

New Mexico Oil Conservation Division, District I
1625 N. French Drive
Hobbs, NM 88240

Form 3160-3
(September 2001)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

5. Lease Serial No.
NM 54450

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

2. Name of Operator

H.L. Brown Operating L.L.C # 213179

3a. Address

P.O. Box 2237, Midland, Texas 79701

3b. Phone No. (include area code)

432 - 688 - 3726

4. Location of Well (Report location clearly and in accordance with any State requirements. *)

At surface 2540' FSL & 660' FEL, Unit I

At proposed prod. zone

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

8. Lease Name and Well No. **<35316>**
Federal '28' #3

9. API Well No.

30-041-20925

10. Field and Pool, or Exploratory
Bluitt N (Siluro-Devonian)

11. Sec., T., R., M., or Blk. and Survey or Area

Sec 28, T-7 -S, R-37 -E

14. Distance in miles and direction from nearest town or post office*

10 miles ENE of Milnesand, NM

12. County or Parish

Roosevelt

13. State

NM

15. Distance from proposed*
location to nearest
property or lease line, ft.
(Also to nearest drig. unit line, if any) 660'

16. No. of Acres in lease
600

17. Spacing Unit dedicated to this well
80

18. Distance from proposed location*
to nearest well, drilling, completed,
applied for, on this lease, ft. 1139'

19. Proposed Depth
9100'

20. BLM/BIA Bond No. on file
0679788

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4067' GL

22. Approximate date work will start*
09-01-06

23. Estimated duration
38 days

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)

Robert McNaughton

Date

6-23-06

Title

Operations Manager/ Petroleum Engineer

Approved by (Signature)

/S/LARRY D. BRAY

Name (Printed/Typed)

Date

JUL 11 2006

Title

**Assistant Field Manager,
Lands And Minerals**

Office

ROSWELL FIELD OFFICE

APPROVED FOR 1 YEAR

Application approval 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.

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)

DISTRICT I
1825 N. French Dr., Hobbs, NM 88240

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
2000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico

Energy, Minerals and Natural Resources Department

Form C-102
Revised March 17, 1999

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-041-20925	Pool Code 6910	Pool Name Bluitt Siluro-Devonian, North
Property Code 54450 35316	Property Name FEDERAL "28"	Well Number 3
OGRID No. 213179	Operator Name H.L. BROWN OPERATING L.L.C.	Elevation 4067'

Surface Location

UL or lot No. 1	Section 28	Township 7 S	Range 37 E	Lot Idn	Feet from the 2540'	North/South line SOUTH	Feet from the 660'	East/West line EAST	County ROOSEVELT
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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
Dedicated Acres 80	Joint or Infill	Consolidation Code	Order No.	5248 NSL-2548-A 03/03/06					

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

	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. Signature Robert McNaughton Printed Name Operations Mgr./ Engr Title 6-23-06 Date	
	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. JANUARY 18, 2006 Date Surveyed Signature, & Seal of Professional Surveyor W.O. No. 6955 Certificate No. Gary Jones 7977 Basin Surveys	

Submit 3 Copies To Appropriate District
Office
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

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-041-20925
5. Indicate Type of Lease STATE <input type="checkbox"/> FED <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. Federal Oil & Gas Lease No. NM - 544550
7. Lease Name or Unit Agreement Name Federal 28 Com
8. Well Number 3
9. OGRID Number 213179
10. Pool name or Wildcat Bluitt North (Siluro-Devonian)

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

H.L. Brown Operating L.L.C

3. Address of Operator

300 West Louisiana, Midland, Texas 79702

4. Well Location

Unit Letter: **I** : **2540'** feet from the **South** line and **660'** feet from the **East** line

Section **28** Township **T-7** Range **R-37-E** NMPM **Roosevelt** County

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

4067' GL

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type **drilling** Depth to Groundwater **176'** Distance from nearest fresh water well **2 miles SW** Distance from nearest surface water **2 miles SW**

Pit Liner Thickness: **12** mil Below-Grade Tank: Volume **10,000** Bbls; Construction Material **PVC plastic**

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 ☐

OTHER: Construct reserve pit for drilling rig ☒

SUBSEQUENT REPORT OF:

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


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.

