

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

Form 3160-3
(February 2005)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 21097 0210974	
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator H. L. Brown Operating, L.L.C.		7. If Unit or CA Agreement, Name and No. NM 71965	
3a. Address 300 W. Louisiana Midland, TX 79701		8. Lease Name and Well No. Federal H #2 ✓	
3b. Phone No. (include area code) (432) 688-3727		9. API Well No. 30-041-20834	
4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface 660' FN & EL At proposed prod. zone same		10. Field and Pool, or Exploratory Bluitt Wolfcamp (GAS)	
14. Distance in miles and direction from nearest town or post office* 10 miles east of Milnesand, NM		11. Sec, T. R. M. or Blk. and Survey or Area Sec 5, T-8-S, R-37-E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 660'		12. County or Parish Roosevelt	
16. No. of acres in lease 320		13. State NM	
17. Spacing Unit dedicated to this well 320'		18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2995'	
19. Proposed Depth 9200'		20. BLM/BIA Bond No. on file 0679788	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4062' GL		22. Approximate date work will start* 07/15/2007	
23. Estimated duration 35 days		24. Attachments	

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

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

25. Signature <i>Carlton Wheeler</i>	Name (Printed/Typed) Carlton Wheeler	Date 06/13/2007
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Title

Approved by (Signature) <i>/s/ Angel Mayes</i>	Name (Printed/Typed) <i>/s/ Angel Mayes</i>	Date JUL 16 2007
Title Assistant Field Manager, Lands And Minerals	Office ROSWELL FIELD OFFICE	APPROVED FOR 2 YEARS

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 page 2)

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS ATTACHED**

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III
1000th 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 Department

Form C-102
Revised October 12, 2005

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

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-041-20934	Pool Code 72640	Pool Name Bluff Wolfcamp (GAS)
Property Code 29864	Property Name FEDERAL "H"	Well Number 2
GRID No. 213179	Operator Name H.L. BROWN OPERATING, LLC	Elevation 4062'

Surface Location

UL or lot No. A	Section 5	Township 8 S	Range 37 E	Lot Idn	Feet from the 660	North/South line NORTH	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
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Dedicated Acres 320ac	Joint or Infill	Consolidation Code	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

	OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division. Signature <u>Carlton Wheeler</u> Date <u>6/13/07</u> Printed Name <u>CARLTON WHEELER</u>
	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. MAY 14, 2007 Date Surveyed Signature & Seal of Professional Surveyor
	W.O. No. <u>10812</u> Certificate No. <u>Gary L. Jones 7977</u>
	PROFESSIONAL SURVEYOR

Supplemental Drilling Data

H. L. BROWN OPERATING, L.L.C.
Federal "H" No. 2
660' FN & EL, Sec. 5, Unit A, T-8-S, R-37-E
Roosevelt County, New Mexico
New Mexico Lease NM - 21097

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 9200' to test the Wolfcamp formation. 13-3/8" surface pipe will be set at about 515', 8-5/8" intermediate pipe will be set at 3800' and 5-1/2" production casing will be set at 9200' or less. The Wolfcamp will be perforated and acid stimulated.

1.) Surface Formation: Ogallala

2.) Estimated Top of Geologic Markers:

Yates	2530'
San Andres	3685'
Abo	6990'
Wolfcamp	7950'

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

Water	None Anticipated
Oil/ Gas	Wolfcamp carbonates at 7950'
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	515'	500 sx "C" w/ 2% CaCl ₂ + celloflake	Surface Must circulate
12-1/4"	8-5/8"	32	J-55	LT&C	3800'	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 15.5 17.0	J-55 J-55 J-55	LT&C LT&C LT&C	0' – 80' 80' – 6900' 6900' – 9200'	Lead: 1200 sx "H" Poz + 10% gel + 5% salt Tail: 400 sx "H" w/ FLA	3400' ** tie into 8-5/8" casing

The surface casing string 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 operated 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' - 3750'	Cut Brine	9.2-10.3	32-34	NC	Add 2% - 3% oil
3750' - 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' - 9200'	SW-Gel	9.2-10.3	38-40	10	Mud up for logs

No abnormal pressures are anticipated. Mud is used for borehole stability and filtrate 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 3750'.
- 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 ~3700' (minimum +).

