N.M. Oil Cons. DIV-Dist. 2
1301 W. Grand Avenue
Artesia, NM 88210

JUN 17 2009

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No.: **NM-102906**

6. If Indian, Allotee or Tribe Name:

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

8. Lease Name and Well No.: **Thunderhead Federal, Well No. 1** (37712)

2. Name of Operator: **Primero Operating,, Inc.**

9 API Well No.: 30-005-64114

3a. Address: **P.O. Box 1433, Roswell, NM 88202**

3b Phone No. *(include area code)*: **575.622.1001**

10. Field and Pool, or Exploratory: **Wildcat**

4. Location of Well *(Report location clearly and in accordance with any State requirements *)*
At surface: **1980' FSL & 660' FEL**
At proposed prod. zone: **same**

11. Sec., T. R. M. or Blk. and Survey or Area: **Sec. 9-T4S-R27E**

14 Distance in miles and direction from nearest town or post office*: **49 miles NE of Roswell, NM**

12 County or Parish: **Chaves**

13 State: **NM**

15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig. unit line, if any)	16 No. of acres in lease	17. Spacing Unit dedicated to this well
660' / 660'	1000	40

18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	19 Proposed Depth	20 BLM/BIA Bond No. on file
4378'	7,000'	NM-2677

21 Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3944' GL	05/25/2009	4-5 weeks

24. Attachments

ROSWELL CONTROLLED WATER BASIN

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

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

25 Signature	Name *(Printed/Typed)*	Date
George R. Smith	George R. Smith	05/05/2009

Title: **Agent for Primero Operating, Inc.**

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
/S/ Angel Mayes	Angel Mayes	06/10/2009

Title: **Assistant Field Manager, Lands And Minerals**

Office: **ROSWELL FIELD OFFICE**

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.

APPROVED FOR 2 YEARS

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)*

DECLARED WATER BASIN

CEMENT BEHIND THE 8 5/8" CASING MUST BE CIRCULATED

WITNESS

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
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 Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-005-64114	None	Wildcat

Property Code	Property Name	Well Number
37712	THUNDERHEAD FEDERAL	1

OGRID No.	Operator Name	Elevation
18100	PRIMERO OPERATING	3944'

Surface Location

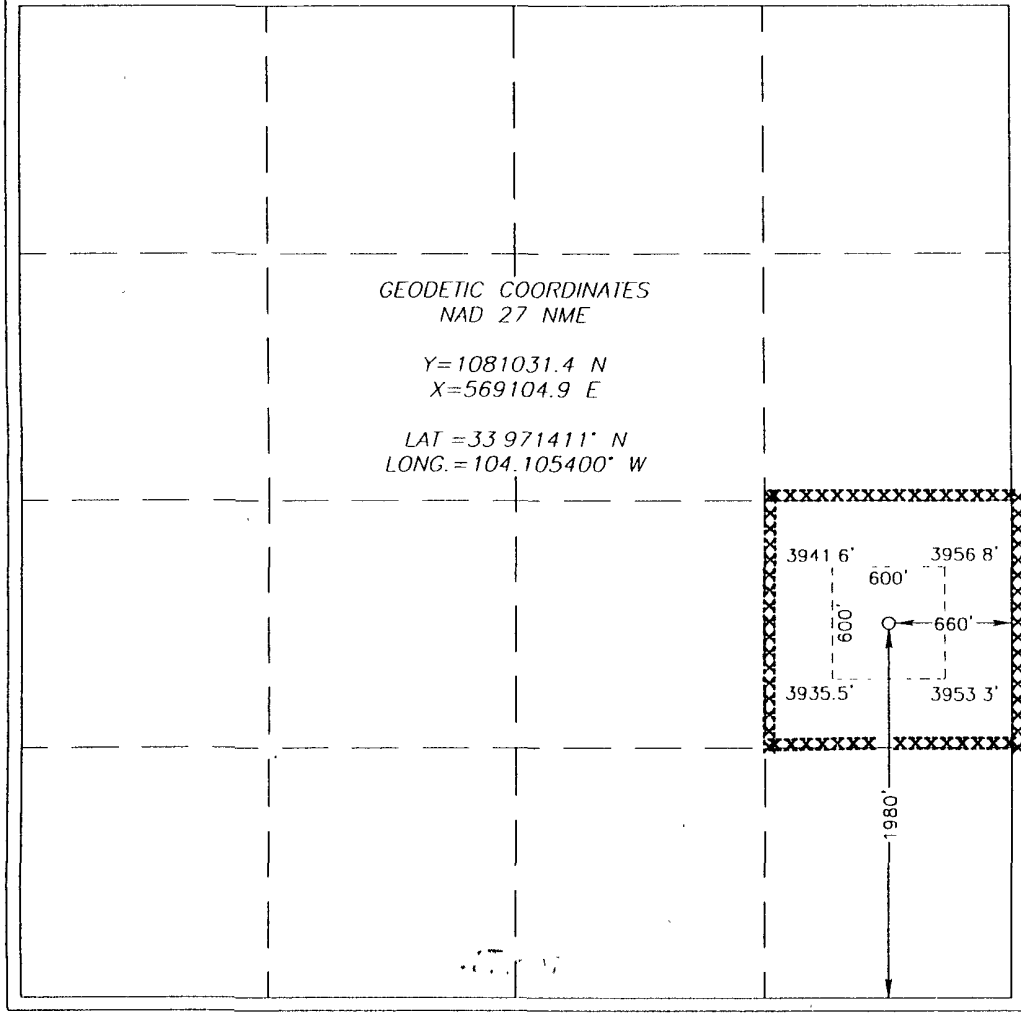
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	9	4-S	27-E		1980	SOUTH	660	EAST	CHAVES

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	Joint or Infill	Consolidation Code	Order No.
40			

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 herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 4-7-09

J. Phelps White IV
Printed Name

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.