According to the State Land Office files, the closest water depth measurement is two miles southwest in Section 5, T-8-S, R-37-E, at 176'. Three miles to the northeast, the water level is at 159' in Section 13, T-7 S, R-37-E.

Will use a single layer - 12 mil liner as per BLM and NMOCD requirements.

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 Operations Manager/ Engineer DATE 6-23-06

Type or print name Robert McNaughton E-mail address: robertm@hloperating.com Telephone No. 432-683-5216
For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any): _____

<p>DRILLING RIG & RESERVE PIT LAYOUT</p> <p>Worksheet supplement for "Application for Permit to Drill or Deepen a Well"</p>	<p>Applicant H.L. Brown Operating L.L.C P.O. Box 2237, Midland Texas 79702</p>
<p>Location: 2540' FSL & 660' FEL Unit I, Section 28, T-7-S, R-37-E Roosevelt Co, NM</p>	<p>Well name and number Federal 28 No. 3</p>

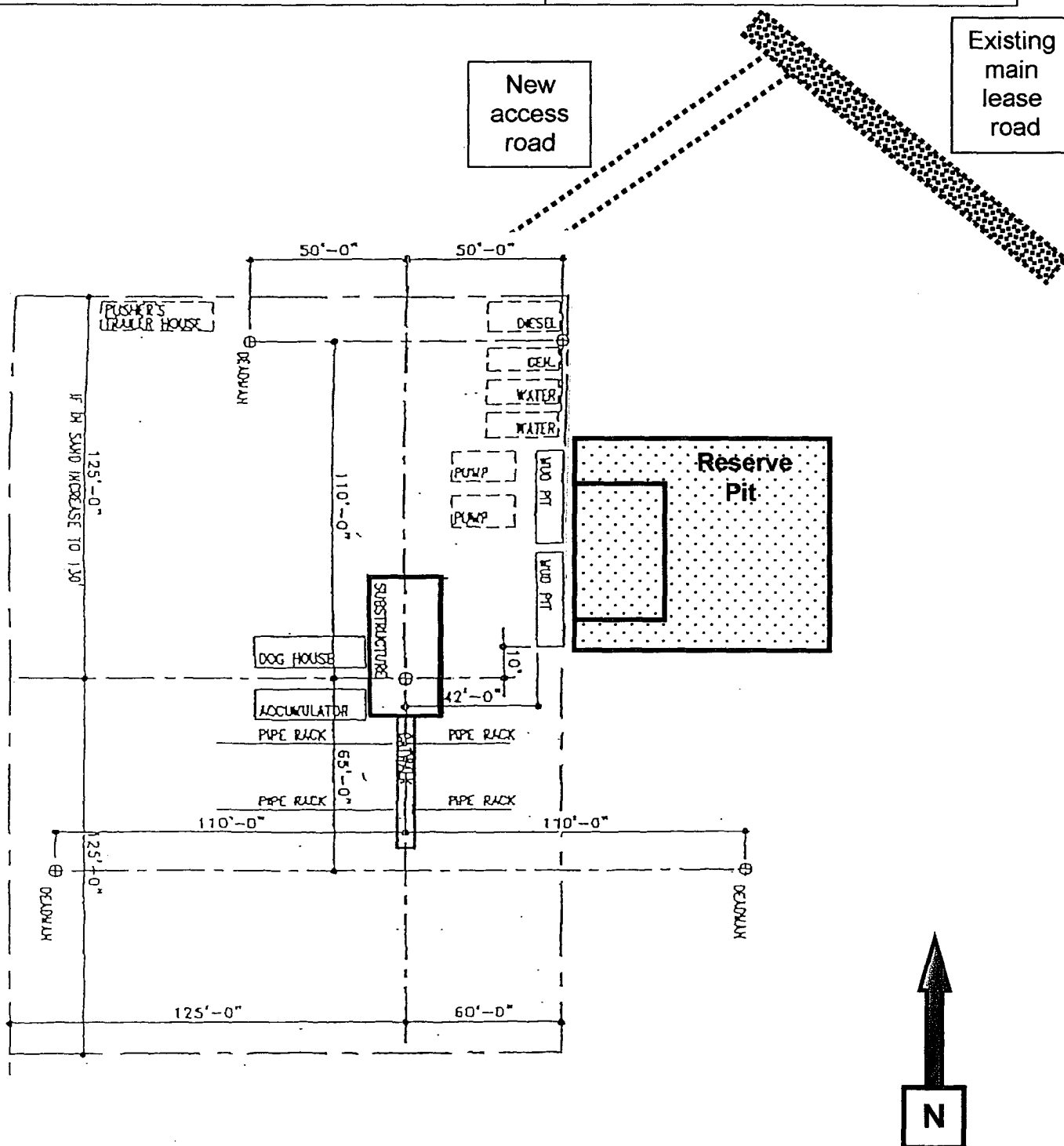


Figure No. 4

Supplemental Drilling Data

H. L. BROWN OPERATING, L. L. C.
Federal "28" Com No. 3
2540' FSL & 660' FEL, Sec. 28, Unit I, T-7-S, R-37-E
Roosevelt County, New Mexico
New Mexico Lease NM - 54450

The following items supplement Form 3160-3 in accordance with instructions contained in onshore Oil and Gas Order No.1:

Overview of Well:

The proposed well will be drilled to about 9100' to test the Devonian formation. 13-3/8" surface pipe will be set at about 515', 8-5/8" intermediate pipe will be set at 3900' and 5-1/2" production casing will be set at 9100'. The Devonian will be perforated and acid stimulated.

1.) Surface Formation: Ogallala

2.) Estimated Top of Geologic Markers:

Rustler Anhydrite	1980'
Yates	2560'
San Andres	3685'
Abo	7000'
Wolfcamp	7975'

3.) Estimated Depths Water, Oil, Gas or Other Mineral Bearing Formations:

Water	None Anticipated
Oil/ Gas	Devonian carbonates at 8900'
Other Minerals	None Anticipated

4.) Proposed Casing and Cementing Program:

Hole Size, in.	Casing Data				Depth, ft	Cement	Expected Top of Cement
	Size	Wt.,#/ft	Grade	Thread			
17-1/2"	13-3/8"	48	H-40	ST&C	510'	500 sx "C" w/ 2% CaCl ₂ , + 1/4# sx celloflake	Surface Must circulate
12-1/4"	8-5/8"	32	J-55	LT&C	3900'	Lead: 1200 sx "C" Poz + 6% gel + celloflake Tail: 300 sx "C" w/ CaCl ₂	Surface Must circulate
7-7/8"	5-1/2"	17.0	J-55	LT&C	0' – 80'	Lead: 1200 sx "H" Poz +	3250'
		15.5	J-55	LT&C	80' – 6900'	10% gel + 5% salt	** tie into
		17.0	J-55	LT&C	6900' – 9100'	Tail: 200 sx "H" w/ FLA	8-5/8" casing

The surface and intermediate casing strings will be tested to 1000 psi. The 5 1/2" casing will be tested to 2000 psi. All casing will be new or used, inspected yellow-band or better.

5.) Pressure Control Equipment:

Pressure control equipment will include a 3000 psi WP blowout preventer stack, sour trim, with both pipe rams and blind rams. Above BOP stack will be an annular BOP, 3000 psi WP with sour trim. Below the double BOP stack will be an adapter spool, 3000 psi WP. On one side of the adapter spool will be a kill line with a check valve and a ball valve. The other side will be a choke manifold with a bleed off line. Hydraulic BOP controls will be checked daily (Figures No. 5 and No. 6).

6.) Circulating Medium:

Depth	Mud Type	Wt. lb/gal	Viscosity sec/1000cc	Filtrate cc/30min	Remarks
0' - 510'	FW-Gel	8.6-9.0	32-34	NC	
510' - 2100'	FW- native	8.6-9.0	29-32	NC	
2100' - 3900'	Cut Brine	9.2-10.3	32-34	NC	Add 2% - 3% oil
3900' - 6800'	FW	8.4-9.2	29-30	NC	
6800' - 7800'	SW-Gel	9.2-10.3	38-40	NC	Add 5% - 6% oil
7800' - 9100'	SW-Gel	9.2-10.3	38-40	10	Mud up for logs and cores

No abnormal pressures are anticipated. Mud is used for borehole stability and filtrate/ shale control and will not be needed for formation pressure control.

7.) Auxiliary Equipment:

- a.) Kelly cock: in mud line above swivel.
- b.) Floats at bit: none planned.
- c.) Mud system monitoring equipment: No automatic equipment planned; will use visual testing and inspection by rig and mud company personnel.

8.) Testing, Logging and Coring Program:

- a.) Samples: Drilling samples will be caught at 10' intervals below 3900'.
- b.) DST and Cores: none planned
- c.) Logging: GR/CNL will be run from surface to TD and the GR/CNL/SDL and DLL/MLL will be run from TD to ~3900'.

9.) Abnormal Pressures, Temperature or Hydrogen Sulfide:

None Anticipated.

10.) Completion Equipment:

The well will initially be completed to flow gas and oil through a stack pack (Figure No. 7).

11.) Anticipated Starting Date:

Drilling operations are expected to commence in September 2006 and are expected to last 30 days. Completion operations are expected to last 8 days.

WELLHEAD BLOWOUT CONTROL SYSTEM Worksheet supplement for "Application for Permit to Drill or Deepen a Well"	Applicant H.L. Brown Operating L.L.C P.O. Box 2237, Midland Texas 79702
Location: 2540' FSL & 660' FEL Unit I, Section 28, T- 7-S, R- 37-E Roosevelt Co, NM	Well name and number <div style="text-align: center;">Federal 28 No. 3</div>

Max. anticipated surface pressure 1000 psi

Annular B.O.P. 11 ", 3000 psi W. P.

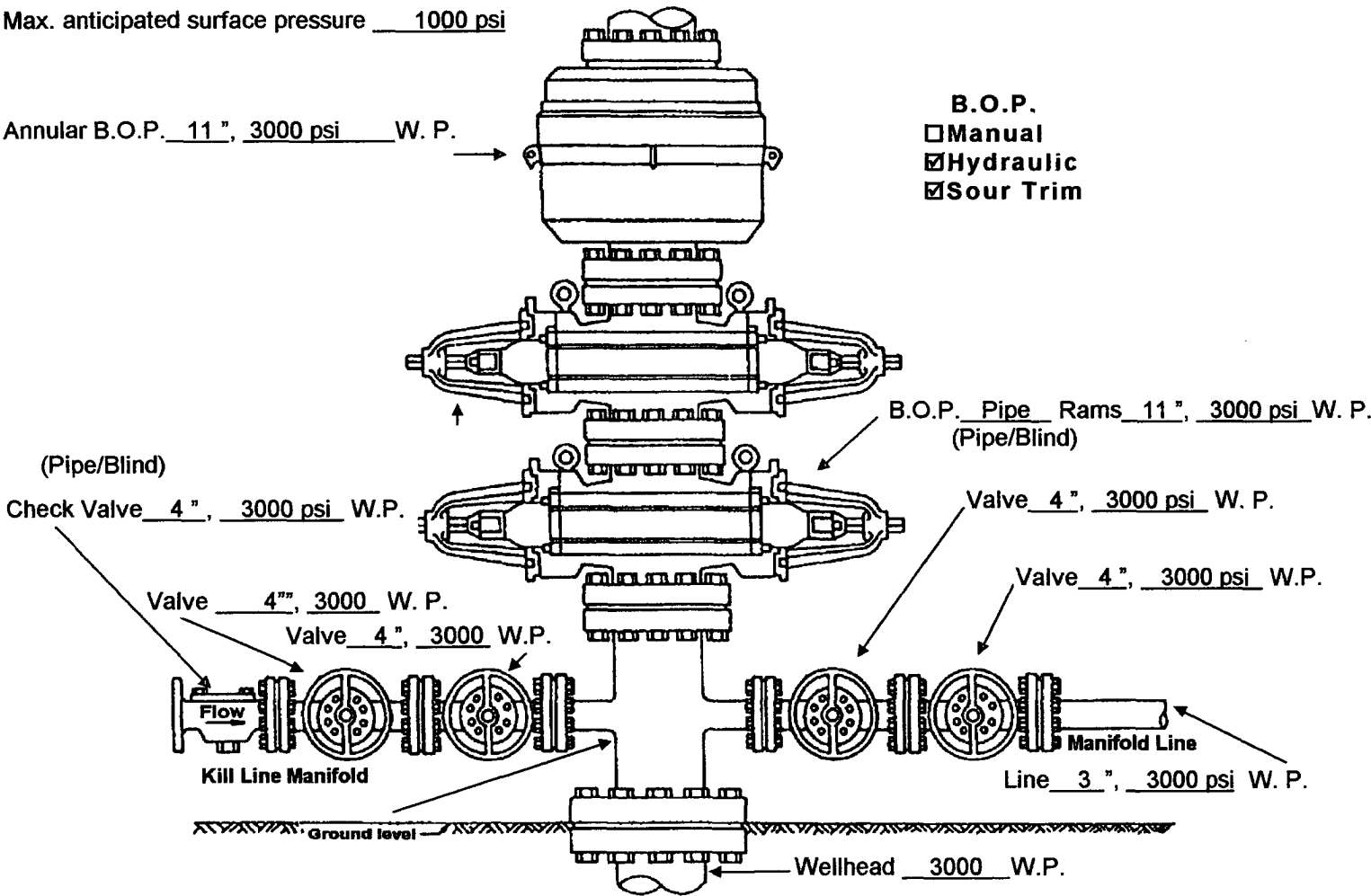


Figure No. 5

<p align="center">CHOKE MANIFOLD DIAGRAM</p> <p align="center">Worksheet supplement for "Application for Permit to Drill or Deepen a Well"</p>	<p>Applicant H.L. Brown Operating L.L.C P.O. Box 2237, Midland Texas 79702</p>
<p>Location: 2540' FSL & 660' FEL Unit I, Section 28, T- 7-S, R- 37-E Roosevelt Co, NM</p>	<p>Well name and number Federal 28 No. 3</p>