9.) Abnormal Pressures, Temperature or Hydrogen Sulfide:

None Anticipated.

10.) Completion Equipment:

The completed well will be a flowing gas well (Figure No. 7) with a stack pack for flow control.

11.) Anticipated Starting Date:

Drilling operations are expected to commence by July 15, 2007 and are expected to last 30 days. Completion operations are expected to last 10 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: 660' FN & EL Unit A, Section 5, T-8-S, R-37-E Roosevelt Co, NM	Well name and number <div style="text-align: center; font-size: 1.2em;">Federal H No. 2</div>

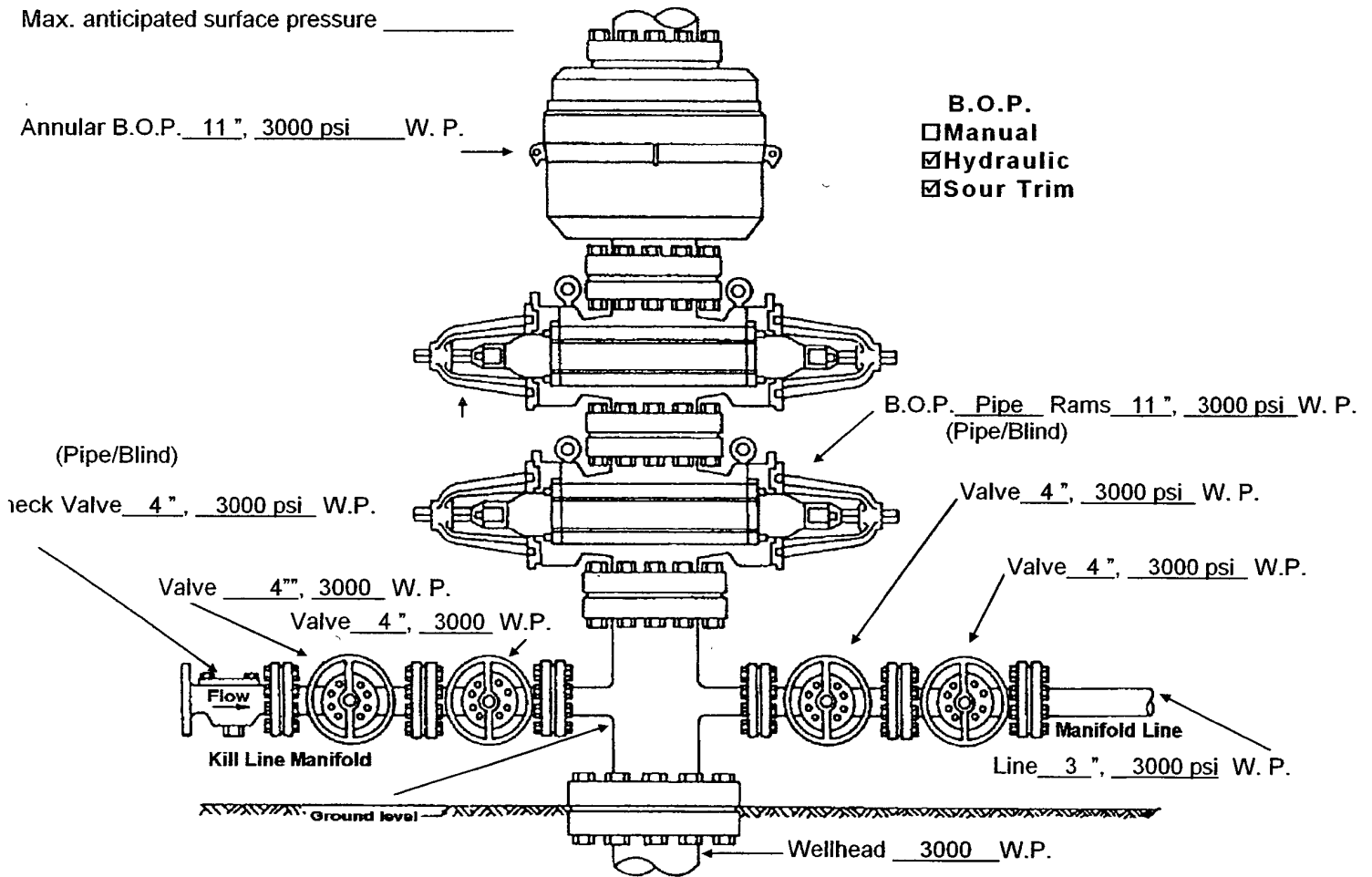


Figure No. 5

<p>CHOKE MANIFOLD DIAGRAM</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: 660' FN & EL Unit A, Section 5, T-8-S, R-37-E Roosevelt Co, NM</p>	<p>Well name and number Federal "H" No. 2</p>

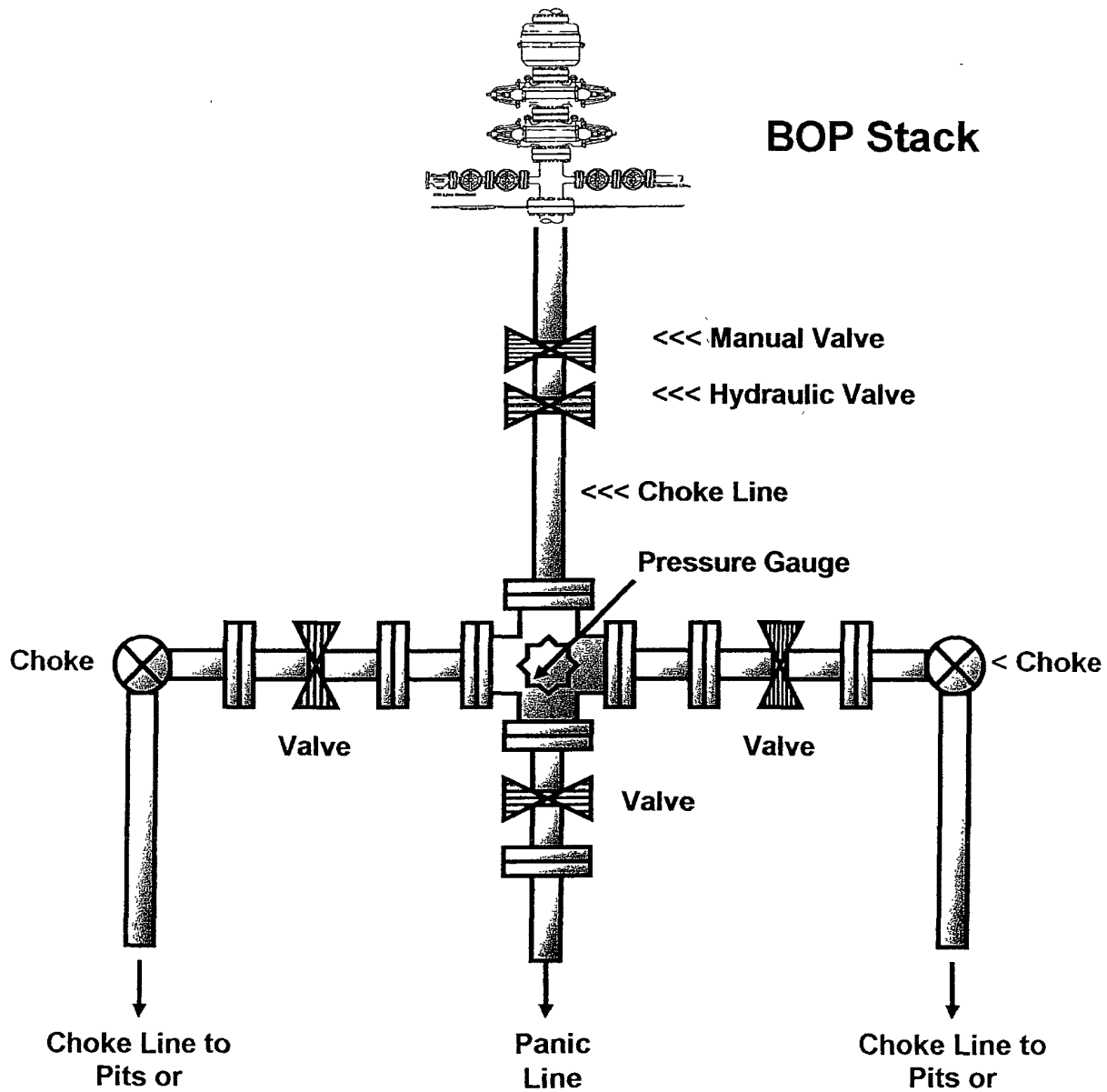


Figure No. 6

<p align="center">WELLHEAD DIAGRAM</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: 660¹/₂ FN & EL Unit A, Section 5, T-25-S, R- 32-E Roosevelt Co, NM</p>	<p>Well name and number Federal H #2</p>

13 3/8" X 8 5/8" X 5 1/2" X 2 3/8" 3000psi WP

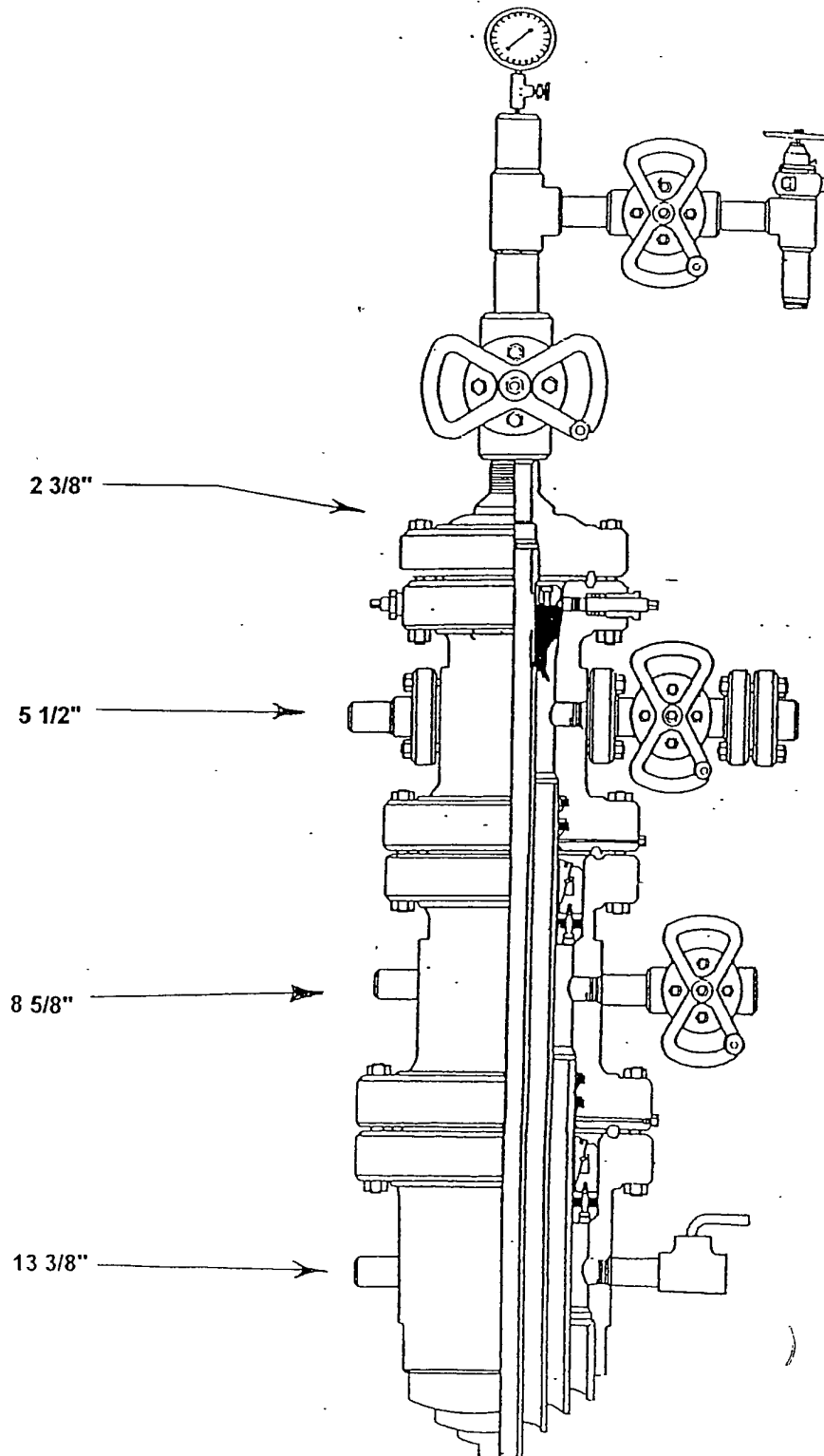


Figure No. 7

EXHIBIT A

