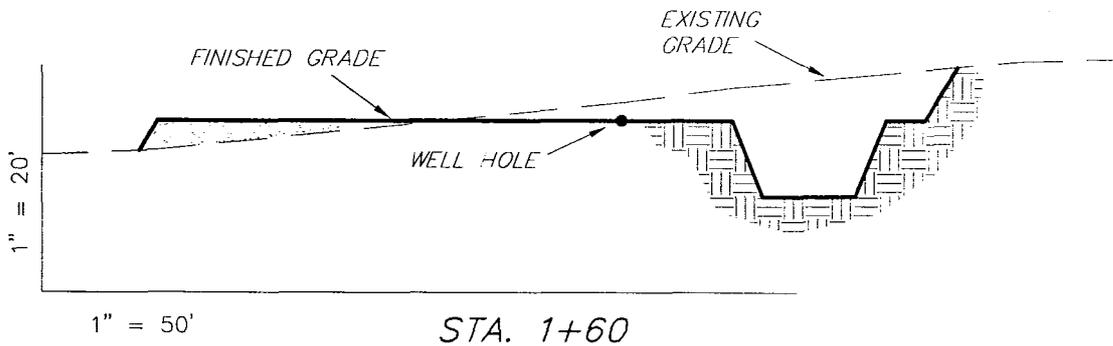
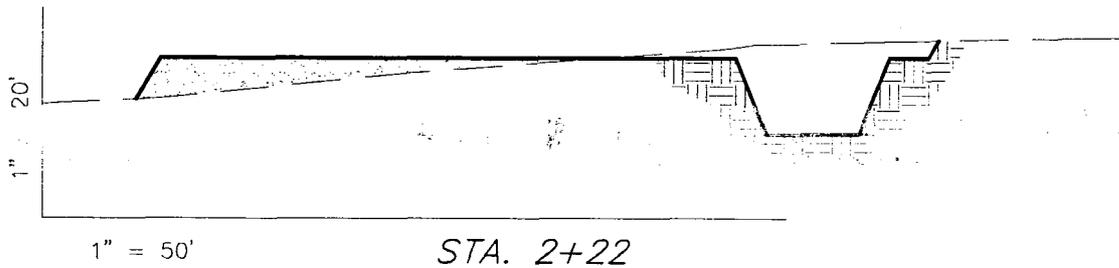
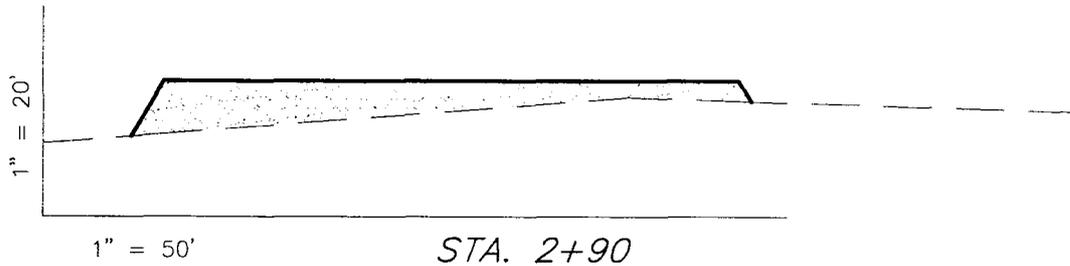
SCALE: 1" = 50'

DRAWN BY: F.T.M.

DATE: 3-10-03

Tri State  
Land Surveying, Inc.  
180 NORTH VERNAL AVE. VERNAL, UTAH 84078  
(435) 781-2501

**INLAND PRODUCTION COMPANY**  
**CROSS SECTIONS**  
**BLACKJACK UNIT 9-9**



NOTE:  
 UNLESS OTHERWISE NOTED  
 ALL CUT/FILL SLOPES ARE  
 AT 1.5:1

**ESTIMATED EARTHWORK QUANTITIES**  
 (No Shrink or swell adjustments have been used)  
 (Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	1,970	1,970	Topsoil is not included in Pad Cut	0
PIT	640	0		640
<b>TOTALS</b>	<b>2,610</b>	<b>1,970</b>	<b>890</b>	<b>640</b>

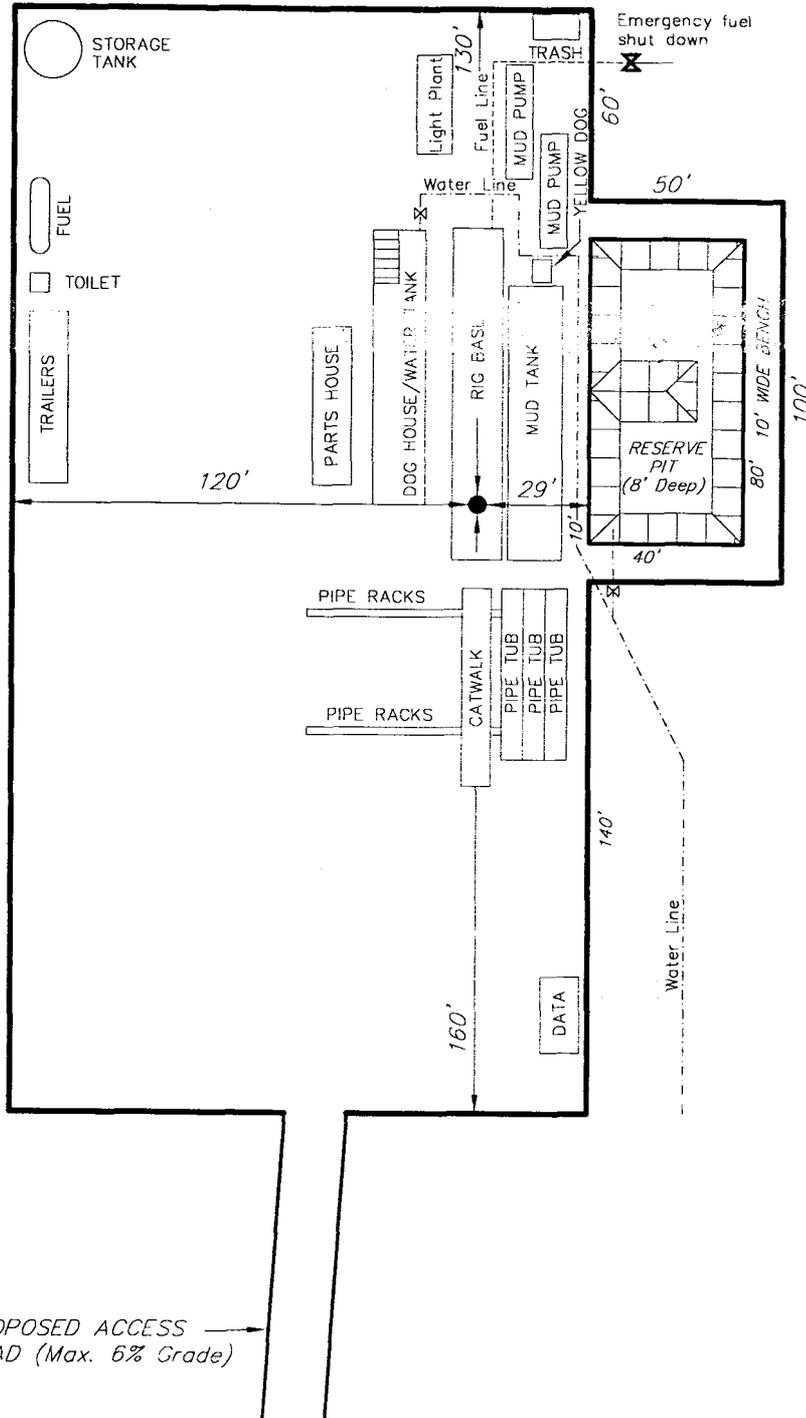
SURVEYED BY: K.G.S.                      SCALE: 1" = 50'  
 DRAWN BY: F.T.M.                      DATE: 9-10-03

**Tri State** (435) 781-2501  
**Land Surveying, Inc.**  
 180 NORTH VERNAL AVE. VERNAL, UTAH 84078

# INLAND PRODUCTION COMPANY

## TYPICAL RIG LAYOUT

### BLACKJACK UNIT 9-9



SURVEYED BY: K.G.S.

SCALE: 1" = 50'

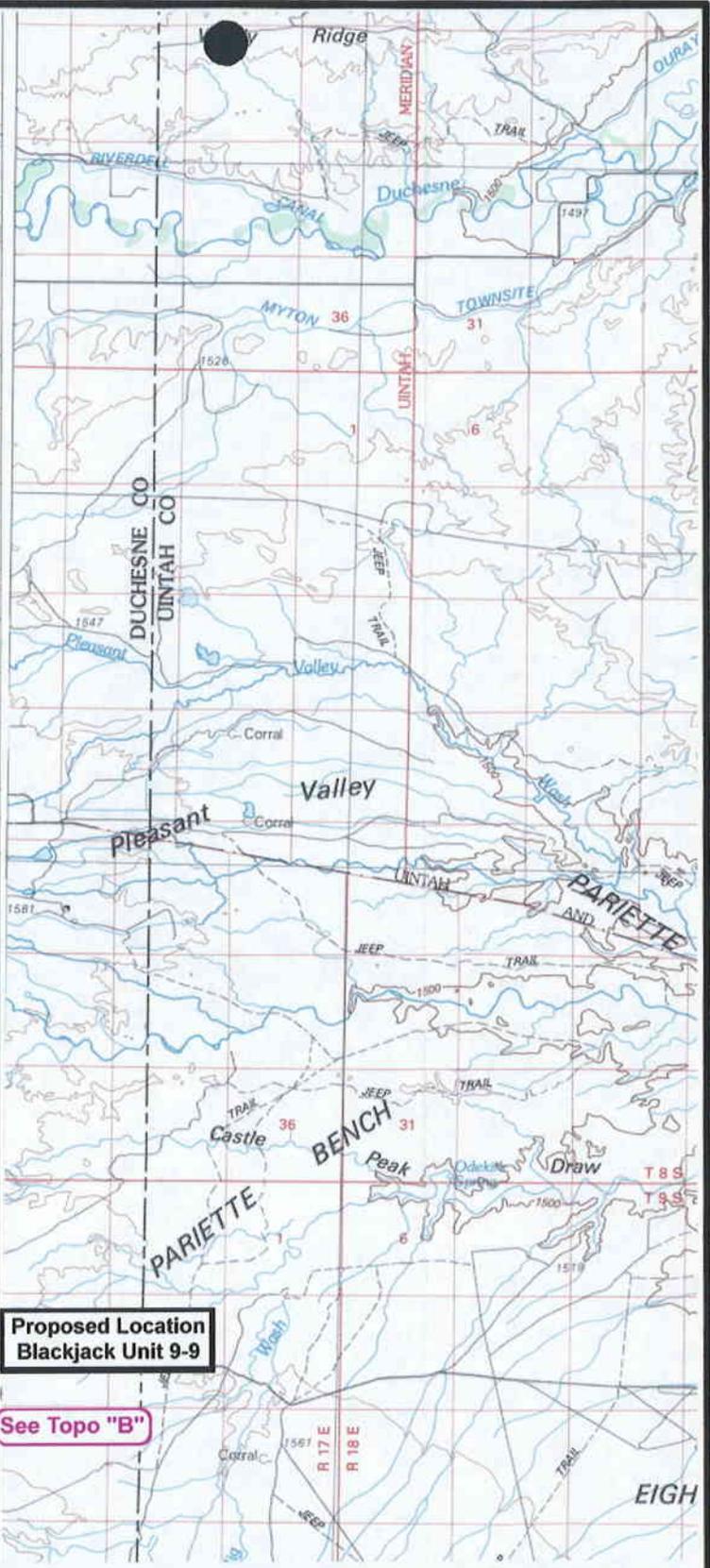
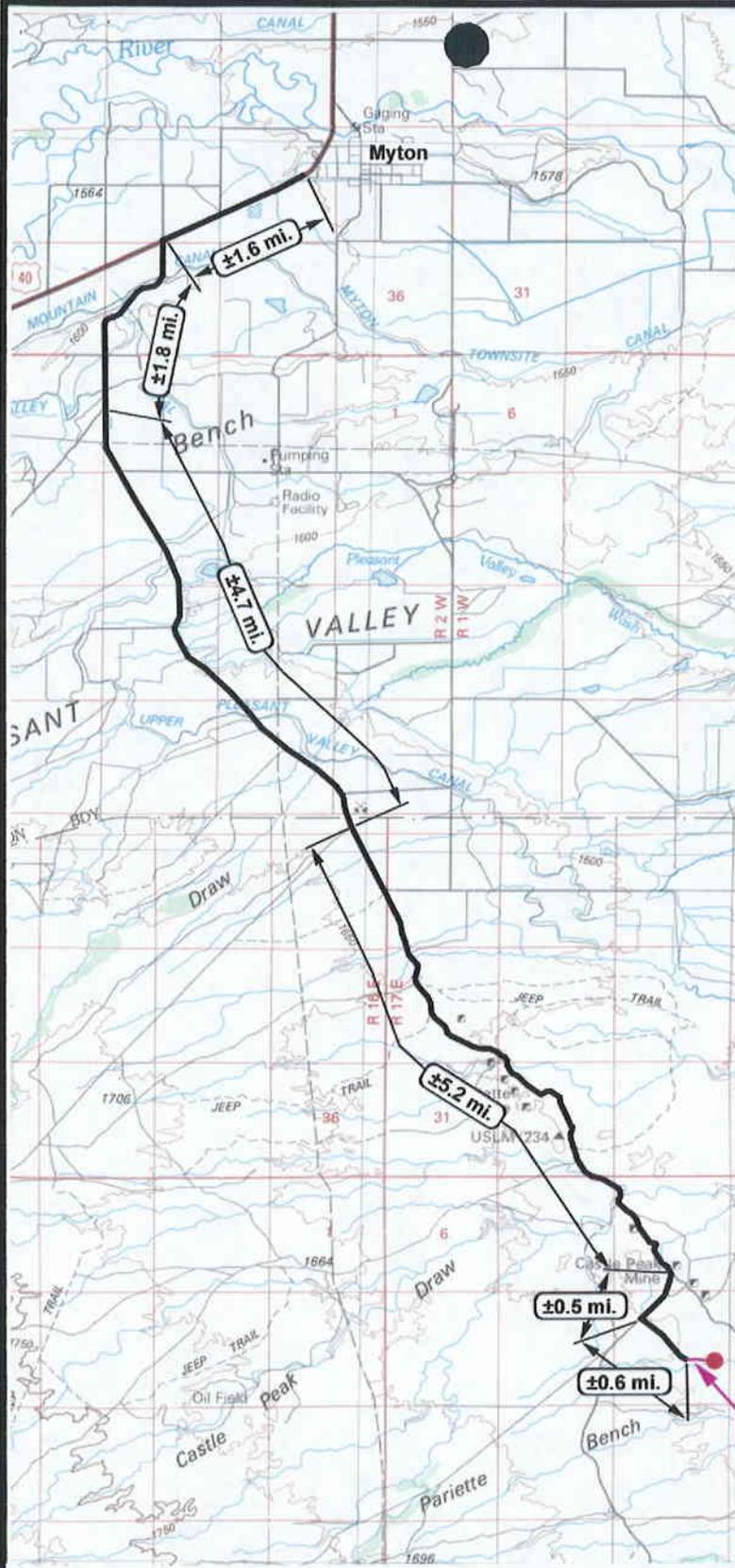
DRAWN BY: F.T.M.

DATE: 9-10-03

**Tri State**  
Land Surveying, Inc.

(435) 781-2501

180 NORTH VERNAL AVE. VERNAL, UTAH 84078



**Blackjack Unit 9-9**  
**SEC. 9, T9S, R17E, S.L.B.&M.**



**Tri-State**  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

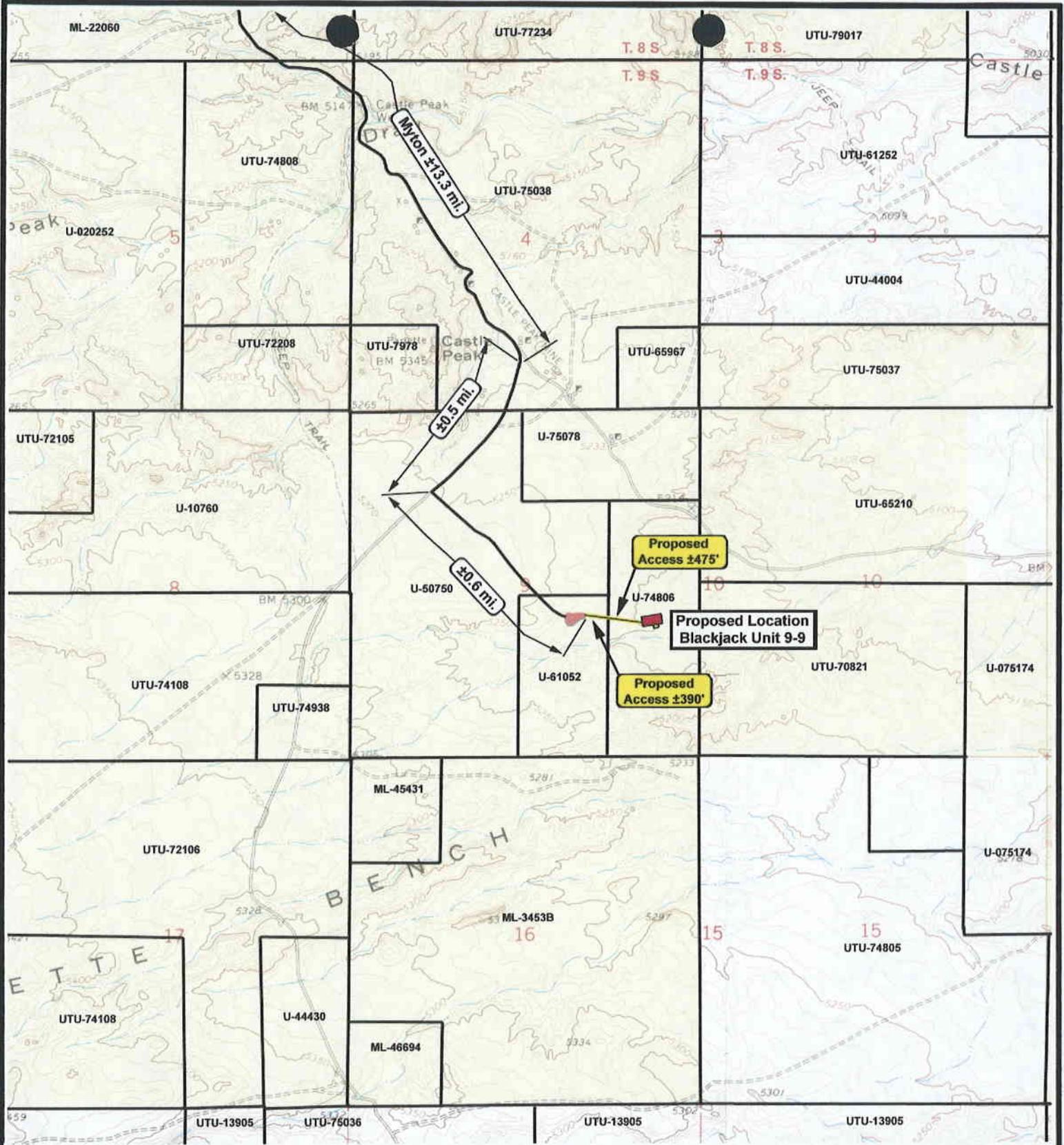
SCALE: 1 = 100,000  
 DRAWN BY: R.A.B.  
 DATE: 11-10-2003

**Legend**

Existing Road  
 Proposed Access

TOPOGRAPHIC MAP

**"A"**



**Blackjack Unit 9-9  
SEC. 9, T9S, R17E, S.L.B.&M.**



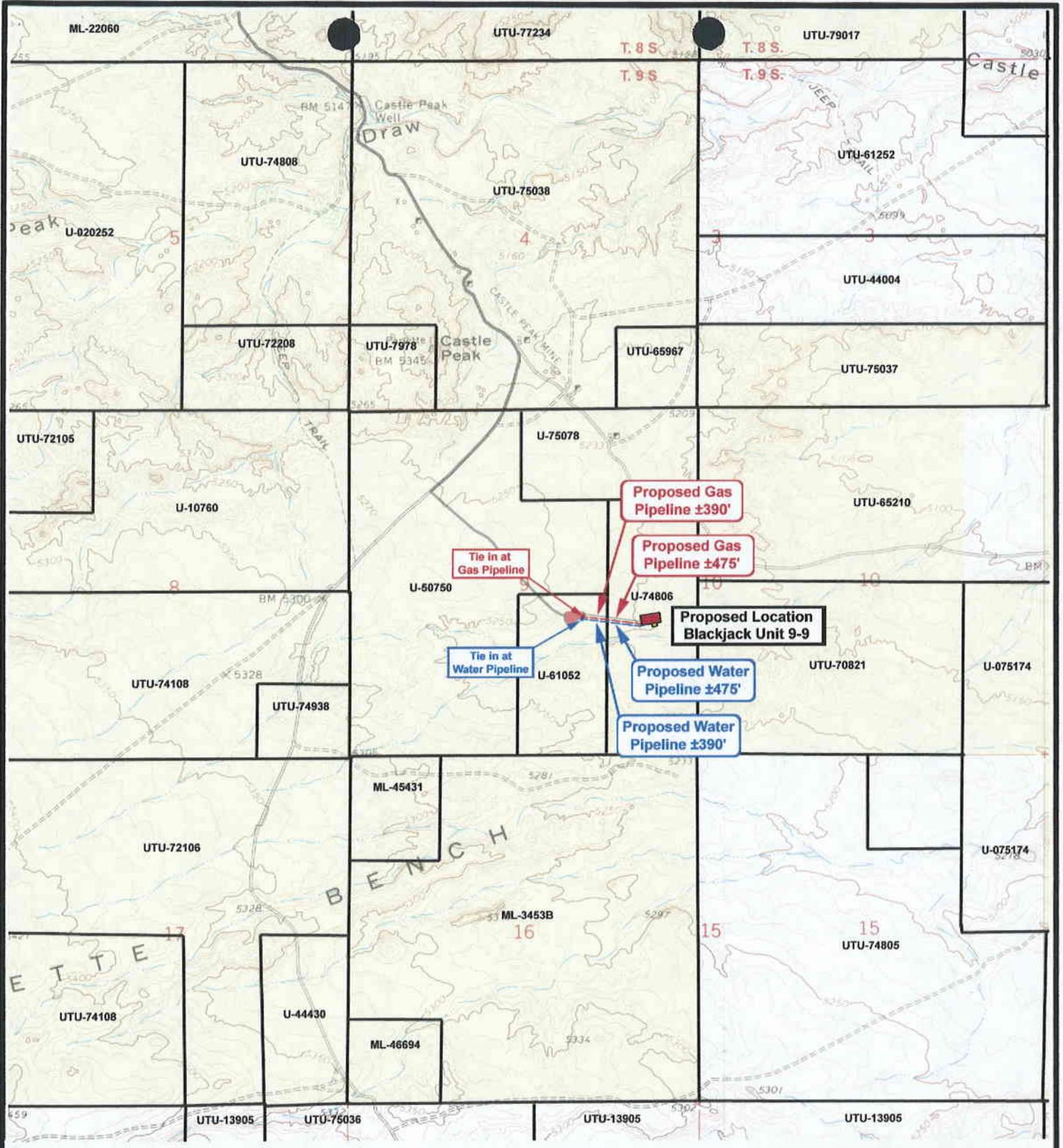
**Tri-State  
Land Surveying Inc.**  
(435) 781-2501  
180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
DRAWN BY: R.A.B.  
DATE: 11-10-2002

- Legend**
- Existing Road
  - Proposed Access

TOPOGRAPHIC MAP

**"B"**



**Blackjack Unit 9-9**  
**SEC. 9, T9S, R17E, S.L.B.&M.**

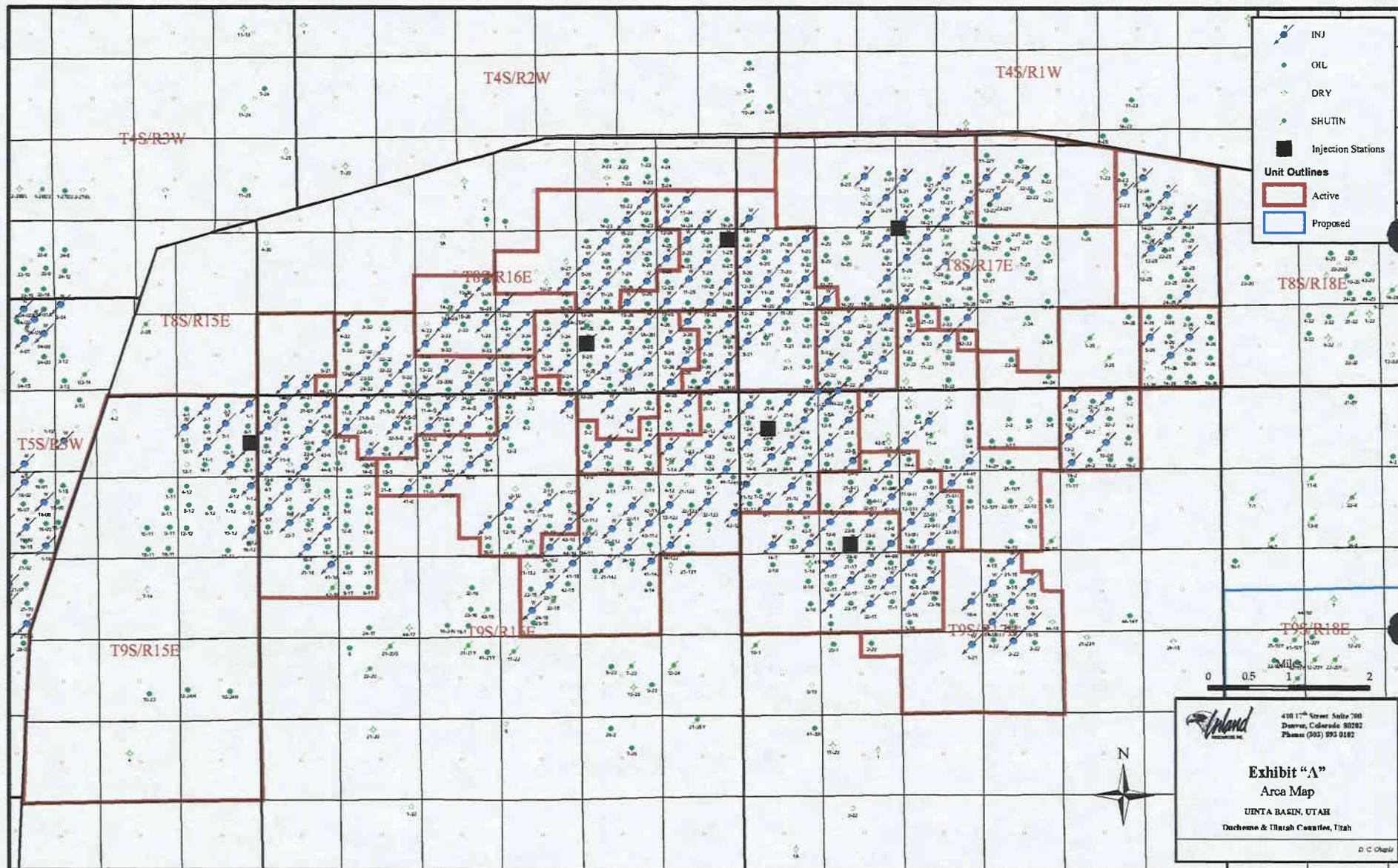


*Tri-State*  
*Land Surveying Inc.*  
 (435) 781-2501  
 180 North Vernal Ave. Vernal, Utah 84078

SCALE: 1" = 2,000'  
 DRAWN BY: R.A.B.  
 DATE: 11-10-2002

Legend	
	Roads
	Existing Gas Line
	Proposed Gas Line
	Existing Water Line
	Proposed Water Line

TOPOGRAPHIC MAP  
**"C"**



January 15, 2003



# 2-M SYSTEM

Blowout Prevention Equipment Systems

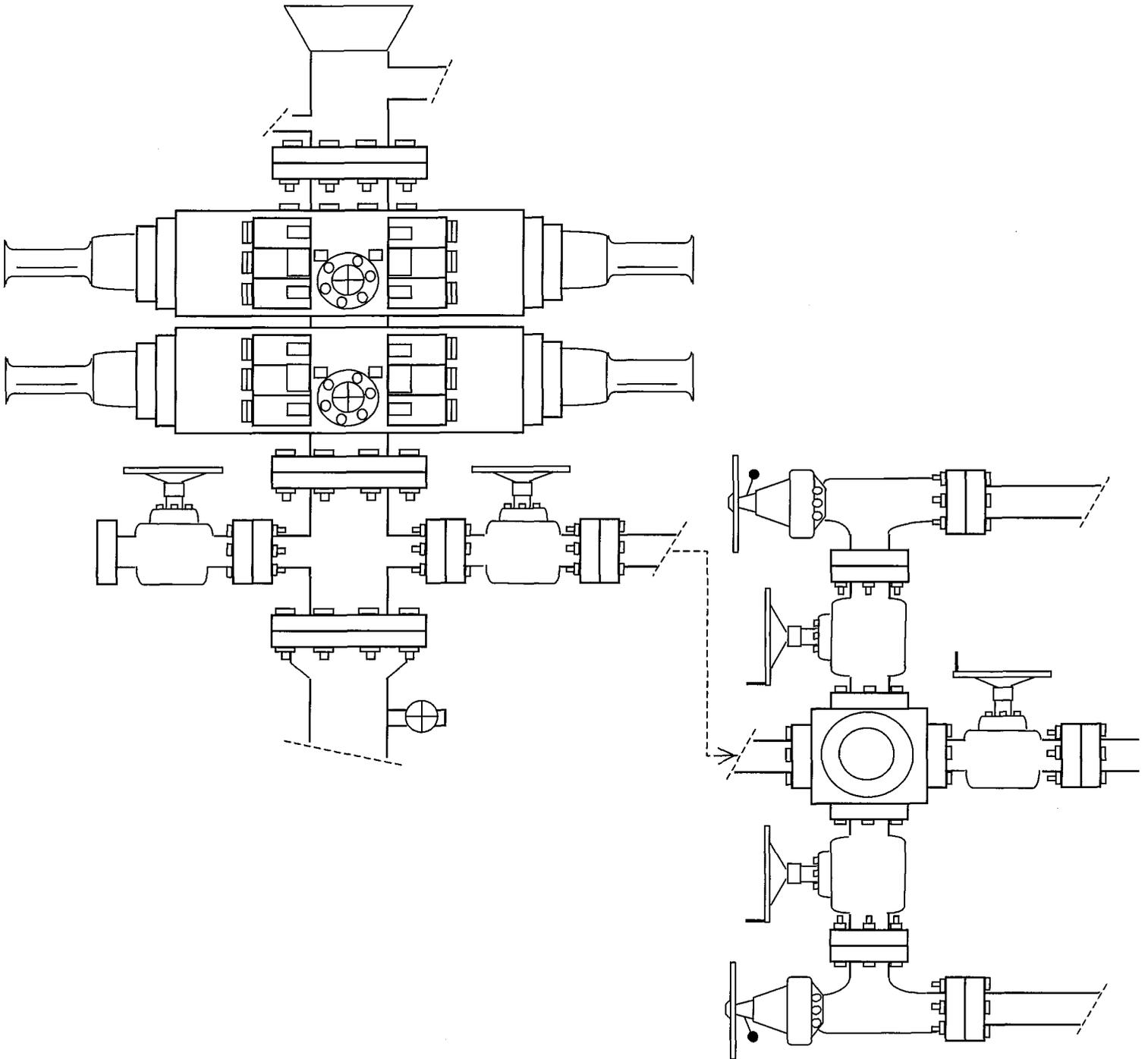


EXHIBIT C

**CULTURAL RESOURCE INVENTORY OF  
INLAND RESOURCES' BLOCK PARCELS IN  
T 9S, R 18E, SECTION 5 and  
T9S, R17E, SECTIONS 9 AND 10  
DUCHESNE AND UINTAH COUNTIES, UTAH**

**BY:**

**Angela Whitfield  
and  
Mark C. Bond**

**Prepared For:**

**Bureau of Land Management  
Vernal Field Office**

**Prepared Under Contract With:**

**Jon D. Holst & Company  
for  
Inland Resources  
2507 Flintridge Place  
Fort Collins, CO 80521**

**Prepared By:**

**Montgomery Archaeological Consultants  
P.O. Box 147  
Moab, Utah 84532**

**MOAC Report No. 03-62**

**June 20, 2003**

**United States Department of Interior (FLPMA)  
Permit No. 03-UT-60122**

**State of Utah Antiquities Project (Survey)  
Permit No. U-03-MQ-0390b**

**INLAND RESOURCES, INC.**

**PALEONTOLOGICAL FIELD SURVEY OF PROPOSED  
PRODUCTION DEVELOPMENT AREAS,  
DUCHESNE AND UINTAH COUNTIES, UTAH**

(South ½ Section 6, T 9 S, R 18 E; South ½ Section 1, T 9 S, 17 R E;  
all of Sections 11 and 12, the NW, SE & NE quarters of the SW ¼ Section 10,  
the NE¼ & SE ¼ of the SE ¼ Section 9, T 9 S, R 17 E and the SE ¼, SW ¼,  
NE ¼ and SE ¼ of the SE ¼, Section 33, T 8 S, R 17 E.)

**REPORT OF SURVEY**

Prepared for:

**Inland Resources, Inc.**

Prepared by:

Wade E. Miller  
Consulting Paleontologist  
May 8, 2003

WORKSHEET  
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/03/2003

API NO. ASSIGNED: 43-013-32517

WELL NAME: BLACKJACK FED 9-9-9-17  
OPERATOR: INLAND PRODUCTION ( N5160 )  
CONTACT: MANDIE CROZIER

PHONE NUMBER: 435-646-3721

PROPOSED LOCATION:  
NESE 09 090S 170E  
SURFACE: 2035 FSL 0688 FEL  
BOTTOM: 2035 FSL 0688 FEL  
DUCHESNE  
MONUMENT BUTTE ( 105 )

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal  
LEASE NUMBER: UTU-74806  
SURFACE OWNER: 1 - Federal  
PROPOSED FORMATION: GRRV

LATITUDE: 40.04389  
LONGITUDE: 110.00394

RECEIVED AND/OR REVIEWED:

Plat

Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. 4488944 )

Potash (Y/N)

Oil Shale 190-5 (B) or 190-3 or 190-13

Water Permit  
(No. MUNICIPAL )

RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )

Fee Surf Agreement (Y/N)

LOCATION AND SITING:

\_\_\_ R649-2-3.

Unit BLACKJACK (GR)

\_\_\_ R649-3-2. General  
Siting: 460 From Qtr/Qtr & 920' Between Wells

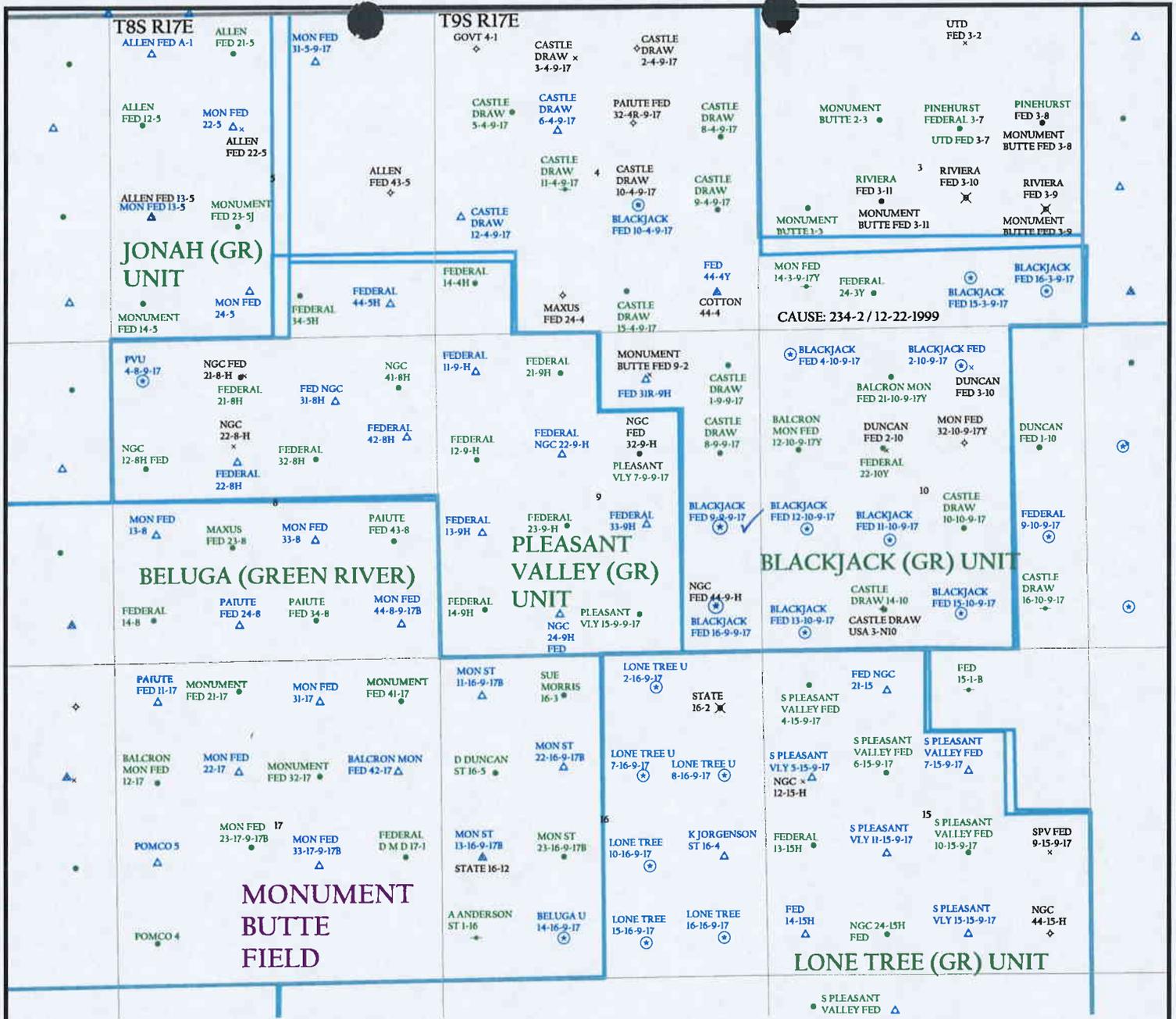
\_\_\_ R649-3-3. Exception

Drilling Unit  
Board Cause No: 234-2  
Eff Date: 12-22-1999  
Siting: Suspends General Siting

\_\_\_ R649-3-11. Directional Drill

COMMENTS: Sop, Separate file

STIPULATIONS: 1-federal approved



OPERATOR: INLAND PROD CO (N5160)  
 SEC. 9 T.9S, R.17E  
 FIELD: MONUMENT BUTTE (105)  
 COUNTY: DUCHESNE  
 CAUSE: 234-2 / 12-22-1999

Wells		Unit Status	
•	GAS INJECTION	□	EXPLORATORY
•	GAS STORAGE	□	GAS STORAGE
•	LOCATION ABANDONED	□	NF PP OIL
•	NEW LOCATION	□	NF SECONDARY
•	PLUGGED & ABANDONED	□	PENDING
•	PRODUCING GAS	□	PI OIL
•	PRODUCING OIL	□	PP GAS
•	SHUT-IN GAS	□	PP GEOTHERML
•	SHUT-IN OIL	□	PP OIL
×	TEMP. ABANDONED	□	SECONDARY
•	TEST WELL	□	TERMINATED
•	WATER INJECTION		
•	WATER SUPPLY		
•	WATER DISPOSAL		

Utah Oil Gas and Mining

Field Status	
□	ABANDONED
□	ACTIVE
□	COMBINED
□	INACTIVE
□	PROPOSED
□	STORAGE
□	TERMINATED

PREPARED BY: DIANA WHITNEY  
 DATE: 04-DECEMBER-2003

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

IN REPLY REFER TO:

3160

(UT-922)

December 4, 2003

Memorandum

To: Assistant District Manager Minerals, Vernal District  
 From: Michael Coulthard, Petroleum Engineer  
 Subject: 2003 Plan of Development White River Unit,  
 Uintah County, Utah.

Pursuant to email between Diana Mason, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2003 within the White River Unit, Uintah County, Utah.

API Number	Well	Location
------------	------	----------

(Proposed PZ Green River)

43-013-32516 Blackjack Federal 16-9-9-17 Sec 9 T09S R17E 0742 FSL 0749 FEL

43-013-32517 Blackjack Federal 9-9-9-17 Sec 9 T09S R17E 2035 FSL 0688 FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - White River Unit  
 Division of Oil Gas and Mining  
 Agr. Sec. Chron  
 Fluid Chron

MCoulthard:mc:12-4-03



State of Utah  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

1594 West North Temple, Suite 1210  
PO Box 145801  
Salt Lake City, Utah 84114-5801  
(801) 538-5340 telephone  
(801) 359-3940 fax  
(801) 538-7223 TTY  
www.nr.utah.gov

Michael O. Leavitt  
Governor

Robert L. Morgan  
Executive Director

Lowell P. Braxton  
Division Director

December 4, 2003

Inland Production Company  
Rt. #3, Box 3630  
Myton, UT 84052

Re: Blackjack Federal 9-9-9-17 Well, 2035' FSL, 688' FEL, NE SE, Sec. 9, T. 9 South,  
R. 17 East, Duchesne County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-013-32517.

Sincerely,

A handwritten signature in black ink, appearing to read 'John R. Baza'.

John R. Baza  
Associate Director

pab  
Enclosures

cc: Duchesne County Assessor  
Bureau of Land Management, Vernal District Office

Operator: Inland Production Company  
Well Name & Number Blackjack Federal 9-9-17  
API Number: 43-013-32517  
Lease: UTU-74806

Location: NE SE                      Sec. 9                      T. 9 South                      R. 17 East

### Conditions of Approval

1. General

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. Notification Requirements

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

3. Reporting Requirements

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, Utah 84145-0155

**IN REPLY REFER TO:**

3160

(UT-922)

December 8, 2003

Memorandum

To: Assistant District Manager Minerals, Vernal District

From: Michael Coulthard, Petroleum Engineer

Subject: 2003 Plan of Development Black Jack Unit,  
Duchesne County, Utah.

Pursuant to email between Diana Whitney, Division of Oil, Gas and Mining, and Mickey Coulthard, Utah State Office, Bureau of Land Management, the following wells are planned for calendar year 2003 within the Black Jack Unit, Duchesne County, Utah.

API Number	Well	Location
------------	------	----------

(Proposed PZ Green River)

43-013-32516 Blackjack Federal 16-9-9-17 Sec 9 T09S R17E 0742 FSL 0749 FEL

43-013-32517 Blackjack Federal 9-9-9-17 Sec 9 T09S R17E 2035 FSL 0688 FEL

This office has no objection to permitting the wells at this time.

/s/ Michael L. Coulthard

bcc: File - Black Jack Unit  
Division of Oil Gas and Mining  
Agr. Sec. Chron  
Fluid Chron

MCoulthard:mc:12-8-03

007

Form 3160-3  
(September 2001)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

RECEIVED  
DEC - 3 2003

FORM APPROVED  
OMB No. 1004-0136  
Expires January 31, 2004

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. UTU-74806
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator Inland Production Company		7. If Unit or CA Agreement, Name and No. Blackjack
3a. Address Route #3 Box 3630, Myton UT 84052		8. Lease Name and Well No. Blackjack Federal 9-9-9-17
3b. Phone No. (include area code) (435) 646-3721		9. API Well No. 43-013-32517
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface NE/SE 2035' FSL 688' FEL At proposed prod. zone		10. Field and Pool, or Exploratory Monument Butte
14. Distance in miles and direction from nearest town or post office* Approximatley 14.4 miles southeast of Myton, Utah		11. Sec., T., R., M., or Blk. and Survey or Area NE/SE Sec. 9, T9S R17E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) Approx. 632' f/lse, 632 f/unit	16. No. of Acres in lease 119.26	17. Spacing Unit dedicated to this well 40 Acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. Approx. 1354'	19. Proposed Depth 6500'	20. BLM/BIA Bond No. on file #4488944
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5196' GR	22. Approximate date work will start* 3rd Quarter 2004	23. Estimated duration Approximately seven (7) days from spud to rig release.

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- Well plat certified by a registered surveyor.
- A Drilling Plan.
- A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).
- Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
- Operator certification.
- Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature <i>Mandie Crozier</i>	Name (Printed/Typed) Mandie Crozier	Date 12/2/03
Title Regulatory Specialist		
Approved by (Signature) <i>Michael B. Leavens</i>	Name (Printed/Typed)	Date 08/26/2004
Title Assistant Field Manager Mineral Resources	Office	

Application approval does not warrant or certify the the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

**NOTICE OF APPROVAL**

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.

\*(Instructions on reverse)

RECEIVED  
SEP 07 2004

DIV. OF OIL, GAS & MINING

CONDITIONS OF APPROVAL ATTACHED

43-013-32517

CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: Inland Production Company.

Well Name & Number: Blackjack 9-9-9-17

API Number 43-013-32517

Lease Number: U-74806

Location: NESE Sec. 9 T.9S R. 17E

Agreement: Blackjack Unit

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

**CONDITIONS OF APPROVAL**

Approval of this application 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.

Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.

**Please submit to this office, in LAS format, an electronic copy of all logs run on this well. This submission will replace the requirement for submittal of paper logs to the BLM.**

In the event after-hours approvals are necessary, you must contact one of the following individuals:

Ed Forsman (435) 828-7874  
Petroleum Engineer

Kirk Fleetwood (435) 828-7875  
Petroleum Engineer

BLM FAX Machine (435) 781-4410

CONDITIONS OF APPROVAL  
FOR THE SURFACE USE PROGRAM OF THE  
APPLICATION FOR PERMIT TO DRILL

-No construction or drilling shall be allowed during the burrowing owl nesting season (April 1 to Aug. 15), without first consulting the BLM biologist. If no nesting owls are found, drilling will be allowed.

-Mountain Plover surveys would have to be conducted in accordance with the U.S. Fish and Wildlife Service Mountain Plover Survey Guidelines.

-To reduce noise levels in the area, a hospital muffler or multi-cylinder engine shall be installed on the pumping unit.



# United States Department of the Interior



## BUREAU OF LAND MANAGEMENT

Utah State Office

P.O. Box 45155

Salt Lake City, UT 84145-0155

<http://www.blm.gov>

IN REPLY REFER TO:

3106

(UT-924)

September 16, 2004

### Memorandum

To: Vernal Field Office

From: Acting Chief, Branch of Fluid Minerals

Subject: Merger Approval

Attached is an approved copy of the name change recognized by the Utah State Office. We have updated our records to reflect the merger from Inland Production Company into Newfield Production Company on September 2, 2004.

Michael Coulthard  
Acting Chief, Branch of  
Fluid Minerals

### Enclosure

1. State of Texas Certificate of Registration

cc: MMS, Reference Data Branch, James Sykes, PO Box 25165, Denver CO 80225  
State of Utah, DOGM, Attn: Earlene Russell, PO Box 145801, SLC UT 84114  
Teresa Thompson  
Joe Incardine  
Connie Seare

UTSL-	15855	61052	73088	76561	
071572A	16535	62848	73089	76787	
065914	16539	63073B	73520A	76808	
	16544	63073D	74108	76813	
	17036	63073E	74805	76954	63073X
	17424	63073O	74806	76956	63098A
	18048	64917	74807	77233	68528A
UTU-	18399	64379	74808	77234	72086A
	19267	64380	74389	77235	72613A
02458	26026A	64381	74390	77337	73520X
03563	30096	64805	74391	77338	74477X
03563A	30103	64806	74392	77339	75023X
04493	31260	64917	74393	77357	76189X
05843	33992	65207	74398	77359	76331X
07978	34173	65210	74399	77365	76788X
09803	34346	65635	74400	77369	77098X
017439B	36442	65967	74404	77370	77107X
017985	36846	65969	74405	77546	77236X
017991	38411	65970	74406	77553	77376X
017992	38428	66184	74411	77554	78560X
018073	38429	66185	74805	78022	79485X
019222	38431	66191	74806	79013	79641X
020252	39713	67168	74826	79014	80207X
020252A	39714	67170	74827	79015	81307X
020254	40026	67208	74835	79016	
020255	40652	67549	74868	79017	
020309D	40894	67586	74869	79831	
022684A	41377	67845	74870	79832	
027345	44210	68105	74872	79833	
034217A	44426	68548	74970	79831	
035521	44430	68618	75036	79834	
035521A	45431	69060	75037	80450	
038797	47171	69061	75038	80915	
058149	49092	69744	75039	81000	
063597A	49430	70821	75075		
075174	49950	72103	75078		
096547	50376	72104	75089		
096550	50385	72105	75090		
	50376	72106	75234		
	50750	72107	75238		
10760	51081	72108	76239		
11385	52013	73086	76240		
13905	52018	73087	76241		
15392	58546	73807	76560		

Corporations Section  
P.O.Box 13697  
Austin, Texas 78711-3697



Geoffrey S. Connor  
Secretary of State

## Office of the Secretary of State

The undersigned, as Secretary of State of Texas, does hereby certify that the attached is a true and correct copy of each document on file in this office as described below:

Newfield Production Company  
Filing Number: 41530400

Articles of Amendment

September 02, 2004

In testimony whereof, I have hereunto signed my name officially and caused to be impressed hereon the Seal of State at my office in Austin, Texas on September 10, 2004.



A handwritten signature in black ink, appearing to read "G. Connor".

Secretary of State

ARTICLES OF AMENDMENT  
TO THE  
ARTICLES OF INCORPORATION  
OF  
INLAND PRODUCTION COMPANY

FILED  
In the Office of the  
Secretary of State of Texas  
SEP 02 2004  
Corporations Section

Pursuant to the provisions of Article 4.04 of the Texas Business Corporation Act (the "TBCA"), the undersigned corporation adopts the following articles of amendment to the articles of incorporation:

ARTICLE 1 – Name

The name of the corporation is Inland Production Company.

ARTICLE 2 – Amended Name

The following amendment to the Articles of Incorporation was approved by the Board of Directors and adopted by the shareholders of the corporation on August 27, 2004.

The amendment alters or changes Article One of the Articles of Incorporation to change the name of the corporation so that, as amended, Article One shall read in its entirety as follows:

"ARTICLE ONE – The name of the corporation is Newfield Production Company."

ARTICLE 3 – Effective Date of Filing

This document will become effective upon filing.

The holder of all of the shares outstanding and entitled to vote on said amendment has signed a consent in writing pursuant to Article 9.10 of the TBCA, adopting said amendment, and any written notice required has been given.

IN WITNESS WHEREOF, the undersigned corporation has executed these Articles of Amendment as of the 1<sup>st</sup> day of September, 2004.

INLAND RESOURCES INC.

