

OPERATOR'S COPY

Form 3160-3
(April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

| | | | | | |
|--|--|---|--|--|--|
| 1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER | | | 5. Lease Serial No. NMNM-93469 | | |
| 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, Inc. (18917) | | | 7. If Unit or CA Agreement, Name and No. | | |
| 3a. Address P. O. Box 1518 Roswell, NM 88202 | | | 8. Lease Name and Well No. Hot Dog 23 Federal, Well No. 2 (38435) | | |
| 3b. Phone No. (include area code) 575-622-3770-Ext. 305 | | | 9. API Well No. 30-015-38337 | | |
| 4. Location of Well (Report location clearly and in accordance with any State requirements*) At surface 1730' FSL & 660' FWL (46 L) At proposed prod. zone same | | | 10. Field and Pool, or Exploratory Dog Canyon (Grayburg) (17940) | | |
| 14. Distance in miles and direction from nearest town or post office* 20 miles NE of Artesia, NM. | | | 11. Sec., T. R. M. or Blk. and Survey or Area Sec. 23-T16S-R27E | | |
| 15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drg. unit line, if any) N/A | | 16. No. of acres in lease 960 | 17. Spacing Unit dedicated to this well 40 | | |
| 18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 2051.17' | | 19. Proposed Depth 1600' | 20. BLM/BIA Bond No. on file NM-2310 | | |
| 21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3543' | | 22. Approximate date work will start* 11/25/2010 | 23. Estimated duration 2-3 weeks | | |

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 <i>George R. Smith</i> | Name (Printed/Typed) George R. Smith | Date 10/27/2010 |
|---|---|--------------------|

Title
POA Agent for Read & Stevens, Inc.

| | | |
|---|----------------------|------------------|
| Approved by (Signature) <i>[Signature]</i> | Name (Printed/Typed) | Date 12/17/10 |
|---|----------------------|------------------|

Title
Go FIELD MANAGER

Office
CARLSBAD 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.

APPROVAL FOR TWO 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)

Roswell Controlled Water Basin

KZ 12/29/10

Approval Subject to General Requirements
& Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

State of New Mexico

DISTRICT I

1625 N. FRENCH DR., HOBBES, NM 88240

Energy, Minerals and Natural Resources Department

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

DISTRICT II

1301 W. GRAND AVENUE, ARTESIA, NM 88210

OIL CONSERVATION DIVISION

1220 SOUTH ST. FRANCIS DR.

Santa Fe, New Mexico 87505

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV

1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

| | | |
|-----------------------------------|--|---|
| API Number 30-015-38337 | Pool Code 17940 | Pool Name Dog Canyon Grayburg |
| Property Code 38435 | Property Name HOT DOG 23 FEDERAL | Well Number 2 |
| OGRID No. 18917 | Operator Name READ & STEVENS, INC. | Elevation 3543' |

Surface Location

| UL or lot No. | Section | Township | Range | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|---------------|---------|----------|-------|---------|---------------|------------------|---------------|----------------|--------|
| L | 23 | 16-S | 27-E | | 1730 | SOUTH | 660 | WEST | EDDY |

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 40 | Joint or Infill | Consolidation Code | 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

| | |
|--|--|
| <p>DETAIL</p> <p>3539.6' 3549.3'</p> <p>600'</p> <p>3536.3' 3547.0'</p> <p>660'</p> <p>1730'</p> <p>SEE DETAIL</p> <p>GEODETTIC COORDINATES NAD 27 NME</p> <p>Y=693205.7 N X=523926.8 E</p> <p>LAT.=32.905677° N LONG.=104.255373° W</p> | <p>OPERATOR CERTIFICATION</p> <p>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.</p> <p><i>George R. Smith</i> 10/27/10 Signature Date</p> <p>George R. Smith, agent Printed Name</p> |
| | <p>SURVEYOR CERTIFICATION</p> <p>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.</p> <p>OCTOBER 13, 2010 Date Surveyed LA</p> <p>Signature & Seal of Professional Surveyor</p> <p><i>Gary E. Eidson</i> 10/25/10 10-11-1519</p> <p>Certificate No. GARY EIDSON 12641 RONALD J. EIDSON 3239</p> |

APPLICATION FOR DRILLING
READ & STEVENS, INC..
 Hot Dog 23 Federal, Well No. 2
 1980' FSL & 660' FWL, Sec. 23-T16S-R27E
 Eddy County, New Mexico
 Lease No.: NMNM-93469
 (Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Read & Stevens, 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:

| | | | |
|----------|--------|--------------|--------|
| Yates | 119' | Premier Sand | 1,450' |
| Queen | 792' | T.D. | 1,600' |
| Grayburg | 1,175' | | |

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

Water: Surface water possible between 80' - 375'.
 Oil: Possible in the Premier below 1,450'
 Gas: None expected.

4. Casing Program: New *See COA*

| HOLE SIZE | CASING SIZE | WEIGHT | GRADE | JOINT | SETTING DEPTH | COLLAPSE DESIGN FACTOR | BURST DESIGN FACTOR | TENSION DESIGN FACTOR |
|-----------|-------------|--------|-------|-------|-------------------|------------------------|---------------------|-----------------------|
| 12 1/4" | 8 5/8" | 24.0# | J-55 | STC | <i>300' 1000'</i> | 5.3 | 2.5 | 3.0 |
| 7 7/8" | 5 1/2" | 15.5# | J-55 | LTC | 1,600' | 2.1 | 1.9 | 4.1 |

5. Proposed Control Equipment

Proposed Control Equipment: A 3M Shaffer Type LWS Double Gate BOP will be installed on the 8 5/8" casing. Casing and BOP will be tested as a 2M system as per Onshore Oil & Gas Order #2 before drilling out with the 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 driller's log. See Exhibit "E".

6. Cement Program

See COA

| CASING | DEPTH | QUANTITY OF CEMENT | TOC | YEILD |
|--------|-------------------|---|---------|-------|
| 8 5/8" | <i>1000' 300'</i> | 300 sx "C" + 2 % CACL | Surface | 1.36 |
| 5 1/2" | 1,600' | Lead: 250 sx EconoCem-HLC w/5#/sk salt, 0.125 #/sk LC (12.5#) | Surface | 2.04 |
| | | Tail: 100 sx C 3#/sk salt, 0.5% LAP-1 | surface | 1.37 |

7. Mud Program:

| MUD PROGRAM | | | | |
|----------------------------|-----------------|------------|-----|----------------|
| DEPTH | | Mud Weight | Vis | W/L Control |
| 0' - <i>300' 1000'</i> | Fresh water mud | 8.5 ppg | 35 | No W/L control |
| <i>1000' 300'</i> - 1,600' | Brine mud | 10.0 ppg | 28 | No W/L control |

READ & STEVENS, INC..

Hot Dog 23 Federal, Well No. 2

Page 2

8. Auxiliary Equipment:

Blowout Preventer, gas detector, Kelly cock, flow sensors and stabbing valve.

9. Testing, Logging, and Coring Program:

Drill Stem Tests: None required.

Logging: T.D thru pay: Schlumberger PEX-HRLA.

T.D. to surface: GR-Neutron

Coring: None required.

See CON

- 10.** 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. The estimated evacuated BHP = 832 psi with a temperature of 76°.

- 11. H₂S:** None expected. None in the previous drilling of wells in the area. See attached Gas Analysis Report, Exhibit "B". No H₂S gas was detected in the Hot Dog 22 Federal, Well No. 1.

- 12.** Anticipated starting date: October 15, 2010.

Anticipated completion of drilling operations: Approximately 2-3 weeks.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

| | | |
|--|--|---|
| 1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other | | 5. Lease Serial No. NMNM93469 |
| 2. Name of Operator READ & STEVENS, INC. | | 6. If Indian, Allottee or Tribe Name |
| 3a. Address P. O. BOX 1518 ROSWELL, NM 88202 | | 7. If Unit or CA/Agreement, Name and/or No. |
| 3b. Phone No. (include area code) Ph: 575-622-3770 Ext: 305 Fx: 575-622-8643 | | 8. Well Name and No. HOT DOG 23 FEDERAL 002 |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 23 T16S R27E 1980FSL 600FWL | | 9. API Well No. |
| | | 10. Field and Pool, or Exploratory DOG CANYON |
| | | 11. County or Parish, and State EDDY COUNTY COUNTY, NM |

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

| TYPE OF SUBMISSION | TYPE OF ACTION |
|--|--|
| <input checked="" type="checkbox"/> Notice of Intent | <input type="checkbox"/> Acidize |
| <input type="checkbox"/> Subsequent Report | <input type="checkbox"/> Deepen |
| <input type="checkbox"/> Final Abandonment Notice | <input type="checkbox"/> Fracture Treat |
| | <input type="checkbox"/> New Construction |
| | <input type="checkbox"/> Plug and Abandon |
| | <input type="checkbox"/> Plug Back |
| | <input type="checkbox"/> Production (Start/Resume) |
| | <input type="checkbox"/> Reclamation |
| | <input type="checkbox"/> Recomplete |
| | <input type="checkbox"/> Temporarily Abandon |
| | <input type="checkbox"/> Water Disposal |
| | <input type="checkbox"/> Water Shut-Off |
| | <input type="checkbox"/> Well Integrity |
| | <input checked="" type="checkbox"/> Other |

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

We are starting location prior to the APD approval on the Hot Dog 23 Federal #2 due to possible lease termination. Please send conditions of approval so we can proceed.

Attached is an email from Dustin Winkler.

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

| | |
|--|---------------------------|
| 14. I hereby certify that the foregoing is true and correct. Electronic Submission #98968 verified by the BLM Well Information System For READ & STEVENS, INC., sent to the Carlsbad | |
| Name (Printed/Typed) DAVID LUNA | Title OPERATIONS ENGINEER |
| Signature (Electronic Submission) | Date 12/13/2010 |

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

| | | |
|---|-------------------|----------------------|
| Approved By <u>James R. Gama</u> | Title <u>SEPS</u> | Date <u>12-14-10</u> |
| Conditions of approval, if any, are attached. Approval of this notice 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. | | Office <u>CFD</u> |

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.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

PECOS DISTRICT CONDITIONS OF APPROVAL

| | |
|-----------------------|-------------------------------------|
| OPERATOR'S NAME: | Read & Stevens Inc |
| LEASE NO.: | NM93469 |
| WELL NAME & NO.: | 2 Hot Dog 23 Federal |
| SURFACE HOLE FOOTAGE: | 1980' FSL & 660' FWL |
| BOTTOM HOLE FOOTAGE | ' F L & ' F L |
| LOCATION: | Section 23, T. 16 S., R 27 E., NMPM |
| COUNTY: | Eddy County, New Mexico |

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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
 - V-door
- ☒ Construction
 - Notification
 - V-Door Direction
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ Road Section Diagram
- ☐ Drilling
 - Casing/Cement
 - Logging requirements
 - Waste Material and Fluids
- ☐ Production (Post Drilling)
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☒ 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)

V-door northeast in order to parallel drainage to north

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. V-DOOR DIRECTION: northeast

C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

E. 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.

F. 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.

G. 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

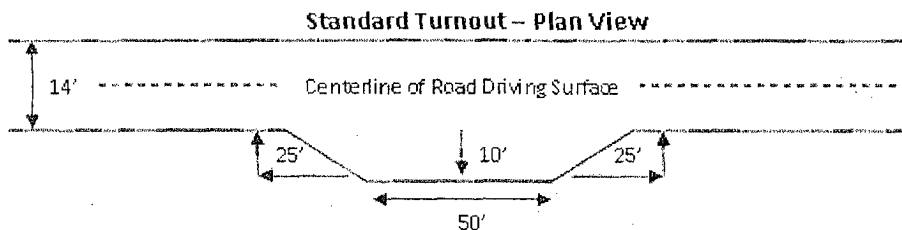
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

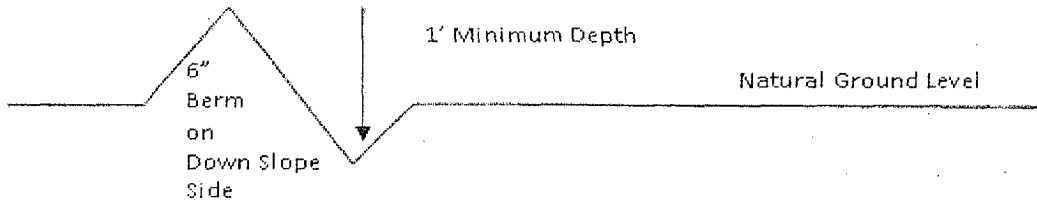


Drainage

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 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:

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

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

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.

