

New Mexico Oil Conservation Division, District 1

Form 3160-3
(September 2001)1625 N. French Drive
Hobbs, NM 88240FORM APPROVED
OMB No. 1004-0136
Expires January 31, 2004UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT


APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM 12852 54449
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
2. Name of Operator H.L. Brown Operating L.L.C # 213179		7. If Unit or CA Agreement, Name and No.
3a. Address P.O. Box 2237, Midland, Texas 79702	3b. Phone No. (include area code) 432-688-3726	8. Lease Name and Well No. Federal '27' #4 13269
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 2415' FSL & 287' FWL, Unit L At proposed prod. zone		9. API Well No. 30-041-20917
14. Distance in miles and direction from nearest town or post office* 10 miles east of Milnesand, NM		10. Field and Pool, or Exploratory Bluitt N (Siluro-Devonian)
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 287'	16. No. of Acres in lease 640	11. Sec., T., R., M., or Blk. and Survey or Area Sec 28, T-7-S, R-37-E 27
17. Spacing Unit dedicated to this well 80	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 180'	12. County or Parish Roosevelt
19. Proposed Depth 9200'	20. BLM/BIA Bond No. on file 0679788	13. State NM
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4056' GL	22. Approximate date work will start* 10-01-05	23. Estimated duration 28 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:

- 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 	Name (Printed/Typed) Robert McNaughton	Date 8-2-05
---	---	----------------

Title Operations Manager/ Petroleum Engineer		
Approved by (Signature) /S/LARRY D. BRAY	Name (Printed/Typed) /S/LARRY D. BRAY	Date SEP 14 2005
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)

KZ
APPROVED FOR 1 YEARAPPROVAL SUBJECT TO
GENERAL REQUIREMENTS AND
SPECIAL STIPULATIONS ATTACHED

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

DISTRICT II
811 South First, Artesia, NM 88210

DISTRICT III
1000 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 30-041-20917	Pool Code 6910	Pool Name Bluitt N (Siluro- Devonian)
Property Code 029854 13269	Property Name FEDERAL "27"	Well Number 4
OGRID No. 213179	Operator Name H.L. BROWN OPERATING L.L.C.	Elevation 4056'

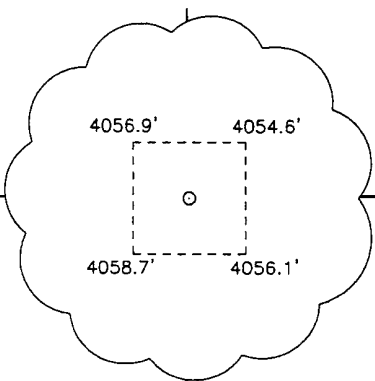
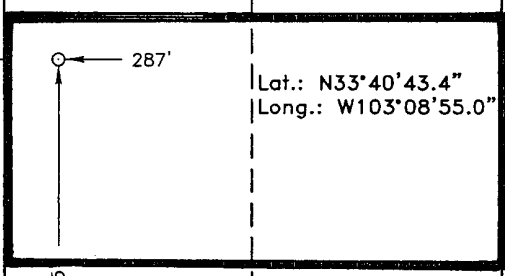

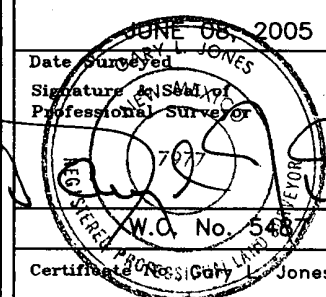
Surface Location

UL or lot No. L	Section 27	Township 7 S	Range 37 E	Lot Idn	Feet from the 2415	North/South line SOUTH	Feet from the 287	East/West line WEST	County ROOSEVELT
---------------------------	----------------------	------------------------	----------------------	---------	------------------------------	----------------------------------	-----------------------------	-------------------------------	----------------------------

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. NSL-5245 ** Non-standard location approved						

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 Ops Manager/ Engineer Title 8-2-05 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.  Date Surveyed Signature Professional Surveyor W.O. Jones Certified 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

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

Form C-103
March 4, 2004

WELL API NO.

30.041.20917

5. Indicate Type of Lease

STATE ☐ FED ☒ FEE ☐

6. Federal Oil & Gas Lease No.

NM - 12852

7. Lease Name or Unit Agreement Name

Federal 27

8. Well Number

4

9. OGRID Number

213179

10. Pool name or Wildcat

Bluitt North (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: L : 2415' feet from the South line and 287' feet from the West line

Section 27 Township T-7 Range R-37-E NMPM Roosevelt County

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

4056' GL

Pit or Below-grade Tank Application (For pit or below-grade tank closures, a form C-144 must be attached)

Pit Location: UL L Sect 27 Township 7-S Range 37-E Pit type drilling

Depth to Groundwater 176' Distance from nearest fresh water well 2 miles South Distance from nearest surface water 2 miles 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:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐

TEMPORARILY ABANDON ☐ CHANGE PLANS ☐

PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐

OTHER: Construct reserve pit for drilling rig ☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐

COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐

CASING TEST AND 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 [Signature] TITLE Operations Manager/ Petroleum Engineer DATE 8-2-05

Type or print name Robert McNaughton E-mail address: robertm@hlboperating.com Telephone No. 432-688-3726

(This space for State use)

APPROVED BY [Signature] TITLE PETROLEUM ENGINEER DATE SEP 15 2005

Conditions of approval, if any:

MULTI-POINT SURFACE USE AND OPERATIONS PLAN

H. L. BROWN OPERATING, L.L.C.

Federal 27 No. 4

2415' FSL & 287' FWL, Sec. 27, Unit L, T-07-S, R-37-E

Roosevelt County, New Mexico

New Mexico Lease NM - 12852

This plan is submitted with the Application for Permit to Drill the above described well. The purpose of the plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of necessary surface disturbances involved, and the procedures to be followed in rehabilitating the surface after completion of the operations so that a complete appraisal can be made of the environmental effects associated with the operation.

1. EXISTING ROADS:

- A. **Figure No.1** is a portion of a USGS contour map showing the location of the proposed well. The well is approximately 9 miles East of Milnesand, NM on State Highway 262. Go straight east one mile on lease road where highway makes a 90 corner south to Bluitt. Go north 1/3 mile just past the compressor station to a tee, go north and then and two miles to the northeast (**Figure 2**). 27 #4 is SW of the 27 #2 battery and just off of the main road **Figure No. 3**.
- B. **Figure No.1** also shows all existing roads within one-mile radius of the well site. The proposed location is at the southern side of the Bluitt Devonian field.
- C. The existing roads will be maintained as needed for both drilling and production by offset lease operators.

2. PLANNED ACCESS ROADS:

- A. Length and width: No new roads will be required since this location will blend into an existing well pad and share a common road.
- B. Surfacing material: Six inches of caliche, water, compacted and graded.
- C. Maximum grade: 1 percent.
- D. Turnouts and Culverts: None required.
- E. Drainage design: None – new pad will blend into the existing pad.
- F. Cuts and Fills: This is relatively flat surface broken by occasional small sand dunes. A slight amount of leveling will be required.
- G. Gates and Cattle Guards: None will be needed.

3. LOCATION OF EXISTING WELLS:

- A. Existing wells within a one-mile (plus) radius are shown on **Figure No. 1**.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. Any produced oil and water will be stored in a tank battery to be built on location. This well will have separate oil tanks for metering and sales. Produced water will be sent to the 27 #2 battery for collection and off lease disposal. Gas will be metered and sent down the existing sales line.
- B. We expect this well flow naturally through the existing low pressure gathering system. In the future, rod pumping may be necessary

5. TYPE OF WATER SUPPLY:

- A. Water will be purchased and trucked to location by low bidder.

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. Caliche for surfacing the well pad and access road will be dug from the reserve pit. Additional caliche will be transported from a privately owned pit located in the SW/4 of Section 6, T-8-S, R-37-E.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be disposed of in the drilling pits.
- B. Drilling fluids will be allowed to evaporate in the drilling pits until pits are dry. Water produced during tests will be disposed of in the drilling pits. Oil produced during tests will be stored in test tanks until sold.
- C. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- D. Trash, waste paper, garbage, and junk will be discarded in a trash trailer and hauled to a state approved garbage disposal facility. All waste material will be contained within trailer to prevent scattering by the wind.
- E. All trash and debris will be removed from the wellsite within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

- A. None required.

9. WELLSITE LAYOUT:

- A. **Figure No. 4** shows the general layout and dimensions of the well pad. Due to the proximity to the 27 #2 well and battery, we expect to put the pits to the west. However, the actual rig layout will depend on the type and size of rig used to drill the well.
- B. Only minor leveling of the wellsite will be required. No significant cuts and fills will be necessary.
- C. The reserve pit will be plastic lined as per current BLM and NMOCD regulations.
- D. The pad and pit area have been staked and flagged.

10. PLANS FOR RESTORATION OF THE SURFACE:

- A. After completion of drilling and/or completion operations, all equipment and other material not needed for operation will be removed. Pits will be filled as soon as they dry. The location will be cleaned of all trash and junk to leave the wellsite as aesthetically pleasing condition as possible.
- B. Any unguarded pits containing fluids will be fenced until they are filled.
- C. After abandonment of the well, surface restoration will be in accordance with the agreement with the surface lessee and the BLM. The pit area, well pad, and all unneeded access road will be ripped to promote re-vegetation. Rehabilitation should be accomplished within 90 days after abandonment.

11. OTHER INFORMATION:

- A. Topography: Land surface is relatively level with small to moderate sand dunes. From an elevation of 4056' at the wellsite, the regional surface slopes gently toward the east at 10' to 20' per mile.
- B. Soil: Soil is predominantly sand and sandy loam underlain by caliche.
- C. Flora and Fauna: The vegetative cover moderate and includes range grasses, weeds, scrub oak and mesquite bushes. Local Wildlife is typical of semi-arid desert land and includes coyotes, rabbits, rodents, reptiles, dove, quail and hawks.
- D. Ponds and Streams: There are no rivers, lakes, or ponds in the area.
- E. Residences and Other Structures: There are no occupied dwellings or other structures within or near the proposed area of the well site. The pumper's residence is located next to the compressor station about 2½ miles away. There are a few ranch houses several miles to the north.

- F. Archeological, Historical and Cultural Sites: None observed in the area.
- G. Land Use: Grazing, oil and gas production and wildlife habitat.
- H. Surface Ownership: The surface that the well site and road are on is owned by Mack Kizer, P.O. Box 27, Pep, New Mexico 88126.

12. OPERATORS' REPRESENTATIVES:

The field representatives responsible for assuring compliance with the approved surface use and operations plan is:

Robert McNaughton
Operations Manager/ Petroleum Engineer
(432) 688-3726 (office)
(432) 694-2553 (residence)
(432) 559-9307 (cell)

Greg McWilliams
Operations Foreman
(806) 790-1332 (mob)

H. L. Brown Operating, L.L.C.'s office is located at 300 W. Louisiana, Midland, Texas, 79701.


13. CERTIFICATION:

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed by H. L. Brown Operating, L.L.C. and it's contractors and subcontractors in conformity with this plan and terms and conditions under which is approved. This statement is subject to provisions of 18 U.P.S. 1001 for the filing of false statement.

8-2-05

Date

Enclosures



Robert McNaughton
Operations Manager/ Petroleum Engineer
H. L. Brown Operating, L.L.C.