By: Susan G. Riggs  
Susan G. Riggs, Treasurer

**DIVISION OF OIL, GAS AND MINING****SPUDDING INFORMATION**Name of Company: INLAND PRODUCTION COMPANYWell Name: BLACKJACK FED 9-9-9-17Api No: 43-013-32517 Lease Type: FEDERALSection 09 Township 09S Range 17E County DUCHESNEDrilling Contractor NDSI RIG # 1**SPUDDED:**Date 09/20/04Time 3:30 PMHow DRY**Drilling will commence:** \_\_\_\_\_Reported by RAY HERRERATelephone # 1-435-823-1990Date 09/21/2004 Signed CHD

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

010

**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 reverse side

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
Newfield Production Company

3a. Address Route 3 Box 3630  
Myton, UT 84052

3b. Phone No. (include are code)  
435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
2035 FSL 688 FEL  
NE/SE Section 9 T9S R17E

5. Lease Serial No.  
UTU74806

6. If Indian, Allottee or Tribe Name.

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

8. Well Name and No.  
BLACKJACK FEDERAL 9-9-9-17

9. API Well No.  
4301332517

10. Field and Pool, or Exploratory Area  
Monument Butte

11. County or Parish, State  
Duchesne, UT

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, 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 _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Spud Notice _____
	<input type="checkbox"/> Convert to Injector	<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 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.)

On 9-20-04 MIRU NDSI NS#1, spud well @ 3:30 PM. Drill 310' of 12 1/4" hole with air mist. TIH W/ 7 Jt's 8 5/8" J-55 24 # csgn. Set @ 308.42' KB On 9-22-04 cement with 150 sks class "G" cement W/2% CaCL2 + 1/4# per sk Cello Flake @ 15.8 ppg > 1.17 cf/ sk yeild. Returned 4 bbls cement to pit. WOC.

RECEIVED

SEP 24 2004

DIV. OF OIL, GAS & MINING

I hereby certify that the foregoing is true and correct

Name (Printed/ Typed)  
Floyd Mitchell

Title

Drilling Supervisor

Signature *Floyd Mitchell*

Date

9/23/2004

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by \_\_\_\_\_

Title

Date

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

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on reverse)

# INLAND PRODUCTION COMPANY - CASING & CEMENT REPORT

8 5/8 CASING SET AT 308.42

LAST CASING 8 5/8" SET AT 308.42'  
 DATUM 12' KB  
 DATUM TO CUT OFF CASING \_\_\_\_\_  
 DATUM TO BRADENHEAD FLANGE \_\_\_\_\_  
 TD DRILLER 310' LOGGER \_\_\_\_\_  
 HOLE SIZE 12 1/4

OPERATOR Inland Production Company  
 WELL Blackjack 9-9-9-17  
 FIELD/PROSPECT Monument Butte  
 CONTRACTOR & RIG # NDSI NS#1

LOG OF CASING STRING:								
PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH	
		37.15' sh jt' shjt						
		WHI - 92 csg head			8rd	A	0.95	
7	8 5/8"	Maverick ST&C csg	24#	J-55	8rd	A	296.57	
		<b>GUIDE</b> shoe			8rd	A	0.9	
CASING INVENTORY BAL.			FEET	JTS	TOTAL LENGTH OF STRING			298.42
TOTAL LENGTH OF STRING			298.42	7	LESS CUT OFF PIECE			2
LESS NON CSG. ITEMS			1.85		PLUS DATUM TO T/CUT OFF CSG			12
PLUS FULL JTS. LEFT OUT			0		CASING SET DEPTH			<b>308.42</b>
TOTAL			296.57	7	} COMPARE			
TOTAL CSG. DEL. (W/O THRDS)			323.68	7				
TIMING			1ST STAGE					
BEGIN RUN CSG.	Spud	9/20/2004	3:30 PM	GOOD CIRC THRU JOB				Yes
CSG. IN HOLE		9/21/2004	5:00 PM	Bbls CMT CIRC TO SURFACE				4
BEGIN CIRC		9/22/2004	1:32 PM	RECIPROCATED PIPE FOR _____ THRU _____ FT STROKE				
BEGIN PUMP CMT		9/22/2004	1:41 PM	DID BACK PRES. VALVE HOLD ?				N/A
BEGIN DSPL. CMT		9/22/2004	1:51 PM	BUMPED PLUG TO _____				286 PSI
PLUG DOWN		9/22/2004	1:56 PM					
CEMENT USED		CEMENT COMPANY- <b>B. J.</b>						
STAGE	# SX	CEMENT TYPE & ADDITIVES						
1	150	Class "G" w/ 2% CaCL2 + 1/4#/sk Cello-Flake mixed @ 15.8 ppg 1.17 cf/sk yield						
CENTRALIZER & SCRATCHER PLACEMENT			SHOW MAKE & SPACING					
Centralizers - Middle first, top second & third for 3								

COMPANY REPRESENTATIVE Floyd Mitchell DATE 9/22/04

STATE OF UTAH  
DIVISION OF OIL, GAS AND MINING  
ENTITY ACTION FORM - FORM 6

*Inland*  
OPERATOR: **NEWFIELD PRODUCTION COMPANY**  
ADDRESS: **RT. 3 BOX 3630**  
**MYTON, UT 84052**

OPERATOR ACCT. NO. N5160  
N2695

ACTION CODE	CURRENT ENTITY NO.	NEW ENTITY NO.	API NUMBER	WELL NAME	WELL LOCATION					SPUD DATE	EFFECTIVE DATE
					QQ	SC	TP	RG	COUNTY		
A	99999	14321	43-047-35156	Federal 1-11-9-17	NE/NE	11	9S	17E	Utah	September 15, 2004	10/6/04
WELL 1 COMMENTS: <i>GRRU</i>											
B	99999	12704	43-013-32509	BlackJack Federal 10-4-9-17	NW/SE	4	9S	17E	Duchesne	September 16, 2004	10/6/04
WELL 2 COMMENTS: <i>GRRU</i>											
A	99999	14322	43-013-32476	Ashley Federal 12-14-9-15	NW/SW	14	9S	15E	Duchesne	September 16, 2004	10/6/04
WELL 3 COMMENTS: <i>GRRU</i>											
B	99999	12704	43-013-32517	BlackJack Federal 9-9-9-17	NE/SE	9	9S	17E	Duchesne	September 20, 2004	10/6/04
WELL 4 COMMENTS: <i>GRRU</i>											
A	99999	14323	43-013-32467	Ashley Federal 11-14-9-15	NE/SW	14	9S	15E	Duchesne	September 22, 2004	10/6/04
WELL 5 COMMENTS: <i>GRRU</i>											

- ACTION CODES (See instructions on back of form)
- A - Establish new entity for new well (single well only)
  - B - Add new well to existing entity (group or unit well)
  - C - Re-assign well from one existing entity to another existing entity
  - D - Re-assign well from one existing entity to a new entity
  - E - Other (explain in comments section)

NOTE: Use COMMENT section to explain why each Action Code was selected.

*Kebbie S. Jones*  
Signature  
Kebbie S. Jones  
Production Clerk  
September 28, 2004  
Date

RECEIVED  
SEP 28 2004 K  
DIV. OF OIL, GAS & MINING

PAGE 02

INLAND

4356463031

09/28/2004 15:44

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

**COPY**

012

**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 reverse side**

1. Type of Well  
 Oil Well    Gas Well    Other

2. Name of Operator  
 Newfield Production Company

3a. Address    Route 3 Box 3630  
                   Myton, UT 84052

3b. Phone No. (include are code)  
 435.646.3721

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
 2035 FSL 688 FEL  
 NE/SE    Section 9 T9S R17E

5. Lease Serial No.  
 UTU74806

6. If Indian, Allottee or Tribe Name.

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

8. Well Name and No.  
 BLACKJACK FEDERAL 9-9-9-17

9. API Well No.  
 4301332517

10. Field and Pool, or Exploratory Area  
 Monument Butte

11. County or Parish, State  
 Duchesne, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, 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 _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Weekly Status Report _____
	<input type="checkbox"/> Convert to Injector	<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 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 recomplate 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.)

On 10-21-04 MIRU Patterson Rig # 155. Set all equipment. Pressure test Kelly, TIW, Choke manifold, & Bop's to 2,000 psi. Test 8.625 csgn to 1,500 psi. Vernal BLM field, & Roosevelt DOGM office was notified of test. PU BHA and tag cement @ 260'. Drill out cement & shoe. Drill a 7.875 hole with fresh water to a depth of 5,785'. Lay down drill string & BHA. Open hole log w/ Dig/SP/GR log's TD to surface. PU & TIH with Guide shoe, shoe jt, float collar, 135 jt's of 5.5 J-55, 15.5# csgn. Set @ 5768' / KB. Cement with 300sks cement mixed @ 11.0 ppg & 3.43 yld. The 450 sks cement mixed @ 14.4 ppg & 1.24 yld. With 20 BBS cement returned to pit. Nipple down Bop's. Drop slips @ 70,000 #'s tension. Release rig 12:30 am on 10-01-04.

**RECEIVED**  
**OCT 29 2004**

DIV. OF OIL, GAS & MINING

I hereby certify that the foregoing is true and correct	Title
Name (Printed/Typed) Floyd Mitchell <i>Floyd Mitchell</i>	Drilling Supervisor
Signature	Date 10/28/2004

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

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

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on reverse)

# INLAND PRODUCTION COMPANY - CASING & CEMENT REPORT

5 1/2" CASING SET AT 5768.6

Flt cllr @ 5735'

LAST CASING 8 5/8" SET AT 308.42'

OPERATOR Newfield Production Company

DATUM 12' KB

WELL Black Jack 9-9-9-17

DATUM TO CUT OFF CASING 12'

FIELD/PROSPECT Monument Butte

DATUM TO BRADENHEAD FLANGE \_\_\_\_\_

CONTRACTOR & RIG # Patterson # 155

TD DRILLER 5785' LOGGER 5765'

HOLE SIZE 7 7/8"

**LOG OF CASING STRING:**

PIECES	OD	ITEM - MAKE - DESCRIPTION	WT / FT	GRD	THREAD	CONDT	LENGTH
		Landing Jt					14
		6.35' short jt @ 3984'					
135	5 1/2"	ETC LT & C casing	15.5#	J-55	8rd	A	5720.09
		Float collar					0.6
1	5 1/2"	ETC LT&C csg	15.5#	J-55	8rd	A	37.26
		<b>GUIDE</b> shoe			8rd	A	0.65
CASING INVENTORY BAL.		FEET	JTS	TOTAL LENGTH OF STRING			5772.6
TOTAL LENGTH OF STRING		5772.6	136	LESS CUT OFF PIECE			16
LESS NON CSG. ITEMS		15.25		PLUS DATUM TO T/CUT OFF CSG			12
PLUS FULL JTS. LEFT OUT		172.06	4	CASING SET DEPTH			<b>5768.6</b>
TOTAL		<b>5929.41</b>	140	} COMPARE			
TOTAL CSG. DEL. (W/O THRDS)		5929.41	140				
TIMING		1ST STAGE	2nd STAGE				
BEGIN RUN CSG.		10/26/2004	11:30 AM	GOOD CIRC THRU JOB <u>Yes</u>			
CSG. IN HOLE		10/26/2004	3:30 PM	Bbls CMT CIRC TO SURFACE <u>20</u>			
BEGIN CIRC		10/26/2004	3:30 PM	RECIPROCATED PIPE FOR <u>THRUSTROKE</u>			
BEGIN PUMP CMT		10/26/2004	6:07 PM	DID BACK PRES. VALVE HOLD ? <u>NO, shut in @ casing cement head</u>			
BEGIN DSPL. CMT		10/26/2004	6:58 PM	BUMPED PLUG TO <u>2050</u> PSI			
PLUG DOWN		10/26/2004	7:39 PM				

CEMENT USED		CEMENT COMPANY- <b>B. J.</b>	
STAGE	# SX	CEMENT TYPE & ADDITIVES	
1	300	Premlite II w/ 10% gel + 3 % KCL, 3#s /sk CSE + 2# sk/kolseal + 1/4#s/sk Cello Flake	
		mixed @ 11.0 ppg W / 3.43 cf/sk yield	
2	450	50/50 poz W/ 2% Gel + 3% KCL, .5%EC1, 1/4# sk C.F. 2% gel. 3% SM mixed @ 14.4 ppg W/ 1.24 YLD	
CENTRALIZER & SCRATCHER PLACEMENT		SHOW MAKE & SPACING	
Centralizers - Middle first, top second & third. Then every third collar for a total of 20.			

COMPANY REPRESENTATIVE Floyd Mitchell

DATE 10/27/2004

NEWFIELD



December 21, 2004

State of Utah, Division of Oil, Gas and Mining  
Attn: Ms. Carol Daniels  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Attn: Ms. Carol Daniels

- ✓ Greater Boundary Fed. 9-3-9-17 (43-013-32183)
- ✓ Federal 13-12-9-17 (43-047-35168)
- ✓ Federal 3-12-9-17 (43-047-35162)
- ✓ Blackjack Fed. 9-9-9-17 (43-013-32517)
- ✓ Ashley Fed. 11-14-9-15 (43-013-32467)

Dear Ms. Carol Daniels

Enclosed is a Well Completion or Recompletion Report and Log form (Form 3160-4). We are no longer sending Log copies since Pat Grissom of Phoenix Surveys is already doing so.

If you should have any questions, please contact me at (303) 382-4449.

Sincerely,

Brian Harris  
Engineering Tech

Enclosures

cc: Bureau of Land Management  
Vernal District Office, Division of Minerals  
Attn: Edwin I. Forsman  
170 South 500 East  
Vernal, Utah 84078

Well File – Denver  
Well File – Roosevelt  
Patsy Barreau/Denver  
Bob Jewett/Denver  
Renee Palmer/Roosevelt

RECEIVED

DEC 23 2004

DIV. OF OIL, GAS & MINING

014

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

5. LEASE DESIGNATION AND SERIAL NO.

UTU-74806

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

NA

WELL COMPLETION OR RECOMPLETION REPORT AND LOG\*

7. UNIT AGREEMENT NAME

Blackjack Unit

1a. TYPE OF WORK

OIL WELL  GAS WELL  DRY  Other \_\_\_\_\_

1b. TYPE OF WELL

NEW WELL  WORK OVER  DEEPEN  PLUG BACK  DIFF RESVR.  Other \_\_\_\_\_

8. FARM OR LEASE NAME, WELL NO.

BLACKJACK FEDERAL 9-9-9-17

2. NAME OF OPERATOR

Newfield Exploration Company

9. WELL NO.

43-013-32517

3. ADDRESS AND TELEPHONE NO.

1401 17th St. Suite 1000 Denver, CO 80202

10. FIELD AND POOL OR WILDCAT

Monument Butte

4. LOCATION OF WELL (Report locations clearly and in accordance with any State requirements.\*)

At Surface 1831' FSL & 2068' FWL (NESW) Sec. 9, Twp 9S, Rng 17E  
At top prod. Interval reported below 2035 688 E E

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

Sec. 9, T9S, R17E

At total depth

14. API NO. 43-013-32517 DATE ISSUED

12. COUNTY OR PARISH Duchesne

13. STATE UT

15. DATE SPUDDED 9/16/2004

16. DATE T.D. REACHED 10/27/2004

17. DATE COMPL. (Ready to prod.) 11/19/2004

18. ELEVATIONS (DF, RKB, RT, GR, ETC.)\* 5193' GL 5205' KB

19. ELEV. CASINGHEAD

20. TOTAL DEPTH, MD & TVD 5785'

21. PLUG BACK T.D., MD & TVD 5730'

22. IF MULTIPLE COMPL., HOW MANY\*

23. INTERVALS DRILLED BY ----->

ROTARY TOOLS X

CABLE TOOLS

24. PRODUCING INTERVAL(S), OF THIS COMPLETION--TOP, BOTTOM, NAME (MD AND TVD)\*

Green River 4682'-5687'

25. WAS DIRECTIONAL SURVEY MADE No

26. TYPE ELECTRIC AND OTHER LOGS RUN

Dual Induction Guard, SP, Compensated Density, Compensated Neutron, GR, Caliper, Cement Bond Log

27. WAS WELL CORED No

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

CASING SIZE/GRADE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	TOP OF CEMENT, CEMENTING RECORD	AMOUNT PULLED
8-5/8" - J-55	24#	308'	12-1/4"	To surface with 150 sx Class "G" cmt	
5-1/2" - J-55	15.5#	5768'	7-7/8"	300 sx Premlite II and 450 sx 50/50 Poz	

29. LINER RECORD

SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
					2-7/8"	EOT @ 5701'	TA @ 5602'

31. PERFORATION RECORD (Interval, size and number)

INTERVAL	SIZE	SPF/NUMBER	DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
(CP4,5) 5556-63', 5679-87'	.41"	4/60	5556'-5687'	Frac w/ 23,857# 20/40 sand in 311 bbls fluid.
(CP1) 5370-81'	.41"	4/44	5370'-5381'	Frac w/ 78,530# 20/40 sand in 610 bbls fluid.
(A 3) 4986-92', 4998-5009'	.41"	4/68	4986'-5009'	Frac w/ 65,716# 20/40 sand in 533 bbls fluid.
(B.5,2) 4762-68', 4810-28'	.41"	4/96	4762'-4828'	Frac w/ 85,068# 20/40 sand in 626 bbls fluid.
(C-sd) 4682-4692'	.41"	4/40	4682'-4692'	Frac w/ 63,382# 20/40 sand in 511 bbls fluid.

33.\* PRODUCTION

DATE FIRST PRODUCTION	PRODUCTION METHOD (Flowing, gas lift, pumping--size and type of pump)	WELL STATUS (Producing or shut-in)					
11/19/2004	2-1/2" x 1-1/2" x 15' RHAC Pump	PRODUCING					
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL--BBL.	GAS--MCF.	WATER--BBL.	GAS-OIL RATIO
10 day ave			---	94	119	7	1266
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL-BBL.	GAS--MCF.	WATER--BBL.	OIL GRAVITY--API (COR.)	
		---					

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

Sold & Used for Fuel

TEST WITNESSED BY

35. LIST OF ATTACHMENTS

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

SIGNED Brian Harris  
Brian Harris

TITLE Engineering Technician

DATE 12/21/2004

BDH

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

37. SUMMARY OF POROUS ZONES: (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);

38. GEOLOGIC MARKERS

FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	TOP	
					MEAS. DEPTH	TRUE VERT. DEPTH
			Well Name Blackjack 9-9-9-17	Garden Gulch Mkr	3534'	
				Garden Gulch 1	3727	
				Garden Gulch 2	3835	
				Point 3 Mkr	4106'	
				X Mkr	4336'	
				Y-Mkr	4372'	
				Douglas Creek Mkr	4501'	
				BiCarbonate Mkr	4730'	
				B Limestone Mkr	4855'	
				Castle Peak	5330'	
				Basal Carbonate	5740'	
				Total Depth (LOGGERS	5765'	



6a. (R649-9-2)Waste Management Plan has been received on: IN PLACE  
6b. Inspections of LA PA state/fee well sites complete on: waived

7. **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

8. **Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: n/a

9. **Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: na/

10. **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: 2/23/2005

**DATA ENTRY:**

1. Changes entered in the **Oil and Gas Database** on: 2/28/2005
2. Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 2/28/2005
3. Bond information entered in RBDMS on: 2/28/2005
4. Fee/State wells attached to bond in RBDMS on: 2/28/2005
5. Injection Projects to new operator in RBDMS on: 2/28/2005
6. Receipt of Acceptance of Drilling Procedures for APD/New on: waived

**FEDERAL WELL(S) BOND VERIFICATION:**

1. Federal well(s) covered by Bond Number: UT 0056

**INDIAN WELL(S) BOND VERIFICATION:**

1. Indian well(s) covered by Bond Number: 61BSBDH2912

**FEE & STATE WELL(S) BOND VERIFICATION:**

1. (R649-3-1) The **NEW** operator of any fee well(s) listed covered by Bond Number 61BSBDH2919

2. The **FORMER** operator has requested a release of liability from their bond on: n/a\*  
The Division sent response by letter on: n/a

**LEASE INTEREST OWNER NOTIFICATION:**

3. (R649-2-10) The **FORMER** 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: n/a

**COMMENTS:**

\*Bond rider changed operator name from Inland Production Company to Newfield Production Company - received 2/23/05



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8  
1595 WYNKOOP STREET  
DENVER, CO 80202-1129  
<http://www.epa.gov/region8>

RECEIVED

NOV 11 2009

DIV. OF OIL, GAS & MINING

Ref: 8P-W-GW

NOV 04 2009

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

Eric Sundberg  
Newfield Production Company  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

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

Re: Final Permit & Aquifer Exemption  
EPA UIC Permit UT21236-08405  
Blackjack Federal 9-9-9-17  
NE SE Sec. 9-T9S-R17E  
Duchesne County, Utah  
API No.: 43-013-32517

Dear Mr. Sundberg:

Enclosed is your copy of the FINAL Underground Injection Control (UIC) Permit for the proposed Blackjack Federal 9-9-9-17 injection well. A Statement of Basis that discusses the conditions and requirements of this EPA UIC Permit, is also included.

The Public Comment period for this Permit ended on OCT 22 2009. No comments on the Draft Permit were received during the Public Notice period; therefore the Effective Date for this EPA UIC Permit is 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 as of the Effective Date of this Permit.

Please note that under the terms and conditions of this Final Permit you are authorized only to construct the proposed injection well. Prior to commencing injection, you first must fulfill all "Prior to Commencing Injection" requirements of the Final Permit, Part II Section C.1, and obtain written Authorization to Inject from the EPA. It is your responsibility to be familiar with and to comply with all provisions of your Final Permit. The EPA forms referenced in the permit are available at <http://www.epa.gov/safewater/uic/reportingforms.html>. Guidance documents for Cement Bond Logging, Radioactive Tracer testing, Step Rate testing, Mechanical Integrity demonstration, Procedure in the Event of a Mechanical Integrity Loss, and other UIC guidances, are available at [http://www.epa.gov/region8/water/uic/deep\\_injection.html](http://www.epa.gov/region8/water/uic/deep_injection.html). Upon request, hard copies of the EPA forms and guidances can be provided.



Printed on Recycled Paper

This EPA UIC Permit is issued for the operating life of the well unless terminated (Part III, Section B). The EPA may review this Permit at least every five (5) years to determine whether any action is warranted pursuant to 40 CFR § 144.36(a).

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. 312-6174.

Sincerely,

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

enclosure: Final UIC Permit  
Statement of Basis  
Final Aquifer Exemption

cc: Letter:

Uintah & Ouray Business Committee, Ute Indian Tribe:  
Curtis Cesspooch, Chairman  
Irene Cuch, Vice-Chairwoman  
Frances Poowegup, Councilwoman  
Ronald Groves, Councilman  
Phillip Chimburas, Councilman  
Steven Cesspooch, Councilman

Daniel Picard, Superintendent  
Uintah & Ouray Indian Agency  
U.S. Bureau of Indian Affairs

cc: all enclosures:

Michael Guinn  
District Manager  
Newfield Production Company  
Myton, Utah

Larry Love  
Director  
Energy & Minerals Dept.  
Ute Indian Tribe

Ferron Secakuku  
Director, Natural Resources  
Ute Indian Tribe

Gilbert Hunt  
Associate Director  
State of Utah - Natural Resources

Fluid Minerals Engineering Dept.  
U.S. Bureau of Land Management  
Vernal, Utah





**UNDERGROUND INJECTION CONTROL PROGRAM  
PERMIT**

PREPARED: October 2009

**Permit No. UT21236-08405**

Class II Enhanced Oil Recovery Injection Well

**Blackjack Federal 9-9-9-17  
Duchesne County, UT**

Issued To

**Newfield Production Co.**  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

## 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,

Newfield Production Co.  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

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

Blackjack Federal 9-9-9-17  
2035' FSL & 688' FEL, NESE S9, T9S, R17E  
Duchesne County, UT

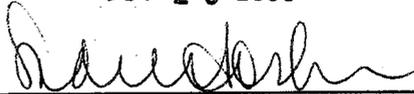
EPA regulates the injection of fluids into injection wells so that injection does not endanger underground sources of drinking water (USDWs). EPA UIC Permit conditions are based on authorities set forth at 40 CFR Parts 144 and 146, and address potential impacts to USDWs.

Under 40 CFR Part 144, Subpart D, certain conditions apply to all UIC Permits and may be incorporated either expressly or by reference. General permit conditions for which the content is mandatory and not subject to site-specific differences are not discussed in this document. Issuance of this Permit does not convey any property rights of any sort or any exclusive privilege, nor does it authorize injury to persons or property or invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. (40 CFR §144.35) An EPA UIC Permit may be issued for the operating life of the injection well or project unless terminated for reasonable cause under 40 CFR §§144.39, 144.40 and 144.41, and may be reviewed at least once every five (5) years to determine if action is required under 40 CFR §144.36(a).

This Permit is issued for the life of the well(s) unless modified, revoked and reissued, or terminated under 40 CFR 144.39 or 144.40. This EPA Permit may be adopted, modified, revoked and reissued, or terminated if primary enforcement authority for a UIC Program is delegated to an Indian Tribe or State. Upon the effective date of delegation, reports, notifications, questions and other correspondence should be directed to the Indian Tribe or State Director.

Issue Date: OCT 28 2009

Effective Date OCT 28 2009

  
\_\_\_\_\_  
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 (MAIP) 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 the Permit, or in the case of an Area Permit within one year of Authorization of the additional well. Authorization to construct and operate shall expire if the well has not been constructed within one year of the Effective Date of the Permit or Authorization and the Permit may be terminated under 40 CFR 144.40, 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 may 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 an 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 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. 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 available from EPA and will be provided upon request.

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.**

Well injection, including for new wells authorized by an Area Permit under 40 CFR 144.33 (c), may commence only after all well construction and pre-injection requirements herein have been met and approved. 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 7520-10 or 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 injection 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 identified in 40 CFR 144.6(b)(2) as fluids used for enhanced recovery of oil or natural gas, including those which are brought to the surface in connection with conventional oil or natural gas production that 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). Non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes and vacuum truck wastes, are NOT approved for injection. This well is NOT approved for commercial brine injection, industrial waste fluid disposal or injection of hazardous waste as defined by CFR 40 Part 261. The Permittee shall provide a listing of the sources of injected fluids in accordance with the reporting requirements in Part II Section D Paragraph 4 and APPENDIX D of this Permit.

#### **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.

### **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 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 an injection well, 2) converting to a non-injection well, and 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 isolates the injection zone and prevents the movement of fluids into or between underground sources of drinking water, and in accordance with 40 CFR 146.10 and other applicable Federal, State or local law or regulations. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.6 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. 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.

### **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 a 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;
- (b) Describes the actions or procedures the Permittee will take to ensure that the well will not endanger USDWs during the period of inactivity. These actions and procedures shall include compliance with mechanical integrity demonstration, Financial Responsibility and all other permit requirements designed to protect USDWs; and
- (c) Receives written notice by the Director temporarily waiving plugging and abandonment requirements.

## 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 any other Federal, 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.

Blackjack Federal No. 9-9-9-17 was drilled to a total depth of 5,785 feet (KB) feet in the Basal Carbonate Member. Plug back total depth (PBSD) is 5,730 feet.

Surface casing (8-5/8 inch) was set at a depth of 308 feet in a 12-1/4 inch hole using 150 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5,768 feet (KB) in a 7-7/8 inch hole with 300 sacks of Premium Lite II mixed and 450 sacks of 50/50 Pozmix. Top of cement by Cement Bond Log is 140 feet from surface.

CBL analysis does not identify adequate 80% bond index cement bond within the Confining Zone.

The schematic diagram shows enhanced recovery injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3,534 feet (top of Garden Gulch Member) and the estimated top of the Wasatch Formation (5,865 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

# UT 21236-08405 Blackjack Federal 9-9-9-17

Spud Date: 9/16/04  
Put on Production: 11/19/04  
GL: 5193' KB: 5205'

Initial Production: BOPD,  
MCFD, BWPD

### Proposed Injection Wellbore Diagram

#### SURFACE CASING

CSG SIZE: 8-5/8"  
GRADE: J-55  
WEIGHT: 24#  
LENGTH: 7 jts. (298.42')  
DEPTH LANDED: 308.42' KB  
HOLE SIZE: 12-1/4" *Base USDWs 256'*  
CEMENT DATA: 150 sxs Class "G" cmt, est 4 bbls cmt to surf.  
Cement Top @ 140'

#### PRODUCTION CASING

CSG SIZE: 5-1/2"  
GRADE: J-55  
WEIGHT: 15.5# *Tronz 2724'-2762'*  
LENGTH: 136 jts. (5772.6') *Mahog. B. 2762'-2780'*  
DEPTH LANDED: 5768.6' KB  
HOLE SIZE: 7-7/8"  
CEMENT DATA: 300 sxs Prem. Lite II mixed & 450 sxs 50/50 POZ.  
CEMENT TOP AT: 140'

#### TUBING

*80% Bond 4288'-4314'*  
SIZE/GRADE/WT: 2-7/8" / J-55 / 6.5#  
NO. OF JOINTS: 172 jts (5574.95')  
TUBING ANCHOR: 5586.95' KB  
NO. OF JOINTS: 1 jts (32.54')  
SEATING NIPPLE: 2-7/8" (1.10')  
SN LANDED AT: 5622.29' KB  
NO. OF JOINTS: 2 jts (65.14)  
TOTAL STRING LENGTH: BOT @ 5701'

#### FRAC JOB

11/15/04 5556'-5687' Frac CP4,5 sands as follows:  
23,857# 20/40 sand in 311 bbls Lightning  
Frac 17 fluid. Treated @ avg press of 1925 psi  
w/avg rate of 24.5 BPM. ISIP 2020 psi. Calc  
flush: 5554 gal. Actual flush: 5628 gal.

11/15/04 5370'-5381' Frac CP 1 sands as follows:  
78,530# 20/40 sand in 610 bbls Lightning  
Frac 17 fluid. Treated @ avg press of 1860 psi  
w/avg rate of 24.9 BPM. ISIP 1975 psi. Calc  
flush: 5368 gal. Actual flush: 5376 gal.

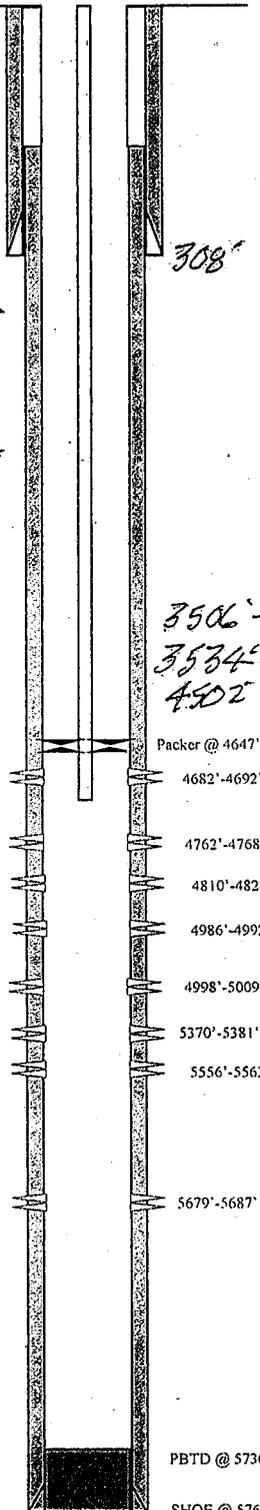
11/15/04 4986'-5009' Frac A3 sands as follows:  
65,716# 20/40 sand in 533 bbls Lightning  
Frac 17 fluid. Treated @ avg press of 1553 psi  
w/avg rate of 24.9 BPM. ISIP 1980 psi. Calc  
flush: 4984 gal. Actual flush: 5040 gal.

11/16/04 4762'-4828' Frac B,5, and 2 sands as follows:  
85,068# 20/40 sand in 626 bbls Lightning  
Frac 17 fluid. Treated @ avg press of 1664 psi  
w/avg rate of 24.8 BPM. ISIP 2150 psi. Calc  
flush: 4760 gal. Actual flush: 4788 gal.

11/16/04 4682'-4692' Frac C sands as follows:  
63,382# 20/40 sand in 511 bbls Lightning  
Frac 17 fluid. Treated @ avg press of 1950 psi  
w/avg rate of 25 BPM. ISIP 2320 psi. Calc  
flush: 4680 gal. Actual flush: 4578 gal.

03/06/07

Tubing Leak: Updated rod and tubing detail.



#### PERFORATION RECORD

Date	Depth Range	Tool Joint	Holes
11/08/04	5679'-5687'	4 JSPF	32 holes
11/08/04	5556'-5563'	4 JSPF	28 holes
11/15/04	5370'-5381'	4 JSPF	44 holes
11/15/04	4998'-5009'	4 JSPF	44 holes
11/15/04	4986'-4992'	4 JSPF	24 holes
11/15/04	4810'-4828'	4 JSPF	72 holes
11/15/04	4762'-4768'	4 JSPF	24 holes
11/16/04	4682'-4692'	4 JSPF	40 holes

**NEWFIELD**

Blackjack Federal 9-9-9-17  
2035 FSL & 688 FEL  
NE/SE Sec. 9, T9S R17E  
Duchesne, County  
API# 43-013-32517; Lease# UTU-74806

## 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: Blackjack Federal 9-9-9-17	
TYPE OF TEST	DATE DUE
Standard Annulus Pressure	Prior to receiving authorization to inject and at least once within any five (5) years after the last successful demonstration of Part I Mechanical Integrity
Pore Pressure	Prior to receiving authorization to inject
Radioactive Tracer Survey (2)	Within a 180-day limited authorization to inject period and at least once within any five (5) year period following the last successful test

# 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)
Blackjack Federal 9-9-9-17	1,310

### 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: Blackjack Federal 9-9-9-17	APPROVED INJECTION INTERVAL (KB, ft)		FRACTURE GRADIENT (psi/ft)
	TOP	BOTTOM	
FORMATION NAME			
Green River: Garden Gulch	3,534.00	4,502.00	0.720
Green River: Douglas Creek	4,502.00	5,740.00	0.720

### 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:

WELL NAME: Blackjack Federal 9-9-9-17	
FORMATION NAME	MAXIMUM VOLUME LIMIT (bbbls)
Green River: Douglas Creek	
Green River: Garden Gulch	

## 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 MONTHLY 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 minimum annulus pressure(s) (psig)
	Each month's injected volume (bbl)
	Fluid volume injected since the well began injecting (bbl)
	Written results of annual injected fluid analysis
	Sources of all fluids injected during the year

In addition to these items, additional Logging and Testing results may be required periodically. For a list of those items and their due dates, please refer to **APPENDIX B - LOGGING AND TESTING REQUIREMENTS**.