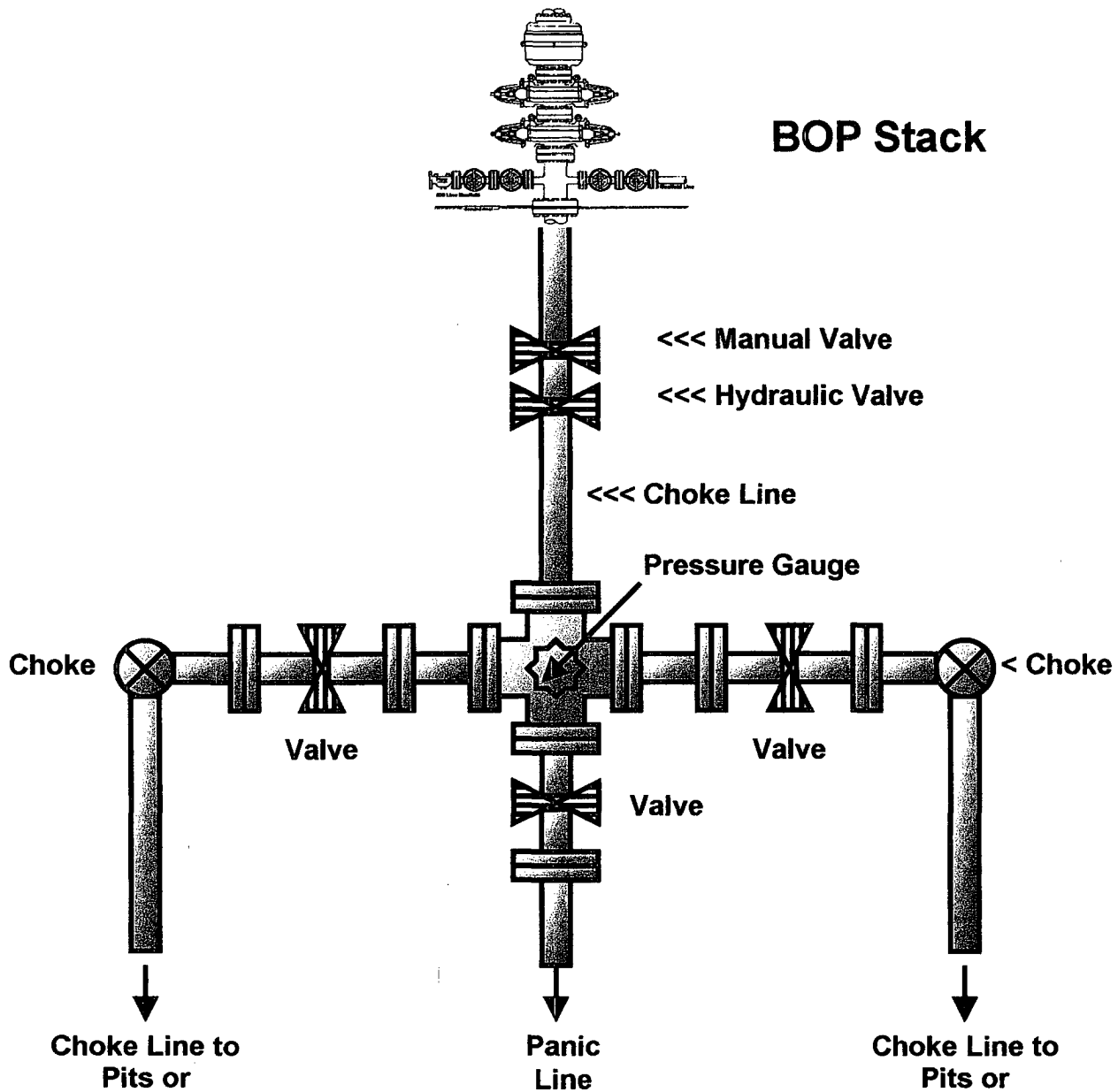


Figure No. 6



United States Department of the Interior
BUREAU OF LAND MANAGEMENT
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201

EXHIBIT B

WELL DRILLING REQUIREMENTS

1 of 6 pages

OPERATORS NAME: H.L. Brown Operating L.L.C. LEASE NO.: NM-54450
WELL NAME & NO: Federal 28 #3
QUARTER/QUARTER & FOOTAGE: NE $\frac{1}{4}$ SE $\frac{1}{4}$ - 2540' FSL & 660' FEL
LOCATION: Section 28, T. 7 S., R. 37 E., NMPM
COUNTY: Roosevelt County, New Mexico

I. GENERAL PROVISIONS:

- A. The operator has the right of administrative review of these requirements pursuant to 43 CFR 3165.1(a).
- B. The operator shall hereafter be identified as the holder in these requirements. The Authorized Officer is the person who approves the Well Drilling Requirements.

II. WELL PAD CONSTRUCTION REQUIREMENTS:

- A. The BLM shall administer compliance and monitor construction of the access road and well pad. Notify Richard G. Hill at least 3 working days (72 Hours) prior to commencing construction of the access road and/or well pad. Roswell Field Office number (505) 627-0247.
- B. Prior to commencing construction of the access road, well pad, or other associated developments, the holder shall provide the dirt contractor with a copy of the approved APD signature page, a copy of the location map (EXHIBIT A), a copy of pages 1 & 2 from the Well Drilling Requirements (EXHIBIT B), and a copy of the Permanent Resource Road Requirements (EXHIBIT D).
- C. The holder shall stockpile the topsoil from the surface of the well pad. The topsoil on the Federal "28" #3 well pad is approximately 6 inches in depth. Approximately 800 cubic yards of topsoil shall be stockpiled on the Southwest corner of the well pad, opposite the reserve pit.
- D. **Reserve Pit Requirements:**
 - 1. The reserve pit shall be constructed 100' X 100' on the **EAST/Southeast** side of the well pad.
 - 2. The reserve pit shall be constructed to a minimum depth of four (4) feet below ground level. The reserve pit shall be constructed, so that the cuttings in the reserve pit can be buried a minimum depth of three (3) feet below ground level. See **Exhibit E – Surface Reclamation/Restoration Requirements**.

WELL DRILLING REQUIREMENTS

2 of 6 pages

3. A synthetic or fabricated liner 12 mil in thickness shall be used to line the reserve pit. The liner shall meet ASTM standards that are designed to be resistant to the reserve pit contents.
4. The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.
5. The reserve pit shall be constructed so as not to leak, break, or allow discharge of drilling muds. Under no circumstances will the reserve pit be cut to drain drilling muds on the well location.
6. The reserve pit shall not be located in any natural drainage.
7. The reserve pit shall be equipped to deter entry by birds, bats, other wildlife, and livestock, if the reserve pit contains any oil and/or toxic fluids.
8. Drilling muds shall be properly disposed of before the reserve pit is reclaimed. Drilling muds can be allowed to evaporate in the reserve pit or be removed and transported to an authorized disposal site. The reserve pit shall be backfilled when dry.
9. Dumping of junk or trash into the reserve pit is not allowed. Junk or trash shall be removed from within the reserve pit before the reserve pit is reclaimed. **Junk or trash shall not be buried in the reserve pit.**

E. Federal Mineral Materials Pit Requirements:

1. Caliche, gravel, or other related materials from new or existing pits on Federal mineral estate shall not be taken without prior approval from the authorized officer. Contact Jerry Dutchover at (505) 627 -0236.
2. Payment for any Federal mineral materials that will be used to surface the access road and the well pad is required prior to removal of the mineral materials.
3. Mineral Materials extracted during construction of the reserve pit may be used for development of the pad and access road as needed, for the Federal 27 #4 oil well only. Removal of any additional material on location must be purchased from BLM prior to removal of any material.
 - a. An optional mineral material pit may be constructed within the archaeologically cleared area. The mineral material removed in the process can be used for pad and access road construction. However, a mineral material sales contract must be purchased from the BLM prior to removal of any material.

F. Well Pad Surfacing Requirement:

The well pad shall be surfaced with 6 inches of compacted caliche, gravel, or other approved surfacing material. The well pad shall be surfaced prior to drilling operations. See Permanent Resource Road Requirements - EXHIBIT D - requirement #4, for road surfacing.

G. Cave Requirements:

1. If, during any construction activities any sinkholes or cave openings are discovered, all construction activities shall immediately cease. Contact Larry Bray at (505) 627-0250.
2. The BLM Authorized Officer will, within 24 hours of notification in "A" above, conduct an on-the-ground field inspection for karst. At the field inspection the authorized field inspector will authorize or suggest mitigating measures to lessen the damage to the karst environment. A verbal order to proceed or stop the operation will be issued at that time.

III. WELL SUBSURFACE REQUIREMENTS:**A. GENERAL DRILLING REQUIREMENTS:**

1. The Bureau of Land Management (BLM) is to be notified at the Roswell Field Office, 2909 West Second St., Roswell NM 88201, (505) 627-0272, in sufficient time for a representative to witness:

A. Spudding B. Cementing casing: 13 $\frac{3}{8}$ inch 8 $\frac{5}{8}$ inch 5 $\frac{1}{2}$ inch C. BOP tests

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

3. Submit a Sundry Notice (Form 3160-5, one original and five copies) for each casing string, describing the casing and cementing operations. Include pertinent information such as; spud date, hole size, casing (size, weight, grade and thread type), cement (type, quantity and top), water zones and problems or hazards encountered. The Sundry shall be submitted within 15 days of completion of each casing string. The reports may be combined into the same Sundry if they fall within the same 15 day time frame.

4. The API No. assigned to the well by NMOCD shall be included on the subsequent report of setting the first casing string.

B. CASING:

1. The 13 $\frac{3}{8}$ inch surface casing shall be set at 510' and cement circulated to the surface. If cement does not circulate to the surface the appropriate BLM office shall be notified and a temperature survey or cement bond log shall be run to verify the top of the cement. Remedial cementing shall be completed prior to drilling out that string.

2. The minimum required fill of cement behind the 8 $\frac{5}{8}$ inch intermediate casing is with sufficient amount of cement circulate to surface.

3. The minimum required fill of cement behind the 5 $\frac{1}{2}$ inch production casing is cement shall be tied back to the 8-5/8" casing.

C. PRESSURE CONTROL:

1. All BOP systems and related equipment shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2. The BOP and related equipment shall be installed and operational before drilling below the 13 $\frac{3}{8}$ inch casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

2. Minimum working pressure of the blowout preventer and related equipment (BOPE) shall be 3000 psi.

3. The appropriate BLM office shall be notified in sufficient time for a representative to witness the tests.

- A. The results of the test shall be reported to the appropriate BLM office.
- B. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- C. Testing must be done in a safe workman-like manner. Hard line connections shall be required.
- D. BOPE shall be tested before drilling into the Wolfcamp formation.

D. DRILLING MUD:

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented. Monitoring equipment shall consist of the following:

- 1. Recording pit level indicator to indicate volume gains and losses.
- 2. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.
- 3. Flow-sensor on the flow-line to warn of abnormal mud returns from the well.