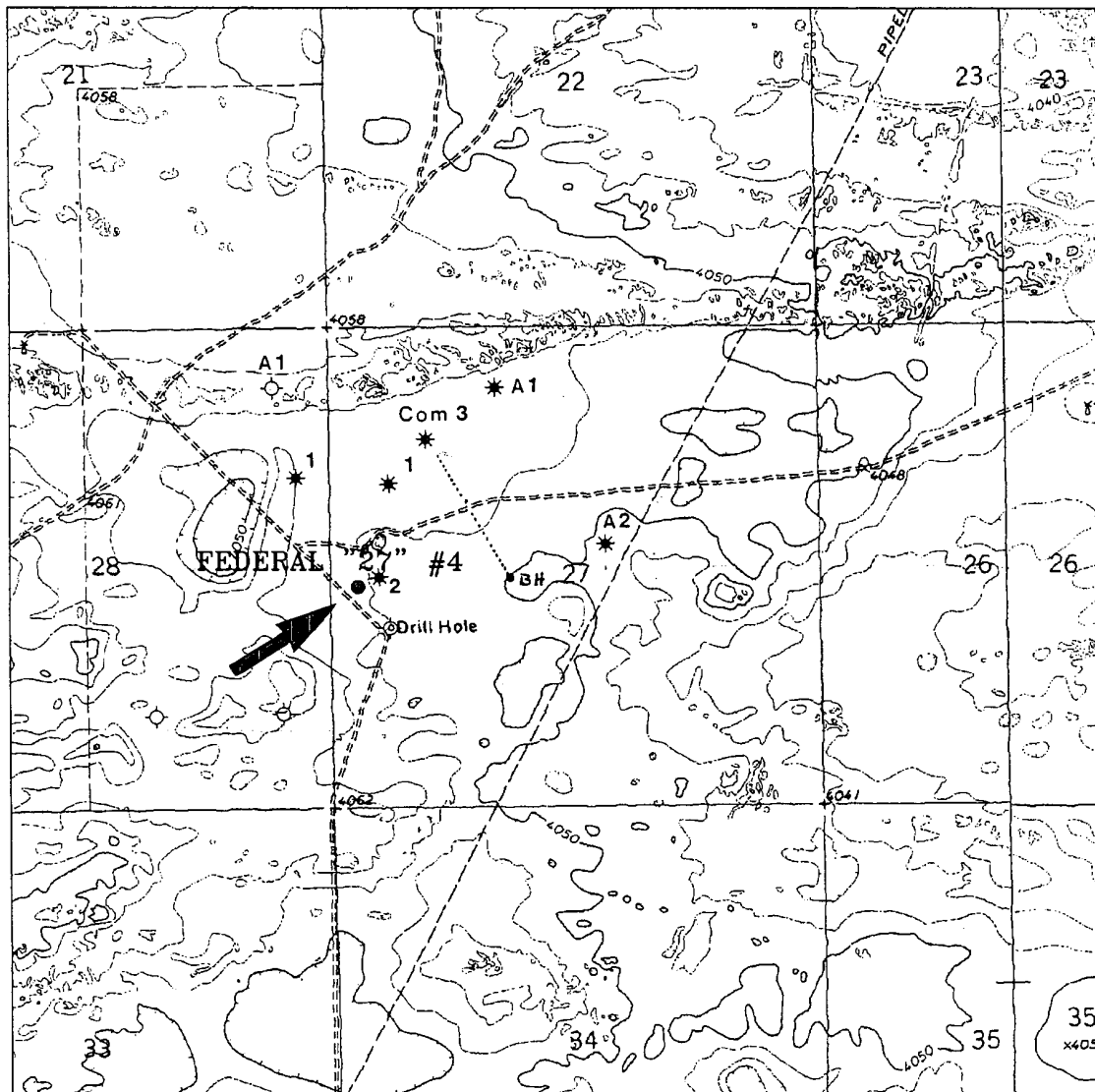


Figure No. 1

FEDERAL "27" #4
 Located at 2415' FSL and 287' FWL
 Section 27, Township 7 South, Range 37 East,
 N.M.P.M., Roosevelt County, New Mexico.

→ Road from compressor plant

**basin
surveys**
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: 5487AA - KJG #1

Survey Date: 06-08-2005

Scale: 1" = 2000'

Date: 06-10-2005

**H.L. BROWN
 OPERATING L.L.C.**

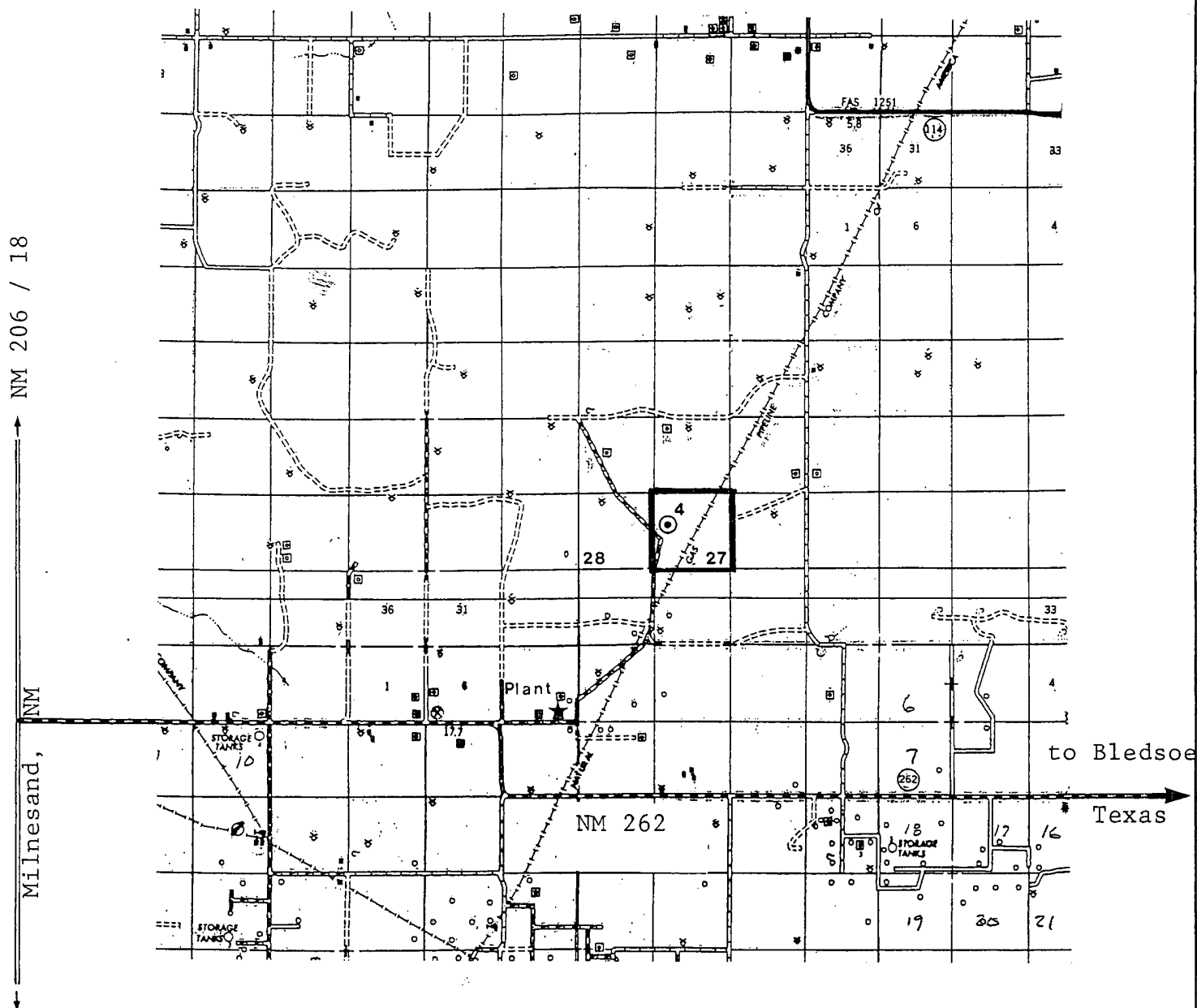


Figure No. 2

FEDERAL "27" #4
 Located at 2415' FSL and 287' FWL
 Section 27, Township 7 South, Range 37 East,
 N.M.P.M., Roosevelt County, New Mexico.

basin
surveys
 focused on excellence
 in the oilfield

P.O. Box 1786
 1120 N. West County Rd.
 Hobbs, New Mexico 88241
 (505) 393-7316 - Office
 (505) 392-3074 - Fax
 basinsurveys.com

W.O. Number: 5487AA - KJG #1

Survey Date: 06-08-2005

Scale: 1" = 2 MILES

Date: 06-10-2005

H.L. BROWN
OPERATING L.L.C.

SECTION 27, TOWNSHIP 7 SOUTH, RANGE 37 EAST, N.M.P.M.,
ROOSEVELT COUNTY, NEW MEXICO.

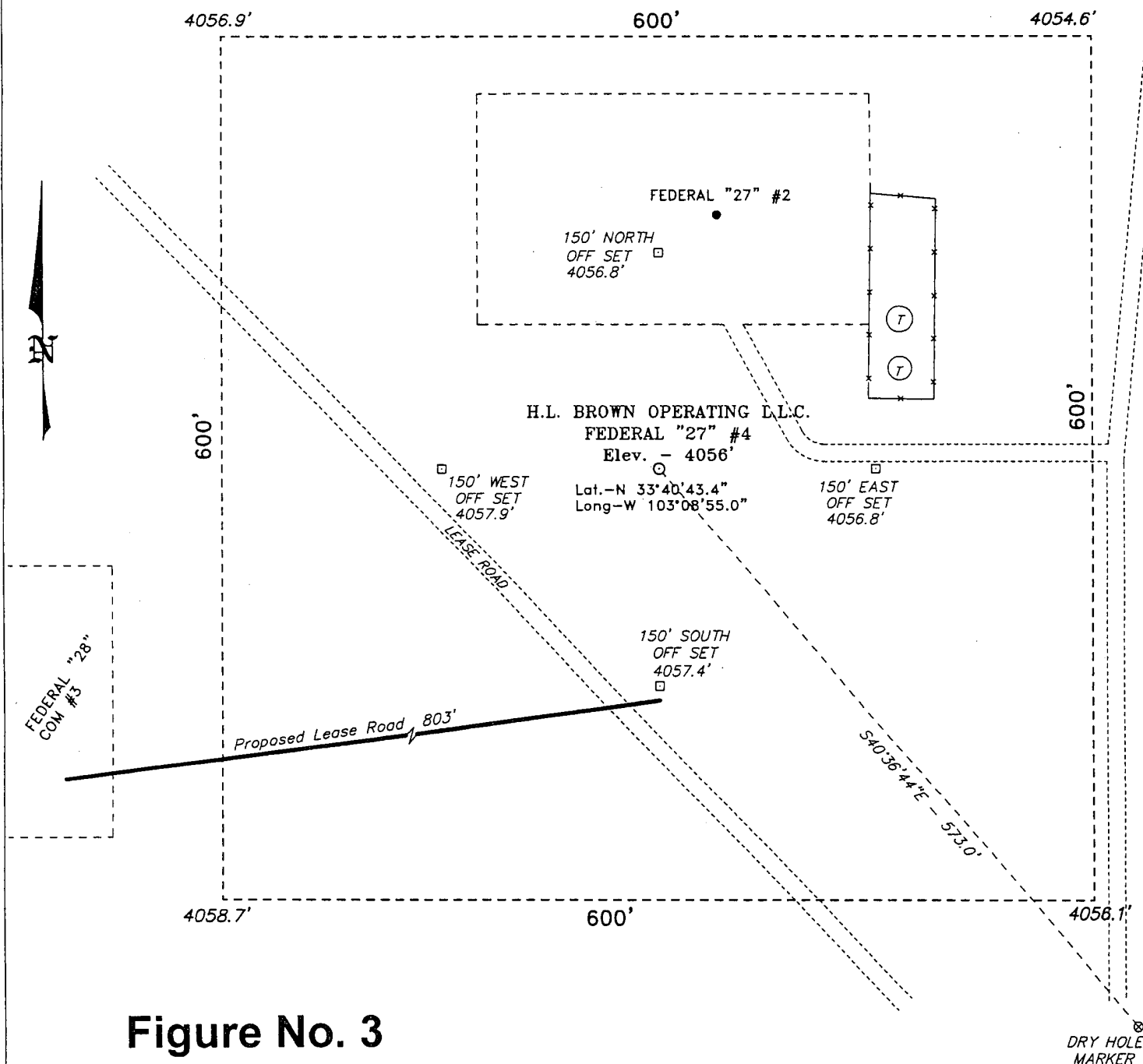
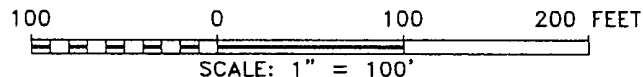


Figure No. 3

Directions to Location:

FROM MILNESAND, GO EAST ON STATE HWY 262 FOR 9.0 MILES TO LEASE ROAD (ROOSEVELT ROAD 42); THENCE GO EAST FOR 1.0 MILE; THENCE NORTH 2.7 MILE TO THE FEDERAL "27" #2 AND PROPOSED WELL PAD FOR THE FEDERAL "27" #4.



H.L. BROWN OPERATING L.L.C.

REF: FEDERAL "27" No. 4 / Well Pad Topo

THE FEDERAL "27" No. 4 LOCATED 2415' FROM
THE SOUTH LINE AND 287' FROM THE WEST LINE OF
SECTION 27, TOWNSHIP 7 SOUTH, RANGE 37 EAST,
N.M.P.M., ROOSEVELT COUNTY, NEW MEXICO.

BASIN SURVEYS P.O. BOX 1786-HOBBS, NEW MEXICO

W.O. Number: 5487

Drawn By: K. GOAD

Date: 06-10-2005 Disk: KIC CD#4 - 5487A.DWG

Survey Date: 06-08-2005

Sheet 1 of 1 Sheets

'DRILLING RIG & RESERVE PIT LAYOUT 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: 2415' FSL & 287' FWL Unit L, Section 27, T-7-S, R-37-E Roosevelt Co, NM	Well name and number <p style="text-align: center;">Federal 27 #4</p>

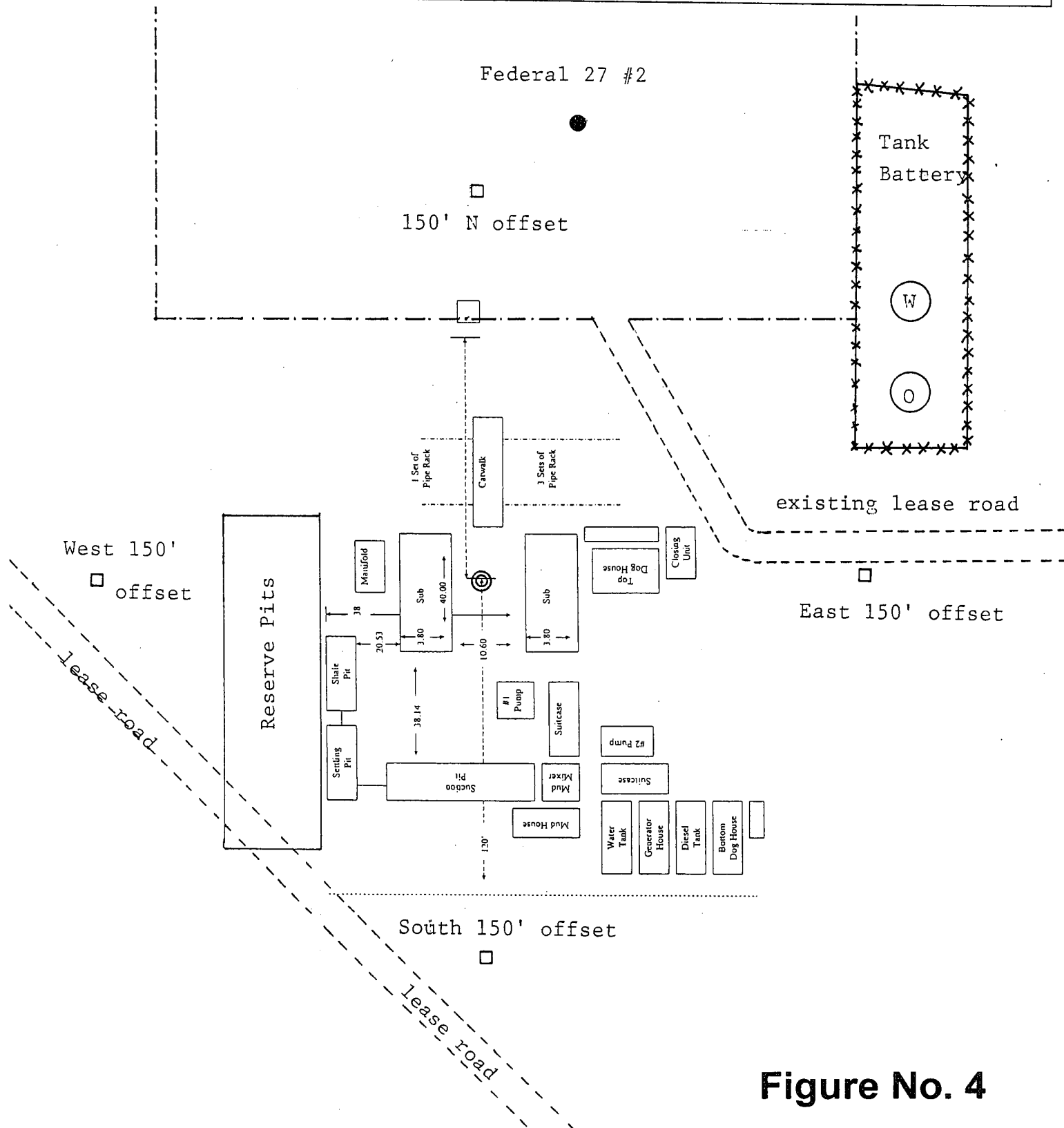


Figure No. 4

Supplemental Drilling Data

H. L. BROWN OPERATING, L.L.C.

Federal 27 No. 4

2415' FSL & 287' FWL, Sec. 27, Unit L, T-07-S, R-37-E

Roosevelt County, New Mexico

New Mexico Lease NM - 12852

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 Devonian formation. 13-3/8" surface pipe will be set at about 515', 8-5/8" intermediate pipe will be set at 3750' and 5-1/2" production casing will be set at 9200'. The Devonian will be perforated and acid stimulated.

1.) Surface Formation: Ogallala

2.) Estimated Top of Geologic Markers:

Yates	2530'
San Andres	3685'
Abo	6990'
Wolfcamp	7940'
Devonian	8650'

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

Water	None Anticipated
Oil/ Gas	Wolfcamp carbonates at 7950', Devonian carbonates at 8670'
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	3750'	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 October 1, 2005 and are expected to last 21 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: 2415' FSL & 287' FWL Unit L, Section 27, T- 7-S, R- 37-E Roosevelt Co, NM	Well name and number <p style="text-align: center;">Federal 27 No. 4</p>

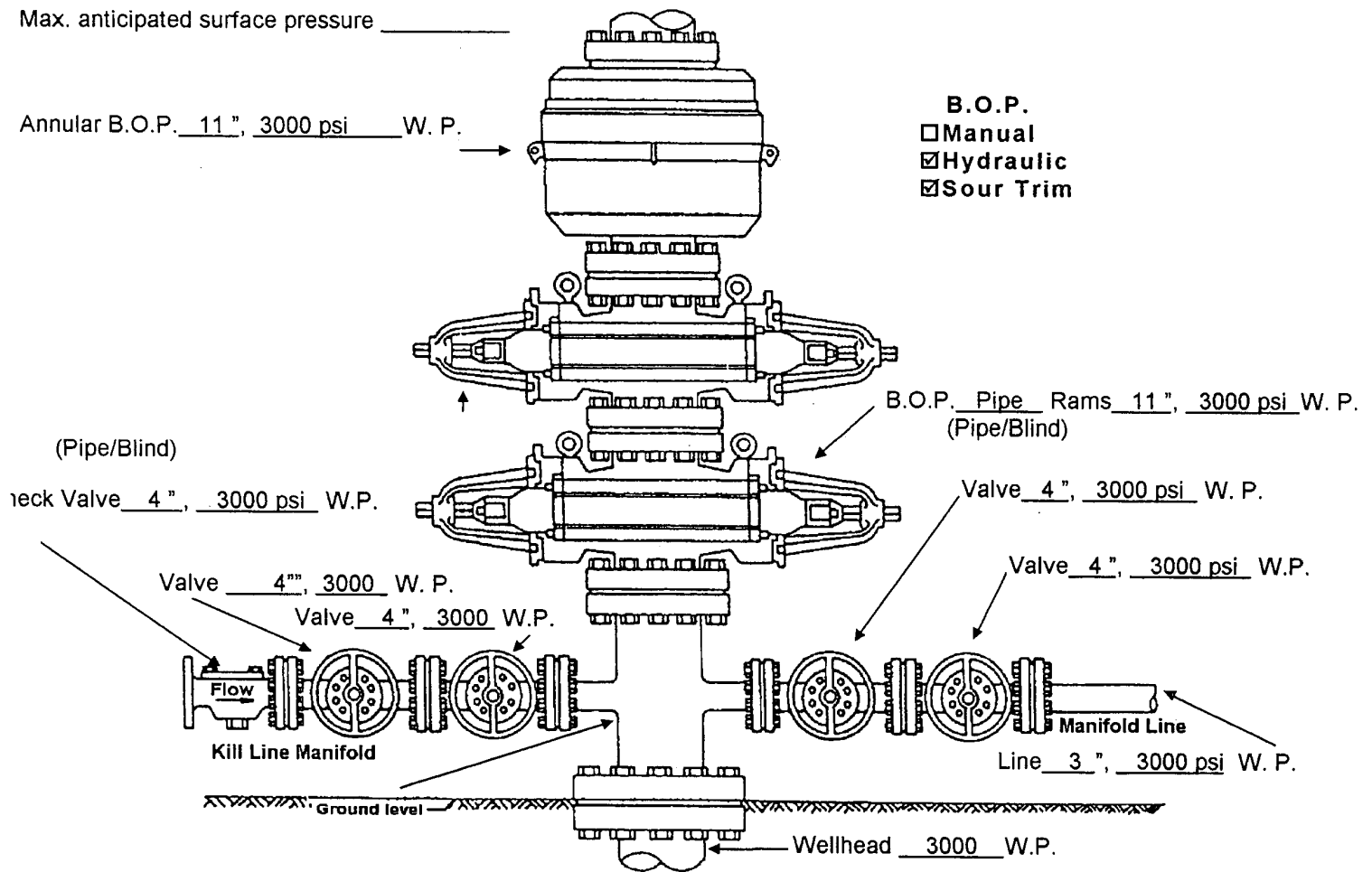


Figure No. 5

<p align="center">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: 2415' FSL & 287' FWL Unit L, Section 27, T- 7-S, R- 37-E Roosevelt Co, NM</p>	<p>Well name and number <p align="center">Federal 27 No. 4</p></p>

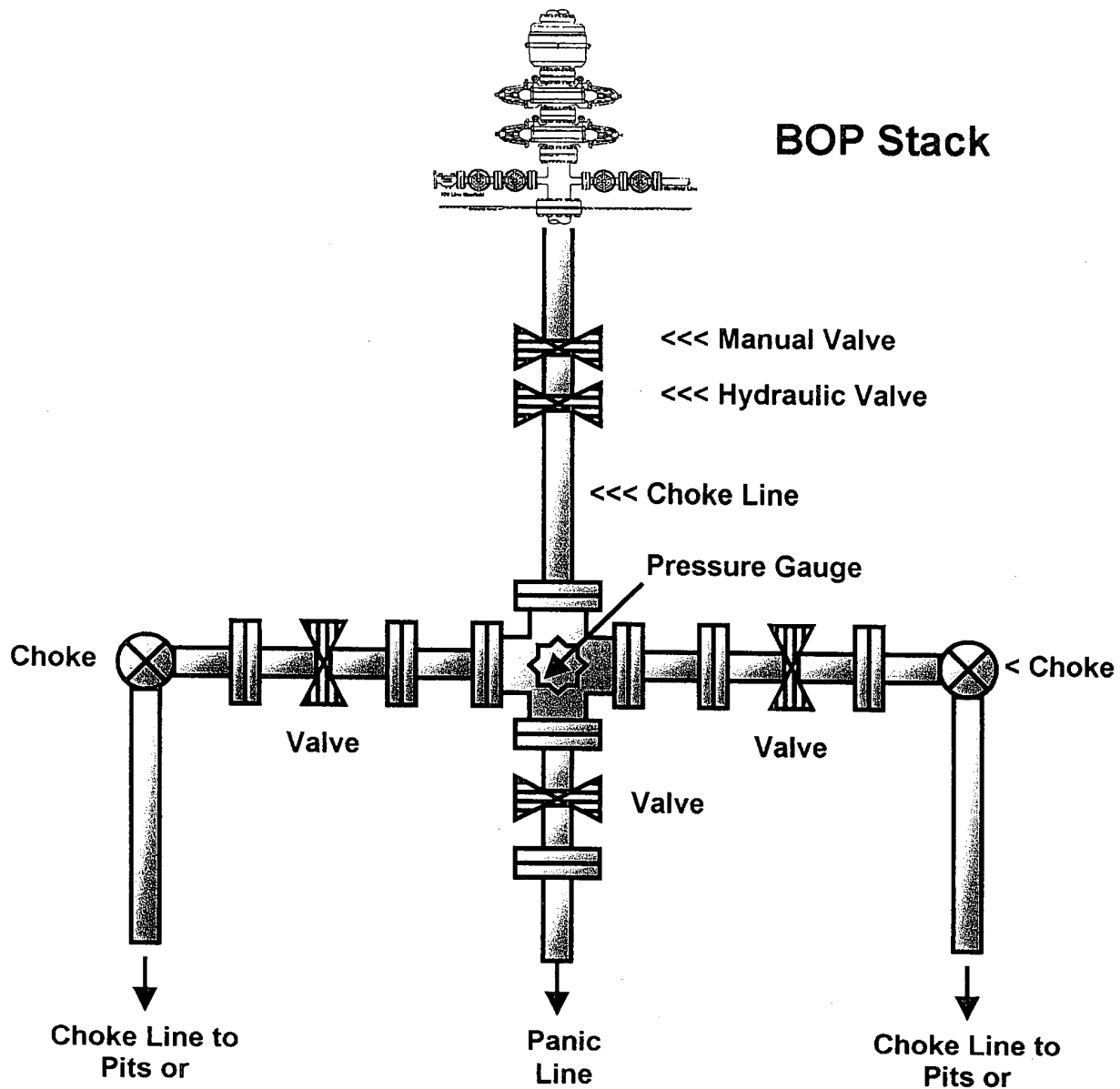


Figure No. 6

<p>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: 2415' FSL & 287' FWL Unit L, Section 27, T- 7-S, R- 37-E Roosevelt Co, NM</p>	<p>Well name and number Federal 27 #4</p>