## APPENDIX E

### PLUGGING AND ABANDONMENT REQUIREMENTS

See diagram.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

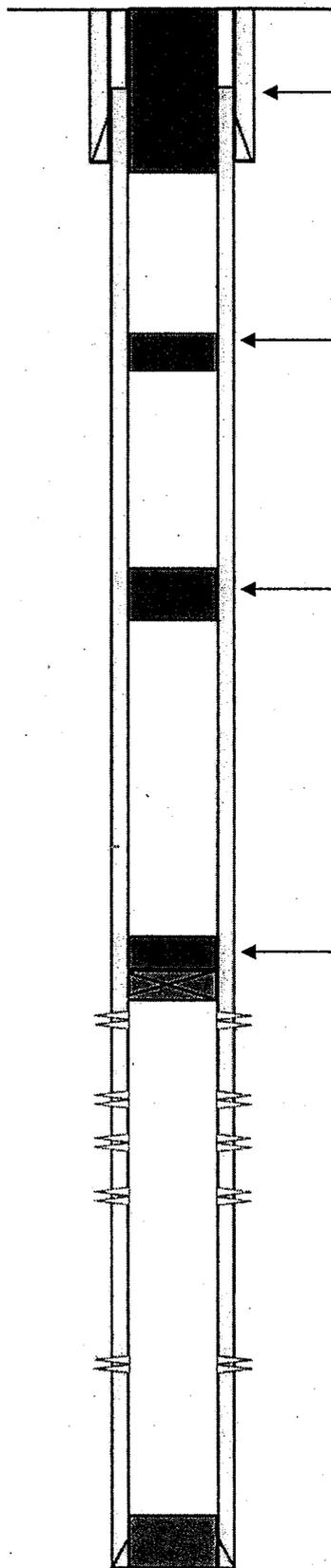
**PLUG NO. 1: Seal Injection Zone:** Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 2,675 feet to 2,830 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 155-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 2,675 feet to 2,830 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1,230 feet - 1,350 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 120-foot balanced 1,230 feet to 1,350 feet.

**PLUG NO.4: Seal Surface:** Set a Class "G" cement plug within the 5-1/2 inch casing to 358 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

## Plugging and Abandonment Diagram for Blackjack Federal No. 9-9-9-17



Plug 4: Set a Class "G" cement plug within the 5-1/2 inch casing surface to 358 feet and up the 5-1/2 inch X 8-5/8 inch casing annulus to the surface.

Plug 3: Perforate and squeeze cement up the backside of the casing across the contact between the Uinta Formation and Green River Formation 1,230 feet – 1,350 feet (KB) unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 120-foot cement plug inside the casing from approximately 1,230 feet – 1,350 feet.

Plug 2: Perforate and squeeze cement up the backside of the casing across the Trona Zone and the Mahogany Bench from approximately 2,675 feet – 2,830 feet (KB) unless pre-existing backside cement precludes cement-squeezing this interval. Set a minimum 155-foot balanced cement plug inside the casing from approximately 2,675 feet – 2,830 feet.

Plug 1: Set a cast iron bridge plug (CIBP) no more than 50 ft above the top perforation with a minimum of 20 ft cement plug on top of the CIBP.

## APPENDIX F

### CORRECTIVE ACTION REQUIREMENTS

No corrective action is deemed necessary for this project.

# **STATEMENT OF BASIS**

**NEWFIELD PRODUCTION CO.  
BLACKJACK FEDERAL 9-9-9-17  
DUCHESNE COUNTY, UT**

**EPA PERMIT NO. UT21236-08405**

***CONTACT:*** Emmett Schmitz  
U. S. Environmental Protection Agency  
Ground Water Program, 8P-W-GW  
1595 Wynkoop Street  
Denver, Colorado 80202-1129  
Telephone: 1-800-227-8917 ext. 312-6174

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.

EPA UIC permits regulate the injection of fluids into underground injection wells so that the injection does not endanger underground sources of drinking water. EPA UIC permit conditions are based upon the authorities set forth in regulatory provisions at 40 CFR Parts 144 and 146, and address potential impacts to underground sources of drinking water. Under 40 CFR 144.35 Issuance of this permit does not convey any property rights of any sort or any exclusive privilege, nor authorize injury to persons or property of invasion of other private rights, or any infringement of other Federal, State or local laws or regulations. 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 the 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 construction and operation of injection wells so that the injection does not endanger underground sources of drinking water, governed by the conditions specified in the Permit. The Permit is issued for the operating life of the injection well or project 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

Newfield Production Co.  
1001 Seventeenth Street, Suite 2000  
Denver, CO 80202

on

April 21, 2009

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

Blackjack Federal 9-9-9-17  
2035' FSL & 688' FEL, NESE S9, T9S, R17E  
Duchesne County, UT

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

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

Blackjack Federal No. 9-9-9-17 is currently an active Green River Formation Douglas Creek Member oil well. It is the initial intent of the applicant to use current producing perforations for Class II enhanced recovery injection.

<b>NEW WELLS</b>		
<b>Well Name</b>	<b>Well Status</b>	<b>Date of Operation</b>
Blackjack Federal 9-9-9-17	New	N/A

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

### Hydrogeologic Setting

Water wells for domestic supply in this area, when present, generally are completed into the shallow alluvium, the Duchesne River Formation, or the underlying Uinta Formation, and the water generally contains approximately 500 to 1,500 mg/l and higher total dissolved solids.

The Uinta-Animas aquifer in the Uinta Basin is present in water-yielding beds of sandstone, conglomerate, and siltstone of the Duchesne River and Uinta Formations, the Renegade Tongue of the Wasatch Formation, and the Douglas Creek Member of the Green River Formation. The Renegade Tongue of the Wasatch Formation and the Douglas Creek Member of the Green River Formation contain an aquifer along the southern and eastern margins of the basin where the rocks primarily consist of fluvial, massive, irregularly bedded sandstone and siltstone. Water-yielding units in the Uinta-Animas aquifer in the Uinta Basin commonly are separated from each other and from the underlying Mesaverde aquifer by units of low permeability composed of claystone, shale, marlstone, or limestone. In the Uinta Basin, for example, the part of the aquifer in the Duchesne River and Uinta Formations ranges in thickness from 0 feet at the southern margin of the aquifer to as much as 9,000 feet in the north-central part of the aquifer. Ground-water recharge to the Uinta-Animas aquifer generally occurs in the areas of higher altitude along the margins of the basin. Ground water is discharged mainly to streams, springs, and by transpiration from vegetation growing along stream valleys. The rate of ground-water withdrawal is small, and natural discharge is approximately equal to recharge. Recharge occurs near the southern margin of the aquifer, and discharge occurs near the White and Green Rivers (from USGS publication HA 730-C). Water samples from Mesaverde sands in the nearby Natural Buttes Unit yielded highly saline water.

#### Geologic Setting (TABLE 2.1)

The proposed enhanced oil recovery injection well is located in the Greater Monument Butte Field, T7-9S and R15-19E, which lies near the center of the broad, gently northward dipping south flank of the Uinta Basin. More than 450 million barrels of oil (63 MT) have been produced from sediments of the Uinta Basin. The Uinta Basin is a topographic and structural trough encompassing an area of more than 9300 square mi (14,900 km) in northeast Utah. The basin is sharply asymmetrical, with a steep north flank bounded by the east-west-trending Uinta Mountains, and a gently dipping south flank. The Uinta Basin was formed in Paleocene to Eocene time, creating a large area of internal drainage which was filled by the ancestral Lake Uinta. The lacustrine, or fresh water lake-formed, sediments deposited in and around Lake Uinta make up the Uintah and Green River Formations. The southern shore of Lake Uinta was very broad and flat, resulting in large cyclic shifts of the location of the shoreline during the many repeated transgressive and regressive cycles caused by the climatic and tectonic-induced rise and fall of water levels of the lake. Distributary-mouth bars, distributary channels, and near-shore bars are the primary oil producing sandstone reservoirs in the area. (Ref: "Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah Biannual Technical Progress Report, 4/1/99-9/30/99", by C. D. Morgan, Program Manager, November 1999, Contract DE-AC26-98BC15103).

The Duchesne River Formation is absent in this area. Shale and siltstone of the Uintah Formation outcrop and compose the surface rock throughout the area. The lower 600 feet to 800 feet of the Uinta Formation, consisting generally of shale interbedded with occasionally water-bearing sandstone lenses between 5 feet to 20 feet thick, is underlain by the Green River Formation. The

Green River Formation is further subdivided into several Member and local marker units. The cyclic nature of Green River deposition in the southern shore area resulted in numerous stacked, intertonguing deltaic and near-shore sand and silt deposits. Red alluvial shale and siltstone deposits that intertongue with the Green River sediments are of the Colton and Wasatch Formations. Under the Wasatch Formation is the Mesaverde Formation, which consists primarily of continental-origin deposits of interbedded shale, sandstone, and coal.

The geologic dip is about 200 feet per mile, and there are no known surface faults in this area. Veins of gilsonite, a natural resinous hydrocarbon occasionally mined as a resource, occurs in the greater Uintah Basin though it is predominantly found on the eastern margin of the basin near the Colorado border. Vertical veins, generally between 2 ft to 6 ft wide but up to 28 ft wide, may extend many miles in length and occasionally extend as deep as 2000 ft. In this area within the Greater Monument Butte Field there is one known gilsonite vein. This vein is not considered to present a pathway for migration of fluid out of the injection zone because it terminates at depth of about 2000 ft, far above the protective confining layer and much deeper injection zone. Newfield and the owner of this former gilsonite mine have agreed to conditions for operation near this vein to ensure no potential for impact to this vein or to ground water from enhanced oil recovery operations.

**TABLE 2.1**  
**GEOLOGIC SETTING**  
**Blackjack Federal 9-9-9-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Lithology
Uinta: Public. 92	0	250	< 10,000	Predominantly lenticular fluvial sand and shale, with minor lacustrine carbonates
Uinta	250	1,293		Tight sandstone and interbedded shale forming confining layers between individual permeable lenticular sandstones
Green River	1,293	5,865		Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.
Upper Green River: Trona	2,724	2,762		Evaporite
Upper Green River: Mahogany Bench	2,762	2,780		Oil shale
Confining Zone	3,506	3,534		Shale
Green River: Garden Gulch	3,534	4,502		Lacustrine sand, shale, carbonate interbedded with fluvial sand and shale
Green River: Douglas Creek	4,502	5,740	6,846	Interbedded sand, shale, and limestone
Green River: Castle Peak	5,330	5,350		Carbonate
Green River: Basal Carbonate	5,740	5,865		Carbonate

**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 a confining zone which

is free of known open faults or fractures within the Area of Review.

The approved interval for Class II enhanced recovery injection in Blackjack Federal No. 9-9-9-17 is located between the top of the Garden Gulch Member (3534 feet) and the top of the Wasatch Formation estimated to be 5865 feet.

**TABLE 2.2  
INJECTION ZONES  
Blackjack Federal 9-9-9-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)	Fracture Gradient (psi/ft)	Porosity	Exempted?*
Green River: Douglas Creek	4,502	5,740	6,846	0.720		P

\* 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.

The 28-foot (3506 feet - 3534 feet) shale Confining Zone directly overlies the top of the Garden Gulch Member.

**TABLE 2.3  
CONFINING ZONES  
Blackjack Federal 9-9-9-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)
Confining Zone	Shale.	3,506	3,534

**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.

Throughout the Greater Monument Butte Field area undergoing enhanced oil recovery operations, water analyses of the Green River Formation generally exhibit total dissolved solids (TDS) content well in excess of 10,000 mg/l. However, some recent water analyses from the field showed lower TDS values closer to 10,000 mg/l. While rain and surface water recharge into Green River Formation outcrops further south along the Book Cliffs/Roan Cliffs in effect "freshens" the Green River Formation water near those outcrops, in this area of the Monument Butte Field the observed

occasional 'freshening' is ascribed to the effective dilution of the originally in-place high TDS water from injection of relatively fresh water for enhanced oil recovery operations. Water samples from deeper Mesaverde Formation sands in the nearby Natural Buttes Unit yield highly saline water.

The State of Utah "Water Wells and Springs" identifies no public water supply wells within the one-quarter (1/4) mile Area-of-Review (AOR) around Blackjack Federal No. 9-9-9-17.

Technical Publication No. 92: State of Utah, Department of Natural Resources, cites the base of Underground Sources of Drinking Water (USDW) in the Uinta Formation approximately 250 feet from the surface. Absent definitive information relative to the water quality of the Uinta Formation, 250 feet to the base of the Uinta Formation (1,293 feet), EPA will require during plugging and abandonment a cement plug at the base of the Uinta Formation to protect contamination of possible Uinta USDWs.

**TABLE 2.4**  
**UNDERGROUND SOURCES OF DRINKING WATER (USDW)**  
**Blackjack Federal 9-9-9-17**

Formation Name	Formation Lithology	Top (ft)	Base (ft)	TDS (mg/l)
Uinta: Public. 92	Predominantly lenticular fluvial sand and shale, with minor lacustrine carbonates	0	250	< 10,000
Uinta	Interbedded lacustrine sand, shale and carbonate with fluvial sand and shale.	250	1,293	

**Exempted Aquifer(s) (40 CFR 144.7 and 146.4)**

Aquifers exempted from protection as a USDW are listed in TABLE 2.5. Exempted is that portion of the aquifer between the depths listed ("TOP" and "BASE") and within the Exempted Radius of the well's surface location, or for an Area Permit, one-quarter (1/4) mile exterior to the defined Area Permit boundary. "Criteria" corresponds to the appropriate criteria (below) for exemption. "VOLUME" is the maximum volume of fluid which can be injected into the exempted area before the injected fluids exceed the exemption boundary, calculated using the following formula:

$$V = \text{Pi} * \text{radius}^2 * \text{height} * \text{porosity} / 5.615$$

- where V = VOLUME (in barrels)
- Pi = 3.1416
- radius<sup>2</sup> = Exempted Radius (squared) - generally 1/4 mile
- height = height of reservoir ("BOTTOM" - "TOP")
- porosity = reservoir porosity (in percent)
- 5.615 = conversion factor (cubic feet per barrel)

**TABLE 2.5**  
**AQUIFER EXEMPTION**  
**Blackjack Federal 9-9-17**

Formation Name	Top (ft)	Base (ft)	Criteria	Volume (bbl)
Green River: Douglas Creek	4,502	5,740	b(1)	

**An aquifer or a portion thereof may be determined to be an "exempted aquifer" provided it meets criteria, listed below.**

- a It does not currently serve as a source of drinking water; AND
- b(1) It cannot now and will not in the future serve as a source of drinking water because it is mineral, hydrocarbon, or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible; OR
- b(2) It cannot now and will not in the future serve as a source of drinking water because it is situated at a depth or location which makes recovery of water for drinking water purposes economically or technically impractical; OR
- b(3) It cannot now and will not in the future serve as a source of drinking water because it is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; OR
- b(4) It cannot now and will not in the future serve as a source of drinking water because it is located over a Class III well mining area subject to subsidence or catastrophic collapse; OR
- c The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.

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

Blackjack Federal No. 9-9-9-17 was drilled to a total depth of 5,785 feet (KB) feet in the Basal Carbonate Member. Plug back total depth (PBD) is 5,730 feet.

Surface casing (8-5/8 inch) was set at a depth of 308 feet in a 12-1/4 inch hole using 150 sacks of Class "G" cement which was circulated to the surface.

Production casing (5-1/2 inch) was set at a depth of 5,768 feet (KB) in a 7-7/8 inch hole with 300 sacks of Premium Lite II mixed and 450 sacks of 50/50 Pozmix. Top of cement by Cement Bond Log is 140 feet from surface.

CBL analysis does not identify adequate 80% bond index cement bond within the Confining Zone.

The schematic diagram shows enhanced recovery injection perforations in the Douglas Creek Member of the Green River Formation. Additional perforations may be added at a later time between the depths of 3,534 feet (top of Garden Gulch Member) and the estimated top of the Wasatch Formation (5,865 feet) provided the operator first notifies the Director and later submits an updated well completion report (EPA Form 7520-12) and schematic diagram.

The packer will be set no higher than 100 feet above the top perforation.

**TABLE 3.1**  
**WELL CONSTRUCTION REQUIREMENTS**  
**Blackjack Federal 9-9-9-17**

Casing Type	Hole Size (in)	Casing Size (in)	Cased Interval (ft)	Cemented Interval (ft)
Surface	12.25	8.63	0 - 308	0 - 308
Longstring	7.88	5.50	0 - 5,769	140 - 5,769

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 well construction plan 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 details for this "new" injection well is shown in TABLE 3.1.