MARCH 27, 2009
Date Surveyed

Signature & Seal of Professional Surveyor

Ronald J. Eidson 04/06/09
09-11-0252

Certificate No. GARY EIDSON 12641
RONALD J. EIDSON 3239

APPLICATION FOR DRILLING
PRIMERO OPERATING, INC.
Thunderhead Federal, Well No. 1
1980' FSL & 660' FEL, Sec. 9-T4S-R27E
Chaves County, New Mexico
Lease No.: NMNM-102906
(Exploratory Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, PRIMERO OPERATING, INC. submits the following items of pertinent information in accordance with BLM requirements:

1. The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.

2. The estimated tops of geologic markers are as follows:

Rustler	350'	Top of Penn-3-Bro.	5,840'
San Andres	1208'	Mississippi	6,505'
Glorieta	2356'	Montoya	6,685'
Abo	4,460'	Granite Wash/Gran.	6700'
Wolfcamp	5,260'	T.D	7,000'

3. The estimated depths at which water, oil or gas formations are anticipated to be encountered:

Water: Surface water in the Triassic between 80' - 230'.
Oil: None expected.
Gas: In the Top of Penn-3-Bro., and below 5,840'.

4. **Proposed New Casing Program:**

OLE SIZE	CASING SIZE	WEIGHT	GRADE	JOINT	SETTING DEPTH FACTOR	COLLAPSE DESIGN FACTOR	BURST DESIGN FACTOR	TENSION DESIGN FACTOR
12 1/4"	8 5/8"	24.0#	J-55	STC	1,500'	1.87	4.02	6.78
7 7/8"	5 1/2"	17.0#	J-55	LTC	7,000'	1.32	1.43	2.08

5. **Proposed Control Equipment**: A 10" 3000 psi wp Shaffer Type "E" BOP will be installed on the 8 5/8" casing. Casing and BOP will be tested as per Onshore Oil & Gas Order No. 2 before drilling out with 7 7/8". The Pipe Rams will be operated and checked daily, plus each time drill pipe is out of hole. This will be documented on the driller's log. See Exhibit "E".

6. **Proposed Cement Program:**

CASING	SETTING DEPTH	QUANITY OF CEMENT	TOC	YEILD
8 5/8"	1500'	Lead: 580 sx "C"	Surface	1.70
		Tail: 200 sx "C" + 2% CaCl 2	"	1.34
5.1/2"	7000'	Lead: 565 sx "C" (50:50) Poz	1300'	2.36
		Tail: 200 sx "C" +2% CaCl 2	"	1.30

7. Proposed Mud Program:

MUD PROGRAM DEPTH	MUD	MUD WEIGHT	VIS.	W/L CONTROL
0-1500'	Fresh water spud mud:	8.4 – 9.4 ppg	32 - 34	No W/L control
1500' – 7000'	Brine Water, Starch mud	9.8 - 10.2 ppg	30 - 39	W/L control <10cc@TD

8. Auxiliary Equipment: Blowout Preventer, gas detector, Kelly cock, pit level monitor, flow sensors and stabbing valve.

8. Testing, Logging, and Coring Program:

Drill Stem Tests: None planned.

Logging: T.D –Surface Casing: GR/ND, DLL, MSFL. LDT
T.D. to surface: G/R/CNL

Coring: None planned.

9. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered the proposed mud program will be modified to increase the mud weight. Estimated Surface Pressure = 2175 psi (evac. hole) and BHP of 3713 psi (evac) with temperature of 130°.

10. H_2S: None expected. None encountered in previously drilled wells. The mud log will be cautioned to use a gas trap to detect H_2S and if any is detected the mud weight will be increased along with H_2S inhibitors sufficient to control the gas. H_2S monitoring equipment will be installed before drilling out from the 8 5/8" casing.

11. Anticipated starting date: May 18, 2009.
Anticipated completion of drilling operations: Approx. 4 weeks.

MULTI POINT SURFACE USE AND OPERATIONS PLAN

PRIMERO OPERATING, INC.
Thunderhead Federal, Well No. 1
1980' FSL & 660' FEL, Sec.9-T4S-R27E
Chaves County, New Mexico
Lease No.: NM-102906
(Exploratory Well)

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 to be followed in rehabilitating the surface and environmental effects associated with the operations.

1. EXISTING ROADS:

A. Exhibit "A" is a portion of a BLM topo map showing the location of the proposed well as staked. The well site location is approximately 49.0 road miles northeast of Roswell, NM. Traveling northeast of Roswell on U.S. Hwy 70 there will be approximately 26 miles of existing paved road and 23 miles of gravel Olive C/Rd. (2), Sea C/Rd, and ranch roads

B. Directions: Travel northeast of Roswell, NM on U.S. Hwy 70 for 26 miles to County Rd. 2, Olive Rd. Turn left (north) for approximately 18.5 miles to CR 58, Sea Rd. Turn northwest for approximately 2.5 miles to the Singleton Ranch Headquarters road, turning north on the east side of the pens and barn to the east gate. Continue through the gate crossing the Hernandez Draw and travel north 2 miles to the Red Hill Windmill. Turn west on north side of windmill for .4 mile to the start of the proposed access road is on the South and will run southwest for 140 feet to the northwest corner of the Thunderhead Federal, Well No. 1 proposed well pad.

2. PLANNED ACCESS ROAD:

A. Length and Width: The proposed new access road will be approximately 12 feet wide and 140 feet long. The proposed and existing roads are color coded on Exhibits "A".

B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche, as needed. The surface will be properly drained.

C. Turnouts: None will be required.

D. Culverts: None.

E. Cuts and Fills: None required.

F. Gates, Cattle guards: None will be required.

G. Off lease right of way: A state ROW will be required.

3. LOCATION OF EXISTING WELLS:

A. Existing wells within a two-mile radius are shown on Exhibit "C".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES;

A. Primero Operating, Inc. has no production facilities on the lease at this time.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES; Continued:

B. If the well proves to be commercial, the necessary production facilities, gas production-process equipment will be installed on the drilling pad.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is planned to drill the proposed well with fresh water that will be obtained from private or commercial sources and will be transported over the existing and proposed access roads or surface flow lines beside existing ranch roads will be used.

6. SOURCE OF CONSTRUCTION MATERIALS:

A. If caliche is needed or required for surfacing the proposed access road and well site pad, it will be obtained from a Fee surface-Federal pit in the SENW qtr of Sec. 10-T4S-R27E. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site and access road and repairing some existing ranch roads. The surface material from the site will be stockpiled at the NE corner of the pad.

7. METHODS OF HANDLING WASTE DISPOSAL:

A. Drill cuttings and liquids will be stored in the steel tanks of the closed loop mud system during the drilling operations and delivered to Gandy Marley, Inc. Permit No.: NMI-19, as needed and at closure.