**POWER OF ATTORNEY
DESIGNATION OF AGENT**

READ & STEVENS, INC., hereby names the following person as its agent

Name of Agent: George R. Smith d/b/a Energy Administrative Services Company

Agents Address: P.O. Box 458, Roswell, NM 88202

Agent's Telephone Number: (575) 623-4940

GRANT OF SPECIAL AUTHORITY

READ & STEVENS, INC., grants its agent the authority to act for it with respect to the following only:

- 1 Executing forms required to be filed with the Bureau of Land Management of the Department of Interior of the United States of America.
2. Executing forms required to be filed with the Oil Conservation Division of the New Mexico Energy, Minerals and Natural Resources Department.

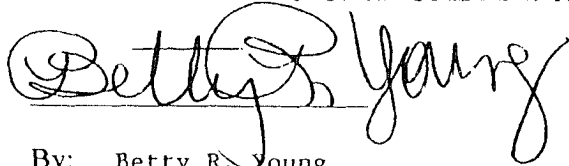
EFFECTIVE DATE

This power of attorney is effective immediately.

RELIANCE ON THE POWER OF ATTORNEY

Any person, including the agent, may rely upon the validity of this power of attorney or a copy of it unless that person knows it has terminated or is invalid.

SIGNATURE AND ACKNOWLEDGMENT



By: Betty R. Young

Title: Vice President of Read & Stevens, Inc.

Date: August 30, 2010

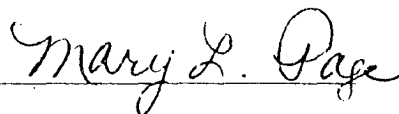
Address: P.O. Box 1518, Roswell, NM 88202

Telephone: 575-622-3770

STATE OF NEW MEXICO

COUNTY OF CHAVES

This instrument was acknowledged before me on 8-30-10 by
Betty R. Young, ~~as~~ as Vice President of Read & Stevens, Inc.
, acting on behalf of said corporation.

Signatory of notary: 

My commission expires: 11-4-13

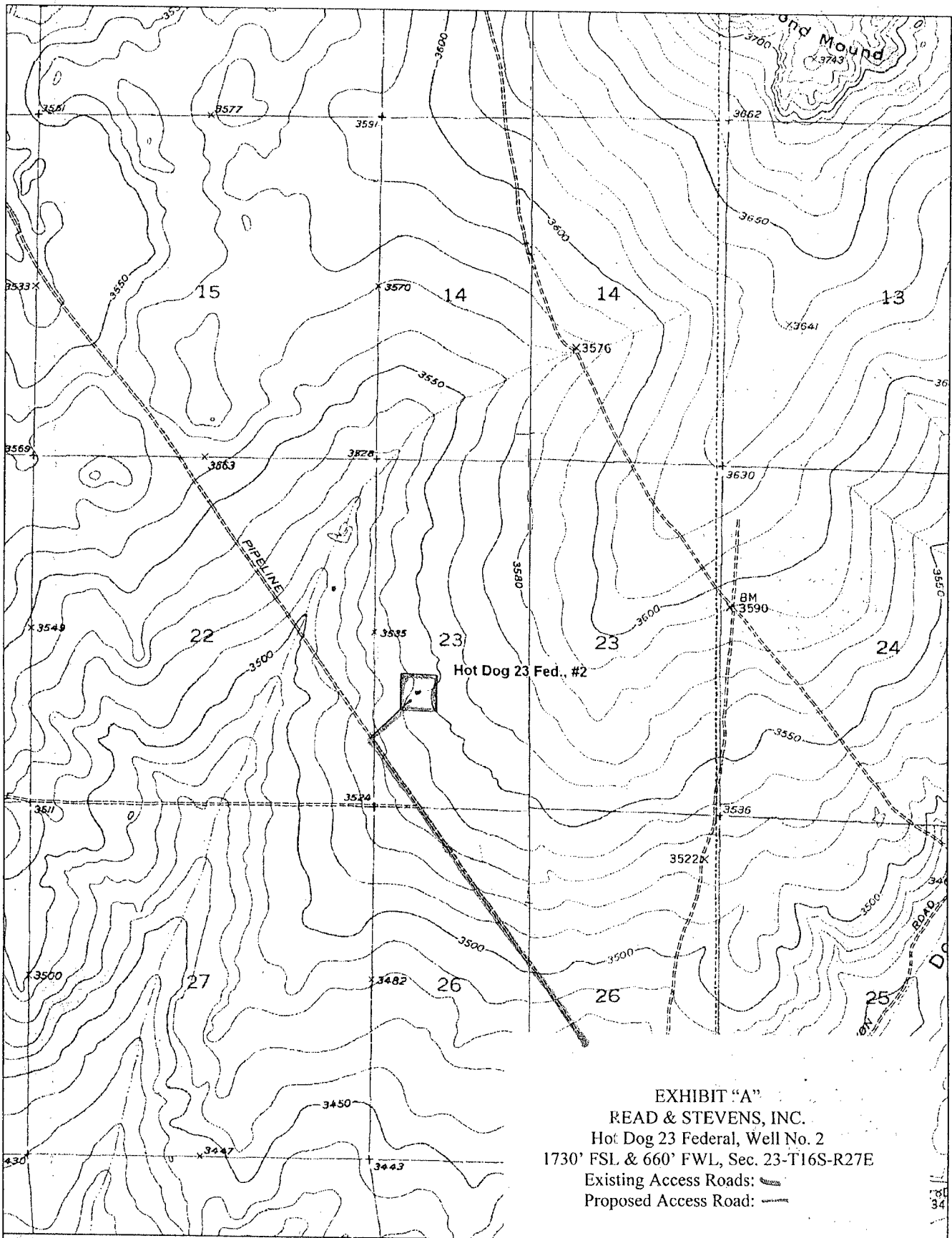
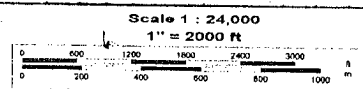


EXHIBIT "A"
 READ & STEVENS, INC.
 Hot Dog 23 Federal, Well No. 2
 1730' FSL & 660' FWL, Sec. 23-T16S-R27E
 Existing Access Roads:
 Proposed Access Road:



© 2002 DeLorme, 3-D TopoQuads ®. Data copyright of content owner.
 www.delorme.com



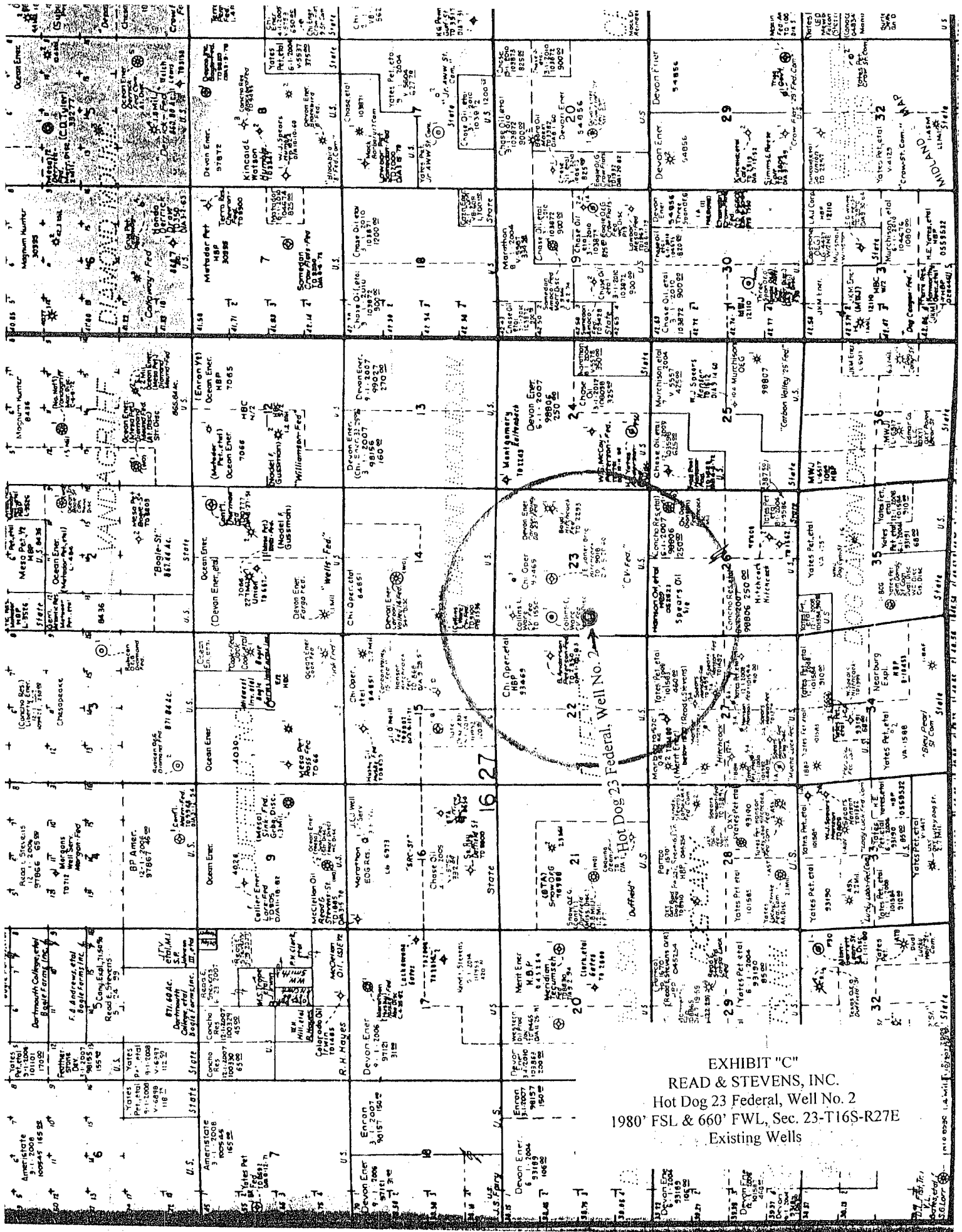


EXHIBIT "C"
READ & STEVENS, INC.
Hot Dog 23 Federal, Well No. 2
1980' FSL & 660' FWL, Sec. 23-T16S-R27E
Existing Wells

Wildcat Measurement Service
P.O.Box 1836
416 East Main Street
Artesia, NM 88211-1836

4/23/2010 5:29 PM
Phone: 575-746-3481
888-421-9453
Fax: 575-748-9852
dnorman@wildcatms.com

GAS ANALYSIS REPORT

Analysis For: READ & STEVENS, INC.
Field Name:
Well Name: HOT DOG "22" #1
Station Number:
Purpose: SPOT
Sample Deg. F: 60.0
Volume/Day:
Formation:
Line PSIG: 10.0
Line PSIA: 23.2

Run No: 2100423-13
Date Run: 04/23/2010
Date Sampled: 04/22/2010
Producer: READ & STEVENS, INC.
County: EDDY
State: NM
Sampled By: CHANDLER MONTGOMERY
Atmos Deg. F: 72

| GAS COMPONENTS | | | |
|------------------|------|----------|--------|
| | | MOL% | GPM |
| Oxygen | O2: | 0.0000 | |
| Carbon Dioxide | CO2: | 0.1367 | |
| Nitrogen | N2: | 51.1210 | |
| Hydrogen Sulfide | H2S: | 0.0000 | |
| | | | |
| Methane | C1: | 39.5795 | |
| Ethane | C2: | 4.6290 | 1.2309 |
| Propane | C3: | 2.5060 | 0.6865 |
| Iso-Butane | IC4: | 0.3472 | 0.1130 |
| Nor-Butane | NC4: | 0.7643 | 0.2396 |
| Iso-Pentane | IC5: | 0.2231 | 0.0811 |
| Nor-Pentanes | NC5: | 0.2063 | 0.0744 |
| Hexanes Plus | C6+: | 0.4868 | 0.2105 |
| | | | |
| Totals | | 100.0000 | 2.6360 |

Pressure Base: 14.650
Real BTU Dry: 622.107
Real BTU Wet: 611.186

Calc. Ideal Gravity: 0.8506
Calc. Real Gravity: 0.8516
Field Gravity:
Standard Pressure: 14.696
Ideal BTU Dry: 623.118
Ideal BTU Wet: 612.276
Z Factor: 0.9985
Average Mol Weight: 24.6369
Average CuFt/Gal: 73.2996
26 lb. Product: 0.5737
Ethane+ GPM: 2.6360
Propane+ GPM: 1.4050
Butane+ GPM: 0.7186
Pentane+ GPM: 0.3660

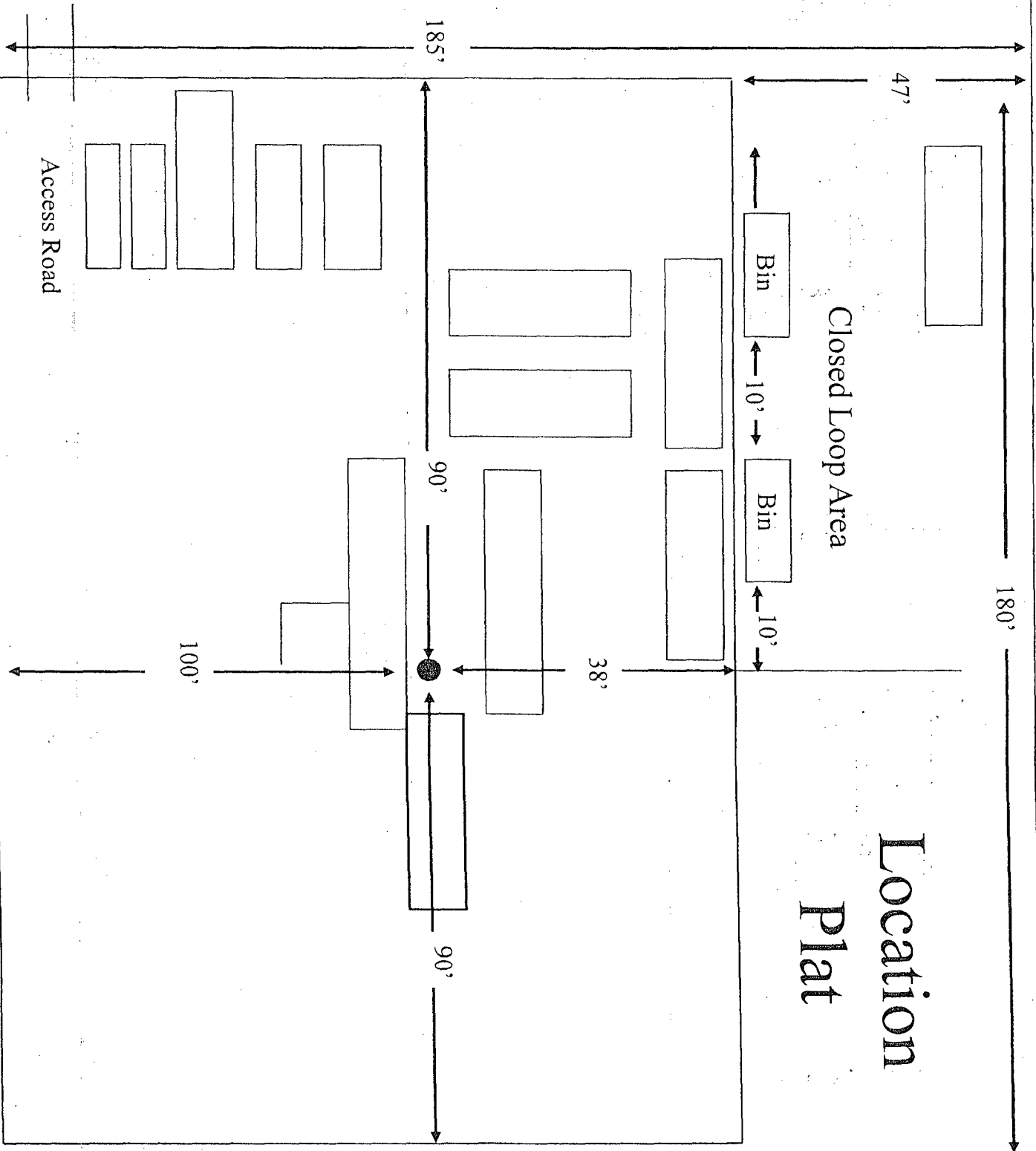
Remarks:
H2S IN GAS STREAM ON LOCATION: NONE DETECTED

Analysis By: Don Norman

EXHIBIT "B"
READ & STEVENS, INC.
Hot Dog 23 Federal, Well No. 2
Gas Analysis Report for Hot Dog 22 Federal, Well #1

Location Plat

EXHIBIT "D"
READ & STEVENS, INC..
Hot Dog 23 Federal, Well No. 2
Pad & Closed Loop Layout



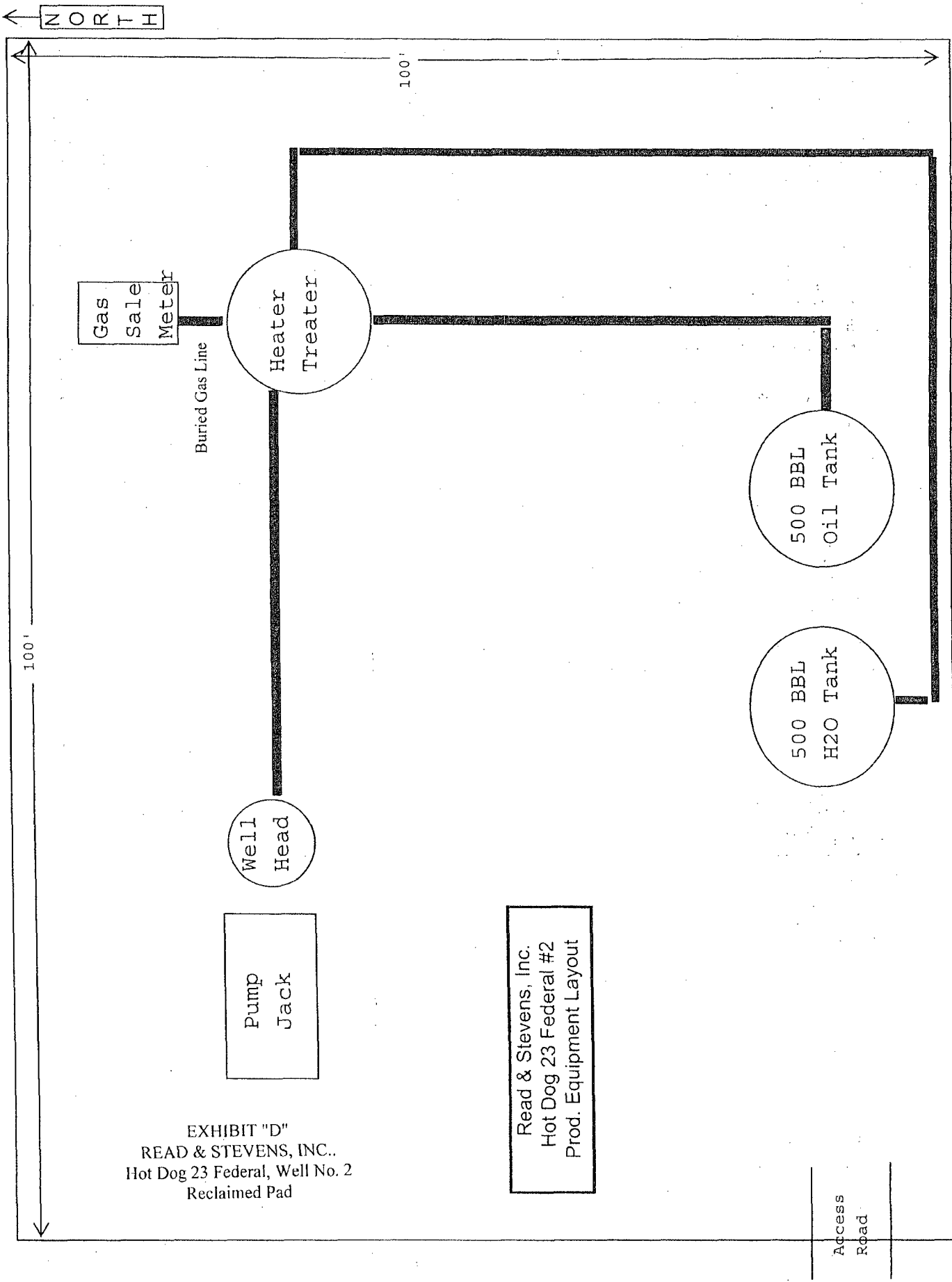


EXHIBIT "D"
READ & STEVENS, INC..
Hot Dog 23 Federal, Well No. 2
Reclaimed Pad

Read & Stevens, Inc.
Hot Dog 23 Federal #2
Prod. Equipment Layout

BOP DIAGRAM 3000# SYSTEM

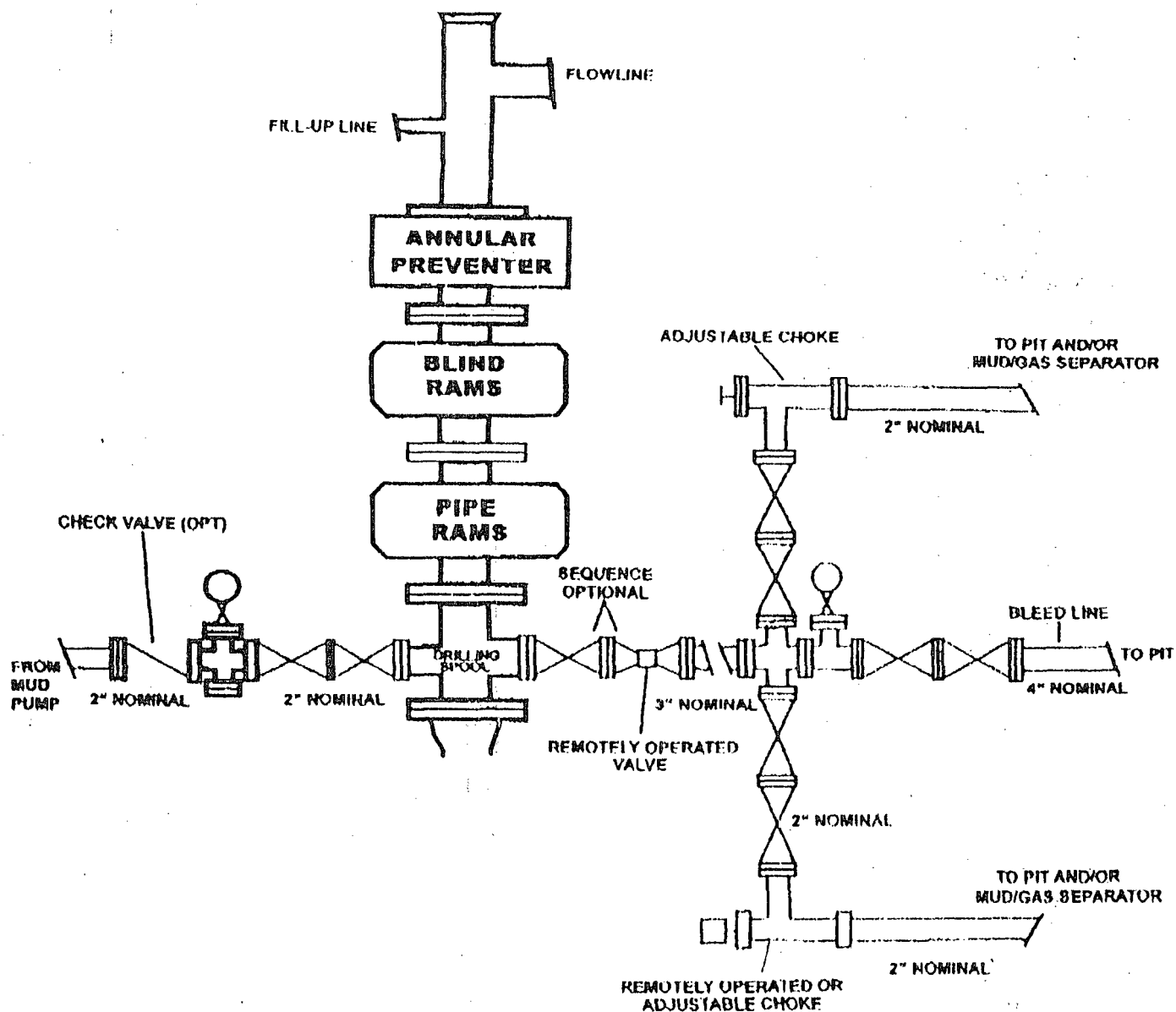


EXHIBIT "E"
READ & STEVENS, INC..
Hot Dog 23 Federal, Well No. 2
BOP Specifications

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, 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, NM 87505

Form C-144 CLEZ
July 21, 2008

For closed-loop systems that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, submit to the appropriate NMOCD District Office.