Remedial cementing may be required if the casing cement is shown to be inadequate by cement bond log or other demonstration of Part II (External) mechanical integrity.

#### **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.

The tubing/casing annulus must be kept closed t all times so that it can be monitored as required under conditions of the Permit.

### Monitoring Devices

The permittee will be required to install and maintain wellhead equipment that allows for monitoring pressures and providing access for sampling the injected fluid. Required equipment may include but is not limited to: 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) fittings or pressure gauges attached to the injection tubing and the TCA for monitoring 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  
AOR AND CORRECTIVE ACTION**

Well Name	Type	Status (Abandoned Y/N)	Total Depth (ft)	TOC Depth (ft)	CAP Required (Y/N)
Blackjack Federal 16-9-9-17	Producer	No	5,750	50	No
Castle Draw #8-9-9-17	Injector	No	5,635	0	No
Federal #33-9H	Injector	No	5,900	1,364	No

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.

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

TABLE 5.1 INJECTION ZONE PRESSURES Blackjack Federal 9-9-9-17			
Formation Name	Depth Used to Calculate MAIP (ft)	Fracture Gradient (psi/ft)	Initial MAIP (psi)
Green River: Douglas Creek	4,682	0.720	1,310

**Approved Injection Fluid**

The approved injection fluid is limited to Class II injection well fluids pursuant to 40 CFR § 144.6(b). For disposal wells injecting water brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production, the fluid may be commingled and the well used to inject other Class II wastes such as drilling fluids and spent well completion, treatment and stimulation fluid. Injection of non-exempt wastes, including unused fracturing fluids or acids, gas plant cooling tower cleaning wastes, service wastes, and vacuum truck and drum rinsate from trucks and drums transporting or containing non-exempt waste, is prohibited.

The proposed injectate will be a blend of culinary-quality water from the Johnson Water District pipeline and/or water from the Green River pipeline, and Green River Formation water from oil wells proximate to the Blackjack Federal No. 9-9-9-17.

**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.

There will be no restrictions on the cumulative volume or daily volume of authorized Class II fluid injected into the approved Green River Formation interval. The Permittee shall not exceed the authorized maximum surface injection pressure.

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

An injection well has mechanical integrity if:

1. there is no significant leak in the casing, tubing, or packer (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 dependent upon well-specific conditions as explained below.

Well construction and site-specific conditions dictate the following requirements for Mechanical Integrity (MI) demonstrations:

**PART I MI:** Internal MI will be demonstrated prior to beginning injection. Since this well is constructed with a standard casing, tubing, and packer configuration, a successful mechanical integrity test (MIT) is required to take place at least once every five (5) years. A demonstration of Part I MI is also required prior to resuming injection following any workover operation that affects the casing, tubing or packer. Part I MI may be demonstrated by a standard tubing-casing annulus pressure test using the maximum permitted injection pressure or 1,000 psi, which ever is less, with a ten (10) percent or less pressure loss over thirty (30) minutes.

**PART II MI:** As the CBL does not exhibit the presence of annulus cement to meet minimum requirements needed to demonstrate zone isolation (at least 18 feet of continuous 80% bond, or better) through the Confining Zone Part II mechanical integrity shall be required. The Part II MI demonstration shall be by Radioactive Tracer Survey or other approved test prior to injection, and at least once within each five (5) year period following the last successful MI test. Approved tests for demonstrating Part II MI include a Temperature Survey, Noise Log or Oxygen Activation Log.

## **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, annulus pressure, monthly injection flow rate and cumulative fluid volume. 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, the well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs, and in accordance with any applicable Federal, State or local law or regulation. Tubing, packer and other downhole apparatus shall be removed. Cement with additives such as accelerators and retarders that control or enhance cement properties may be used for plugs; however, volume-extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. A minimum 50 ft surface plug shall be set inside and outside of the surface casing to seal pathways for fluid migration into the subsurface. Within sixty (60) days after plugging the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. The plugging and abandonment plan is described in Appendix E of the Permit.

The well shall be plugged in a manner that isolates the injection zone and prevents movement of fluid into or between USDWs and in accordance with other applicable Federal, State or local law or regulation. Tubing, packers, and any downhole apparatus shall be removed. Class A, C, G, and H cements, with additives such as accelerators and retarders that control or enhance cement properties, may be used for plugs. However, volume extending additives and gel cements are not approved for plug use. Plug placement shall be verified by tagging. Plugging gel of at least 9.2 lb/gal shall be placed between all plugs. Within sixty (60) days after plugging, the owner or operator shall submit Plugging Record (EPA Form 7520-13) to the Director. The Plugging Record must be certified as accurate and complete by the person responsible for the plugging operation. At a minimum, the following plugs are required:

**PLUG NO. 1: Seal Injection Zone:** Set a cast iron bridge plug (CIBP) no more than fifty (50) feet above the top injection perforation. Place at least twenty (20) feet of cement plug on top of the CIBP.

**PLUG NO. 2: Seal Mahogany Shale and Trona intervals:** Squeeze a cement plug on the backside of the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale approximately 2,675 feet to 2,830 feet (unless pre-existing backside cement precludes cement-squeezing this interval) followed by a minimum 155-foot balanced cement plug inside the 5-1/2 inch casing across the Trona Zone and the Mahogany Shale, approximately 2,675 feet to 2,830 feet.

**PLUG NO. 3: Seal USDWs:** Squeeze a cement plug (1,230 feet - 1,350 feet) on the backside of the 5-1/2 inch casing across the base of the Uinta formation (unless pre-existing backside cement precludes cement-squeezing this interval), followed by a minimum 120-foot balanced 1,230 feet to

1,350 feet.

PLUG NO.4: Seal Surface: Set a Class "G" cement plug within the 5-1/2 inch casing to 358 feet and up the 5-1/2 inch by 8-5/8 inch casings annulus to the surface.

## **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:

A May 27, 2009 demonstration of Financial Responsibility in the amount of \$59,344 has been provided.

The Director may revise the amount required, and may require the Permittee to obtain and provide updated estimates of plugging and abandonment costs to the approved Plugging and Abandonment Plan.

Financial Statement, received May 16, 2008

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

# UNDERGROUND INJECTION CONTROL PROGRAM

## AQUIFER EXEMPTION

EPA PERMIT NO. UT21236-08405

Newfield Production Co.

**TABLE 1.1**  
**AQUIFER EXEMPTION PROPOSAL(S)**  
**Blackjack Federal 9-9-9-17**

Formation Name	Top (ft)	Base (ft)	TDS (mg/l)
Green River: Douglas Creek	4,502.00	5,740.00	6,846.00

The formation listed above is hereby exempted from protection as an underground source of drinking water (USDW) in compliance with provisions of the Safe Drinking Water Act as amended (42 USC 300f-300j-9, commonly known as the SDWA) and attendant regulations at Title 40 of the Code of Federal Regulations, within the subsurface interval shown and within a 1/4 mile radial distance from the surface location of the:

Blackjack Federal 9-9-9-17  
Monument Butte (Duchesne)  
2035' FSL & 688' FEL, NESE S9, T9S, R17E  
Duchesne County, UT

This aquifer exemption is granted in conjunction with an Underground Injection Control Permit issued for the injection of Class II fluids. This Aquifer Exemption has no expiration date.

The effective date of this exemption is ~~\_\_\_\_\_~~ **OCT 28 2009**

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

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
USA UTU-74806

**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.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:  
GMBU

1. TYPE OF WELL: OIL WELL  GAS WELL  OTHER

8. WELL NAME and NUMBER:  
BLACKJACK FEDERAL 9-9-9-17

2. NAME OF OPERATOR:  
NEWFIELD PRODUCTION COMPANY

9. API NUMBER:  
4301332517

3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052 PHONE NUMBER 435.646.3721

10. FIELD AND POOL, OR WILDCAT:  
GREATER MB UNIT

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 2035 FSL 688 FEL

COUNTY: DUCHESNE

OTR/TR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NESE, 9, T9S, R17E

STATE: UT

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 (Submit in Duplicate)  Approximate date work will _____	<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"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARITLY 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 FLAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of Work Completion: 05/26/2010	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input checked="" type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input type="checkbox"/> OTHER: -
	<input checked="" 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.

The subject well has been converted from a producing oil well to an injection well on 05/19/2010.

On 05/18/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 05/26/2010 the casing was pressured up to 1280 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 420 psig during the test. There was not an EPA representative available to witness the test.

EPA# UT21236-08405

API# 43-013-32517

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

NAME (PLEASE PRINT) Lucy Chavez-Naupoto

TITLE Administrative Assistant

SIGNATURE *Lucy Chavez-Naupoto*

DATE 06/01/2010

(This space for State use only)

**RECEIVED**  
**JUN 07 2010**  
**DIV. OF OIL, GAS & MINING**

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 checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. USA UTU-74806
2. Name of Operator NEWFIELD PRODUCTION COMPANY		6. If Indian, Allottee or Tribe Name.
3a. Address    Route 3 Box 3630 Myton, UT 84052	3b. Phone    (include are code) 435.646.3721	7. If Unit or CA/Agreement, Name and/or GMBU
4. Location of Well    (Footage, Sec., T., R., M., or Survey Description) 2035 FSL 688 FEL NESE Section 9 T9S R17E		8. Well Name and No. BLACKJACK FEDERAL 9-9-9-17
		9. API Well No. 4301332517
		10. Field and Pool, or Exploratory Area GREATER MB UNIT
		11. County or Parish, State DUCHESNE, UT

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, 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	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug & Abandon	<input type="checkbox"/> Temporarily Abandon	Change Status _____
	<input checked="" type="checkbox"/> Convert to Injector	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	_____

13. Describe Proposed or Completed Operation: (Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat 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.)

The subject well has been converted from a producing oil well to an injection well on 05/19/2010.

On 05/18/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well. On 05/26/2010 the casing was pressured up to 1280 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tubing pressure was 420 psig during the test. There was not an EPA representative available to witness the test.

EPA# UT21236-08405      API# 43-013-32517

I hereby certify that the foregoing is true and correct (Printed/ Typed) Lucy Chavez-Naupoto	Title Administrative Assistant
Signature 	Date 06/01/2010
<b>THIS SPACE FOR FEDERAL OR STATE OFFICE USE</b>	

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

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious and fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

**RECEIVED**  
**JUN 07 2010**  
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 80202-2466

EPA Witness: \_\_\_\_\_ Date: 05/26/10  
 Test conducted by: Dale Giles  
 Others present: \_\_\_\_\_

Well Name: <u>Blackjack Fed. 9-9-9-17</u>		Type: ER SWD	Status: AC TA UC
Field: _____			
Location: _____	Sec: <u>9 T 9 N 10 R 17 1/2 W</u>	County: <u>Duchesne</u>	State: <u>UT</u>
Operator: _____			
Last MIT: <u>/ /</u>	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: 0 psig

MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>420</u> psig	psig	psig
End of test pressure	<u>420</u> psig	psig	psig
<b>CASING / TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1280</u> psig	psig	psig
5 minutes	<u>1280</u> psig	psig	psig
10 minutes	<u>1280</u> psig	psig	psig
15 minutes	<u>1280</u> psig	psig	psig
20 minutes	<u>1280</u> psig	psig	psig
25 minutes	<u>1280</u> psig	psig	psig
30 minutes	<u>1280</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> 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.:

Signature of Witness: \_\_\_\_\_

7

8

9

10

11

NOON

1

2

3

4

5

6

6 PM

8

7

6 AM

5

4

3

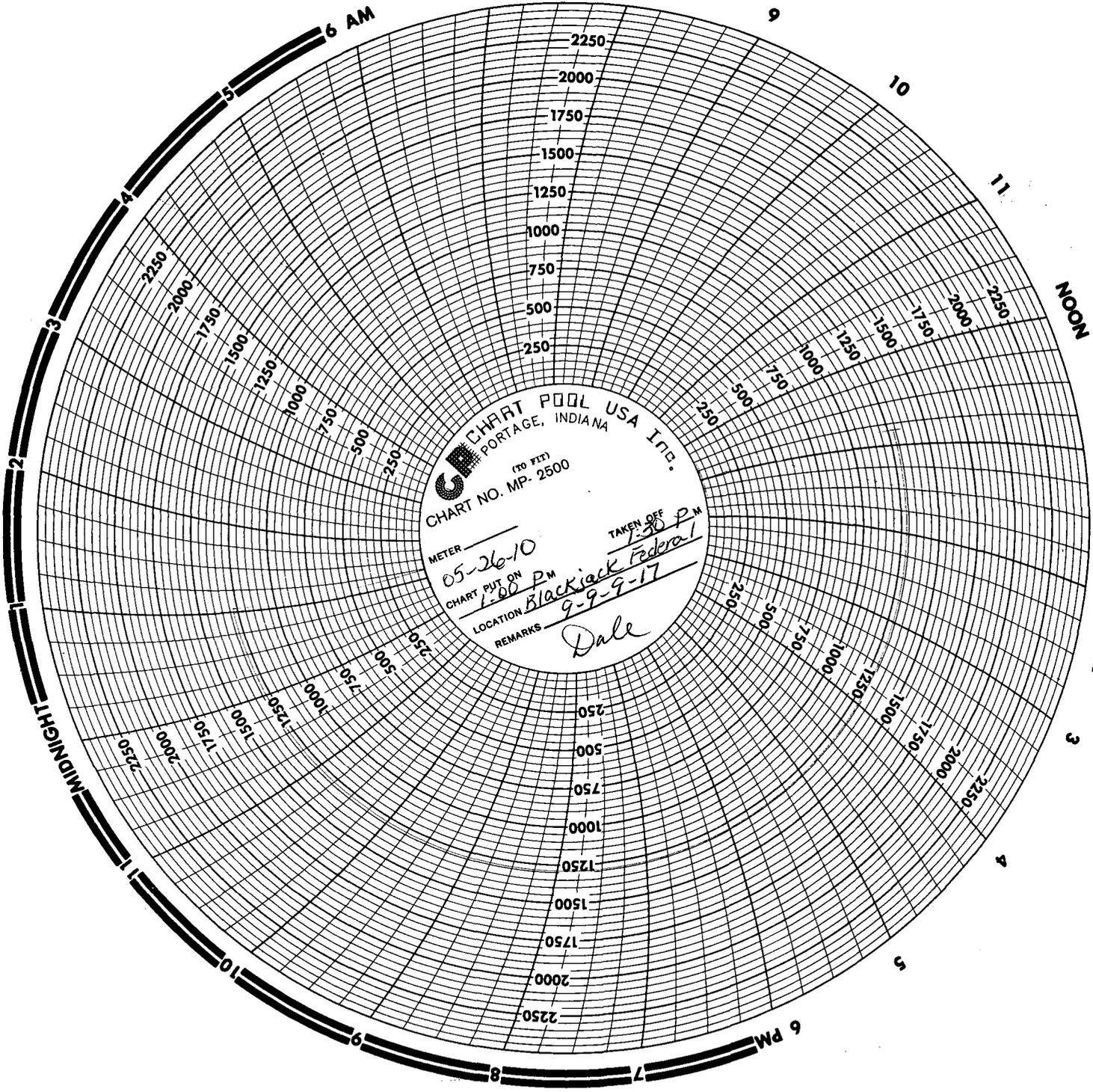
2

MIDNIGHT

**CHART POOL USA Inc.**  
 PORTAGE, INDIANA  
 (70 FT)  
 CHART NO. MP- 2500

METER \_\_\_\_\_  
 05-26-10  
 CHART PUT ON 1-00 P.M.  
 LOCATION *Blackjack Federal*  
 9-9-9-17  
 REMARKS *Dale*

TAKEN OFF 7-30 P.M.



**Daily Activity Report**

Format For Sundry

**BLACKJACK 9-9-9-17****3/1/2010 To 7/30/2010****5/18/2010 Day: 1****Conversion**

WWS #7 on 5/18/2010 - LD rod string & pump. Start TOH W/ production tbg. - MIRU Western rig #7. RU HO trk to annulus & pump 60 BW @ 250°F. RU pumping unit & unseat rod pump. Flush tbg & rods W/ 30 BW @ 250°F. Re-seat pump, soft joint rod string & strip off flow-T. Fill tbg W/ 12 BW. Pressure test tbg to 3000 psi. Retrieve rod string & unseat pump. TOH & LD rod string and pump. Re-flushed rods twice more on TOH. ND wellhead & release TA @ 5587'. NU BOP. TOH & talley production tbg. Break each connection, clean & inspect pins and apply Liquid O-ring to pins. Out W/ 100 jts. SIFN.

**Daily Cost:** \$0**Cumulative Cost:** (\$15,239)

---

**5/19/2010 Day: 2****Conversion**

WWS #7 on 5/19/2010 - Finished TOH W/ tbg. TIH W/ packer. Testing injection string. - RU HO trk & flush tbg W/ 30 BW @ 250°F. Con't TOH & talley production tbg. Break each connection, clean & inspect pins and apply Liquid O-ring to pins. LD btm 32 jts & BHA. MU & TIH W/ new Weatherford 5 1/2" Arrowset 1-X packer (W/ wicker slips & W.L. re-entry guide), new 2 7/8 SN and 143 jts 2 7/8 8rd 6.5# J-55 tbg. Re-torque each connection on TIH. RU HO trk & pump 10 bbls pad. Drop standing valve & pump to SN. Pressure test tbg to 3000 psi. Bled air & re-bumped pressure several times. Having gas issues-not a solid test. Pressure up to 3000 psi & SIFN.