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

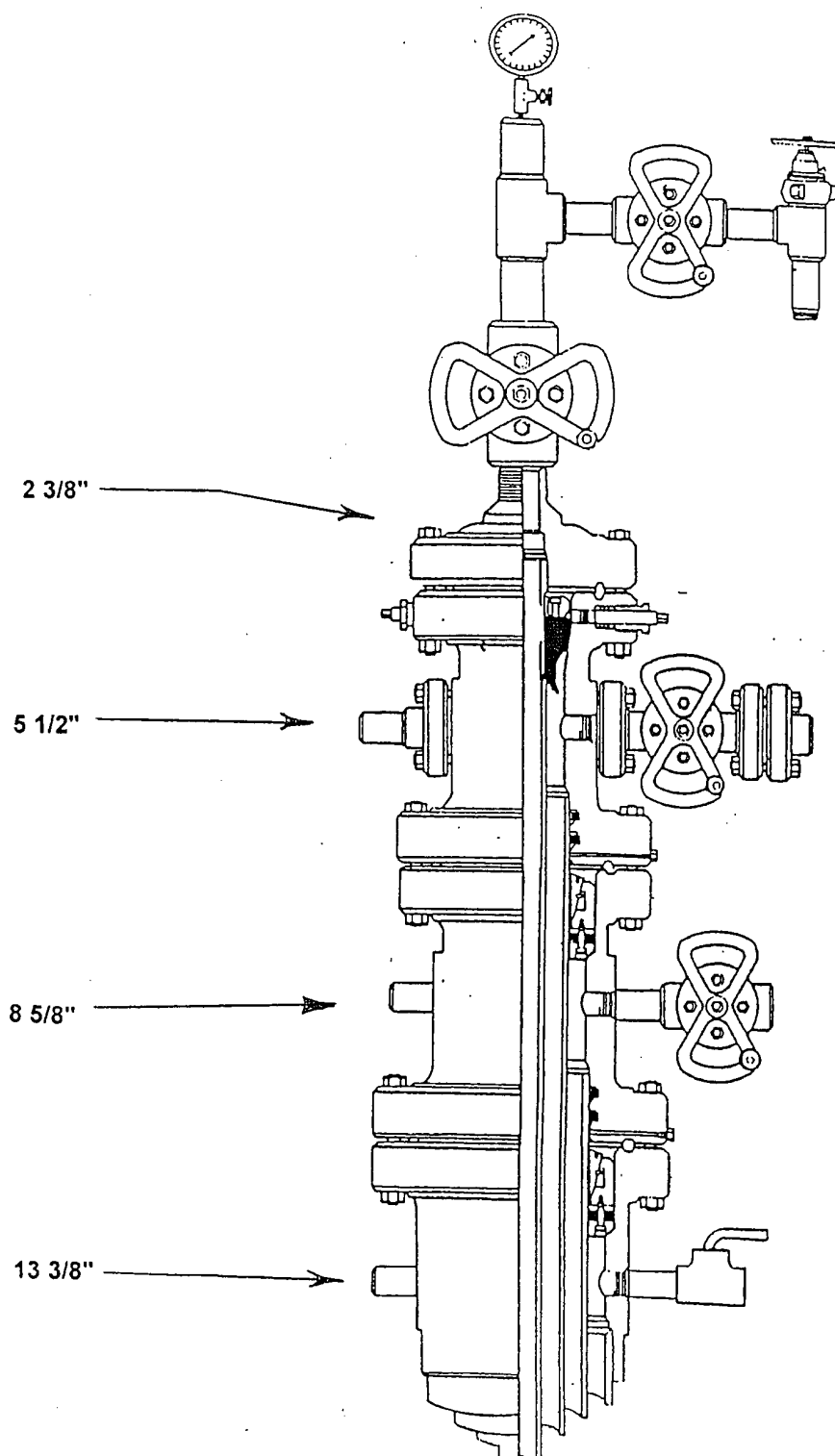


Figure No. 7

H. L. Brown Operating L.L.C.
Federal 27 #4
Drilling Permit – Operator Statement

UNITED STATES DEPARTMENT OF THE INTERIOR
Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201-1287

Statement Accepting Responsibility for Operations

Operator Name: H.L. Brown Operating L.L.C.
Address: 300 West Louisiana
City, State: Midland, Texas
Zip Code: 79702

The undersigned accepts all applicable terms, conditions, stipulations and restrictions concerning operations conducted on the leased land, or portion thereof, as described below:

Lease Name: **Federal "27" #4**

Lease Number: **NM – 12852**

Legal Description of Land: **all Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico.**

Formations: **All uncommitted mineral interests from surface to total depth.**

Bond Coverage: **Statewide**

BLM Bond File Number: **#0679788**

Authorized Signature:



Name: Robert McNaughton

Title: Operations Manager

Date: August 2, 2005

H. L. Brown L. L. C.
Federal 27 #4
Drilling Permit – Surface Agreement

UNITED STATES DEPARTMENT OF THE INTERIOR

**Bureau of Land Management
Roswell Field Office
2909 West Second Street
Roswell, New Mexico 88201-1287**

Surface Agreement

Operator Name: H.L. Brown Operating L.L.C.
Address: 300 West Louisiana
City, State: Midland, Texas
Zip Code: 79702

Lease Name: **Federal "27" #4**

Lease Number: **NM – 12852**

Legal Description of Land: **all Section 27, T-8-S, R-37-E, NMPM, Roosevelt County, New Mexico.**

The surface that the well site and road are on is owned by Mack Kizer, P.O. Box 27, Pep, New Mexico 88126. We have reached a surface damage agreement with Mr. Kizer as of August 02, 2004.

Authorized Signature:

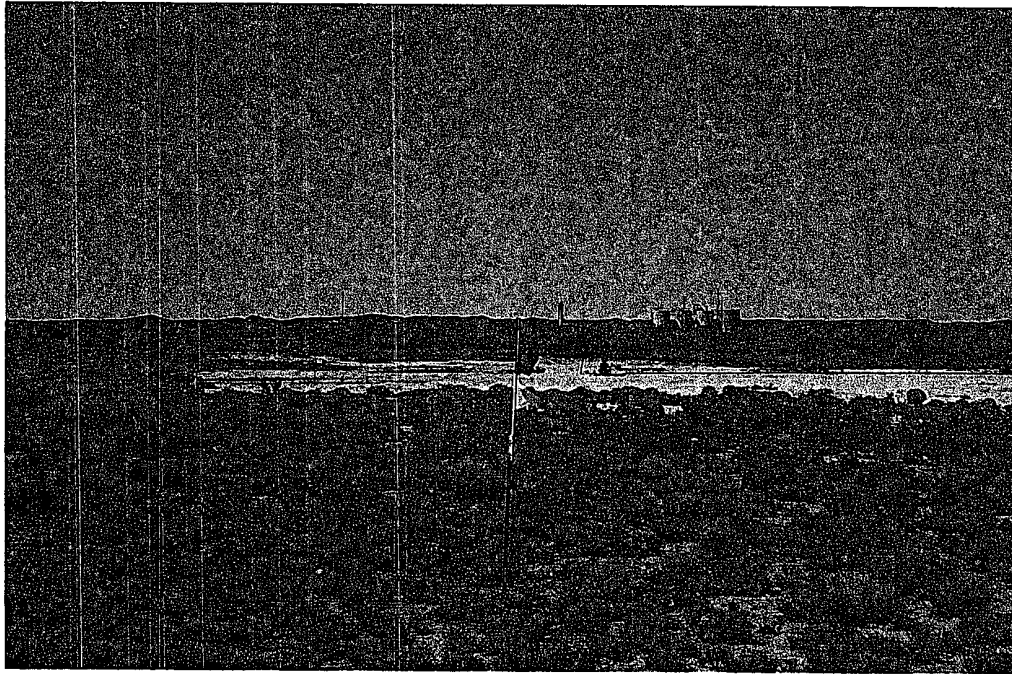


Name: Robert McNaughton

Title: Operations Manager

Date: August 2, 2005

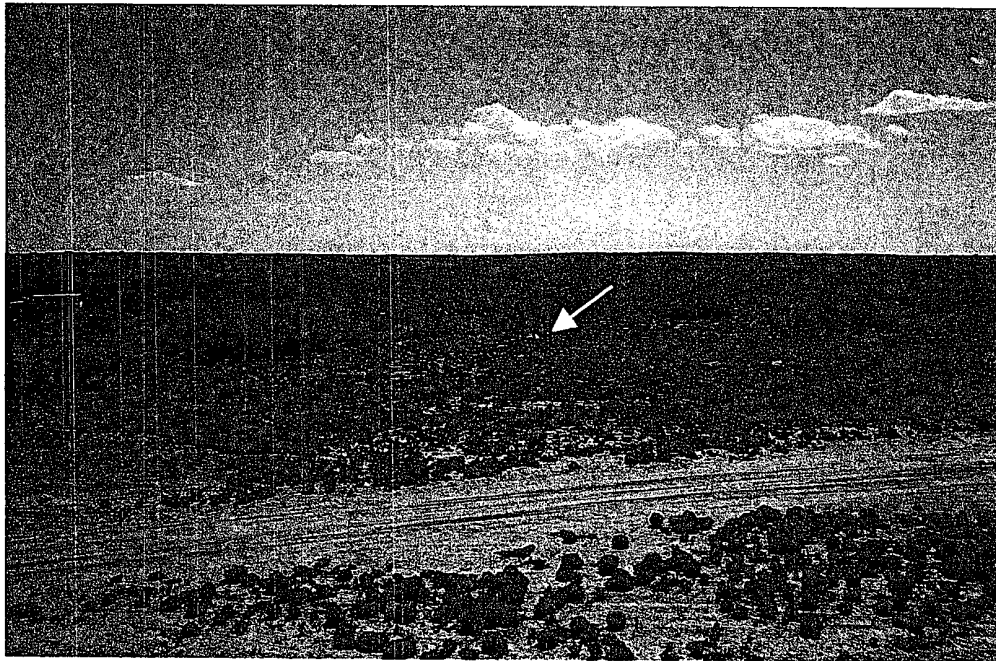
Federal 27 #4 Location - June 8, 2005



Above: looking north from 27 #4 stake to 27 #2 wellhead.

Below: looking southwest from the top of the 27 #2 tank battery.

#2 well had large location cleared - #4 will overlap about halfway.



TITLE PAGE/ABSTRACT/NEGATIVE SITE REPORT

1. BLM Report No. 2. Reviewer's Initials/Date.....3. NMCRIS Number
Accepted () Rejected () 93697

4. Type of Report: Negative (X) Positive ()

5. Title of Report: **A CULTURAL RESOURCE SURVEY
OF THE FEDERAL "27" NO. 4 AND THE FEDERAL
"28" COM. NO. 3 WELL LOCATIONS, ROOSEVELT
COUNTY, NEW MEXICO**

6. Fieldwork Date(s)
07JUL2005

Author: **Don Clifton**

7. Report Date
11JUL2005

8. Consultant Name and Address:

Direct Charge: **Don Clifton**

Field Personel: **Don Clifton**

Address: **P.O. Box 30, Pep, N.M. 88126**

Phone: **(505)675-2360**

9. Cultural Resource Permit No.:
83-2920-02-O

10. Consultant Report Number
581

11. Client Name: **H. L. Brown Operating, L.L.C.**

Responsible Individual: **Robert McNaughton**

Address: **300 W. Louisiana, Midland, Tx. 79702**

Phone: **915-683-5216**

13. Land Status	BLM	State	Private	Other	Total
a. Area Surveyed			18.65		18.65
b. Area of Effect			9.3		9.3

14. Linear Length: **900'** Width: **100**

15. Location:

a. State: **New Mexico**

a. County: **Roosevelt**

c. BLM Office: **Roswell**

d. Nearest City or Town: **Milnesand**

e. Legal Description: **T7S R 37E Section 27 NW NW SW – Fed. "27" #4**
Section 28 N1/2 NE SW – Fed. "28" Com. #3

f. Well Pad Footages: **287' fwl/2415' fsl – Fed. "27" #4**
2310' fsl/660' fel – Fed. "28" Com. #3

g. USGS 7.5' Map: **Bluit, N. M. 1972 rev. 1084 33103 F2**

16. Project Data:

a. Records Search:

Date of BLM Review: 06Jul2005 Name of Reviewer: Pat Flanary

Date of ARMS Data Review: 30Jun2005 Name of Reviewer: Don Clifton

Findings: No previously recorded cultural resources are within one mile of the proposed well locations.

b. Description of Undertaking. H. L. Brown Operation L.L.C. proposes to construct the Federal "27" #4 and the Federal "28" Com. #3 well locations. The proposed "27" #4 well is on portions of an existing well pad and a caliche lease road will serve as access. The proposed Federal "28" Com. #3 well location has an access road connecting it to the "27" #4 and another access road on the north from the proposed location to an existing lease road.

c. Environmental Setting: The two proposed wells are approximately 10 miles east of Milnesand, New Mexico. The "27" #4 well is on the gentle east-facing slope of a ridge. The "28" Com #3 is on the top and sides of a narrow north/south trending ridge. A playa is to the northeast of the well location.

Soils are classified as Berthoud sandy loams. Observed soils are sandy loams.

Vegetation noted is a dominant shinnery oak, with mesquite, sandsage, yucca, snakeweed, and mixed grasses.

There is an estimated 70% of surface visibility within the survey areas.

d. Field Methods: The two well locations were examined for cultural resources by walking a series of linear transects spaced no wider than 50' apart. The access roads were inspected by walking a linear transect on either side of the staked center line which covered a 100' wide area.

e. Artifacts Collected: None

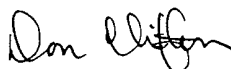
17. Cultural Resource Findings:

a. Location and Identification of each resource: No cultural resources were discovered within the areas examined.

b. Evaluation of significance of each resource

18. Management Summary: It is recommended that construction of the Federal "27" #4, the Federal "28 Com. #3, and the two access roads proceed without any further cultural resource investigations.

19. I certify the information provided is correct and accurate to my knowledge and meets all applicable BLM standards.

Responsible Archaeologist: 

Date: July 11, 2005

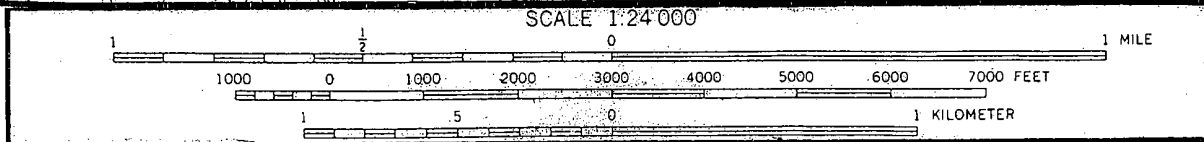
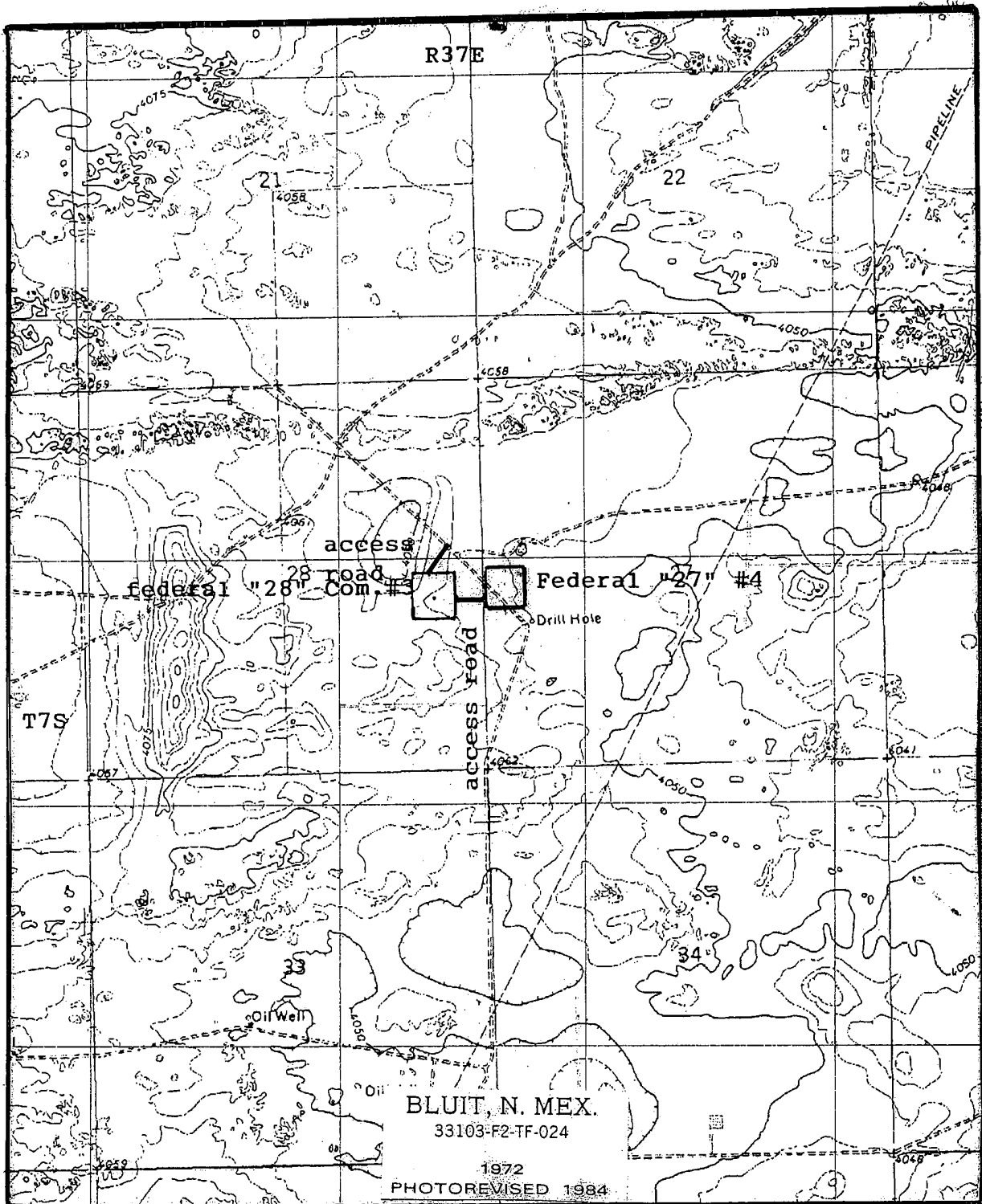


EXHIBIT A

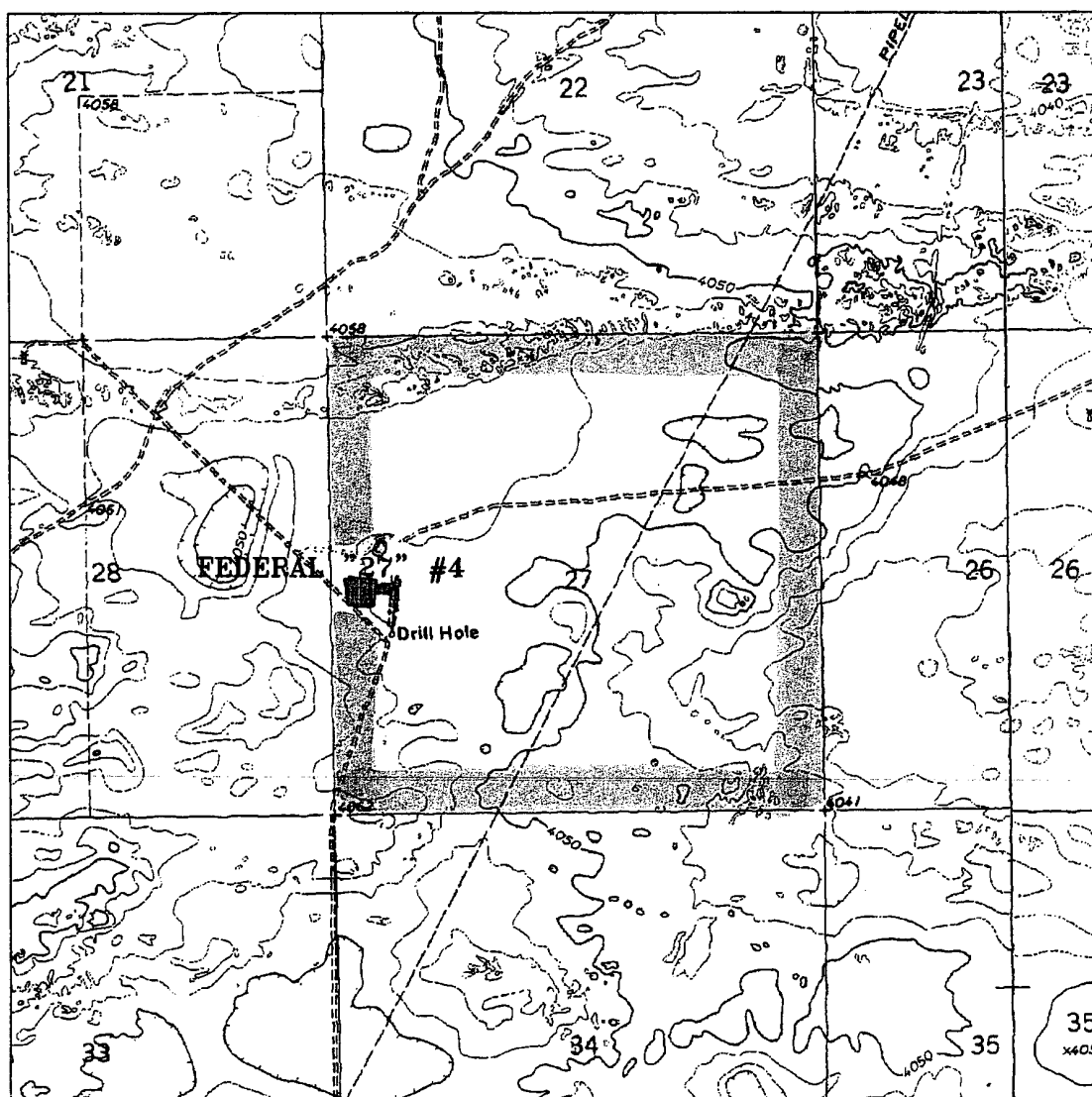
OPERATORS NAME: H.L. Brown Operating L.L.C. LEASE NO.: NM-54450

WELL NAME & NO: Federal "27" #4

QUARTER/QUARTER & FOOTAGE: NW¹/₄-SW¹/₄ - 2415' FSL & 287' FWL

LOCATION: Section 27, T. 7 S., R. 37 E., NMPM

COUNTY: Roosevelt County, New Mexico





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-54449
WELL NAME & NO: Federal "27" #4
QUARTER/QUARTER & FOOTAGE: NW¼SW¼ - 2415' FSL & 287' FWL
LOCATION: Section 27, 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 "27" #4 well pad is approximate 6 inches in depth. Approximately 800 cubic yards of topsoil shall be stockpiled on the East/Southeast corner of the well pad, opposite the reserve pit.
- D. Reserve Pit Requirements:
 - 1. The reserve pit shall be constructed 50' X 100' on the **West/Northwest** side of the well pad. **The construction of the reserve pit shall not disturb the existing access road that is on the south 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.**
 - 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.

WELL DRILLING REQUIREMENTS

2 of 6 pages

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. DRILLING OPERATION 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 extend upward a minimum of 500 feet above the uppermost perforation.**

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.

C. 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:

A. Recording pit level indicator to indicate volume gains and losses.

B. Mud measuring device for accurately determining the mud volumes necessary to fill the hole during trips.

C. Flow-sensor on the flow-line to warn of abnormal mud returns from the well.

IV. ON LEASE - WELL REQUIREMENTS:

A. The holder shall post signs identifying the location permitted herein with the requirements contained in Onshore Oil and Gas Order #1 and 43 CFR 3162.6.

B. The following data is required on the well sign that shall be posted in a conspicuous place on the well pad. The sign shall be kept up with current identification and shall be legible for as long as the well is in existence:

Operator Name: H.L. Brown Operating L.L.C.

Well Name & No.: Federal "27" #4

Lease No.: NM-54449

Footage: 2415' FSL & 287' FWL

Location: Section 27, T. 7 S., R. 37 E.

C. UPON ABANDONMENT OF THE WELL, THE SAME INFORMATION SHALL BE INSCRIBED ON THE DRY HOLE MARKER WITH A BEADED WELD.

D. The approval of the APD does not in any way imply or grant approval of any on-lease, off-lease, or off-unit action(s). It is the responsibility of the holder to obtain other approval(s) such as rights-of-way from the Roswell Field Office or other agencies, including private surface landowner(s).

E. All vehicles, including caterpillar track-type tractors, motor graders, off-highway trucks and any other type of motorized equipment that is used in the construction of the access road and well pad shall be confined to the area(s) herein approved. The drilling rig that is used to drill the well shall also be confined to the approved area(s).

F. Containment Structure Requirement:

1. A containment structure or earthen dike shall be constructed and maintained around all storage facilities/batteries. The containment structure or earthen dike shall surround the storage facilities/batteries.
2. The containment structure or earthen dike shall be constructed two (2) feet high around the facilities/batteries (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum).
3. The perimeter of the containment structure or earthen dike can be constructed substantial larger for greater holding capacity of the contents of the largest tank.
4. The containment structure or earthen dike shall be constructed so that in case of a spill the structure can contain the entire contents of the largest tank, plus 24 hour production, within the containment structure or earthen dike, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

G. Painting Requirement:

All above-ground structures (e.g.: meter houses, tanks, above ground pipelines, and related appurtenance, etc.) not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for painting all the well facilities is *Olive Drab from the Supplemental Environmental color chart 18-0622 TPX.*

H. Fence Requirement:

The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair impacted improvements to at least their former state. On private surface the holder shall contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates shall be allowed unless approved by the Authorized Officer.

I. Open-vent Exhaust Stack Requirements:

1. All open-vent exhaust stacks associated with heater-treater, separators and dehydrator units shall be modified to prevent birds and bats from entering them and to the extent practical to discourage perching and nesting.
2. New production equipment installed on federal leases after November 1st, 1993, shall have the open-vent exhaust stacks constructed to prevent the entry of birds and bats and to the extent practical, to discourage perching, and nesting.

V. Invasive and Noxious Weeds Requirement:

A. The holder shall be held responsible if noxious weeds become established within the area. Evaluation of the growth of noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipelines, and adjacent land affected by the establishment of weeds due to this action. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.

B. The holder shall insure that the equipment and or vehicles that will be used to construct, maintain and administer the access roads, well pad and resulting well are not polluted with invasive and noxious weed seed. Transporting of invasive and noxious weed seed could occur if the equipment and vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to construction, maintenance and administration of the access roads, well pad, and resulting well.

VI. SPECIAL REQUIREMENT(S):

A. Lesser Prairie Chicken Stipulation:

The Roswell Approved Resource Management Plan and Record Of Decision addresses the preservation of the Lesser prairie chicken wildlife habitat. In cooperation with NMDGF, the RFO shall also consider the preservation of the North Bluit Lesser Prairie Chicken Management Area.

1. There shall be no earthmoving construction activities, well exploratory and/or developmental drilling, well completion, plugging and abandonment activities, **between March 15th through June 15th**, of each year. During that period, other activities, including the operation and maintenance of oil and gas facilities, will not be allowed **between 3:00 a.m. and 9:00 a.m.**. To the extent practicable, activities occurring for a short period of time may be conducted so long as they do not commence until after **9:00 A.M.**. Any deviation from this stipulation must be approved in writing by the Roswell Field Office Manager or the appropriate Authorized Officer.
2. All motors or engines that produce high noise levels shall have mufflers installed that effectively reduce excessive noise levels within prairie chicken habitat. High noise levels produced by motors or engines shall be reduced and muffled so as not to exceed 75 db measured at 30 feet from the source of the noise.
3. Upon abandonment of the well, reclamation activities can be conducted between March 15th through June 15th, so long as reclamation work shall not be conducted between the hours of **3:00 AM to 9:00 AM**. Any deviation from this requirement shall require prior approval by the Authorized Officer.
4. In an emergency situation, the Authorized Officer can allow a pit to be constructed for the purpose of collecting crude oil for removal. To prevent wildlife from entering the pit, netting of adequate size to deter access by wildlife shall cover the pit until it is no longer a threat to wildlife, and the pit is reclaimed.



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

EXHIBIT C

1 of 3 pages

CONDITIONS OF APPROVAL

OPERATOR: H.L. Brown Operating L.L.C.

LEASE NO: NM-54449

WELL NAME & NO.: Federal "27" #4

LOCATION: Section 27 T. 7 S., R. 37 E., N.M.P.M.

QUARTER/QUARTER & FOOTAGE: NW¼SW¼ - 2415' FSL & 287' FWL

COUNTY: Roosevelt County, New Mexico

GENERAL CONDITIONS OF APPROVAL:

1. The **operator** shall hereafter be identified as the **holder** in these requirements. The Authorized Officer is the person who approves the Conditions Of Approval.
2. The holder shall indemnify the United States against any liability for damage to life or property arising from occupancy or use of public lands under this authorization.
3. The holder shall have surface use approval prior to any construction work on change(s) or modification(s) to the access road and/or well pad. The holder shall submit (Form 3160-5), Sundry Notice and Report On Wells, an original plus one (1) copy to the Roswell Field Office, stating the basis for any changes to previously approved plans. Prior to any revised construction the holder shall have an approved Sundry Notice and Report On Wells or written authorization to proceed with the change in plans ratified by the Authorized Officer.
4. **Weed Control:**
 - A. The holder shall be held responsible if noxious weeds become established within the area. Evaluation of the growth of noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipelines, and adjacent land affected by the establishment of weeds due to this action. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.

B. The holder shall insure that the equipment and or vehicles that will be used to construct, maintain and administer the access roads, well pad and resulting well are not polluted with invasive and noxious weed seed. Transporting of invasive and noxious weed seed could occur if the equipment and vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to construction, maintenance and administration of the access roads, well pad, and resulting well.

5. Hazardous Substances:

a. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act Of 1976, as amended (15 U.S.C. 2601, *et. seg.*) with regard to any toxic substances that are used, generated by or stored on the project/pipeline route or on facilities authorized. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

b. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substances or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, *et. seg.* or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et. seg.*) on this project/pipeline (unless the release or threatened release is wholly unrelated to the holder's activity on the pipeline). This agreement applies without regard to whether a release is caused by the operator, its agent, or unrelated third parties.

6. Undesirable Events:

If, during any phase of the construction, operation, maintenance, or termination of the authorization, any oil or other pollutants, should be discharged, and impacting Federal land, the control and total removal, disposal, and cleaning up of such oil or other pollutants, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal land, or to repair all damages to Federal land resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

7. Archaeological, Paleontology, and Historical Sites:

- a. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder shall be responsible for the cost of evaluation and any decision as to the proper mitigation measures will be made by the Authorized Officer after consulting with the holder.
- b. The holder is hereby obligated to comply with procedures established in the Native American Graves Protection and Repatriation Act (NAGPRA) to protect such cultural items as human remains, associated funerary objects, sacred objects, and objects of cultural patrimony discovered inadvertently during the course of project implementation. In the event that any of the cultural items listed above are discovered during the course of the project work, the holder shall immediately halt the disturbance and contact the BLM within 24 hours for instructions. The holder or initiator of any project shall be held responsible for protecting, evaluating, reporting, excavating, treating, and disposing of these cultural items according to the procedures established by the BLM in consultation with Indian Tribes. Any unauthorized collection or disturbance of cultural resources may result in a shutdown order by the Authorized Officer.

8. Sanitation:

The holder shall be responsible for maintaining the site in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

9. Open-top Tanks: Any open-top tank containing oil and/or toxic fluids shall be covered with netting or equipped to prevent birds, bats, and other wildlife from entering the open-top tank.

10. Other: None



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

EXHIBIT D

1 of 7 pages

PERMANENT RESOURCE ROAD REQUIREMENTS

Operator: H.L. Brown Operating L.L.C.

BLM Serial Number: NM-54449

Well Name & No.: Federal "27" #4

Location: Section 27, T. 7 S., R. 37 E.

2415' FSL & 287' FWL, Roosevelt County, N.M.

The holder agrees to comply with the following requirements:

1. GENERAL REQUIREMENTS:

- A. The **operator** shall hereafter be identified as the **holder** in these requirements. The Authorized Officer is the person who approves the Permanent Resource Road Requirements.
- B. The holder shall minimize any disturbance to structures on public domain surface. Damages caused to any structure during road construction operations shall be promptly repaired by the holder. Functional use of any structure shall be maintained at all times. The holder shall make a documented good-faith effort to contact the owner prior to disturbing any structure.
- C. When necessary to pass through an existing fence line, the fence shall be braced on both sides of the passageway prior to cutting and the fence shall be promptly repaired to at least it's former state or to a higher standard than it was previously constructed.
- D. A professional engineer shall design the access road if the road grade exceeds 10 percent slope.

2. INGRESS AND EGRESS:

The access road shall be renovated and the access road would access the well pad on the **Northeast** corner of the well pad to comply with the planned access road route.

3. ROAD TRAVELWAY WIDTH:

The travelway of the road shall be constructed 14 feet wide. The maximum width of surface disturbance shall not exceed 30 feet of road construction. The specified travelway width is 14 feet for all road travelway surfaces unless the Authorized Officer approves a different width.

4. SURFACING:

A. Beginning from the dedicated road (county road and/or state highway) all access roads on federal surface and the entire length of the new access road travelway shall be surfaced prior to drilling operations.

B. **The access road travelway shall be surfaced** with caliche or gravel material. If other surfacing material is used, the new type of material shall be approved by the Authorized Officer. The travelway of the road shall be surfaced with **caliche** material. The caliche material shall be compacted to a minimum thickness of 6 inches for the entire length of the travelway surface on the access road. The width of surfacing shall not be less than 14 feet of travelway surface. Prior to using any mineral materials from an existing federal pit, authorization must first be obtained from the Authorized Officer.

5. CROWNING AND DITCHING :

Crowning with materials on site and ditching on one side of the road, on the uphill side, shall be required. The road cross section shall conform to the cross section diagrams in Figure 1 (attached page 6). Where conditions dictate, ditching shall be required on both sides of the road. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road).

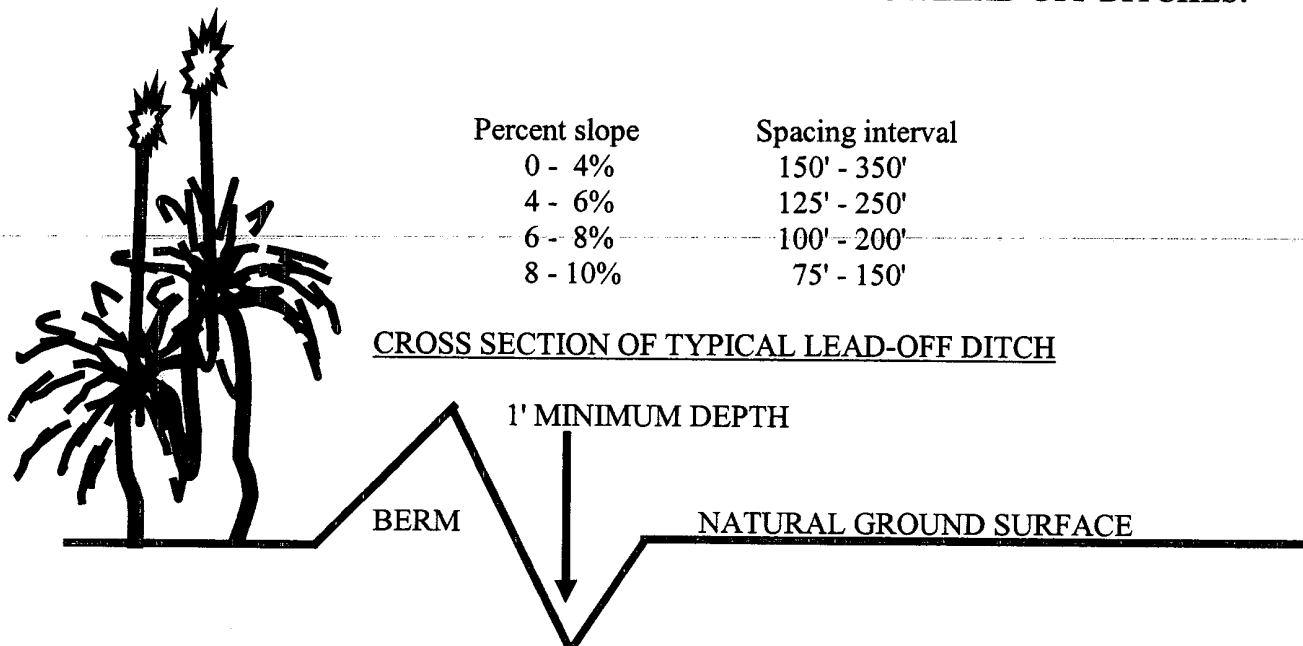
6. DRAINAGE:

A. Drainage control shall be ensured over the entire road through the construction of ditches, sidehill out sloping and insloping, lead-off ditches, culvert installation, and low water crossings.

B. All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval for lead-off ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road slope (in %):

PERCENT SLOPE AND SPACING INTERVALS FOR LEAD-OFF DITCHES:

Percent slope	Spacing interval
0 - 4%	150' - 350'
4 - 6%	125' - 250'
6 - 8%	100' - 200'
8 - 10%	75' - 150'

CROSS SECTION OF TYPICAL LEAD-OFF DITCH

C. A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

D. On road slopes exceeding 2%, water flow shall drain water into an adjacent lead-off ditch. Water flow drainage location and spacing shall be determined by the following formula:

FORMULA FOR SPACING INTERVAL OF LEAD-OFF DITCHES:

$$\text{spacing interval} = \frac{400'}{\text{road slope in \%}} + 100'$$

Ex. 4% slope: spacing interval = $\frac{400}{4} + 100 = 200$ feet

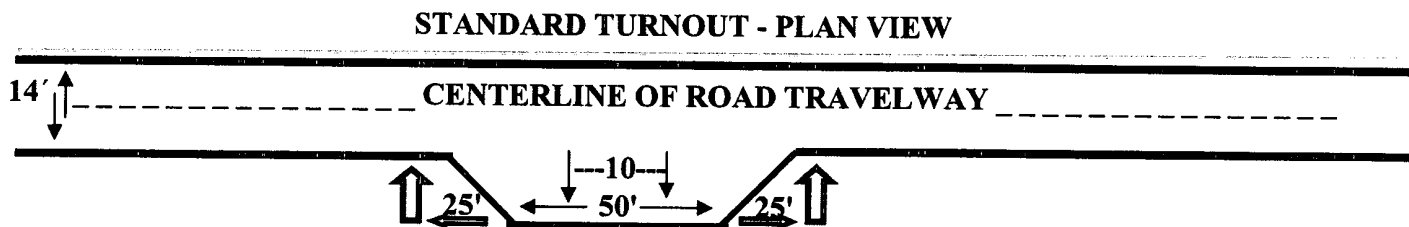
7. CULVERT INSTALLATION:

ONE (1) CULVERT SHALL BE INSTALLED AT THE DEEP WATERWAY CHANNEL FLOW CROSSING IN THE XX¼XX¼ OF SECTION - T. S. - R. E. (SEE EXHIBIT A - LOCATION MAP).

Culvert pipes shall be used where ravines, arroyo gullies, and deep waterway channel flows are crossed by the access road construction route. The culvert(s) shall not be less than XX inches in diameter (minimum 18 inch culvert). The location for the culvert installation is designated on the attached map - **EXHIBIT A**. (A culvert pipe installation diagram shall be attached to this requirement when a culvert is required to be installed, see EXHIBIT - X).

8. TURNOUTS:

Vehicle turnouts shall be constructed on all single lane roads (unless the Authorized Officer determines that the turnouts are not required). Turnouts shall be intervisible and shall be constructed on all blind curves with additional turnouts as needed to keep spacing below 1000 feet. Turnouts shall conform to the following diagram:



9. CATTLEGUARDS: NONE REQUIRED

A. ONE (1) CATTLEGUARD SHALL BE INSTALLED AT THE FENCE CROSSING IN THE XX¼XX¼ OF SECTION - T. S. - R. E. (SEE EXHIBIT A - LOCATION MAP).

PERMANENT RESOURCE ROAD REQUIREMENTS

4 of 7 pages

B. A cattleguard installation diagram shall be attached to this stipulation when a cattleguard is required to be installed - see EXHIBIT X - DIAGRAM A & B).

C. The existing cattleguard(s) on the access road shall be replaced if they are damaged from heavy vehicular traffic use and the Authorized Officer determines that a new cattleguard shall be installed where the existing in place cattleguard(s) have deteriorated beyond practical use. The holder shall be held responsible for the condition of the existing in place cattleguard(s) that are utilized for vehicular traffic use on lease operations by the holder.

D. Where used, all cattleguard grids and foundation designs and construction shall meet the American Association of State Highway and Transportation Officials (AASHTO) Load Rating H-20, although AASHTO U-80 rated grids shall be required where heavy loads, (exceeding H-20 loading,) are anticipated. (See BLM standard drawings for cattleguards – Exhibit X – Diagram A & B). Cattleguard grid length shall not be less than 8 feet and width of not less than 14 feet. A wire gate (16-foot minimum width) will be provided on one side of the cattleguard unless requested otherwise by the surface user.

10. MAINTENANCE:

A. The holder shall maintain the road in a safe, usable condition. A maintenance program shall include, but not be limited to blading, ditching, culvert installation, culvert cleaning, cattleguard maintenance, surfacing, and weed control.

B. The holder shall cooperate with other authorized users in maintenance of the road(s). Failure of the holder to share maintenance costs in dollars, equipment, materials, and manpower proportionate to the holders use with other authorized users may be adequate grounds to terminate the road use. The determination as to whether maintenance expenditures have been withheld by the holder and the decision to terminate the road use shall be at the discretion of the Authorized Officer. Upon request, the Authorized Officer shall be provided with copies of any maintenance agreements entered into by the holder.

11. PUBLIC ACCESS:

A Public access on this road shall not be restricted by the holder without specific written approval being granted by the Authorized Officer. Gates or cattleguards on public land shall not be locked or closed to public use unless closure is absolutely necessary and is authorized in writing by the Authorized Officer.

12. ROAD REHABILITATION REQUIREMENTS:

A. SEE -SURFACE RECLAMATION/RESTORATION REQUIREMENTS - Exhibit E.

B. On private estate land the restoration procedures on the reclamation of the access road shall be accomplished in accordance with the Private Surface Land Owner concurrence. If the surface land owner does not retain the access road for his ranch operations, upon abandonment of this well, the surface material (caliche/gravel) shall be removed from the access road. The removal of the surface material on the road could be re-used for maintenance of other federal roads within close proximity of the reclaimed area or properly disposed of in a federal mineral material pit.

13. SPECIAL REQUIREMENT(S):

A. The existing access road on the south side of the well pad shall be left intact and no new surface disturbance is allowed on the road.

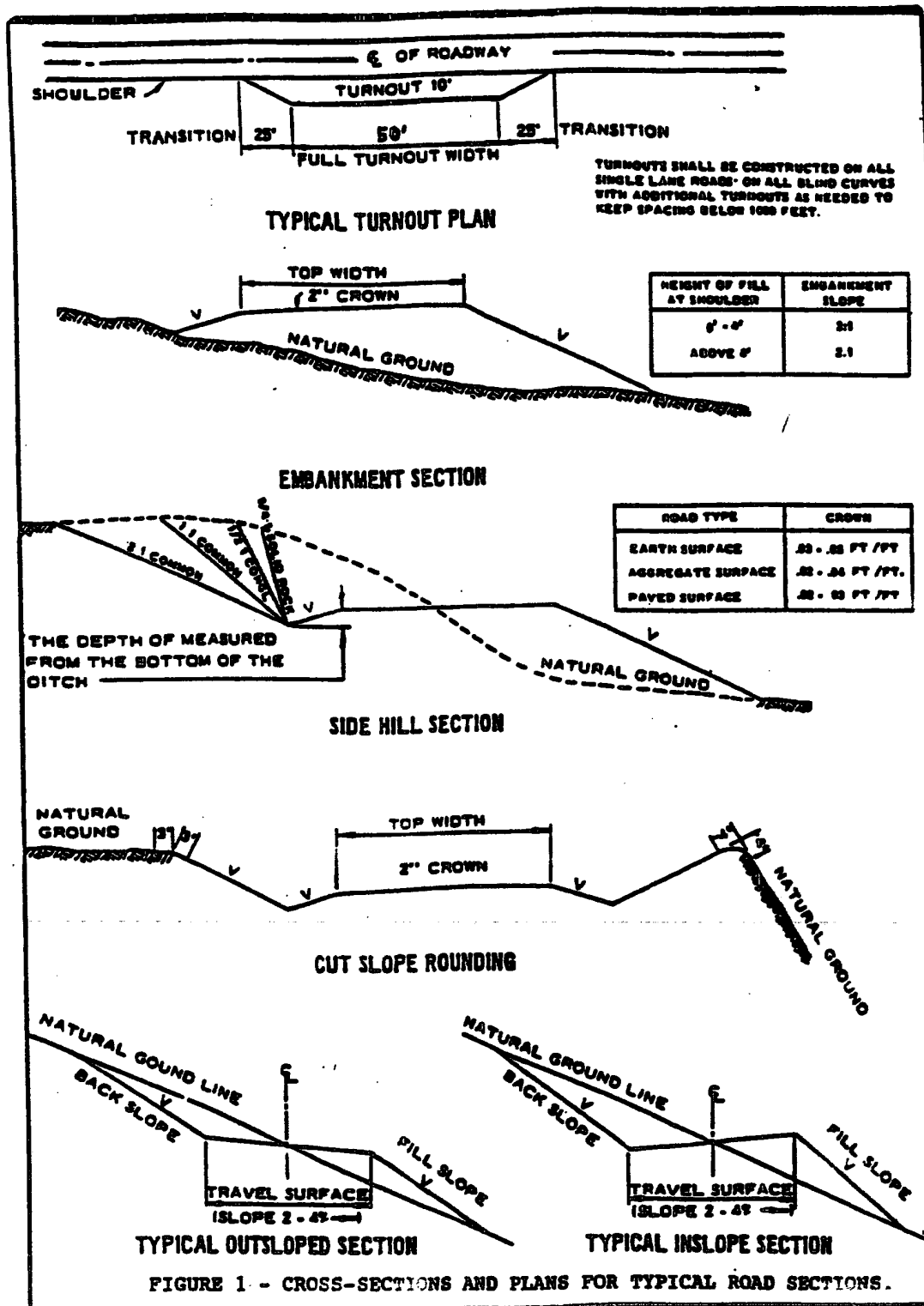


EXHIBIT A

7 of 7 pages

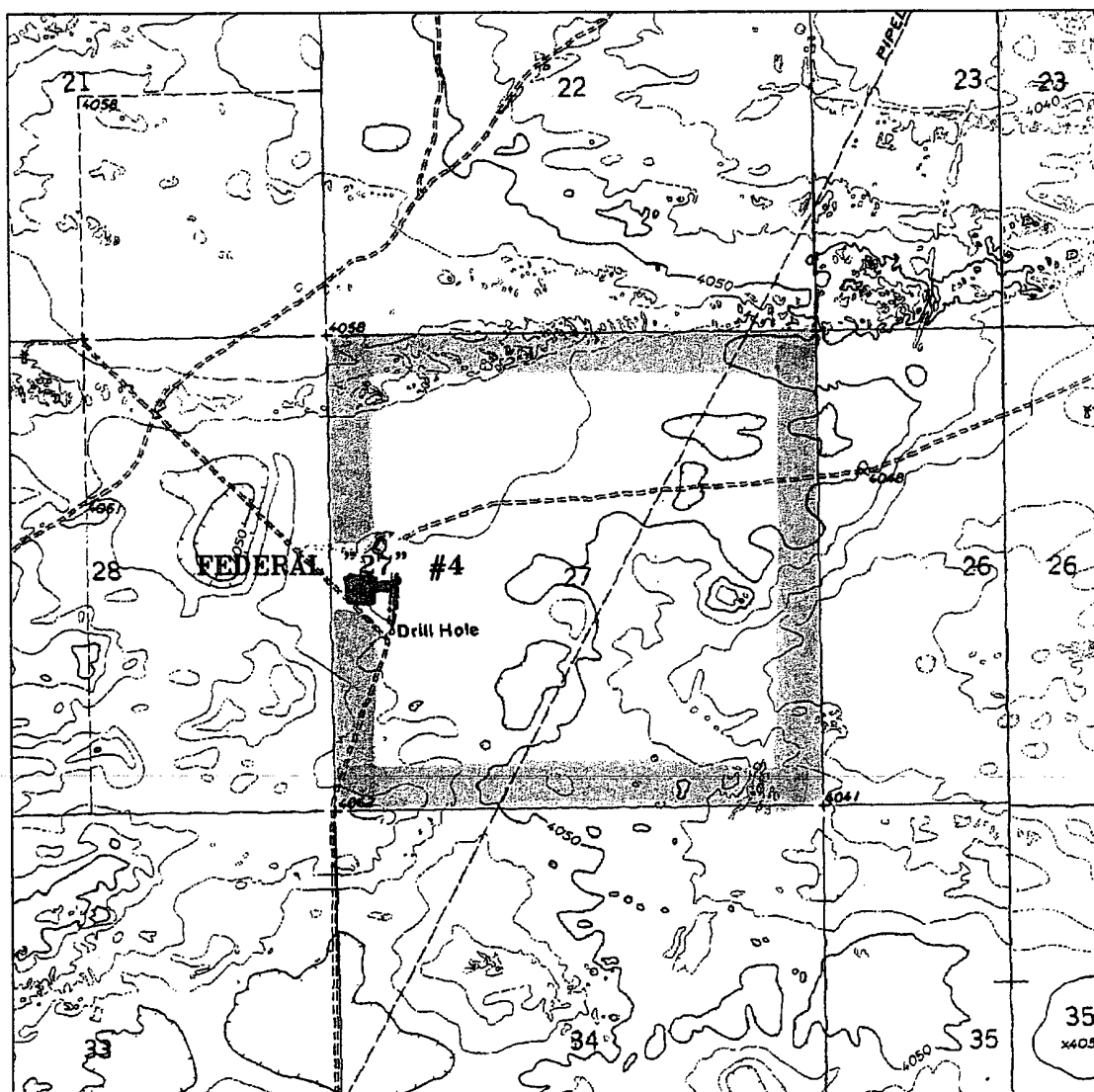
OPERATORS NAME: H.L. Brown Operating L.L.C. LEASE NO.: NM-54450

WELL NAME & NO: Federal "27" #4

QUARTER/QUARTER & FOOTAGE: NW¹/₄-SW¹/₄ - 2415' FSL & 287' FWL

LOCATION: Section 27, T. 7 S., R. 37 E., NMPM

COUNTY: Roosevelt County, New Mexico





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

EXHIBIT E

1 of 5 pages

SURFACE RECLAMATION/RESTORATION REQUIREMENTS

OPERATORS NAME: H.L. Brown Operating L.L.C. LEASE NO.: NM-54450
WELL NAME & NO: Federal "27" #4
QUARTER/QUARTER & FOOTAGE: NW¼-SW¼ - 2415' FSL & 287' FWL
LOCATION: Section 27, 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 administers the reclamation requirements.
- C. The holder shall comply with all the surface reclamation/restoration required by the Authorized Officer pertaining to the reclamation/restoration of the access road and well pad.

II. FORM 3160-5, SUNDRY NOTICES AND REPORTS ON WELLS:

- A. The holder shall adhere to the following:

1. If the well is not drilled, please notify the BLM so that an official release can be approved.

2. **Downhole requirement:** If the well is a dry hole and will be plugged, approval of the proposed plugging program may be obtained orally. However, oral approval must be confirmed in writing by immediately filing a Sundry Notice And Report On Wells (Form 3160-5) "**Notice of Intention to Abandon**", an original and five (5) copies shall be submitted to the Roswell Field Office. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where plugs are to be placed, type of plug, type of plugging mud, etc..

3. The same notification shall be required of the Holder for the reclamation/restoration of the access road and well pad. The Holder shall initially report surface reclamation/restoration of the access road and well pad concurrently with the Downhole requirement. A Sundry Notice And Report On Wells (Form 3160-5) "**Notice of Intention to Abandon**", an original and five (5) copies shall be submitted to the Roswell Field Office. Upon receipt of the "**NOI**" the Authorized Officer shall provide the holder with the specific requirements for the reclamation/restoration of the access road and well pad.

4. **Subsequent Report Of Abandonment:** The holder shall submit a second report on Form 3160-5, Sundry Notices and Reports On Wells, an original and five (5) copies shall be submitted to the Roswell Field Office, pertaining to the reclamation/restoration of the access road and well pad. The holder shall demonstrate that the surface reclamation/restoration requirements have been complied with. The holder shall specify that the reclamation work accomplished the restoration of the disturbed areas to as near the original surface condition the land was in prior to construction of the access road and well pad.

5. **Final Abandonment Notice:** The holder shall submit a third report on Form 3160-5, Sundry Notices and Reports On Wells, an original and five (5) copies shall be submitted to the Roswell Field Office, that shall ascertain that all surface reclamation/restoration requirements have finally been completed and that the access road and well pad are ready for final inspection. The holder shall specify that the surface has been reclaimed in accordance with federal regulations and request for the final approval of the access road and well pad.

III. BOND LIABILITY:

A. Liability under bond shall be retained until all surface reclamation/restoration of the access road and well pad has been completely reclaimed to the satisfaction of the Authorized Officer.

IV. ACCESS ROAD AND WELL PAD RECLAMATION REQUIREMENTS:

1. If the well is completed, all areas of the well pad not necessary for operations shall be reclaimed to resemble the original contours of the surrounding terrain.

2. Upon abandonment of the well, cut-and-fill slopes shall be re-contoured and reduced to a slope of 3:1 or less. The road shall be recontoured to as near the original topography, as possible.

3. Upon abandonment of the well, all production equipment shall be removed from the well pad and properly disposed of.

4. **On private estate land the restoration procedures on the reclamation of the access road and well pad shall be accomplished in accordance with the Private Surface Land Owner concurrence. If the surface land owner does not retain the access road and/or well pad for his ranch operations, upon abandonment of this well, the surface material (caliche/gravel) shall be removed from the access road and well pad.**

5. The surfacing material that is removed can be used on existing roads in need of maintenance, or hauled to a federal material pit for disposal. If the material is to be used on a road or hauled to a material pit, contact the BLM Authorized Officer at (505) 627-0272 for possible additional requirements.

6. Upon removal of the surfacing material, the access road and well pad shall be ripped a maximum of 16 inches deep (Ripping depth will be determined by depth of soil shown in the Soil Conservation Service Survey Handbook).

7. All culverts and other road structures (e.g.: cattleguard, H-Braces, signs, etc.) shall be removed and properly disposed of.
8. All over-burden material shall be replaced in the cut areas, ditches, lead-off ditches, and any other excavated earthwork shall be back filled.
9. An earthen berm shall be constructed at the entrance of the road to prevent vehicular traffic on the reclaimed road.

V. Reserve Pit Reclamation Requirements:

- A. Upon reclamation of the reserve pit, the impervious, reinforced, synthetic or fabricated 12 mil in thickness liner shall be used to encapsulate the reserve pit cuttings.
- B. The dried cuttings in the reserve pit shall be buried a minimum depth of three (3) feet below ground level.
- C. The reserve pit area shall be covered with a three (3) feet minimum cap of clean soil or like material that is capable of supporting native plant growth. Once the reserve pit contents have been capped, the cap shall not be disturbed without NMOCD approval.
- D. Should the cuttings in the reserve pit not meet the three (3) feet below ground level depth, the excess contents shall be removed from the reserve pit until the required minimum depth of three (3) feet below ground level requirement has been met. The excess cuttings shall be removed from the well location and shall be properly disposed of at an authorized disposal site.
- E. Contact Jerry Dutchover, at (505) 627-0236, three days before commencing the reserve pit reclamation.

VI. SEEDING REQUIREMENTS:

- A. The stockpile of topsoil shall be spread over the well pad to cultivate a seed bed. The holder shall not contaminate the topsoil stockpile with the reserve pit muds and/or cuttings.
- B. The reclaimed area(s) shall be seeded with the seed mixture that was determined by the Roswell Field Office for the Desired Plant Community on this well site.
- C. The same seed mixture shall be used for the reclamation of the access road and well pad.
- D. The planting of the seed shall be done in accordance with the following seeding requirements:
 1. The topsoil soil shall be plowed under with soil turning equipment and the plowed surface shall be disked before seeding. Seed shall be planted using a drill equipped planter with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first; the holder shall take appropriate measures to ensure this

SURFACE RECLAMATION/RESTORATION REQUIREMENTS

4 of 5 pages

does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre noted below are to be doubled.

2. The holder shall seed all the disturbed areas with the DPC seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed per acre, (Pounds of pure live seed per acre: pounds of seed X percent purity X percent germination = pounds pure live seed). There shall be no primary or secondary noxious weeds in the seed mixture.

In accordance with State law(s) the seed should be tested for purity and viability within nine (9) months prior to sell. Commercial seed shall be either certified or registered seed. The seed mixture container shall be tagged in accordance with State law(s) and the certified seed tag shall be made available for inspection by the Authorized Officer.

3. **Desired Plant Community** seed mixture to be planted in pounds of pure live seed per acre:

Tivoli fine sand, less than 9% slope; Brownfield fine sandy, less than 9% slope
Deep Sand HP-3 Ecological Site

<u>Common Name and Preferred Variety</u>	<u>Scientific Name</u>	<u>Pounds of Pure Live Seed Per Acre</u>
Sand bluestem, var. Woodward	<i>Andropogon hallii</i>	2.50 Lbs.
Sideoats grama, var. Vaughn or El Reno	<i>Bouteloua curtipendula</i>	1.00 Lb.
Little bluestem var. Pastura	<i>Schizachyrium scoparium</i>	2.50 Lbs.
Sand dropseed	<i>Sporobolus cryptandrus</i>	1.00 Lb.
Bush penstemon	<i>Penstemon ambiguus</i>	1.00 Lb.
Desert or Scarlet Globemallow	<i>Sphaeralcea ambigua</i> or <i>S. coccinea</i>	<u>1.00 Lb.</u>
TOTAL POUNDS PURE LIVE SEED PER ACRE		9.00 Lbs.

4. If one species is not available, increase ALL others proportionately. The seed mixture shall be certified weed free seed. A minimum of 4 species is required, including 1 forb species.

E. The recommended time to seed is from June 15th through September 15th. The optimum seeding time is in mid-July. Successive seeding should be done either late in the fall (Sept. 15th - Nov. 15th, before freeze up) or early as possible the following spring to take advantage of available ground moisture. However, the holder may seed immediately after completing surface abandonment requirements.

F. The seeding of the disturbed areas shall be repeated until a vegetative thicket is established on the access road and well pad. The Authorized Officer shall make the determination when the regrowth on the disturbed areas is satisfactory.

G. The holder shall be responsible for the establishment of vegetation on the access road and well pad. Evaluation of vegetation growth will not be made before the completion of the first growing season after seeding. The Authorized Officer reserves the right to require reseeding at a specific time if seed does not germinate after one growing season. Waiver of this requirement would be considered if diligent attempts to revegetate the disturbed areas have failed and the Authorized Officer determines that further attempts to replant the access road and well pad are futile.

H. Contact Mr. Randy Legler at (505) 627-0215 to witness the seeding operations, two (2) days prior to seeding the disturbed areas.

I. Invasive and Noxious Weeds Requirement:

1. The holder shall be held responsible if noxious weeds become established within the reclaimed areas. Evaluation of the growth of noxious weeds shall be made upon discovery. Weed control will be required on the disturbed land where noxious weeds exist, which includes the road, pad, associated pipeline corridor/routes, and adjacent land affected by the establishment of weeds due to this action. The holder is responsible for consultation with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policy.

2. The holder shall insure that the equipment and or vehicles that will be used to reclaim the access roads and well pad are not polluted with invasive and noxious weed seed. Transporting of invasive and noxious weed seed could occur if the equipment and vehicles were previously used in noxious weed infested areas. In order to prevent the spread of noxious weeds, the Authorized Officer shall require that the equipment and vehicles be cleaned with either high pressure water or air prior to reclamation of the access roads and well pad.