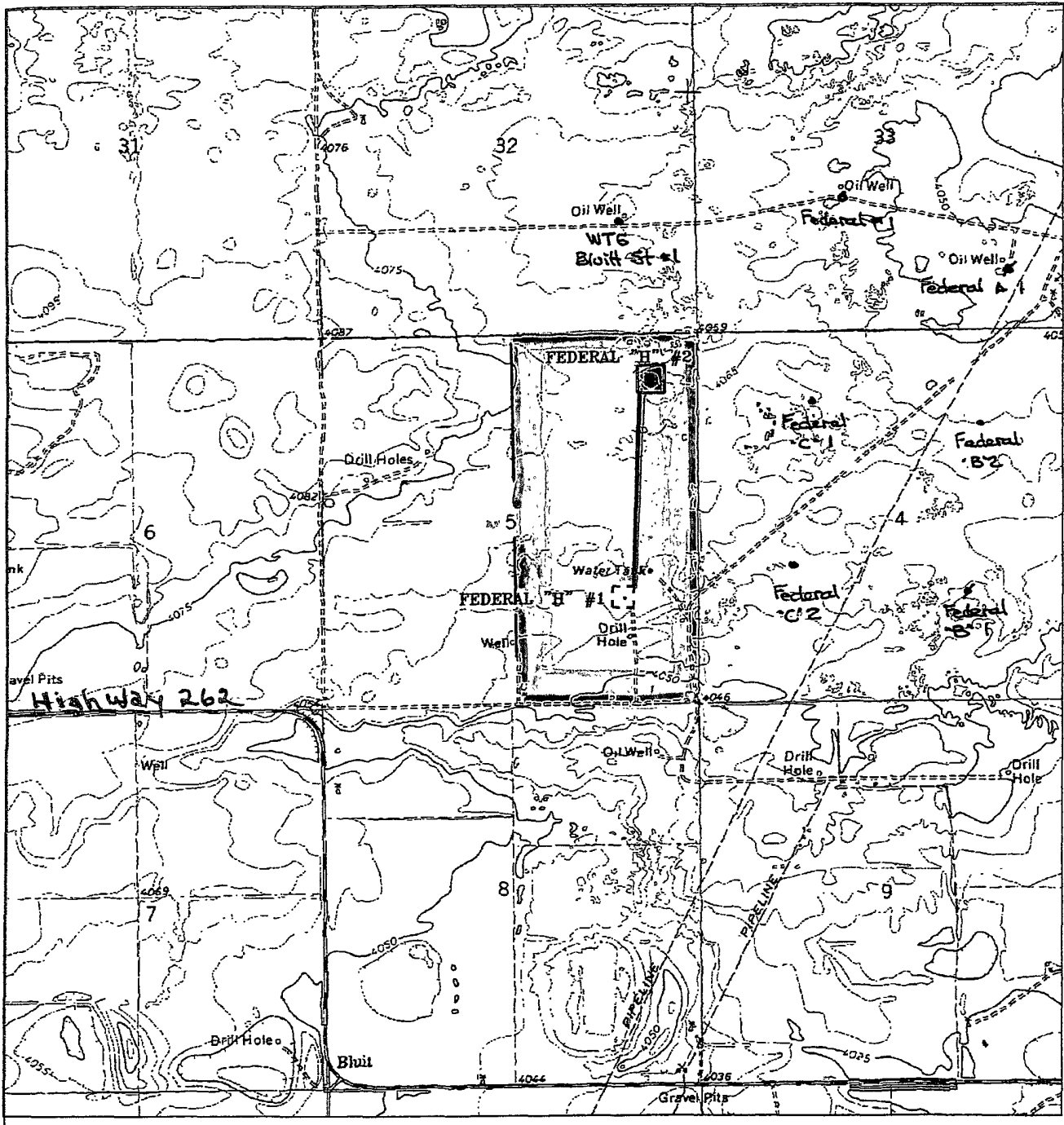
OPERATORS NAME: H.L. Brown Operating, L.L.C. LEASE NO.: NM-021097A