**Daily Cost:** \$0**Cumulative Cost:** (\$8,921)

---

**5/20/2010 Day: 3****Conversion**

WWS #7 on 5/20/2010 - Confirmed tbg test. Set & test packer. RDMOSU. - SITP @ 2500 psi. RU HO trk & bump tbg pressure to 3000 psi. Final test held solid for 30 minutes. Retrieve standing valve W/ overshot on sandline. ND BOP & land tbg on flange. Mix 15 gals Multi-Chem C-6031 & 5 gals B-8850 in 70 bbls fresh water. Pump dn annulus @ 90°F. PU on tbg & set pkr W/ SN @ 4655', CE @ 4659' & EOT @ 4663'. Land tbg W/ 15,000# tension. NU wellhead. Pressure test annulus & pkr to 1500 psi. Holding solid after 1 hour. RDMOSU. - Perform MIT.

**Daily Cost:** \$0**Cumulative Cost:** (\$7,222)

---

**5/28/2010 Day: 4****Conversion**

Rigless on 5/28/2010 - MIT on Well - On 5/18/2010 Jason Deardorff with the EPA was contacted concerning the initial MIT on the above listed well (BlackJack 9-9-9-17). On 5/26/2010 the csg was pressured up to 1280 psig and charted for 30 minutes with no pressure loss. The well was not injecting during the test. The tbg pressure was 420 psig during the test. There was not an EPA representative available to witness the test. Final Report! EPA# UT21236-08405 API#43-013-32517 **Finalized**

**Daily Cost:** \$0**Cumulative Cost:** \$18,098

---

**Pertinent Files: Go to File List**

**STATE OF UTAH**  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

5. LEASE DESIGNATION AND SERIAL NUMBER:  
USA UTU-74806

**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.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT or CA AGREEMENT NAME:  
GMBU

1. TYPE OF WELL: OIL WELL  GAS WELL  OTHER

8. WELL NAME and NUMBER:  
BLACKJACK FEDERAL 9-9-9-17

2. NAME OF OPERATOR:  
NEWFIELD PRODUCTION COMPANY

9. API NUMBER:  
4301332517

3. ADDRESS OF OPERATOR: Route 3 Box 3630 CITY Myton STATE UT ZIP 84052 PHONE NUMBER 435.646.3721

10. FIELD AND POOL, OR WILDCAT:  
GREATER MB UNIT

4. LOCATION OF WELL:  
FOOTAGES AT SURFACE: 2035 FSL 688 FEL

COUNTY: DUCHESNE

OTR/OTR. SECTION. TOWNSHIP. RANGE. MERIDIAN: NESE, 9, T9S, R17E

STATE: UT

**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 <u>06/21/2010</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"/> TEMPORARITLY 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 FLAIR
	<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/STOP)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: - Put on Injection
	<input checked="" 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.

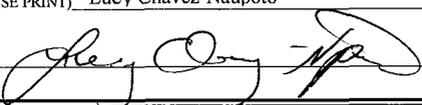
The above reference well was put on injection at 12:30 PM on 06-21-2010.

EPA # UT21236-08405 API # 43-013-32517

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

NAME (PLEASE PRINT) Lucy Chavez-Naupoto

TITLE Administrative Assistant

SIGNATURE 

DATE 06/21/2010

(This space for State use only)

**RECEIVED**  
**JUN 28 2010**  
**DIV. OF OIL, GAS & MINING**

<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> UTU-74806
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</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>7. UNIT or CA AGREEMENT NAME:</b> GMBU (GRRV)
<b>1. TYPE OF WELL</b> Water Injection Well		<b>8. WELL NAME and NUMBER:</b> BLACKJACK FED 9-9-17
<b>2. NAME OF OPERATOR:</b> NEWFIELD PRODUCTION COMPANY		<b>9. API NUMBER:</b> 43013325170000
<b>3. ADDRESS OF OPERATOR:</b> Rt 3 Box 3630 , Myton, UT, 84052	<b>PHONE NUMBER:</b> 435 646-4825 Ext	<b>9. FIELD and POOL or WILDCAT:</b> MONUMENT BUTTE
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 2035 FSL 0688 FEL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NESE Section: 09 Township: 09.0S Range: 17.0E Meridian: S		<b>COUNTY:</b> DUCHESNE
		<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"/> ALTER CASING	<input type="checkbox"/> CASING REPAIR
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 5/19/2015	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> CHANGE WELL NAME
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> CONVERT WELL TYPE
<input type="checkbox"/> DRILLING REPORT Report Date:	<input type="checkbox"/> DEEPEN	<input 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: <input type="text" value="5 YR MIT"/>

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

5 YR MIT performed on the above listed well. On 05/19/2015 the casing was pressured up to 1466 psig and charted for 30 minutes with no pressure loss. The well was injecting during the test. The tbq pressure was 1731 psig during the test. There was not an EPA representative available to witness the test. EPA #UT22197-08405

**Accepted by the  
Utah Division of  
Oil, Gas and Mining  
FOR RECORD ONLY  
May 26, 2015**

<b>NAME (PLEASE PRINT)</b> Lucy Chavez-Naupoto	<b>PHONE NUMBER</b> 435 646-4874	<b>TITLE</b> Water Services Technician
<b>SIGNATURE</b> N/A	<b>DATE</b> 5/22/2015	

## 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 80202-2466

EPA Witness: \_\_\_\_\_ Date: 5/19/15  
 Test conducted by: Johnny Daniels  
 Others present: \_\_\_\_\_

Well Name: <u>Blackhawk Federal 9-9-9-17</u>	Type: ER SWD	Status: AC TA UC
Field: <u>Gambin</u>		
Location: <u>NE/SE</u> Sec: <u>9 T 9 N/S R 17 E/W</u> County: <u>Duchesne</u> State: <u>UT</u>		
Operator: <u>NFX</u>		
Last MIT: <u>1</u> / <u>1</u>	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: 301 bpd

Pre-test casing/tubing annulus pressure: 0 psig

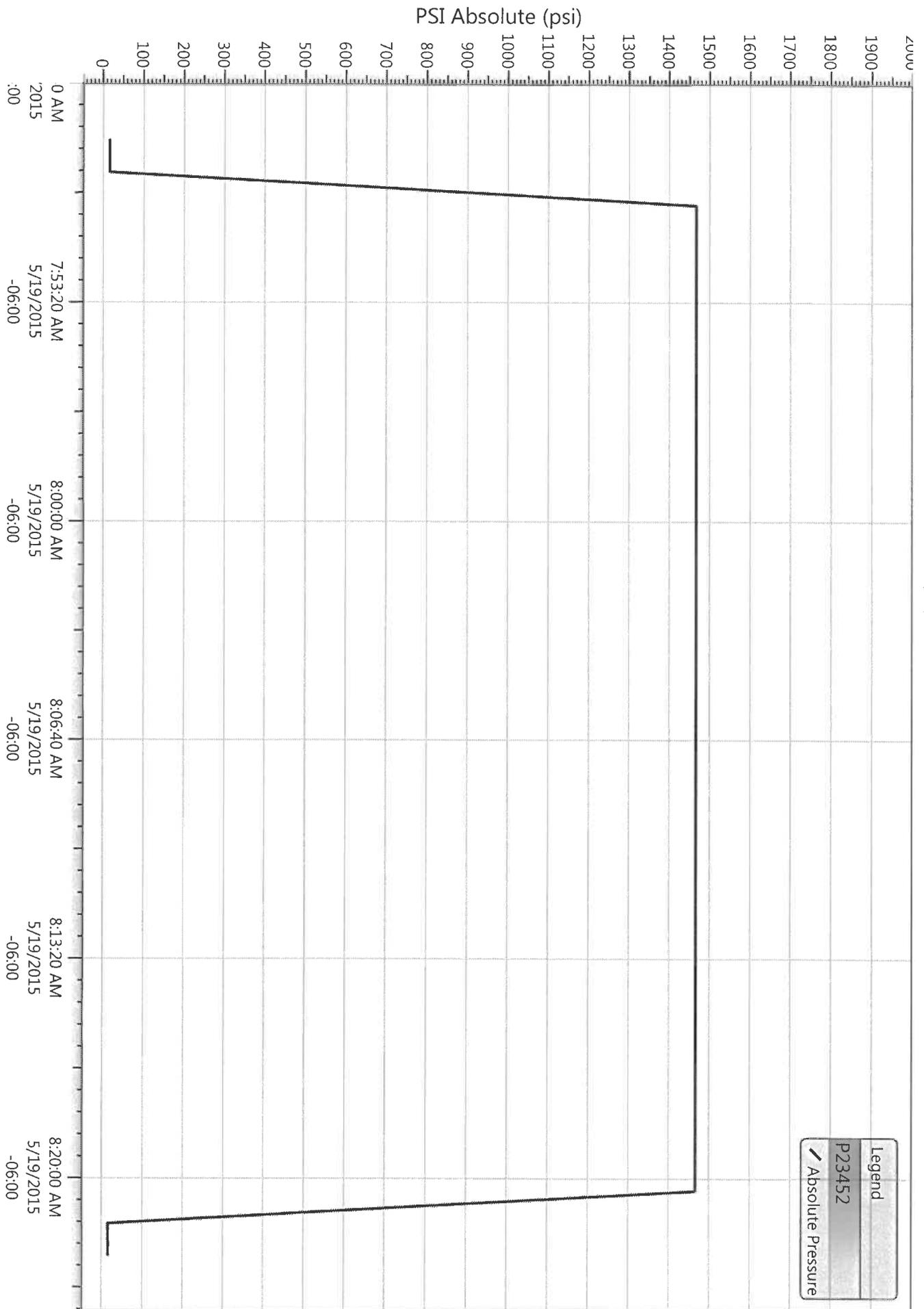
MIT DATA TABLE	Test #1	Test #2	Test #3
<b>TUBING PRESSURE</b>			
Initial Pressure	<u>1731</u> psig	psig	psig
End of test pressure	<u>1731</u> psig	psig	psig
<b>CASING/TUBING ANNULUS PRESSURE</b>			
0 minutes	<u>1467</u> psig	psig	psig
5 minutes	<u>1467</u> psig	psig	psig
10 minutes	<u>1467</u> psig	psig	psig
15 minutes	<u>1467</u> psig	psig	psig
20 minutes	<u>1466</u> psig	psig	psig
25 minutes	<u>1466</u> psig	psig	psig
30 minutes	<u>1466</u> psig	psig	psig
_____ minutes	psig	psig	psig
_____ minutes	psig	psig	psig
<b>RESULT</b>	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> Fail	<input type="checkbox"/> Pass <input type="checkbox"/> 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.:

Signature of Witness: Johnny Daniels



Blackjack 9-9-9-17 MIT  
5/19/2015 7:48:18 AM

Legend  
P23452  
/ Absolute Pressure

# Blackjack Federal 9-9-17

Spud Date: 9/16/04  
 Put on Production: 11/19/04  
 GL: 5193' KB: 5205'

Initial Production: BOPD,  
 MCFD, BWPD

## SURFACE CASING

CSG SIZE: 8-5/8"  
 GRADE: J-55  
 WEIGHT: 24#  
 LENGTH: 7 jts. (298.42')  
 DEPTH LANDED: 308.42' KB  
 HOLE SIZE: 12-1/4"  
 CEMENT DATA: 150 sxs Class "G" cmt, est 4 bbls cmt to surf.

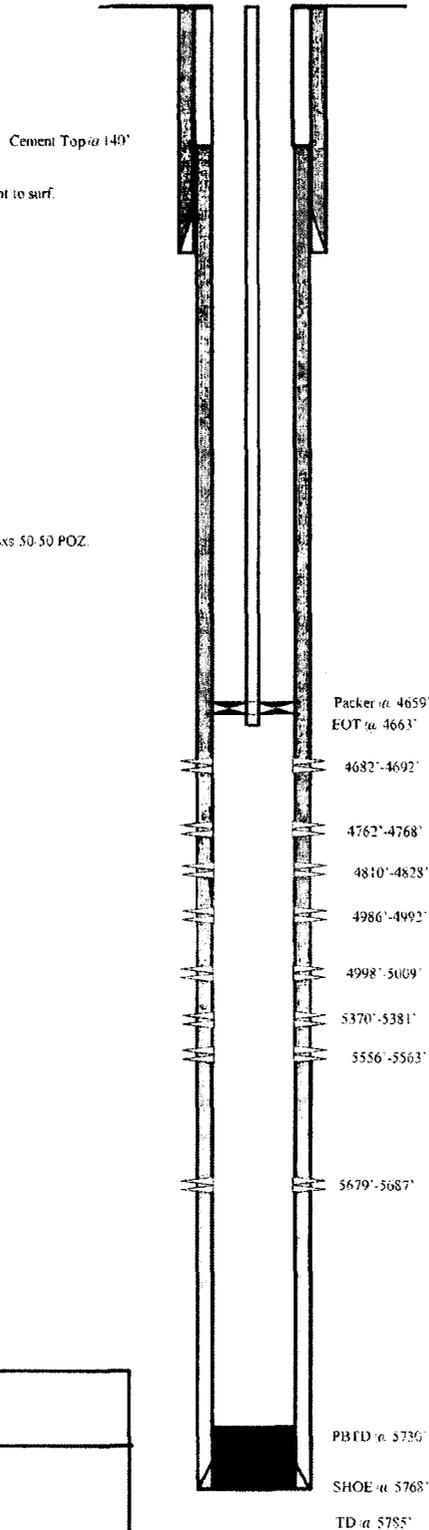
## PRODUCTION CASING

CSG SIZE: 5-1/2"  
 GRADE: J-55  
 WEIGHT: 15.5#  
 LENGTH: 136 jts. (5772.6')  
 DEPTH LANDED: 5768.6' KB  
 HOLE SIZE: 7-7/8"  
 CEMENT DATA: 300 sxs Prem. Lite II mixed & 450 sxs 50-50 POZ.  
 CEMENT TOP AT: 140'

## TUBING

SIZE GRADE/WT: 2-7/8" J-55 6.5#  
 NO. OF JOINTS: 143 jts (4642.6')  
 SEATING NIPPLE: 2-7/8" (1.10')  
 SN LANDED AT: 4654.6' KB  
 CE @ 4658.99'  
 TOTAL STRING LENGTH: EOT @ 4663'

Injection Wellbore  
 Diagram



## FRAC JOB

11/15/04 5556'-5687' **Frac CP4.5 sands as follows:**  
 23,857# 20-40 sand in 511 bbls Lightning  
 Frac 17 fluid. Treated @ avg press of 1925 psi  
 w avg rate of 24.5 BPM. ISIP 2020 psi. Calc  
 flush: 5554 gal. Actual flush: 5628 gal.

11/15/04 5370'-5381' **Frac CP 1 sands as follows:**  
 78,520# 20-40 sand in 610 bbls Lightning  
 Frac 17 fluid. Treated @ avg press of 1860 psi  
 w avg rate of 24.9 BPM. ISIP 1975 psi. Calc  
 flush: 5368 gal. Actual flush: 5376 gal.

11/15/04 4986'-5009' **Frac A3 sands as follows:**  
 65,716# 20-40 sand in 533 bbls Lightning  
 Frac 17 fluid. Treated @ avg press of 1553 psi  
 w avg rate of 24.9 BPM. ISIP 1980 psi. Calc  
 flush: 4984 gal. Actual flush: 5040 gal.

11/16/04 4762'-4828' **Frac B.5, and 2 sands as follows:**  
 85,068# 20-40 sand in 626 bbls Lightning  
 Frac 17 fluid. Treated @ avg press of 1664 psi  
 w avg rate of 24.8 BPM. ISIP 2150 psi. Calc  
 flush: 4760 gal. Actual flush: 4788 gal.

11/16/04 4682'-4692' **Frac C sands as follows:**  
 63,382# 20-40 sand in 511 bbls Lightning  
 Frac 17 fluid. Treated @ avg press of 1950 psi  
 w avg rate of 23 BPM. ISIP 2320 psi. Calc  
 flush: 4680 gal. Actual flush: 4578 gal.

03/05/07 **Tubing Leak:** Updated rod and tubing detail.

05/19/210 **Convert to Injection Well**

05/26/10 **MIT Completed - tbg detail updated**

## PERFORATION RECORD

Date	Depth Range	Tool	Holes
11/08/04	5679'-5687'	4 JSPF	32 holes
11/08/04	5556'-5563'	4 JSPF	28 holes
11/15/04	5370'-5381'	4 JSPF	44 holes
11/15/04	4998'-5009'	4 JSPF	44 holes
11/15/04	4986'-4992'	4 JSPF	24 holes
11/15/04	4810'-4828'	4 JSPF	72 holes
11/15/04	4762'-4768'	4 JSPF	24 holes
11/16/04	4682'-4692'	4 JSPF	40 holes

**NEWFIELD**

Blackjack Federal 9-9-17  
 2035 FSL & 688 FEL  
 NE/SE Sec. 9, T9S R17E  
 Duchesne, County  
 API# 43-013-32517; Lease# UTU-74806