B. There will be no mud pits to be fenced.

C. Water produced during operations will be collected in tanks until hauled to an approved disposal system.

D. Oil produced during operations will be stored in tanks until sold.

E Current laws and regulations pertaining to the disposal of human waste will be complied with.

F. Trash, waste paper, garbage and junk will be contained in trash bins to prevent scattering by the wind and will be removed for deposit in an approved sanitary landfill within 30 days after finishing drilling and/or completion operations.

8. ANCILLARY FACILITIES:

A. None required.

9. WELL SITE LAYOUT:

A. Exhibit "D" shows the relative location and dimensions of the well pad, closed loop system, and major rig components. The pad and closed loop system area has been staked and flagged, 600' X 600' & 300' X 300'.

B. Mat Size: 250' X 125', plus 90' X 250' pad to service the closed loop mud system on the south/southeast

9. Well Site Layout continued

C Cut & Fill: The location will require a 2.0- foot cut on the east with fill to the south and west. A 2 foot berm will be placed on the east and south side of the pad to prevent any spill into the draw south of the pad

D. The surface will be topped with compacted caliche, as needed.

10. PLANS FOR RESTORATION OF THE SURFACE:

A. After completion of drilling and/or completion operations, all equipment and other material not required for operations will be removed. The location will be cleaned of all trash and junk to leave the well site in an aesthetically pleasing a condition as possible.

B. There will be no unguarded pits containing fluids.

C. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management and the Singleton Ranch, fee surface owner, will be complied with and will be accomplished as expeditiously as possible. Mud from the closed system will be disposed of as required. See 7- A. paragraph above.

11. OTHER INFORMATION:

A. Topography: The proposed well site and access road are located on a 2% slope to the west.. The location has an elevation of 3944.0' GL.

B. Soil: The topsoil at the well site is a reddish brown sandy loam with a calcareous and sandstone rock scatter of the underlying rock. The soil is part of the Latom fine sandy loam and the Latom-Rock outcrop-Philder Series complex.

C. Flora and Fauna: The location has a fair to poor grass cover of tabosa, three awn, and grama along with plants of mesquite, yucca, cacti and miscellaneous weeds and wildflowers. The wildlife consists of rabbits, coyotes, antelope, deer, rattlesnakes, lizards, dove, quail and other wildlife typical of the semi-arid desert land.

D. Ponds and Streams: None, except an intermittent water flow in the draw east and south of the drill site, when it rains.

E. Residences and Other Structures: None in the immediate vicinity except the ranch Red Hill windmill 1000 feet southeast of the location.

F. Land Use: Cattle grazing.

G. Surface Ownership: The proposed well site and access road is on Fee surface of the Singleton Ranches, P.O. Box 39, Elida, NM 88116, Phone No.: 575.274.6464, and with Federal minerals.

H. There is a slight evidence of archaeological, historical or cultural sites in the NE part of the staked area, but does not impact the well site area. Archaeological Survey Consultants, Box 2285, Roswell, NM 88202 has conducted an archaeological survey and their report will be submitted to the appropriate government agencies.

12. OPERATOR'S REPRESENTATIVE:

A. The field representative for assuring compliance with the approved use and operations plan is as follows:

Phelps White
PRIMERO OPERATING, INC
P.O. Box 1433
Roswell, NM 88202
Office Phone: 575-622-1001
Cell Phone: 575-626-7660

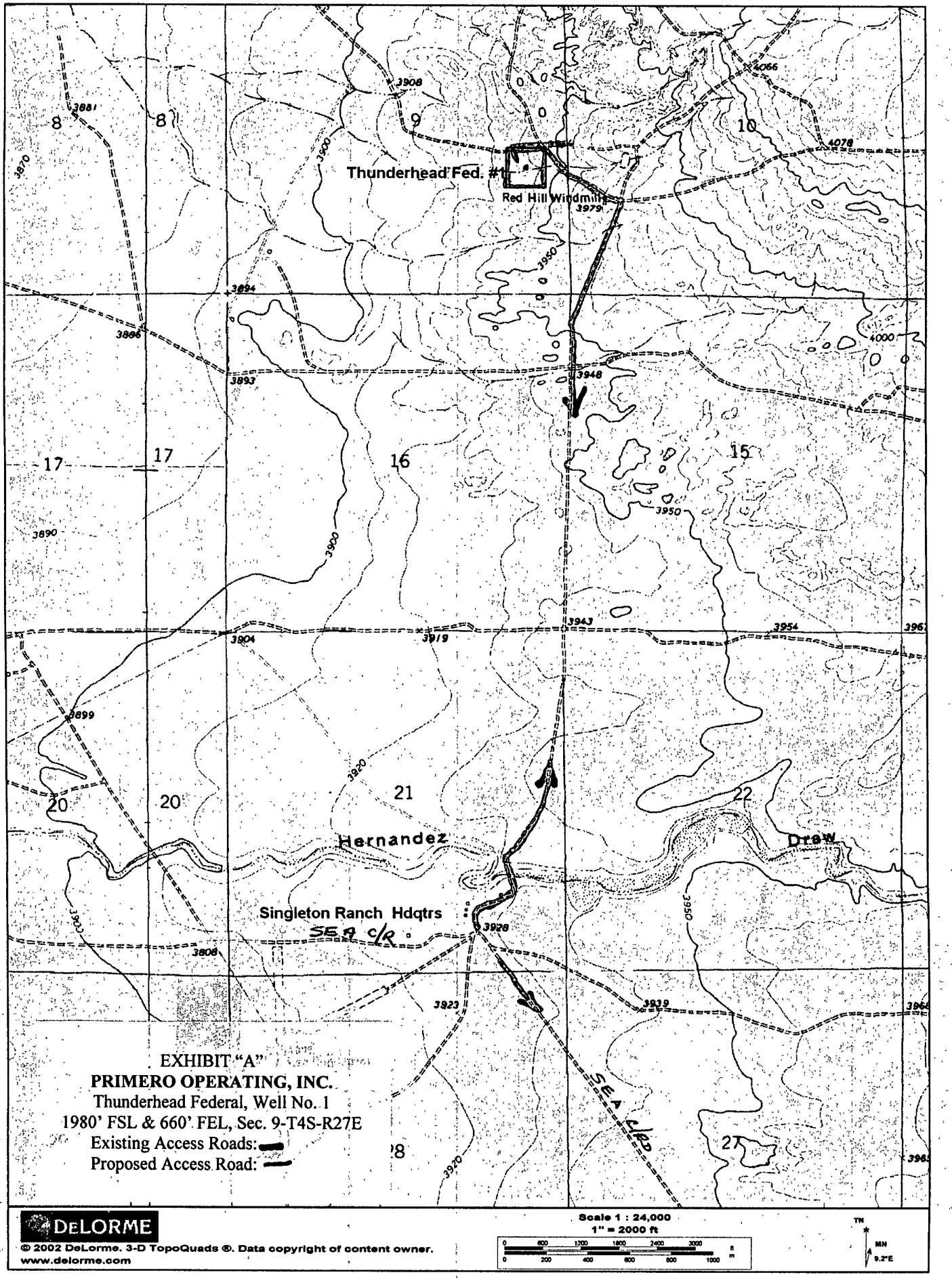
CERTIFICATION:

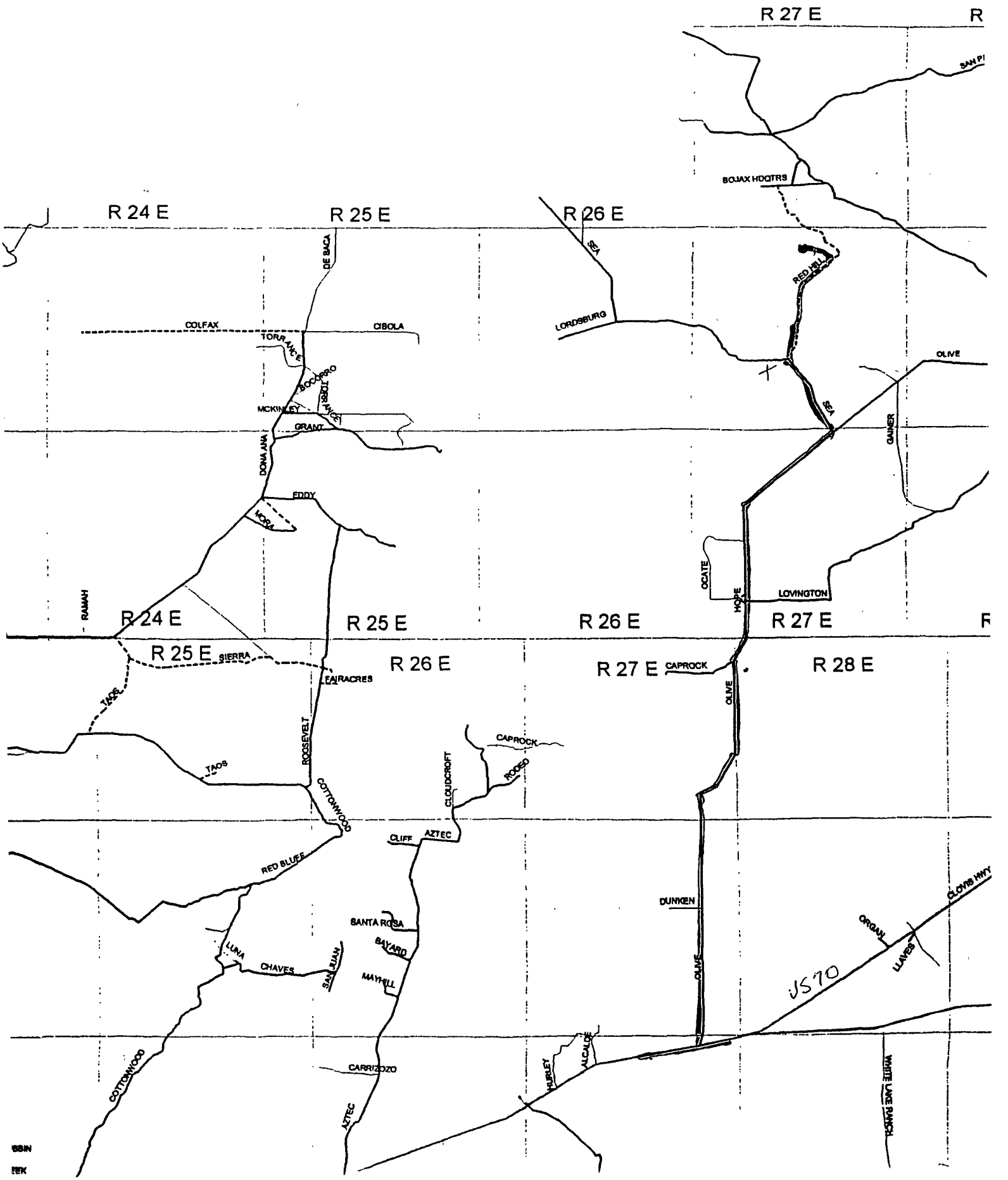
I hereby certify that I have inspected the proposed drill site and access route; that I am familiar with the conditions which presently exist; that the statements made in the plan are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will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

May 5, 2009

George R. Smith

George R. Smith
POA Agent for: PRIMERO OPERATING, INC.


Thunderhead Fed. #1
Red Hill Windmill
Hernandez
Singleton Ranch Hdqtrs
SEA C/R
Draw
SEA C/R
EXHIBIT "A"
PRIMERO OPERATING, INC.
Thunderhead Federal, Well No. 1
1980' FSL & 660' FEL, Sec. 9-T4S-R27E
Existing Access Roads:
Proposed Access Road:
DeLORME
© 2002 DeLorme. 3-D TopoQuads ®. Data copyright of content owner.
www.delorme.com
Scale 1 : 24,000
1" = 2000 ft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SOCORRO
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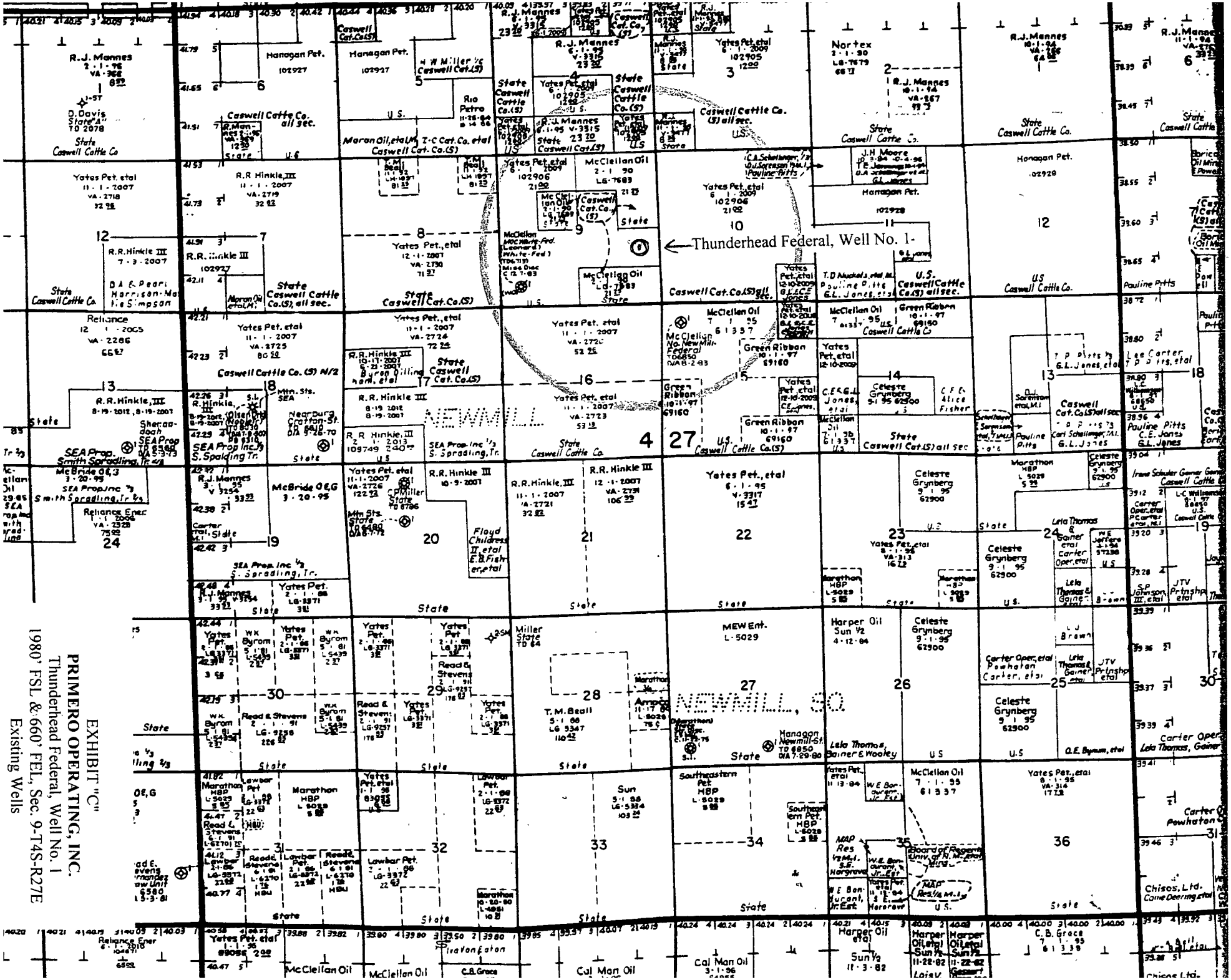
CLOUDCROFT
RODEO
COTTONWOOD
CLIFF
AZTEC
RED BLUFF
DUNKEN
CLOVIS HWY
SANTA ROSA
BAYARD
LUNA
CHAVES
SAN JUAN
MAYHILL
ORGAN
LLANOS
US 70
CARRIZOZO
COTTONWOOD
AZTEC
HURLEY
ALCALDE
WHITE LAKE RANCH


Thunderhead Federal, Well No. 1-
NEWMILL
NEWMILL CO.
PRIMERO OPERATING, INC.
Thunderhead Federal, Well No. 1
1980' FSL & 660' FEL, Sec. 9-T4S-R27E
Existing Wells
EXHIBIT "C"

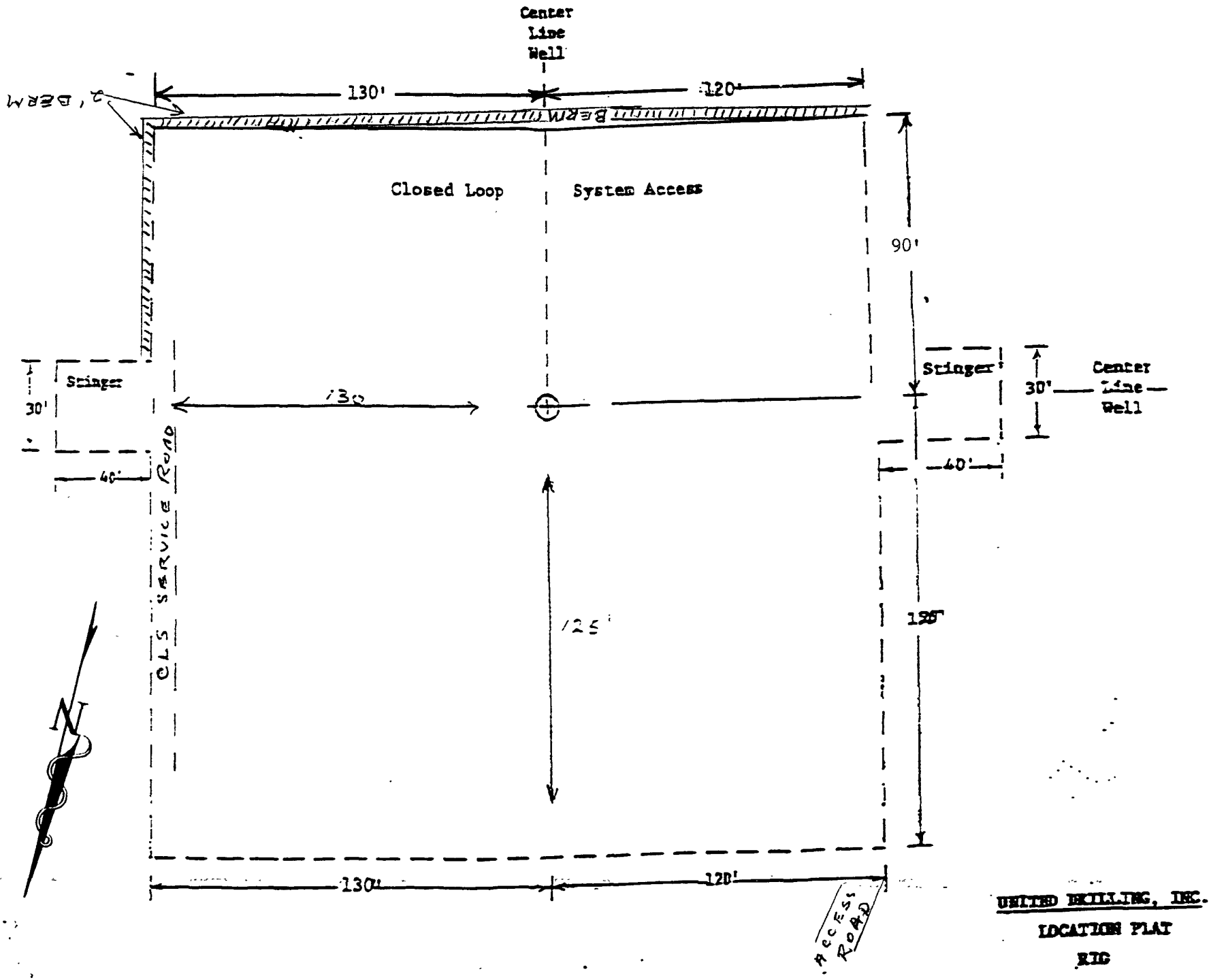


EXHIBIT "D"
PRIMERO OPERATING, INC.
Thunderhead Federal, Well No. 1
Pad & Pit Layout

UNITED DRILLING, INC.

LOCATION PLAT

RIG

BOP DIAGRAM
3000# SYSTEM

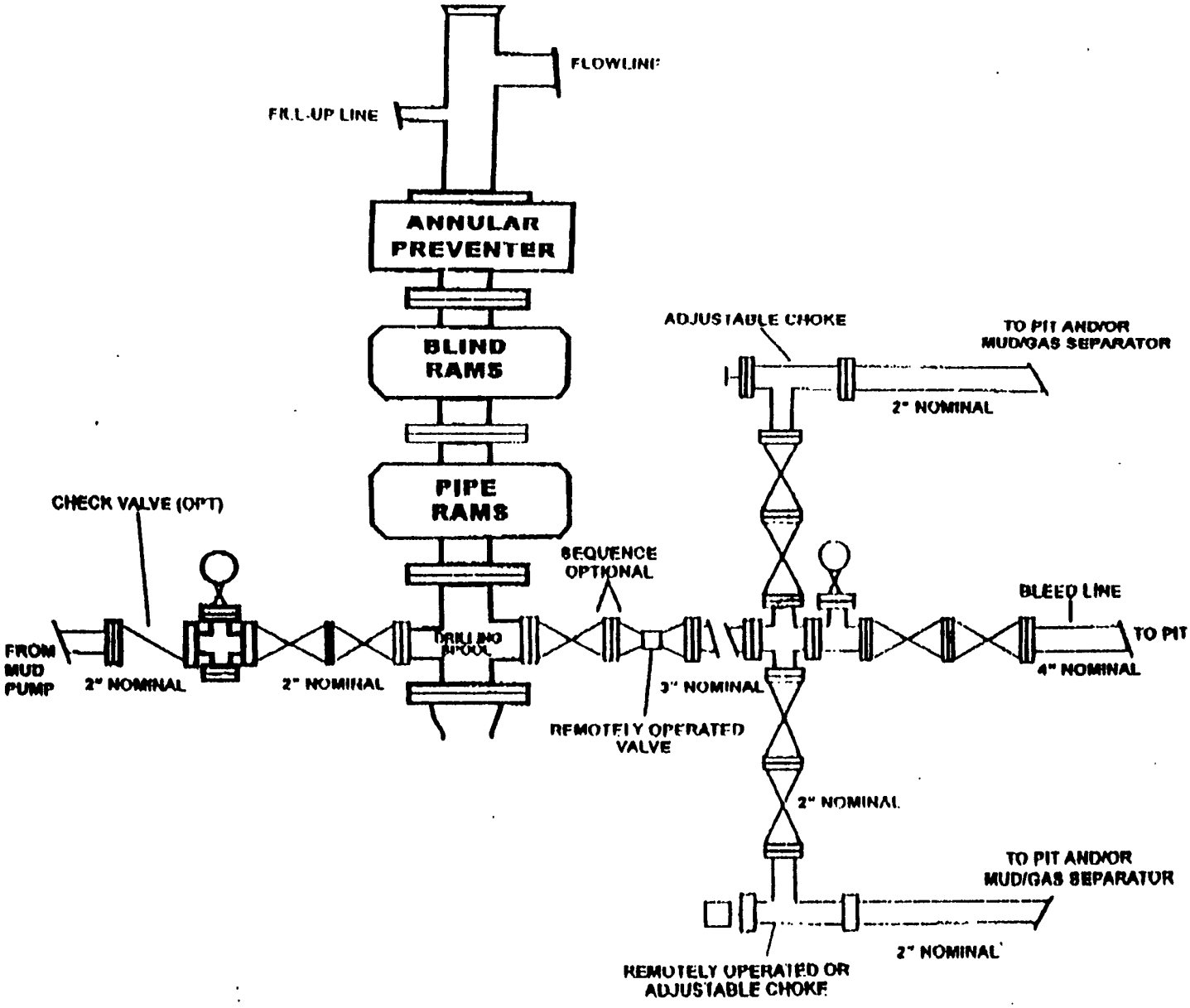


EXHIBIT "E"
PRIMERO OPERATING, INC.
Thunderhead Federal, Well No. 1
BOP Specifications

PECOS DISTRICT - RFO
CONDITIONS OF APPROVAL

June 9, 2009

PRIMERO OPERATING, INC
P.O. Box 1433
Roswell, NM 88202
Office Phone: 575-622-1001
Cell Phone: 575-626-7660

Thunderhead Federal #1
1980' FSL & 660' FEL,
Sec.9-T4S-R27E
Chaves County, New Mexico, NMPM

GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

I. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD (Filing of a Sundry Notice is required for this 60 day extension).

II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator 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 shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery.

Due to the close proximity of LA 162946, an eligible prehistoric archeological site, the following stipulations shall be adhered to:

1) No construction or vehicular traffic shall occur in excess of 230 feet east or northeast of the well pad center (1980 FSL, 660 FEL).
2) No widening of the present surface disturbance of the existing bladed road leading to the well location is permitted since no cultural survey has been done.
3) A BLM permitted archeologist shall be present during well pad and associated short access road construction.

Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

III. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations (access road and/or well pad). Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

IV. CONSTRUCTION

A. NOTIFICATION:

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Roswell Field Office at (505) 627-0247 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved Application for Permit to Drill and Conditions of Approval on the well site and they shall be made available upon request by the Authorized Officer.

If any conflicts with livestock arise as a result of the access road and well pad construction, consultation with the allottee will mitigate those impacts.

B. TOPSOIL:

The topsoil will be stripped to approximately 6 inches in depth within the area designated for construction of the well pad. The operator shall stockpile the stripped topsoil adjacent to the constructed well pad. The topsoil will be used for interim and final reclamation of the surface disturbance created by the construction of the well pad. The topsoil will not be used to construct containment structures or earthen dikes that are constructed and maintained on the constructed

well pad. The direct and indirect impacts to soil resulting from the surface disturbing activities will be mitigated through the instructions and/or orders for surface reclamation/restoration of the disturbed areas.

C. CLOSED SYSTEMS OR STEEL TANKS:

A closed system or steel tanks will be used in lieu of reserve pits.

A containment structure or earthen dike shall be constructed and maintained on the north, west, east, and south sides of the outside boundary of the well pad in order to protect the nearby intermittent drainage located to the south. If the well pad is constructed into a cut on a slope then the uphill side of the well pad will not require the construction of the containment structure or earthen dike, but the construction of the containment structure or dike will be required on the remaining three sides of the well pad which will extend into the uphill portion of the well pad. The containment structure or earthen dike is required so that if oilfield waste contaminant or product contaminant were leaked, spilled, and or released upon the well pad the oilfield waste contaminant or product contaminant shall be contained on the well pad and not enter into the nearby intermittent drainage located to the south. The containment structure or earthen dike shall be constructed two (2) feet high (the containment structure or earthen dike can be constructed higher than the two (2) feet high minimum). The containment structure or earthen dike shall be constructed and maintained during the drilling phase, the production phase and for the life of the well. During interim reclamation, if the surface area of the constructed well pad is reduced then the original constructed containment structure or earthen dike and a portion of the constructed well pad will be excavated and removed. During interim reclamation, the containment structure or earthen dike will then be re-constructed on the outside boundaries of the reduced in size constructed well pad.

D. FEDERAL MINERAL MATERIALS PIT:

Payment shall be made to the BLM prior to removal of any federal mineral materials from any site. Call the Roswell Field Office at (575) 627-0236. A BLM permit will be required.

E. WELL PAD SURFACING:

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational need.

The south portion of the constructed well pad will remain 50 feet from the edge of the intermittent drainage located to the south of the well pad.

F. ON LEASE ACCESS ROADS:

Road Egress and Ingress

The on lease access road shall be constructed to access the corner of the well pad.

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed thirty (30) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

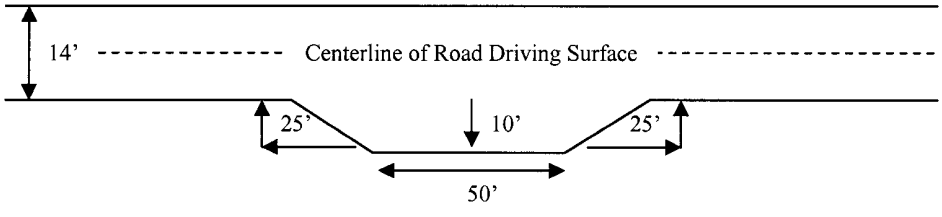
Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

Standard Turnout – Plan View

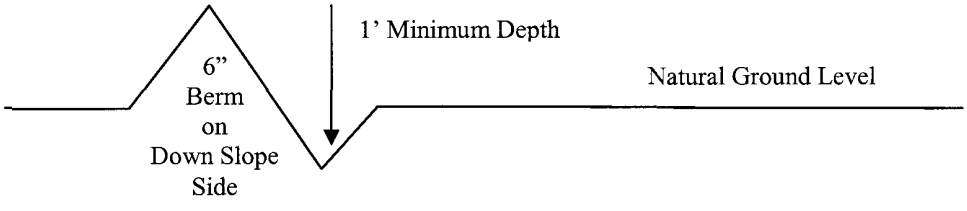


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

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.

Cross Section Of Typical Lead-off Ditch



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

Formula For Spacing Interval Of Lead-off Ditches

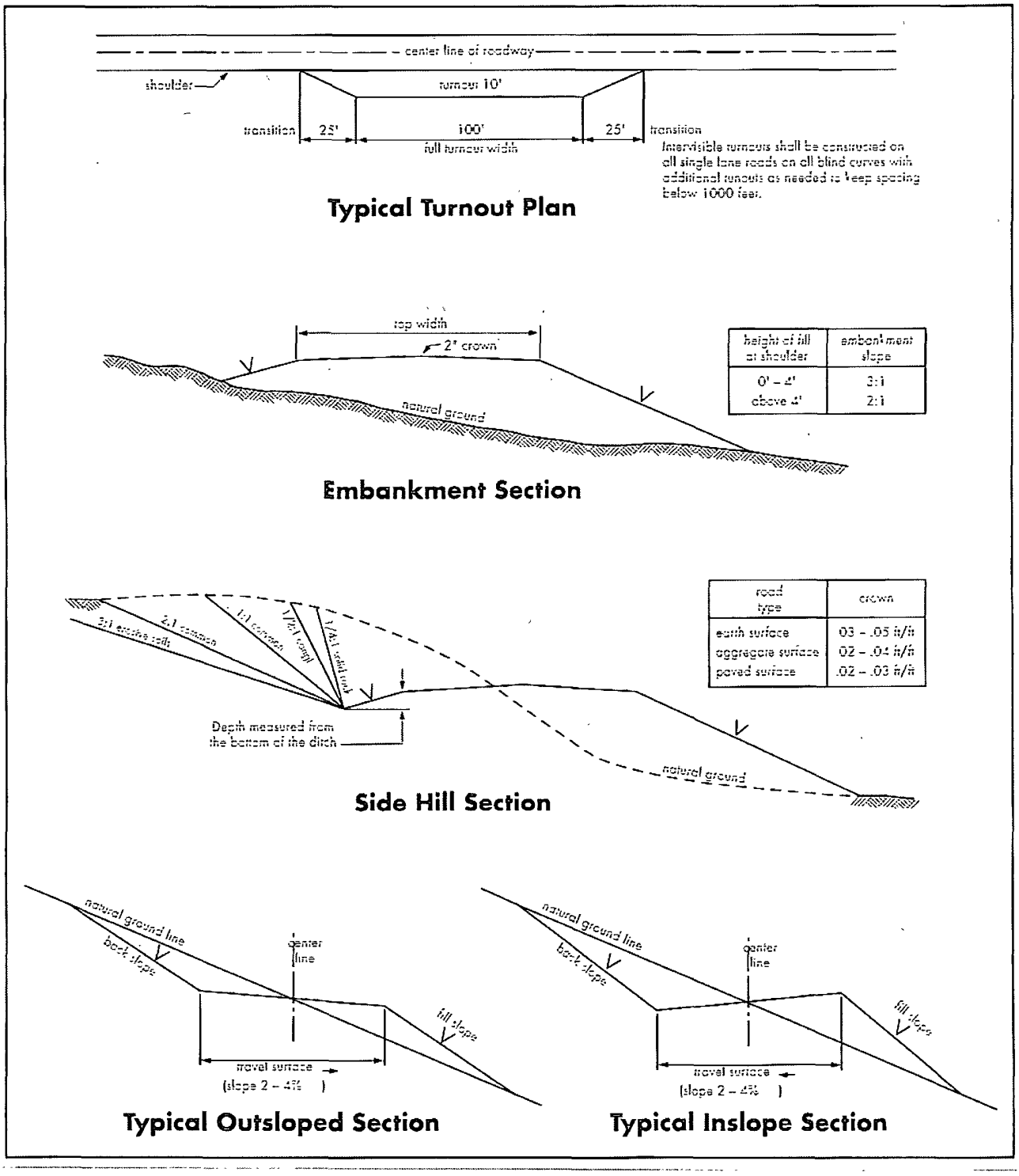
Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 910-6024. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.

2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:

   a. Spudding well
   b. Setting and/or Cementing of all casing strings

3. The BLM is to be notified a minimum of 4 hours in advance for a representative to witness BOPE Tests.

4. 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.

5. Include the API Number assigned to well by NMOCD on the subsequent report of setting the first casing string.

6. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string(s) opposite competent rock. The record of the drilling rate along with the caliper-gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the borehole 30 days from completion

7. The operator is using fresh water and non toxic drilling mud to drill to 1500 ft. The approximate base of the usable water occurs above 300 ft. The operator may set casing anywhere between 350 ft to 1500 ft. Any polymers used will be water based and non-toxic.

B. CASING

1. The 8 5/8 inch usable water protection casing string(s) shall be set at approximately 1500 feet opposite competent bedrock.

If not the operator is required to set usable water protecting casing in the next thick competent bedding (i.e. 15 to 25 ft or greater) encountered and cemented to the surface.

a. If cement does not circulate to the surface, the Roswell Field Office shall be notified and a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

b. Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin or 500 pounds compression strength, whichever is greater. (This is to include the lead cement).

c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compression strength, whichever is greater.

d. If cement falls back, remedial action will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **5-1/2** inch production casing is **sufficient to tie back 500 feet above the uppermost perforation in the pay zone**. If cement does not circulate, a temperature survey utilizing an electronic type temperature survey with a surface log readout will be used or a cement bond log shall be run to verify the top of the cement.

3. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

C. PRESSURE CONTROL

1. Before drilling below the **8-5/8** inch surface casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.

2. Before drilling below the **8-5/8** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **3000** psi.

3. The BOPE shall be installed before drilling below the **8-5/8** inch surface casing shoe and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

a. The BLM Roswell Field office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

b. The tests shall be done by an independent service company.

c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.

e. 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.

f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

VI. PRODUCTION

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Containment Structures

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

VRM Requirements – VRM Class IV

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, Juniper Green (Standard Environmental Color Chart June 2008).

Facility Requirement

Low-profile tanks not greater than eight-feet-high shall be used.

VII. INTERIM RECLAMATION

Earthwork for interim and final reclamation must be completed within 6 months of well completion or well plugging.

During the life of the development, all disturbed areas not needed for active support of production operations should undergo "interim" reclamation in order to minimize the environmental impacts of development on other resources and uses.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be

necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

Pecos District, BLM Seed Mix For

Ecological Site: Sandy HP-3 & Shallow Sand CP-2 for (CP-2 Shallow Sandstone)

Common Name and Preferred Variety	Scientific Name	Pounds of Pure Live Seed Per Acre
Blue grama, var. Lovington	*(Bouteloua gracilis)*	2.0
Sideoats grama var. Vaughn or El Reno	*(Bouteloua curtipendula)*	3.0
Little bluestem	*(Schizachyrium scoparium)*	0.5
Sand dropseed	*(Sporobolus cryptandrus)*	1.0
Plains bristlegrass	*(Setaria macrostachya)*	1.0
Indian blanketflower	*(Gaillardia aristata)*	0.5
Desert or Scarlet globemallow	*(Sphaeralcea ambigua)* or *(S. coccinea)*	1.0
Total Pounds Pure Live Seed (lbs) per acre		9.0

Certified Weed Free Seed

IF ONE SPECIES IS NOT AVAILABLE
INCREASE ALL OTHERS PROPORTIONATELY
No less than (4) species, including one (1) forb
No less than 9.0 pounds lbs per acre shall be applied

C. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.

b. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).

c. Surface Reclamation must be completed within 6 months of well plugging or completion. If the operator proposes to modify the plans for surface reclamation approved in the APD, the operator must attach these modifications to the Notice of Intent using Sundry Notices and Reports on Wells, Form 3160-5.

GENERAL LOCATION MAP