WELL NAME & NO: Federal H #2

QUARTER/QUARTER & FOOTAGE: NE $\frac{1}{4}$ NE $\frac{1}{4}$ - 660' FNL & 660' FEL

LOCATION: Section 5, T. 8 S., R. 37 E.

COUNTY: Roosevelt County, New Mexico, NMPM



Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1501 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
March 4, 2004

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

WELL API NO. 30-041-20934	
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 - 12852	
7. Lease Name or Unit Agreement Name Federal H	
8. Well Number 2	
9. OGRID Number 213179	
10. Pool name or Wildcat Bluitt Wolfcamp	

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 <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> 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: A : 660' feet from the North line and 660' feet from the East line Section 5 Township T-8-S Range R-37-E NMPM Roosevelt County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 4062' GL	
Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached)	
Pit Location: UL A Sect 5 Township 8-S Range 37-E Pit type drilling	
Depth to Groundwater 176' Distance from nearest fresh water well 3/4 mile South Distance from nearest surface water 3/4 mile south	
Below-grade Tank Location UL Sect Twp Rng : feet from the line and feet from the line	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data	
NOTICE OF INTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/> ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/> CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/> PLUG AND ABANDONMENT <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/> MULTIPLE COMPLETION <input type="checkbox"/>	CASING TEST AND CEMENT JOB <input type="checkbox"/>
OTHER: Construct reserve pit for drilling rig <input checked="" type="checkbox"/>	OTHER: <input type="checkbox"/>

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 in Sec 5, T-8-S, R-37-E, at 176'. Six miles to the northeast, the water level is at 159' in Sec 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 Carlton Wheeler TITLE Operations Manager DATE 6/13/07

Type or print name Carlton Wheeler E-mail address: ccw@hlboperating.com Telephone No. 432-688-3727

(This space for State use)

APPROVED BY Chris Williams DISTRICT SUPERVISOR/GENERAL MANAGER DATE JUL 20 2007
Conditions of approval, if any: