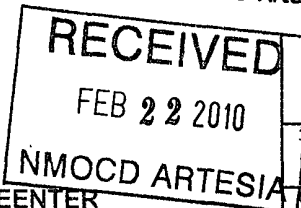


UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No 1004-0136
Expires July 31, 2010

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a Type of Work: <input type="checkbox"/> DRILL <input checked="" type="checkbox"/> REENTER		5 Lease Serial No NMNM93469	
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 READ & STEVENS		7 If Unit or CA Agreement, Name and No	
Contact: DAVID LUNA E-Mail: dluna@read-stevens.com		8 Lease Name and Well No HOT DOG 22 FEDERAL 1	
3a Address P O BOX 1518 ROSWELL, NM 88202		9 API Well No 30-015-24361	
3b Phone No (include area code) Ph: 575-622-3770 Ext: 213 Fx: 575-622-8643		10 Field and Pool, or Exploratory DOG CANYON; GRAYBURG ✓	
4 Location of Well (Report location clearly and in accordance with any State requirements *) At surface 1980FNL 660FEL At proposed prod zone 1980FNL 660FEL		11 Sec., T., R., M., or Blk. and Survey or Area Sec 22 T16S R27E Mer NMP	
14 Distance in miles and direction from nearest town or post office* 9.5 AIRMILES NE OF ARTESIA, NM		12 County or Parish EDDY	
15 Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig unit line, if any) 660'		13 State NM	
16 No. of Acres in Lease 960.00		17 Spacing Unit dedicated to this well	
18 Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft 1,490'		20 BLM/BIA Bond No. on file NM2310	
21 Elevations (Show whether DF, KB, RT, GL, etc) 3513 GL		22 Approximate date work will start 03/01/2010	
23 Estimated duration			

24. Attachments

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

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

25. Signature (Electronic Submission)	Name (Printed/Typed) DAVID LUNA Ph: 575-622-3770 Ext: 213	Date 01/07/2010
Title PETROLEUM ENGINEER		
Approved by (Signature) /s/ Don Peterson	Name (Printed/Typed) CARLSBAD FIELD OFFICE	Date FEB 10 2010
Title FIELD MANAGER	Office	

Application approval does not warrant or certify 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

Approval Subject To (see next page)

Roswell Controlled Water Basin

GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHEDElectronic Submission #79757 verified by the BLM Well Information System
For READ & STEVENS, sent to the Carlsbad
witness production casing and tag plug.
witness CIT,SEE ATTACHED FOR OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **
CONDITIONS OF APPROVAL

Additional Operator Remarks:

Read & Stevens, Inc. proposes to re-enter this well known as the Peterson Federal #1, API #30-015-24361, NMNM 93469 and rename this well to Hot Dog 22 Federal #1.

Please see attached procedure

District I

1525 N. French Dr., Hobbs, NM 88240
Phone: (505) 793-6161 Fax: (505) 793-9723

District II

1301 W. Grand Ave., Artesia, NM 88213
Phone: (505) 748-1181 Fax: (505) 748-0720

District III

1000 Rio Brazos Rd., Santa Fe, NM 87513
Phone: (505) 324-6178 Fax: (505) 324-5170

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3470 Fax: (505) 476-3482

State of New Mexico

Energy, Minerals and Natural Resources

Oil Conservation Division

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

Form C-102
Permit 197544

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number 30-015-24361	2. Pool Code 7946	3. Pool Name DOG CANYON, GRAYBURG
4. Property No. 38069	5. Property Name HOT DOG 22 FEDERAL	6. Well No. 001
7. OGBID No. 15917	8. Operator Name READ & STEVENS INC	9. Elevation 3513

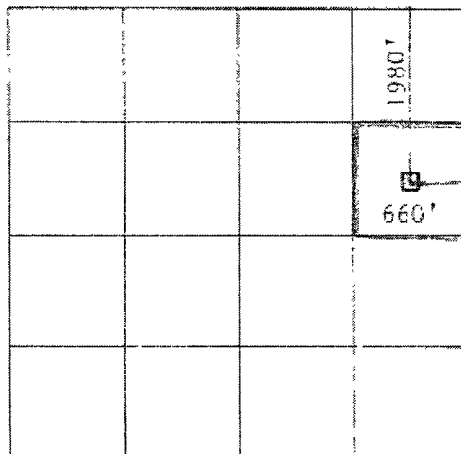
10. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N-S Line	Feet From	E-W Line	County
H	22	16S	27E		1980	N	660	E	EDDY

11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N-S Line	Feet From	E-W Line	County
12. Dedicated Acres 40.00		13. Joint or Infill		14. Consolidation Code		15. Order No.			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



OPERATOR CERTIFICATION

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

E-Signed By: David Luna

Title: Petroleum Engineer

Date: January 7, 2010

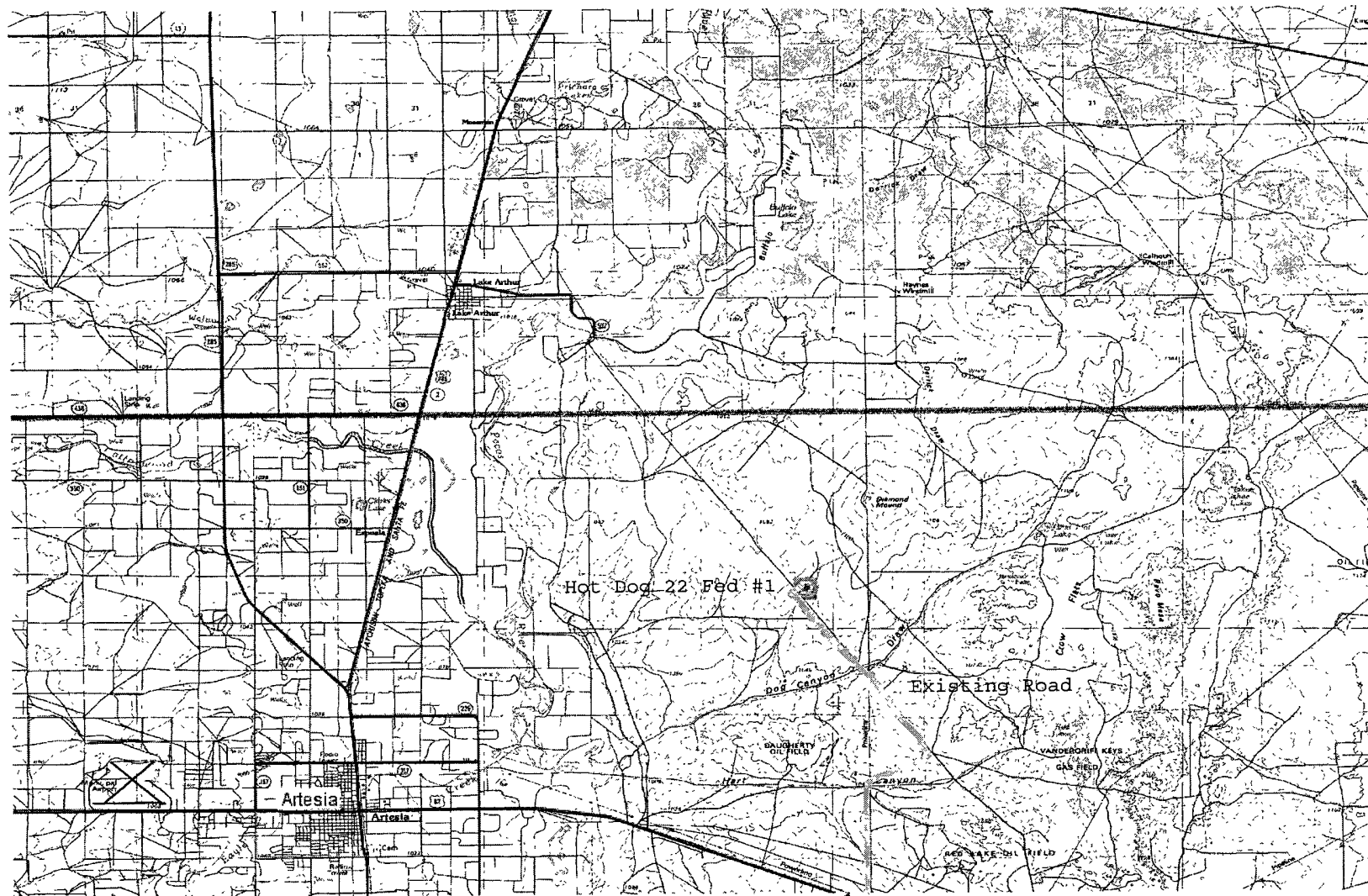
SURVEYOR CERTIFICATION

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.

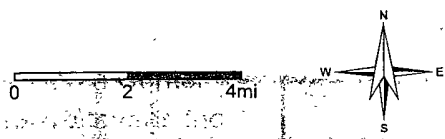
Surveyed By: John West

Date of Survey: 9/27/1982

Certificate Number:



Electric Substation



Petroleum Recovery
Research Center

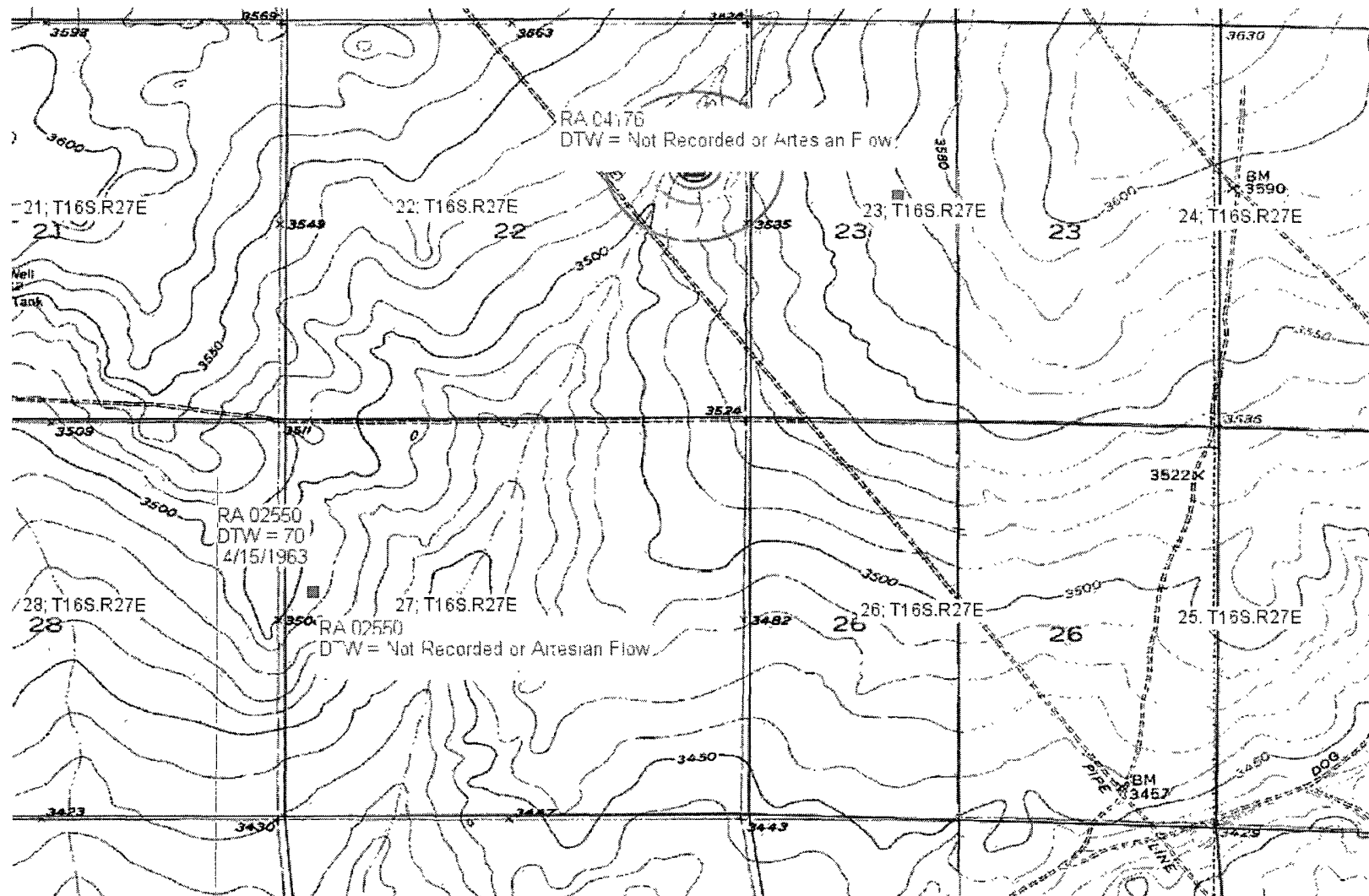
Read & Stevens Inc

Dog Canyon Topo

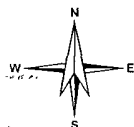
Read & Stevens Inc

Exhibit "B"

Jan 05, 2010



0 1000 2000ft



Petroleum Recovery
Research Center

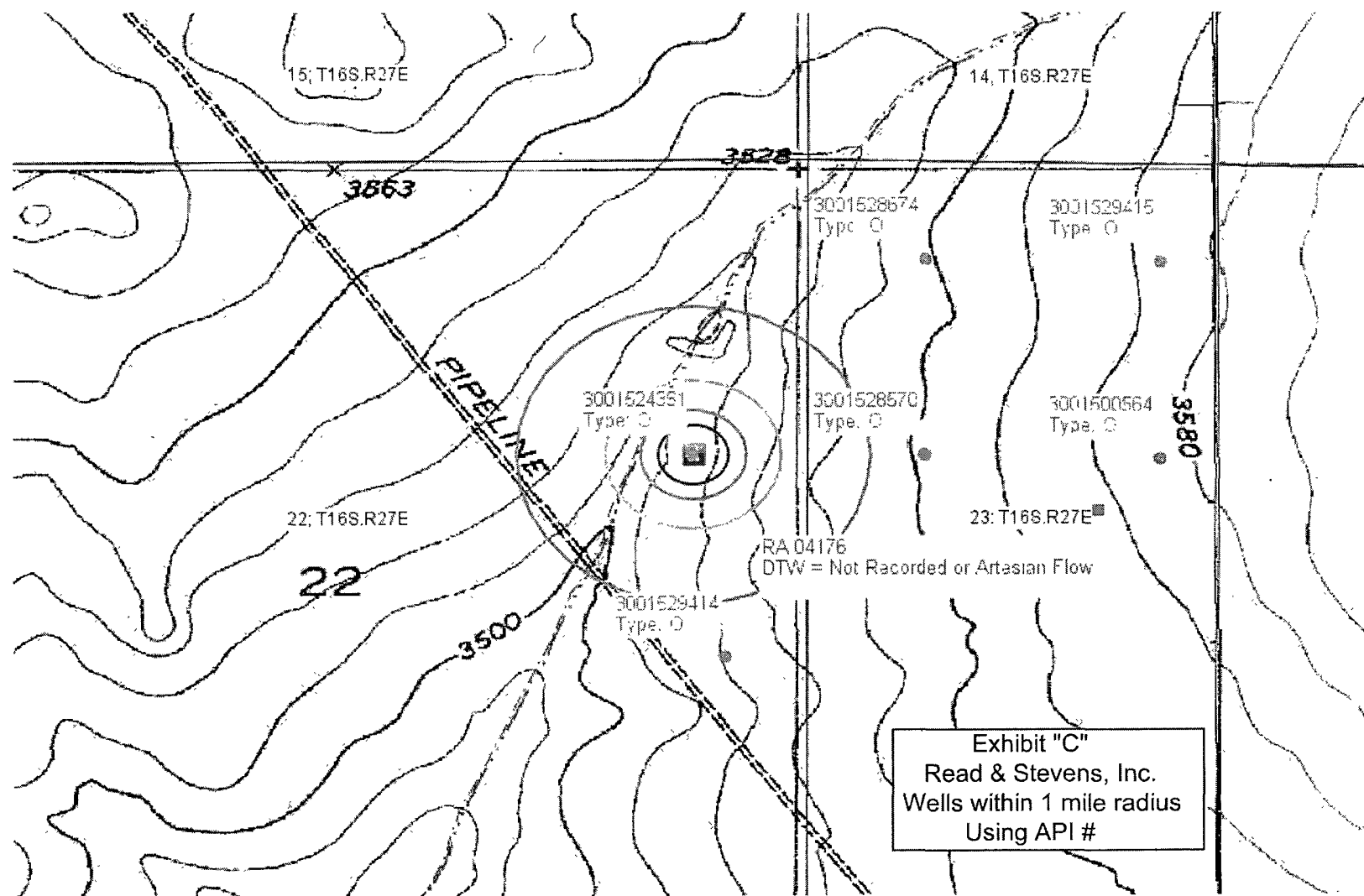
Water = 70'

Hot Dog 22 Fed #1

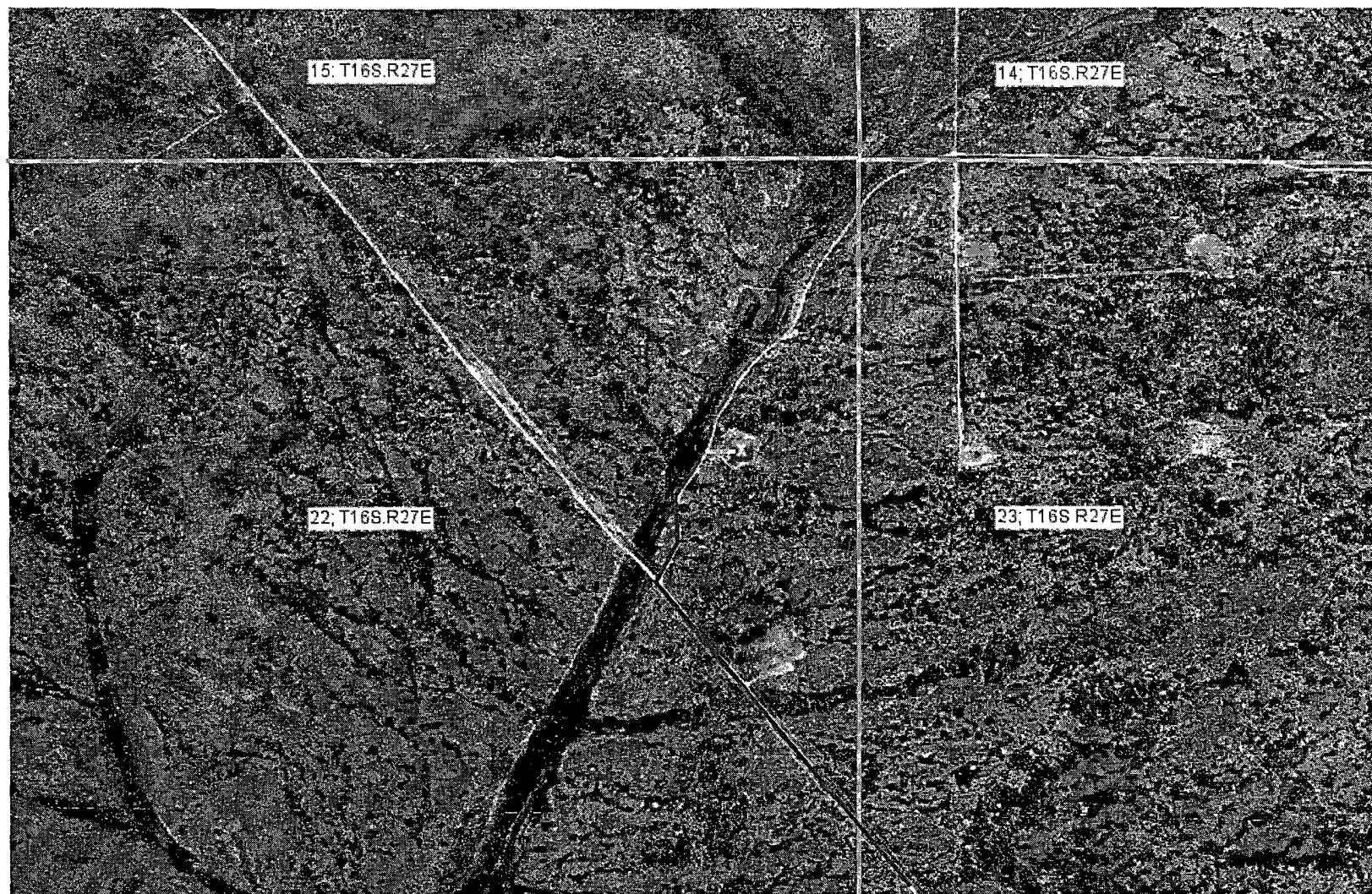
Depth to Water = 70'

Exhibit "F"

Jan 15, 2010



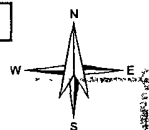
Petroleum Recovery Research Center	Hot Dog 22 Fed #1	Figure: 1000' radius
Jan 07, 2010	Hot Dog Canyon Prospect	Jan 07, 2010



Existing Road

Proposed Road

500 1000ft



Petroleum Recovery
Research Center

Exhibit "A"
Read & Stevens, Inc.
Hot Dog 22 Federal #1
Location and Roads

Figure:

Jan 18, 2010

Drilling Plan
Hot Dog 22 Fed #1
1980' FNL & 660' FEL
Sec 22 -T16S - R27E, Eddy Co., NM
API: 30-015-24361
Lease Number: NMNM-93469
Field/Pool: #17940, Dog Canyon (Grayburg)

Tops:

Formation	Depth below Ground level (ft)
DTW (Exhibit "F")	70
Queen	714
Premier Snd	1,422
San Andres	1,432

Pay info: Premier Sand (Oil), 1422', Pressure=750 psi, Temp=104 deg F

Potential Hazards/Abnormal Conditions: None expected

Casing Program:

Depth (ft)	Hole Size (in)	Casing Size/Wt/Grade/Thds	Coll	Burst	Tens	Cement
0'-365': installed Dec. 1982	12 1/4	8 5/8 24# J55 STC	1.6	1.7	2.8	200 sx Class C, 4 sx CACL, 5 sx Gel, 2 sx Paper, Y=1.32, TOC=Surf.
350'-1060': installed Dec. 1982	7 7/8	7 20# (no other info)	1.5	1.5	2.2	TOC=350', No other info.
0'-1600': Proposed new casing install	6 1/8	4 1/2 10.5# J-55 LTC (new) STC	1.8	1.9	3.2	210 sx Hal-C, .3%LAP-1,.5%CFR-3,.25%D-Air 3000,Y=1.33, TOC=Surf.

Mud Program:

Depth (ft)	Mud Type	Weight (ppg)	Vis (sec)	Fluid Loss (cc)
0-1600	Brine	10	28	NC

P&A Info:

Casing Removal: 7" was backed off at 350'
Cement Plugs: 1400'-1500', 1000'-1100', 300'-400', 15 sacks @ surface
Original Hole: 6 1/8" (1060'-2350')

BOP Equipment: Exhibit "E"

BOPE to be installed on 8 5/8" casing rated to 3,000 psi working pressure, and pressure tested prior to drilling out the cement plugs. During Completion the BOPE will also be installed on the 4 1/2" casing rated to 3,000 psi working pressure, and tested prior to drilling out to the casing shoe.

No Testing or Coring. Logging will include PEX-HRLA (Schlumberger) from 1060'-1600'.

Read & Stevens Drilling & Completion Procedure: Exhibit "G"

Directions:

From Artesia go East on 82. Go across River. Go about 4 miles East of Riverside (Mackville). North at Electric Substation (CR 202/203). Go around Substation and continue North for about 2.8 miles. East or right for 1.5 miles. Left or NE for 4.5 miles. Right 1/4 mile to location. See Map.

READ & STEVENS, INC
Premier Sand ReEntry

API NUMBER: 30-015-24361 LSE #: NMNM 93469
WELL NAME: Hot Dog 22 Federal #1
FIELD NAME: Dog Canyon: Grayburg
LOCATION: Eddy County, New Mexico Sec. 22 T16S-R27E.1980 FNL, 660 FEL
TD: Original: 2350' Proposed PBTD: 1550'
Hole Size: 6 1/8" (1060'-2350')

ELEVATIONS: GL 3513', All logs referenced to GL. (NO KB reported)
CSG: 8 5/8" 24# J55 @ 360', 7" 20# backed off at 350', bottom @ 1060'
P&A INFO: Plugs: 1400'-1500', 1000'-1100', 300'-400', 15 sacks @ surface
PROPOSED PERFS: Premier Sand: 1422-30 (17 holes)
Wellbore: Exhibit A: Current Exhibit B: Proposed

CONTACT LIST

Operator: Read & Stevens, Inc. 575 622-3770 8-5 M-F Office
400 Penn Plaza, Suite 1000 Roswell, NM 88201 575 622-8643 fax
Company Rep: Will Palmer 390-2424
Joe Tovar 390-2425
Engineer: David Luna 622-3770, ext.213 626-9395 cellular

Procedure:

1. Move in PU. Drill out cement plugs with 6 1/8" bit. Plugs are at 1400'-1500', 1000'-1100', 300'-400', 15 sacks @ surface. Note that the 7" casing was backed off at 350'. Be careful when drilling through the cement plug at this depth.
2. Drill with Cut Brine (9.4-9.7#)
3. Drill out cement plugs. Clean out to 1600'.
4. Install **4 1/2" 10.5# J-55 Casing**
 - a. 4.952" I.D., 4790 psi Yield, 4010 psi Collapse, 5" OD w/coupling
 - b. 7" 20# I.D. is 6.456"
5. Land at 1600' +/- . Pump 210 sks (280 cf) Halliburton HalCem-C to surface. *see col 4*
6. Run Bond Log and correlate to ND logged 1/11/83 (get with David).
7. Perf Premier Sand w/ 3 1/8" guns: 1422-30 (2 spf, 120 deg, 17 shots)
8. Acidize clean out with 2500 gallons.
9. Frac down casing: 35,000# 16/30 (2.4, & 6 ppg in 30# x-linked gel).
10. Install Pumping equipment (tankage, pump jack, 2 3/8" tubing, rods, pump)

Directions to Well:

9 1/2 airmiles NE of Artesia.

Drilling and Completion Procedure

Exhibit "G"

READ & STEVENS, INC

Premier Sand ReEntry

API NUMBER: 30-015-24361 LSE #: NMNM 93469

WELL NAME: Hot Dog 22 Federal #1

FIELD NAME: Dog Canyon: Grayburg

LOCATION: Eddy County, New Mexico Sec. 22 T16S-R27E, 1980 FNL, 660 FEL

TD: Original: 2350' Proposed PBTD: 1550'

Hole Size: 6 1/8" (1060'-2350')

ELEVATIONS: GL 3513', All logs referenced to GL. (NO KB reported)

CSG: 8 5/8" 24# J55 @ 360', 7" 20# backed off at 350', bottom @ 1060'

P&A INFO: Plugs: 1400'-1500', 1000'-1100', 300'-400', 15 sacks @ surface

PROPOSED PERFS: Premier Sand: 1422-30 (17 holes)

Wellbore: Exhibit A: Current Exhibit B: Proposed

CONTACT LIST

Operator: Read & Stevens, Inc. 575 622-3770 8-5 M-F Office

400 Penn Plaza, Suite 1000 Roswell, NM 88201 575 622-8643 fax

Company Rep: Will Palmer 390-2424

Joe Tovar 390-2425

Engineer: David Luna 622-3770, ext. 213 626-9395 cellular

Procedure:

1. Move in PU. Drill out cement plugs with 6 1/8" bit. Plugs are at 1400'-1500', 1000'-1100', 300'-400', 15 sacks @ surface. Note that the 7" casing was backed off at 350'. Be careful when drilling through the cement plug at this depth.
2. Drill with Cut Brine (9.4-9.7#)
3. Drill out cement plugs. Clean out to 1600'.
4. Install 4 1/2" 10.5# J-55 Casing *etc*
 - a. 4.952" I.D., 4790 psi Yield, 4010 psi Collapse, 5" OD w/coupling
 - b. 7" 20# I.D. is 6.456"
5. Land at 1600' +/- Pump 210 sks (280 cf) Halliburton HalCem-C to surface. *see 76A*
6. Run Bond Log and correlate to ND logged 1/11/83 (get with David).
7. Perf Premier Sand w/ 3 1/8" guns: 1422-30 (2 spf, 120 deg, 17 shots)
8. Acidize clean out with 2500 gallons.
9. Frac down casing: 35,000# 16/30 (2, 4, & 6 ppg in 30# x-linked gel).
10. Install Pumping equipment (tankage, pump jack, 2 3/8" tubing, rods, pump)

Directions to Well:

From Artesia go East on 82. Go across River. Go about 4 miles East of Riverside (Mackville). North at Electric Substation (CR 202/203). Go around Substation and continue North for about 2.8 miles. East or right for 1.5 miles. Left or NE for 4.5 miles. Right 1/4 mile to location. See Map.

Hot Dog 22 Federal #1

Read Stevens, Inc.

Sec22,16S,27E, 1980FNL,660FEL

Previous API: 30-015-24361

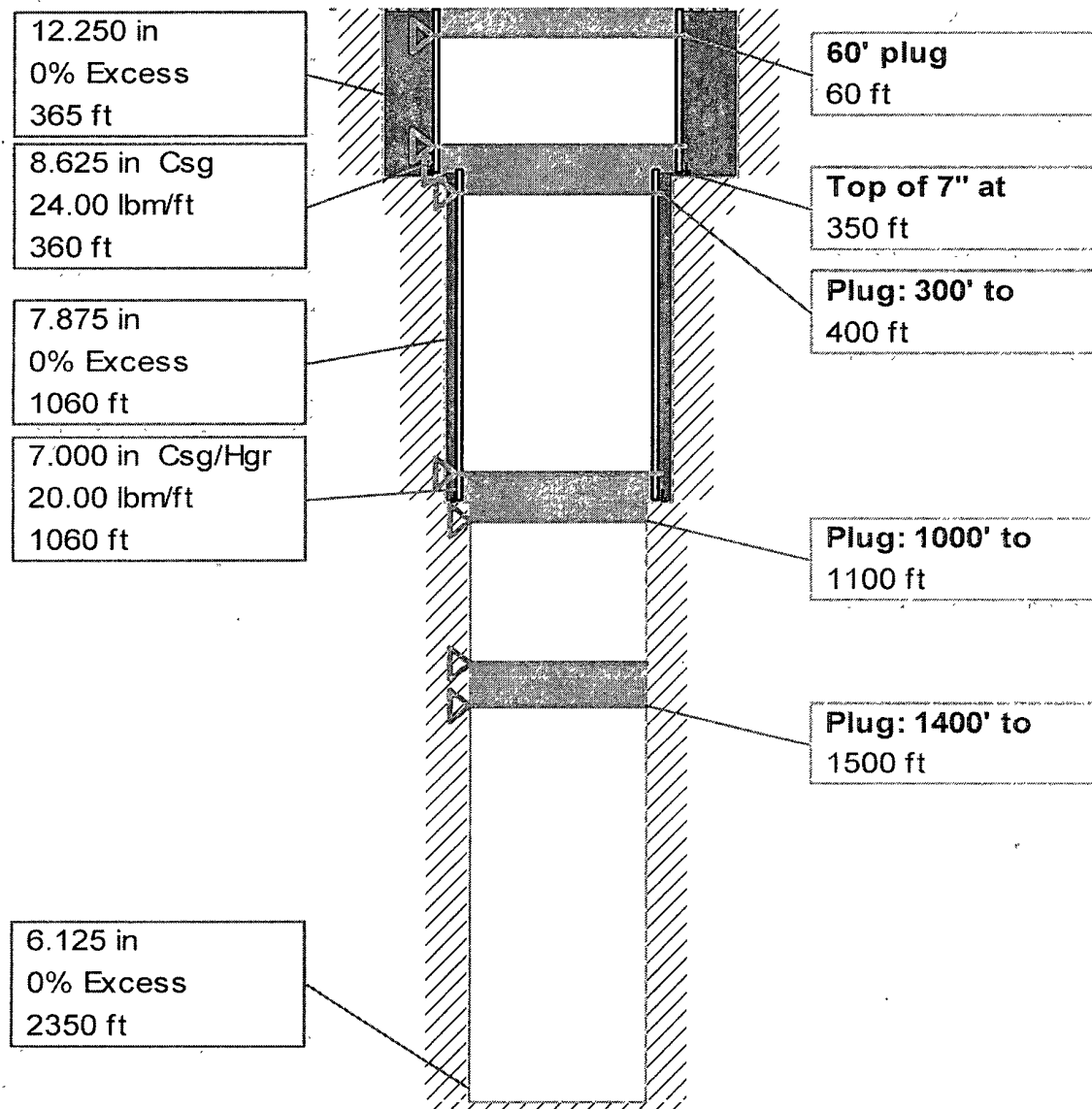
Field: Dog Canyon, Grayburg

Pool # 17940, Lease # NMNM 93469

Previous Owner: Bruce Anderson, Peterson Fed #1

Spud: 12/29/82, PAed: 1/17/83

Exhibit A: Current Wellbore



i-Handbook*

- *a mark of Schlumberger

Hot Dog 22 Federal #1

Read Stevens, Inc.

Sec22,16S,27E, 1980FNL,660FEL

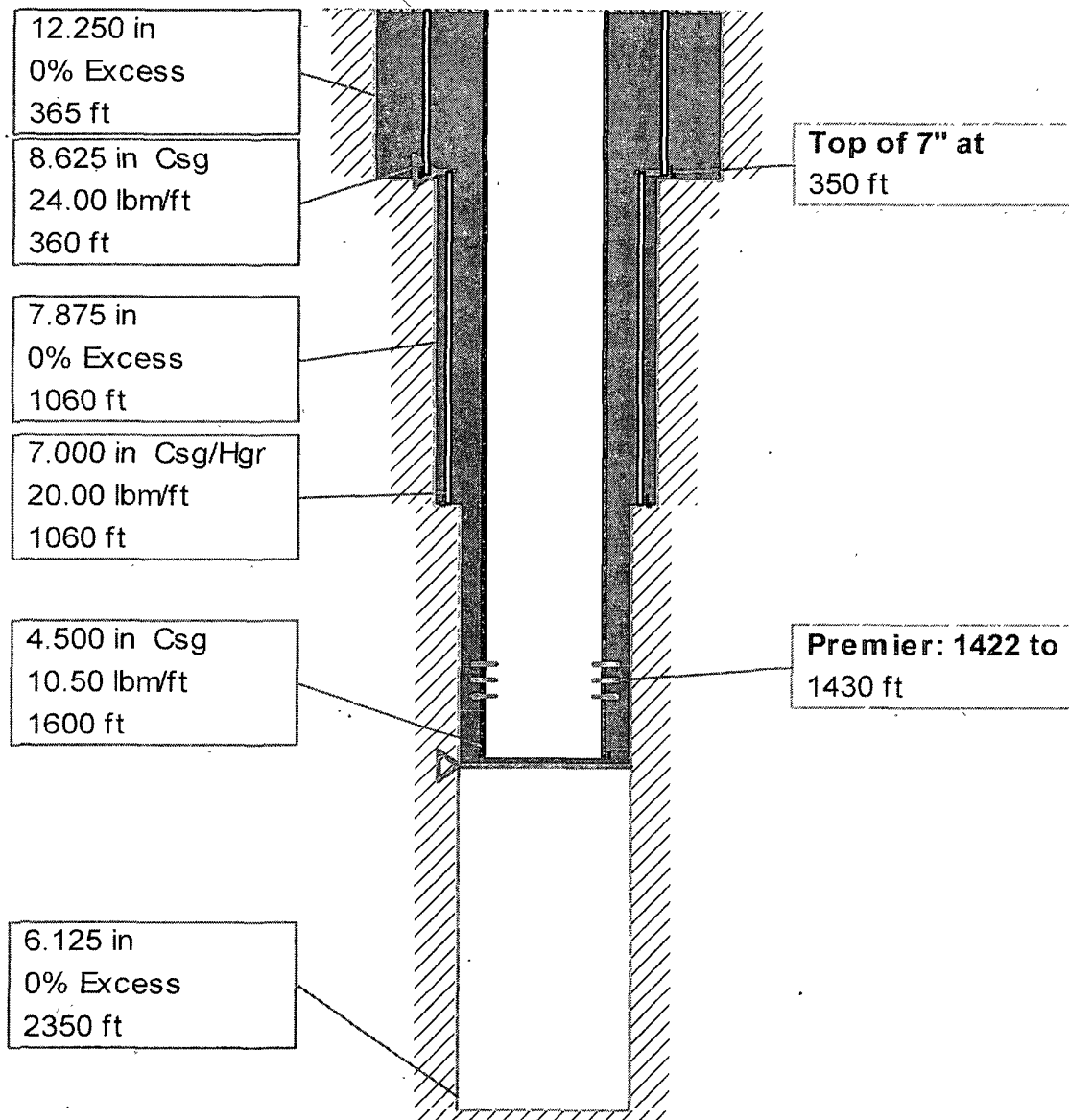
Previous API: 30-015-24361

Field: Dog Canyon, Grayburg

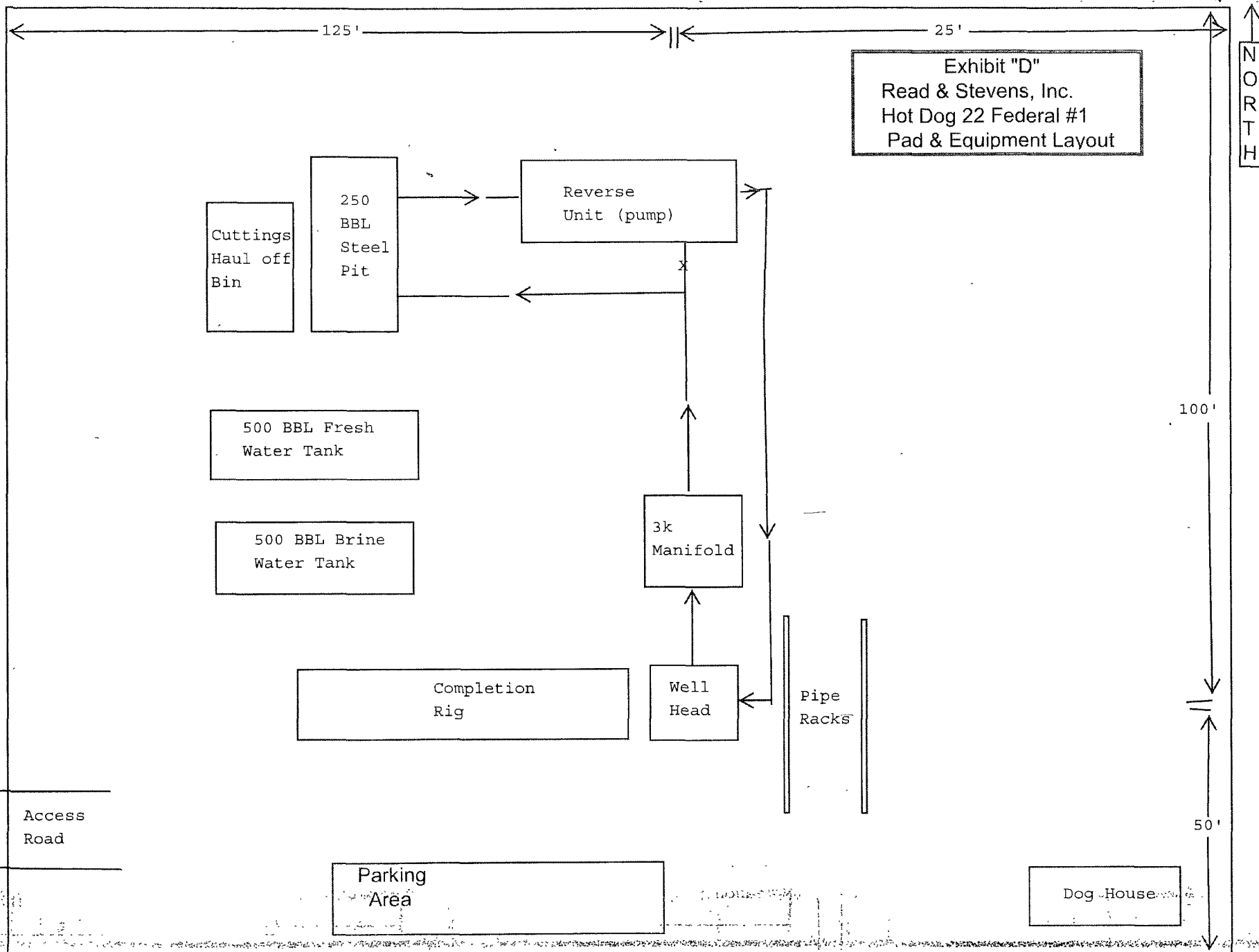
Pool # 17940, Lease # NMNM 93469

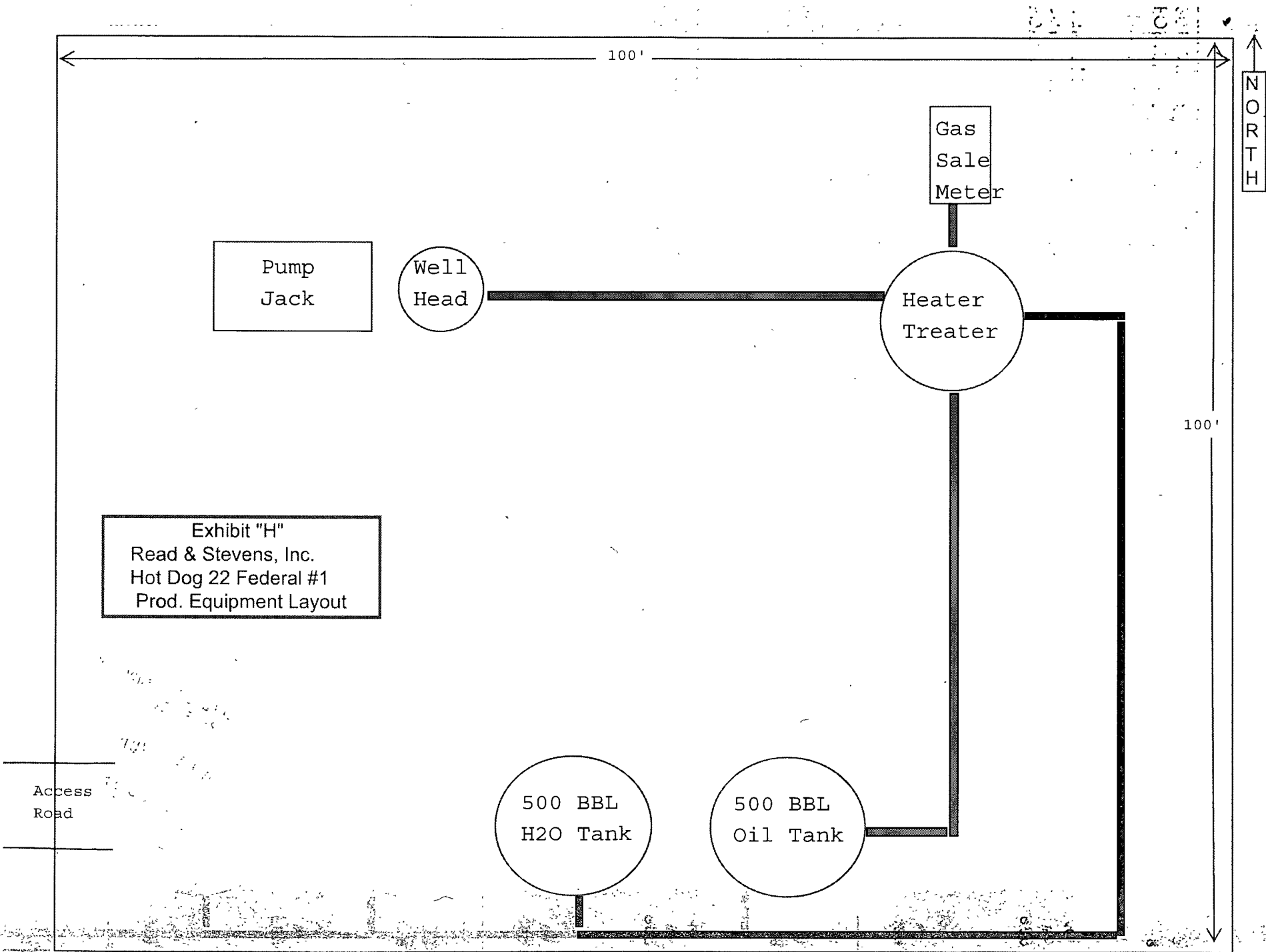
**Drill out plugs, cement 4 1/2" casing
and complete the Premier Sand**

Exhibit B: Proposed Wellbore



i-Handbook* - *a mark of Schlumberger





3k BOP & Manifold Schematic

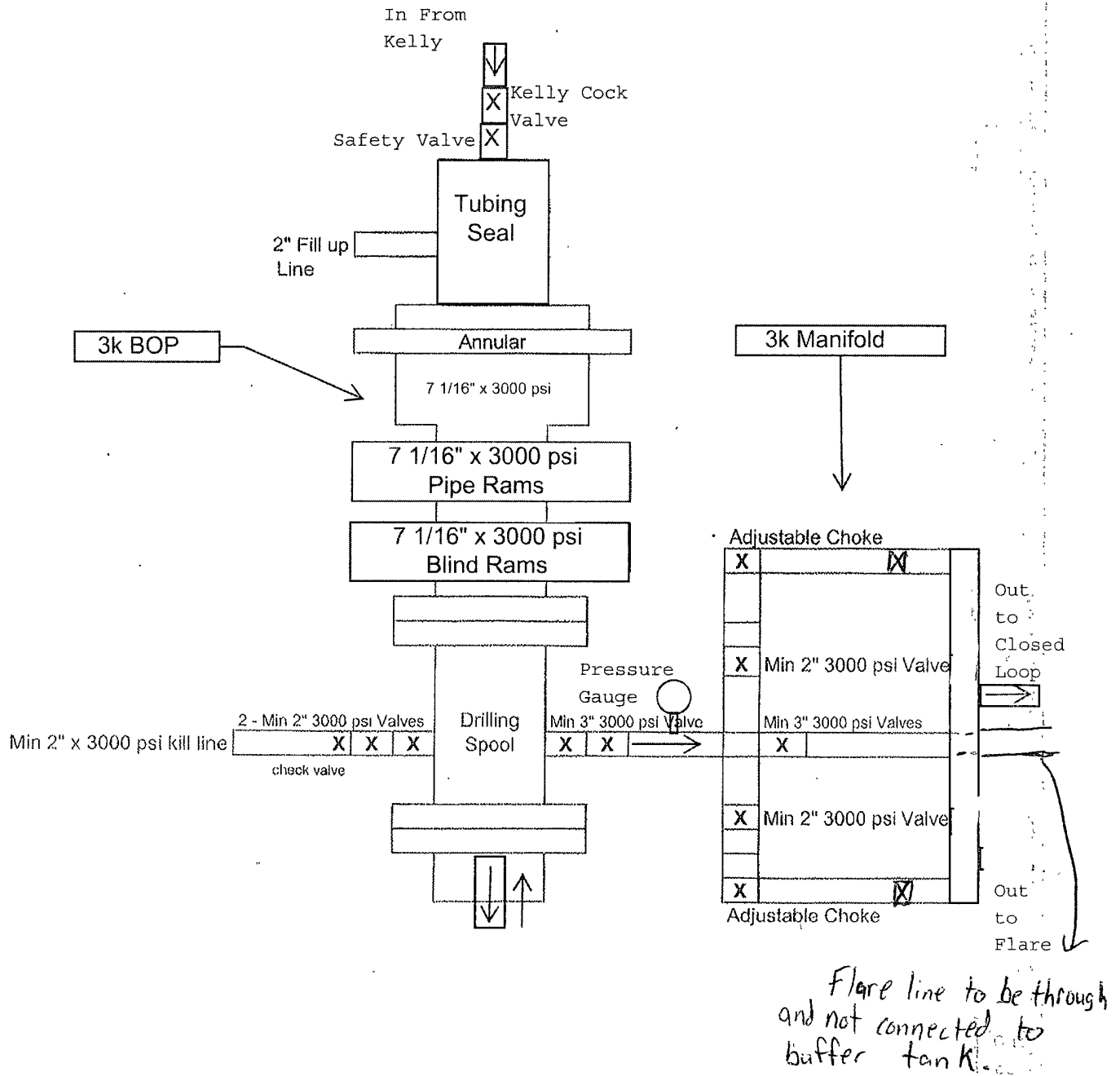


Exhibit "E"
Read & Stevens, Inc.
Hot Dog 22 Federal #1
BOP & Manifold Specifications

Closed Loop System Plan

Design Plan

Equipment list,

1. 1-Above Ground Steel Tanks
2. 1-Haul off Bin
3. 1-500 BBL frac tanks for fresh water
4. 1-500 BBL frac tank for brine water

Operation and Maintenance Plan

Closed Loop equipment will be inspected daily by each tour and any necessary maintenance performed.

Any leak in system will be repaired and/or contained immediately.

BLM notified within 48 hours.

Remediation process started

Closure Plan

During drilling operations all liquids, drilling fluid and cuttings will be hauled off via CRI. (Controlled Recovery Incorporated Permit R-9166 or NM-01-0006).

Alternative haul off is Gandy Marley (Permit NM-01-0019)

SURFACE USE PLAN OF OPERATIONS

READ & STEVENS, INC.
Hot Dog 22 Federal 1
Section 22, T16S-R27E
1980' FNL & 660' FEL
Eddy County, New Mexico
Lease No. NMNM93469
(Re-Entry 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 following in rehabilitating the surface and environmental effects associated with the operations.

1. EXHISTING ROADS:

- A. Exhibit "B" is a portion of a BLM map showing the location of the proposed well as staked. The well site location is 9.5 air miles NE of Artesia, NM. Traveling east of Artesia on U.S. Hwy 82 there will be about 11 miles of existing paved road. And traveling north on CR 202/203 there will be about 9 miles of existing gravel/caliche oil field roads.
- B. Directions: From Artesia go East on 82. Go across River. Go about 4 miles East of Riverside (Mackville). North at Electric Substation (CR 202/203). Go around Substation and continue north for about 2.8 miles. East or right for 1.5 miles. Left or NE for 4.5 miles. Right ¼ mile to location. See Map.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed access road will be approximately 200 feet long and 12 foot width. The proposed and existing roads are coded on Exhibit "A".
- B. Construction: The proposed access road will be constructed by grading and topping with compacted caliche. The surface will be properly drained.
- C. Turnouts: None required.
- D. Culverts: None.

- E. Cuts and Fills: None required.
- F. Gates, Cattle guards: None will be required.
- G. Off lease right of way: None required.

3. LOCATION OF EXISTING WELLS:

- A. Existing wells within a 1 mile radius are shown on Exhibit "C".

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

- A. Read & Stevens, Inc. has no production facilities on the lease at this time.
- B. If the well proves to be commercial, the necessary production facilities, gas separation-process equipment and tank battery, if required, will be installed on the drilling pad.

5. LOCATION AND TYPE OF WATER SUPPLY:

- A. It is planned to drill the proposed well with brine water that will be obtained from private or commercial sources and will be transported over the existing and proposed access roads.

6. SOURCE OF CONSTRUCTION MATERIALS:

- A. Caliche for surfacing the proposed access road and well site pad will be obtained from the location, if available, or from an approved BLM pit. No surface materials will be disturbed except those necessary for actual grading and leveling of the drill site and access road.

7. METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cutting will be disposed of as outlined in the C-144 EZ (attached).
- B. Drilling fluids will be disposed of as outline in the C-144 EZ (attached).
- C. All pits will be above ground.

- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or a separate disposal application will be submitted to the BLM for approval.
- E. Oil produced during operations will be stored in tanks until sold
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. 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/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, reserve tanks, closed loop, and major rig components. The pad and tank area will be staked and flagged.
- B. Mat Size: 150' X 150'.
- C. Cut & Fill: The location will require cut and fill leveling of small dunes.
- D. The surface will be topped with compacted caliche.

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 cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition as possible.
- B. If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible.

11. OTHER INFORMATION:

- A. Topography
- B. Soil
- C. Ponds and Streams: None in area.
- D. Residences and Other Structures: None in the immediate vicinity.
- E. Land Use: Cattle grazing.
- F. Surface Ownership: The proposed well site and proposed access road on Federal surface and minerals

12. OPERATOR'S REPRESENTATIVE:


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

David Luna
READ & STEVENS, INC.
P. O. Box 1518
Roswell, New Mexico 88202
Office Phone: (575) 622-3770 ext 213
Cell Phone: (575) 626-9395
Email: dluna@read-stevens.com

13. OPERATOR CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route; that I am 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 Read & familiar with the conditions which presently exist; that the statements made in the Stevens, 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. 101 for the filing of a false statement.

DATE: January 22, 2010


David Luna, Petroleum Engineer
Read & Stevens, Inc.

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Read & Stevens, Inc.
LEASE NO.:	NMNM93469
WELL NAME & NO.:	Hot Dog 22 Federal #1
SURFACE HOLE FOOTAGE:	1980' FNL & 660' FEL
BOTTOM HOLE FOOTAGE:	Same
LOCATION:	Section 22, T. 16 S., R 27 E., NMPM
COUNTY:	Eddy County, New Mexico

TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
 - Protecting Water Quality
 - Protecting Wildlife Habitat
 - Protecting Livestock Watering System
 - BLM Right-of-Way Requirement
 - Erosion Control
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling—Reentry**
 - CIT Required
 - Plugging Requirements
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
- ☐ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**

I. 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.

II. 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.)

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

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. 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.

V. SPECIAL REQUIREMENT(S)

Protecting Water Quality:

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.
- Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control.
- **Tank Battery COAs Only:**
Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Protecting Wildlife Habitat:

- Exhaust noise from pump jack engines must be muffled or otherwise controlled.

Protecting Livestock Watering System:

- Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by development activity.

BLM Right-of-Way Requirement:

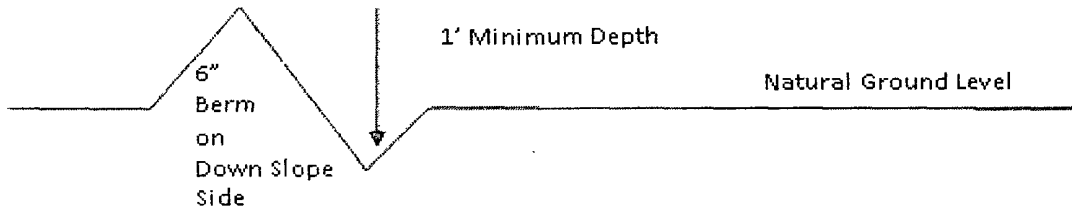
- The company has been advised of the requirement to apply for a BLM right-of-way for the off-lease portion of access road for the proposed well location on BLM lands. The access road right-of-way will not be constructed or improved until an appropriate BLM right-of-way grant has been attained.

Erosion Control:

- Special attention will be made in constructing the road paralleling the drainage. Erosion control structures will be implemented.
- Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing 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 a 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:

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

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5972 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 APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil will be used for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

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 needs.

F. ON LEASE ACCESS ROADS

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

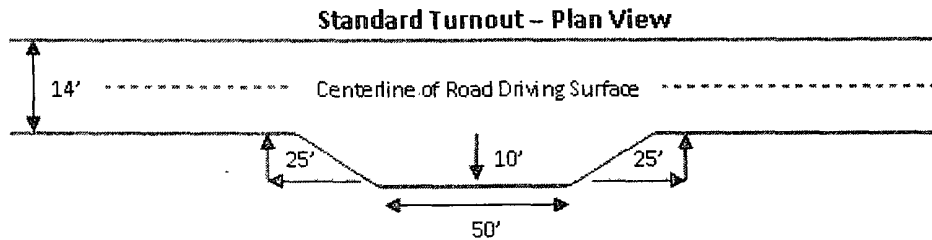
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

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:



Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

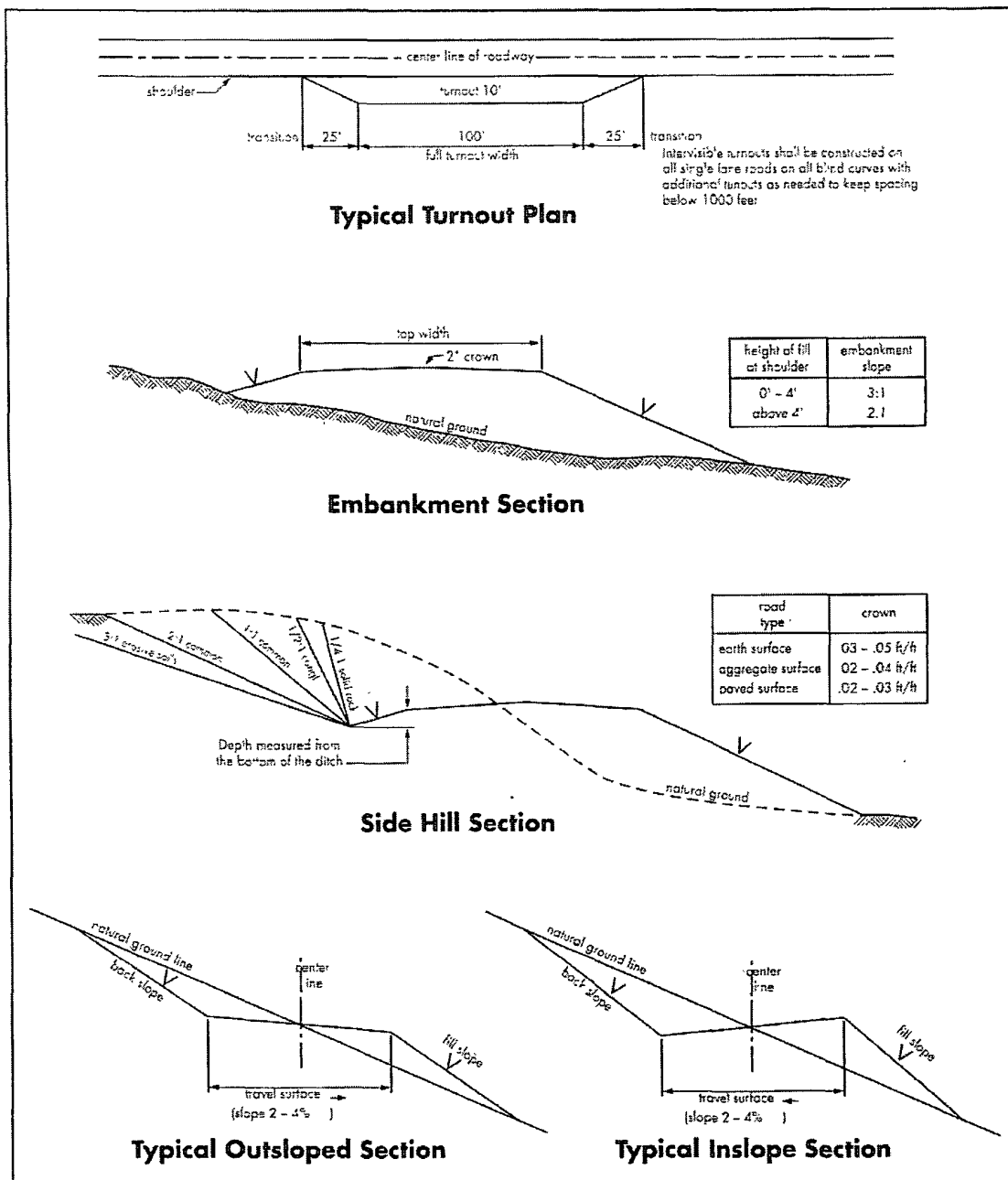
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

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



VII. DRILLING – Re-entry

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. BOPE tests
- b. Setting and Cementing the production casing string
- c. CIT test
- d. Plug

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
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. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

B. CASING – Re-entry

Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.

Wait on cement (WOC) time for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

Possible lost circulation in the Grayburg and San Andres Formations.

1. The 8-5/8" surface casing is set at 365 feet with cement circulated to surface.

A CIT is to be performed on the intermediate casing per Onshore Oil and Gas Order 2.III.B.1.h prior to drilling the shoe plug. Test pressure to be 500 psi.

2. The 7" intermediate casing is set at 1,060 feet with top of cement at 350 feet. During plugging the casing was cut and pulled at 350 feet.
3. The minimum required fill of cement behind the 4-1/2 inch production casing is:
 - ☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office.
4. 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.

C. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M) psi**.
3. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. The tests shall be done by an independent service company.
 - b. The results of the test shall be reported to the appropriate BLM office.
 - c. 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 appropriate BLM office.**

- d. 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. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

CRW 020810

VIII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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.

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
Shale Green, Munsell Soil Color Chart # 5Y 4/2

IX. INTERIM RECLAMATION

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.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. 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.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

X. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

*Note: The previously constructed well pad and reserve pit for the Peterson Federal #1 must be reclaimed as well.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 1, for Loamy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take

appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

<u>Species</u>	<u>lb/acre</u>
Plains lovegrass (<i>Eragrostis intermedia</i>)	0.5
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sideoats grama (<i>Bouteloua curtipendula</i>)	5.0

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed