



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

2006 MAY 11 AM 9

1a. Type of Work DRILL	5. Lease Number NMSF-078388 Unit Reporting Number NMNM 078394B	RECEIVED OTO FARMINGTON
1b. Type of Well GAS	6. If Indian, All. or Tribe	
2. Operator <b>BURLINGTON</b> RESOURCES Oil & Gas Company, LP	7. Unit Agreement Name Huerfanito Unit	
3. Address & Phone No. of Operator PO Box 4289, Farmington, NM 87499 (505) 326-9700	8. Farm or Lease Name	
4. Location of Well Unit H (SENE), 1915' FNL & 780' FEL,  Latitude 36° 30.2682'N Longitude 107° 44.0550'W	9. Well Number #91E  10. Field, Pool, Wildcat Basin Dakota  11. Sec., Twn, Rge, Mer. (NMPM) H Sec. 12, T26N, R9W  API # 30-045-3 3741	
14. Distance in Miles from Nearest Town	12. County San Juan	13. State NM
15. Distance from Proposed Location to Nearest Property or Lease Line 780'		
16. Acres in Lease	17. Acres Assigned to Well DK- 320 - N/2	
18. Distance from Proposed Location to Nearest Well, Drig, Compl, or Applied for on this Lease Twinned with the Huerfanito Unit #66R (PC)		
19. Proposed Depth 6482'	20. Rotary or Cable Tools Rotary	
21. Elevations (DF, FT, GR, Etc.) 6179' GL	22. Approx. Date Work will Start	
23. Proposed Casing and Cementing Program See Operations Plan attached		
24. Authorized by: <u>Patsy Clugston</u> Sr. Regulatory Specialist	Date <u>5/11/06</u>	

PERMIT NO.

APPROVAL DATE

APPROVED BY [Signature]

TITLE ARM

DATE 5/30/06

Archaeological Report attached  
Threatened and Endangered Species Report attached

NOTE: This format is issued in lieu of U.S. BLM Form 3160-3

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

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE  
SUBJECT TO COMPLIANCE WITH ATTACHED  
"GENERAL REQUIREMENTS".

NMOCD

District I  
PO Box 1980, Hobbs, NM 88241-1980

District II  
PO Drawer 00, Artesia, NM 88211-0719

District III  
1000 Rio Brazos Rd., Aztec, NM 87410

District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
PO Box 2088  
Santa Fe, NM 87504-2088

Form C-102

Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

2006 MAY 11 AM 9:40  
AMENDED REPORT

RECEIVED

OIL CONSERVATION DIVISION

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number <b>30-C45- 33741</b>	*Pool Code <b>71599</b>	*Pool Name <b>Basin Dakota</b>
*Property Code <b>7138</b>	*Property Name <b>HUERFANITO UNIT</b>	*Well Number <b>91E</b>
*GRID No. <b>14538</b>	*Operator Name <b>BURLINGTON RESOURCES OIL &amp; GAS COMPANY, LP</b>	*Elevation <b>6179'</b>

10 Surface Location


UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	12	26N	9W		1915	NORTH	780	EAST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H									

12 Dedicated Acres <b>DK 320.0 ac N2</b>	13 Joint or Infill	14 Consolidation Code	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED  
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	5203.44'	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief <i>Patsy Clugston</i> Signature <b>Patsy Clugston</b> Printed Name <b>Sr. Regulatory Specialist</b> Title <b>4/24/2006</b> Date
LEASE USA SF-078388	LAT: 36°30.2682' N LONG: 107°44.0550' W DATUM: NAD27 1820'	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Date of Survey: MARCH 2, 2006 Signature and Seal of Professional Surveyor  <b>JASON C. EDWARDS</b> Certificate Number 15269
5271.42'	12	
	5208.72'	

Office

Energy, Minerals and Natural Resources

May 27, 2004

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

WELL API NO.

30-045- 33741

5. Indicate Type of Lease

STATE ☐FEE ☐

6. State Oil &amp; Gas Lease No.

7. Lease Name or Unit Agreement Name

Huerfanito Unit

8. Well Number

#91E

9. OGRID Number

14538

10. Pool name or Wildcat

Basin Dakota

## SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well:

Oil Well ☐Gas Well ☒

Other

2. Name of Operator

BURLINGTON RESOURCES OIL &amp; GAS COMPANY LP

3. Address of Operator

3401 E. 30TH STREET, FARMINGTON, NM 87402

4. Well Location

Unit Letter H : 1915' feet from the North line and 780' feet from the East line  
Section 12 Township 26N Range 9W NMPM County San Juan

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

6179' GL

Pit or Below-grade Tank Application

☐ or Closure ☐Pit type New Drill Depth to Groundwater <50' Distance from nearest fresh water well>1000' Distance from nearest surface water

&gt;200'

Pit Liner Thickness:

12

mil

Below-Grade Tank:

Volume

bbls;

Construction Material

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

## NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐PLUG AND ABANDON ☐TEMPORARILY ABANDON ☐CHANGE PLANS ☐PULL OR ALTER CASING ☐MULTIPLE COMPL ☐

## SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ALTERING CASING ☐COMMENCE DRILLING OPNS. ☐P AND A ☐CASING/CEMENT JOB ☐

OTHER:

New Drill ☒OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

New Drill, Lined:

Burlington Resources proposes to construct a new drilling pit and an associated vent/flare pit. Based on Burlington's interpretation of the Ecosphere's risk ranking criteria, the new drilling pit will be a lined pit as detailed in Burlington's Revised Drilling / Workover Pit Construction / Operation Procedures dated November 11, 2004 on file at the NMOCD office. A portion of the vent/flare pit will be designed to manage fluids and that portion will be lined as per the risk ranking criteria. Burlington Resources anticipates closing these pits according to the Drilling / Workover Pit Closure Procedure dated August 2, 2004 on file at the NMOCD office

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☒ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE

TITLE

Sr. Regulatory Analyst

DATE

4/28/2006

Type or print name

Patsy Clugston

E-mail address:

pclugston@br-inc.com

Telephone No.

505-326-9518

For State Use Only

APPROVED BY

TITLE

DEPUTY OIL &amp; GAS INSPECTOR, DIST. 4

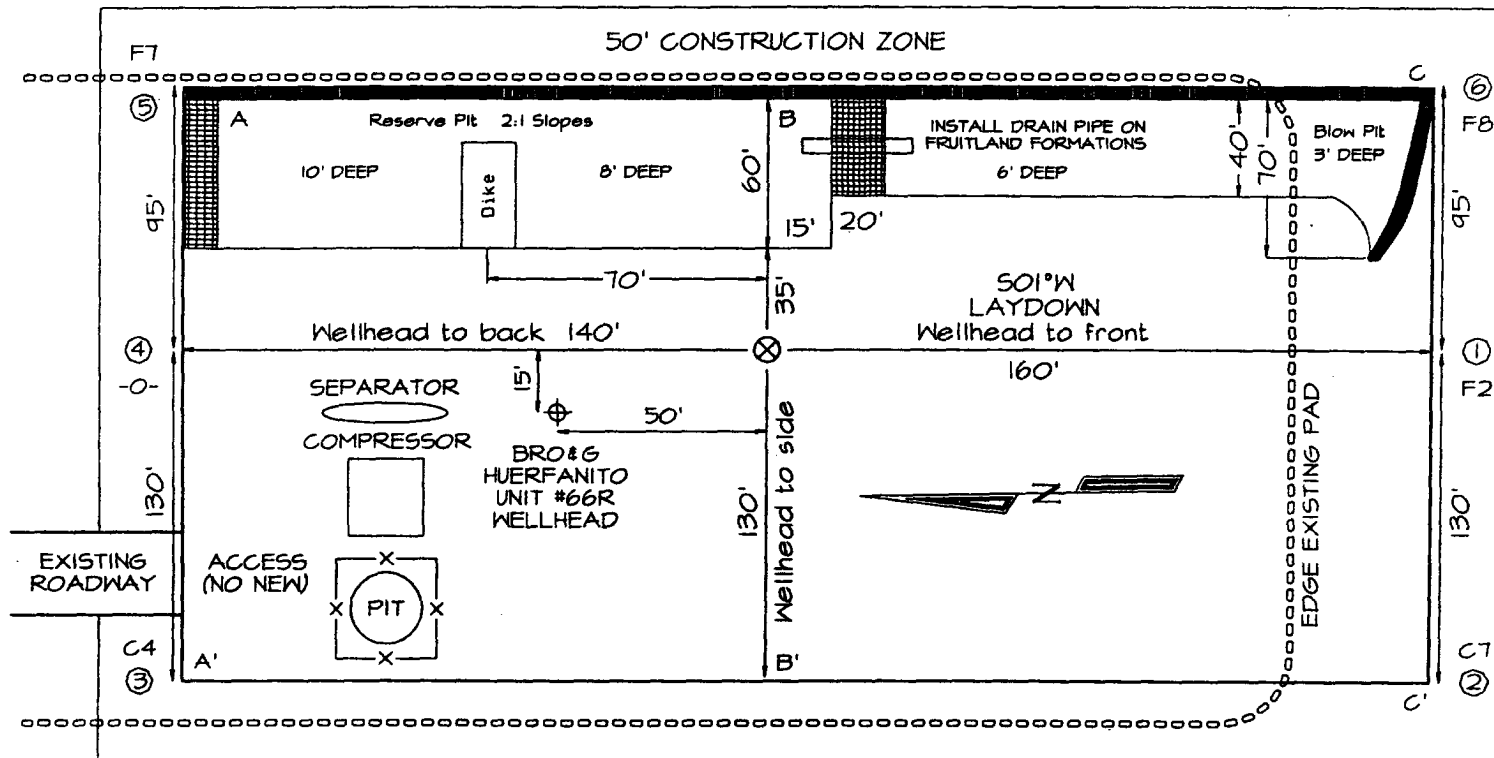
DATE

JUN 01 2006

Conditions of Approval (if any):

**BURLINGTON RESOURCES OIL & GAS COMPANY, LP  
HUERFANITO UNIT #91E, 1915' FNL & 780' FEL  
SECTION 12, T26N, R9W, NMPM, SAN JUAN COUNTY, NM  
GROUND ELEVATION: 6179' DATE: MARCH 2, 2006**

LATITUDE: 36.50448° N  
LONGITUDE: 107.73486° W  
DATUM: NAD1983

$$\frac{225' \times 300'}{(325' \times 400')} = 2.98 \text{ ACRES}$$


Reserve Pit Dike: to be 8' above Deep side (overflow - 3' wide and 1' above shallow side).  
Blow Pit: overflow pipe halfway between top and bottom and to extend over plastic liner and into blow pit.

A-A'						
6189'						
6179'						
6169'						

B-B'						
6189'						
6179'						
6169'						

C-C'						
6189'						
6179'						
6169'						

Note: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction

## OPERATIONS PLAN

**Well Name:** Huerfanito Unit #91E  
**Location:** 1915' FNL, 780' FEL, Section 12, T-26-N, R-9-W  
San Juan County, New Mexico  
Latitude 36° 30.2682', Longitude 107° 44.0550'  
**Formation:** Basin Dakota  
**Elevation:** 6179' GL

<u>Formation Tops:</u>	<u>Top</u>	<u>Bottom</u>	<u>Contents</u>
Surface	San Jose	1121'	
Ojo Alamo	1121'	1233'	aquifer
Kirtland	1233'	2038'	gas
Fruitland	1746'	2285'	
Pictured Cliffs	1911'	2411'	gas
Lewis	2011'	2758'	gas
Huerfanito Bentonite	2361'	3185'	gas
Chacra	2793'	3835'	gas
Cliff House	3466'	3943'	
Menefee	3561'	4595'	gas
Point Lookout	4238'	4968'	gas
Mancos	4576'	5785'	gas
Gallup	5366'	6585'	gas
Greenhorn	6204'	6638'	gas
Graneros	6258'	6672'	gas
Two Wells	6289'	6745'	
Paguate	6370'	6809'	
Cubero	6433'	6860'	
Encinal	6492'		gas
TD	6482'		

### Logging Program:

Mud Logs/Coring/DST -  
Mud logs - none  
Coring - none  
DST - none  
Open hole - none  
Cased hole - Gamma Ray - surface to TD

### Mud Program:

<u>Interval</u>	<u>Type</u>	<u>Weight</u>	<u>Vis.</u>	<u>Fluid Loss</u>
0- 320'	Spud MUD/Air/Air Mist	8.4-9.0	40-50	no control
320' - 6482'	LSND	8.4-9.0	30-60	no control

### Casing Program (as listed, the equivalent, or better):

<u>Hole Size</u>	<u>Depth Interval</u>	<u>Csg. Size</u>	<u>Wt.</u>	<u>Grade</u>
12 1/4"	0' - 320'	8 5/8"	24.0#	J-55
7 7/8"	0' - 6482'	4 1/2"	10.5#	J-55

**Tubing Program:** 0' - 6482' 2 3/8" 4.7# J-55

### BOP Specifications, Wellhead and Tests:

#### Surface to Intermediate TD -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out surface casing, BOPE and casing will be tested to 600 psi for 30 minutes.

#### Intermediate TD to Total Depth -

11" 2000 psi minimum double gate BOP stack (Reference Figure #1). After nipple-up prior to drilling out intermediate casing, BOPE and casing will be tested to 1500 psi for 30 minutes.

**Surface to Total Depth -**

2" nominal, 2000 psi minimum choke manifold (Reference Figure #3).

**Completion Operations -**

7 1/16" 2000 psi double gate BOP stack (Reference Figure #2). After nipple-up prior to completion, pipe rams, casing and liner top will be tested to 2000 psi for 15 minutes.

**Wellhead -**

8 5/8" x 4 1/2" x 2 3/8" x 2000 psi tree assembly.

**General -**

- Pipe rams will be actuated once each day and blind rams will be actuated once each trip to test proper functioning.
- An upper kelly cock valve with handle available and drill string valves to fit each drill string will be available on the rig floors at all times.
- BOP pit level drill will be conducted weekly for each drill crew.
- All BOP tests & drills will be recorded in daily drilling reports.
- Blind and pipe rams will be equipped with extension hand wheels.

**Cementing:**

8 5/8" surface casing conventionally drilled -

Cement with 321 sacks Type III cement with 0.25 pps Celloflake, 3% calcium chloride. (200% excess, bring cement to surface). Wait on cement appropriate time until cement achieves 250 psi compressive strength at 60 degrees F. prior to nipple up of BOPE. Wait on cement for 8 hrs for conventionally set holes before pressure testing or drilling out from under surface.

Saw tooth guide shoe on bottom. Bowspring centralizers will be run in accordance with Onshore Order #2.

4 1/2" Production Casing Two Stage -

Stage collar set @ 4088'. First Stage: Lead with w/264 sacks Premium Lite HS FM cmt w/0.25 pps celloflake, 0.3% CD-32, 6.25 pps LCM-1 and 1% FL-52. Second Stage: 441 sacks Premium Lite cmt w/3% calcium chloride, 0.4% metasilicate, 0.25 pps celloflake, 5 pps LCM-1 and 0.4% FL-52. (2185 cu ft - 50% excess, circulate to surface, run CBL/temperature survey if cement is not circulated to surface.)

Cement nose guide shoe on bottom with float collar spaced on top of shoe joint. Bowspring centralizers spaced every fourth joint off bottom, to the base of the Ojo Alamo @ 1233'. Two turbolating centralizers at the base of the Ojo Alamo 1233'. Bowspring centralizers spaced every fourth joint from the base of the Ojo Alamo to the base of the surface casing.

Note: If open hole logs are run, cement volumes will be based on 25% excess over caliper volumes.

If hole conditions permit, an adequate water spacer will be pumped ahead of each cement job to prevent cement/ mud contamination or cement hydrati

**Special Drilling Operations (Air/Mist Drilling):**

The following equipment will be operational while air/mist drilling:

- An anchored blooie line will be utilized to discharge all cuttings and circulating medium to the blow pit a minimum of 100' from the wellhead.
- The blooie line will be equipped with an automatic igniter or pilot light.
- Compressors will be located a minimum of 100' from the wellhead in the opposite direction from the blooie line.
- Engines will have spark arresters or water cooled exhaust.

**Special Drilling Operations (Air/Mist Drilling):**

- The rotating head will be properly lubricated and maintained.
- A float valve will be utilized above the bit.
- Mud circulating equipment, water, and mud materials will be sufficient to maintain control of the well.

**Additional Information:**

- The Dakota formation will be completed.
- No abnormal temperatures or hazards are anticipated.
- Anticipated pore pressures are as follows:

Fruitland Coal	300 psi
Pictured Cliffs	600 psi
Mesa Verde	700 psi
Dakota	2500 psi
- Sufficient LCM will be added to the mud system to maintain well control, if lost circulation is encountered below the top of the Pictured Cliffs.
- The north half of Section 12 is dedicated to the Dakota formation.
- This gas is dedicated.

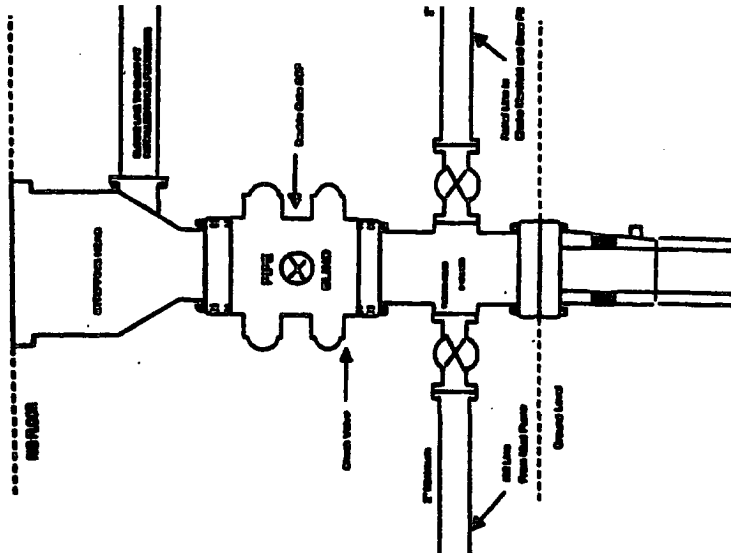
  
Drilling Engineer

Date

5/10/06

# BURLINGTON RESOURCES

## Completion/Workover Rig BOP Configuration 2,000 psi System



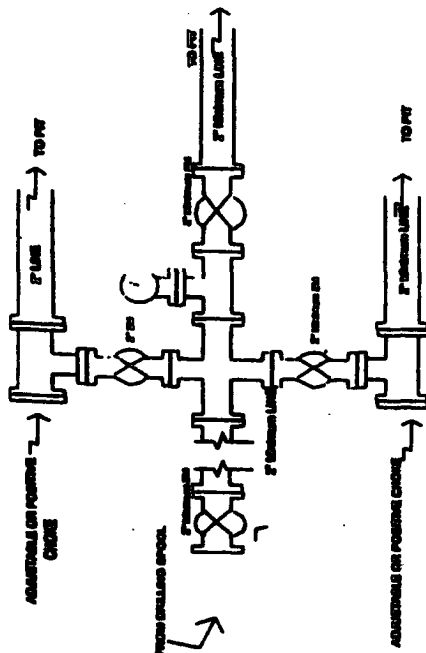
Minimum BOP installation for all Completion/Workover Operations. 7-1/16" bore, 2000 psi minimum working pressure double gate BOP to be equipped with blind and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2000 psi working pressure or greater excluding 800 psi stripping head.

Figure #2

4-20-01

# BURLINGTON RESOURCES

## Drilling Rig Choke Manifold Configuration 2000 psi System



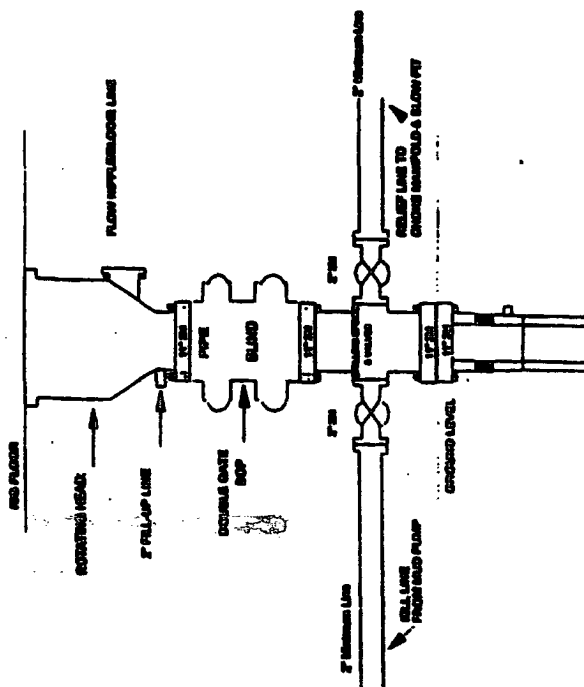
Choke manifold installation from Surface Casing Point to Total Depth. 2,000psi working pressure equipment with two chokes.

Figure #3

4-20-01

# Burlington Resources

## Drilling Rig 2000 psi System



BOP installation from Surface Casing Point to Total Depth. 1 1/2" Bore 2000 psi minimum working pressure double gate BOP to be equipped with blind rams and pipe rams. A stripping head to be installed on the top of the BOP. All BOP equipment is 2,000 psi working pressure.

Figure #1

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