Closed-Loop System Permit or Closure Plan Application

(that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure)

Type of action: ☒ Permit ☐ Closure

Instructions: Please submit one application (Form C-144 CLEZ) per individual closed-loop system request. For any application request other than for a closed-loop system that only use above ground steel tanks or haul-off bins and propose to implement waste removal for closure, please submit a Form C-144.

Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.
Operator: Read & Stevens, Inc. OGRID #: 18917
Address: P.O. Box 1518 Roswell, NM 88202
Facility or well name: Hot Dog 23 Federal, Well No. 2
API Number: _____ OCD Permit Number: _____
U/L or Qtr/Qtr L Section 23 Township 16S Range 27E County: Eddy
Center of Proposed Design: Latitude 32.906363° N Longitude 104.255369° NAD: X1927 ☐ 1983
Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.
X Closed-loop System: Subsection H of 19.15.17.11 NMAC
Operation: ☒ Drilling a new well ☐ Workover or Drilling (Applies to activities which require prior approval of a permit or notice of intent) ☐ P&A
☐ Above Ground Steel Tanks or ☒ Haul-off Bins

3.
Signs: Subsection C of 19.15.17.11 NMAC
☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers
☐ Signed in compliance with 19.15.3.103 NMAC

4.
Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC
Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached.
☒ Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC
☒ Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC
☒ Please complete Box 5) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC
☐ Previously Approved Design (attach copy of design) API Number: _____
☐ Previously Approved Operating and Maintenance Plan API Number: _____

5.
Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only: (19.15.17.13.D NMAC)
Instructions: Please identify the facility or facilities for the disposal of liquids, drilling fluids and drill cuttings. Use attachment if more than two facilities are required.
Disposal Facility Name: CRI (Controlled Recovery, Inc.) Disposal Facility Permit Number: #R-9166
Disposal Facility Name: _____ Disposal Facility Permit Number: _____
Will any of the proposed closed-loop system operations and associated activities occur on or in areas that will not be used for future service and operations?
☐ Yes (If yes, please provide the information below) ☒ No
Required for impacted areas which will not be used for future service and operations:
☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC
☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection I of 19.15.17.13 NMAC
☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC

6.
Operator Application Certification:
I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.
Name (Print): George R. Smith Title: POA agent
Signature: George R. Smith Date: August 27, 2010
e-mail address: gr.smith1@hotmail.com Telephone: 575-623-4940

7. **OCD Approval:** ☐ Permit Application (including closure plan) ☐ Closure Plan (only)

OCD Representative Signature: _____ Approval Date: _____

Title: _____ OCD Permit Number: _____

8. **Closure Report (required within 60 days of closure completion):** Subsection K of 19.15.17.13 NMAC

Instructions: Operators are required to obtain an approved closure plan prior to implementing any closure activities and submitting the closure report. The closure report is required to be submitted to the division within 60 days of the completion of the closure activities. Please do not complete this section of the form until an approved closure plan has been obtained and the closure activities have been completed.

☐ Closure Completion Date: _____

9. **Closure Report Regarding Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Steel Tanks or Haul-off Bins Only:**

Instructions: Please identify the facility or facilities for where the liquids, drilling fluids and drill cuttings were disposed. Use attachment if more than two facilities were utilized.

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Disposal Facility Name: _____ Disposal Facility Permit Number: _____

Were the closed-loop system operations and associated activities performed on or in areas that *will not* be used for future service and operations?

☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No

Required for impacted areas which will not be used for future service and operations:

☐ Site Reclamation (Photo Documentation)

☐ Soil Backfilling and Cover Installation

☐ Re-vegetation Application Rates and Seeding Technique

10. **Operator Closure Certification:**

I hereby certify that the information and attachments submitted with this closure report is true, accurate and complete to the best of my knowledge and belief. I also certify that the closure complies with all applicable closure requirements and conditions specified in the approved closure plan.

Name (Print): _____ Title: _____

Signature: _____ Date: _____

e-mail address: _____ Telephone: _____

Read & Stevens, Inc, HOT DOG 23 FEDERAL, Well No. 2
API: 30--

Sec. 23, T16S-R27E: 1980' FSL & 660' FWL Eddy Co., NM

DESIGN: Closed Loop System with roll-off steel bins (pits)

CLS/Carlsbad will supply (2) bins () volume, rails and transportation relating to the Close Loop system. Specifications of Close Loop System attached.

Contacts: Tommy Wilson 575-748-6367 Cell Office # 575-885-3996

Closed Loop Specialties: Supervisor: Curtis: 575-706-4605 - Carlsbad Cell

Monitoring 24 hour service

Equipment:

2-Centrifuges (brand): Swaco

2-Rig Shakers (brand): Mongoose

Air pumps on location for immediate remediation process

Layout of Close Loop System with bins, centrifuges and shakers attached.

Cuttings and associated liquids will be hauled to a State regulated third party disposal site: CRI (Controlled Recovery, Inc) Disposal Facility Permit # R-9166

2- CLS Bins with track system

1 500 bbl tank for fresh water

OPERATIONS:

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

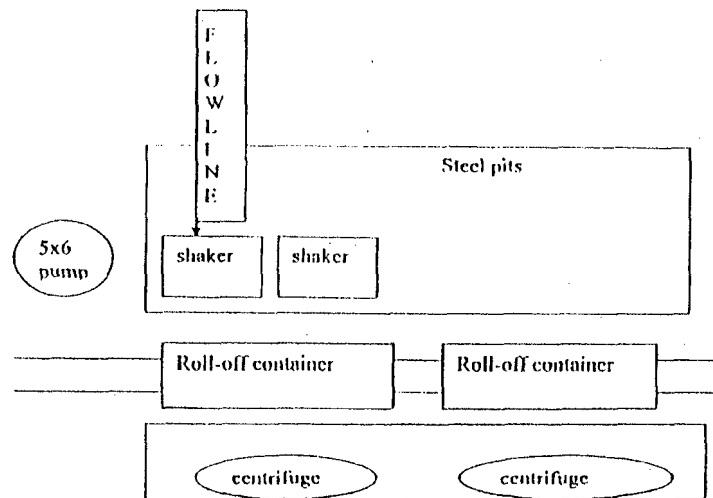
Any leak in system will be repaired and or/contained immediately

OCD will be notified within 48 hours of the spill.

Remediation process started immediately

CLOSURE:

During drilling operations all liquids, drilling fluids and cuttings will be hauled off by CLS (Closed Loop Specialties) to disposal facility, Controlled Recovery, Inc. Permit # R-9166



This will be maintained by 24 hour solids control personnel that stay on location.

TOMMY WILSON



**CLOSED LOOP
SPECIALTY**

Office: 575.746.1689

Cell: 575.748.6367

MULTI POINT SURFACE USE AND OPERATIONS PLAN

READ & STEVENS, INC.
Hot Dog 23 Federal, Well No. 2
1980' FSL & 660' FWL, Sec. 23-T16S-R27E
Eddy County, New Mexico
Lease No.: NMNM-93469
(Development 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 20 road miles northeast of Artesia, NM. Traveling east of Artesia on U.S. Hwy 82 there will be approximately 9 miles of existing paved road and 8 miles of gravel oil field roads
- B. Directions: Travel east of U.S. Hwy 285 in Artesia on U.S. 82 for 9 miles to CR 202, at the power station. Turn north for 2.9 miles and then turn right, northeast, for 1.2 miles to a pipeline road running northwest. Continue northwest for 3.6 miles, to the start of the proposed access road on the right.. The proposed access road will run northeast for 1000 feet to the southwest corner of the proposed well pad.

2. PLANNED ACCESS ROAD:

- A. Length and Width: The proposed new access road will be approximately 979 feet long and 12 foot width. 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. The surface will be properly drained.
- C. Turnouts: One turnout will be required at the midway point of the proposed new access road; increasing the width to 20 feet for passing.
- D. Culverts: None.
- E. Cuts and Fills: None required.
- F. Gates, Cattle guards: No cattle guard will be required.
- G. Off lease right of way: None required. Both state and Federal have previously been assigned.

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. 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 fresh 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 existing well pad of the Hot Dog 23 Federal, Well No. 1 located 1980' FNL & 660' FEL. This will serve as a clean up of the P/A well and access road. 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 cuttings and liquids will be stored in steel tanks of the closed loop mud system during the drilling operation. Drill cuttings will be delivered to CRI, Permit No. R-9166, as needed, and at closure. Drilling liquids will be hauled to a separate approved disposal system.
- B. There are no mud pits to be fenced.
- C. 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.
- 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 pit area has been staked and flagged, 300' X 300' and 600' X 600' for archaeological survey.
- B. Mat Size: 180' X 185', including closed loop system on the north.
- C. Cut & Fill: The location is relatively level with no dune surface but will require a 1.5' cut on the northeast with fill to the southwest.
- 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 will be cleaned of all trash and junk to leave the well site in an aesthetically pleasing condition as possible. The pad area will be reclaimed to leave an area of 100' X 100' working pad.
- B. All produced mud and fluids of the closed loop mud system will be removed to authorized disposal sites.
- C. 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: The proposed well site and access road are located on a relatively level terrain. The location has an elevation of 3543' GL and a slope of 2.1% to the southwest.
- B. Soil: The topsoil at the well site is a light tan calcareous gypsiferous loam with some surface scatter of gypsum rock and occasional exposed bedrock outcrops. The soil is part of the Reeves-Gypsum soil complex.
- C. Flora and Fauna: The location has a fair to good grass cover of grama, three awn, alkali sacaton, and fluff grass along with plants of mesquite, yucca, broomweed, creosote bush, 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 in immediate area.
- E. Residences and Other Structures: None in the immediate vicinity.
- F. Land Use: Cattle grazing.
- G. Surface Ownership: The proposed well site and access road is on Federal surface and minerals.
- H. There is no evidence of archaeological, historical or cultural sites in the staked area. Archaeological Survey Consultants, P. O. Box 2285, Roswell, NM 88202 is conducting 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:

David Luna, operations engineer
READ & STEVENS, INC.
P. O. Box 1518
Roswell, NM 88202
Office Phone: (575) 622-3770 (ext 305)

CERTIFICATION:

I hereby certify that I have inspected the proposed drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have knowledge of state and Federal laws applicable to this operation; that the statements made in the APD package are, to the best of my knowledge, true and correct; and, that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

Executed this 27th day of August, 2010.


George R. Smith

POA agent for Read & Stevens, Inc.

P.O. Box 458
Roswell, NM 88202
575-623-4940

David Luna, Field Representative
P.O. Box 1518
Roswell, NM 88202
575-622-3770 Ext. 305
575-626-9395 - Cell#

PECOS DISTRICT CONDITIONS OF APPROVAL

| | |
|-----------------------|-------------------------------------|
| OPERATOR'S NAME: | Read & Stevens Inc |
| LEASE NO.: | NM93469 |
| WELL NAME & NO.: | 2 Hot Dog 23 Federal |
| SURFACE HOLE FOOTAGE: | 1730' FSL & 660' FWL |
| BOTTOM HOLE FOOTAGE | ' F L & ' F L |
| LOCATION: | Section 23, 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
 - V-door
- ☒ Construction
 - Notification
 - V-Door Direction
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ Road Section Diagram
- ☐ Drilling
 - Casing/Cement
 - Logging requirements
 - Waste Material and Fluids
- ☐ Production (Post Drilling)
 - Well Structures & Facilities
 - Pipelines
 - Electric Lines
- ☒ 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)

V-door northeast in order to parallel drainage to north

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. V-DOOR DIRECTION: northeast

C. TOPSOIL

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be used for interim and final reclamation.

D. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

E. 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.

F. 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.

G. 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

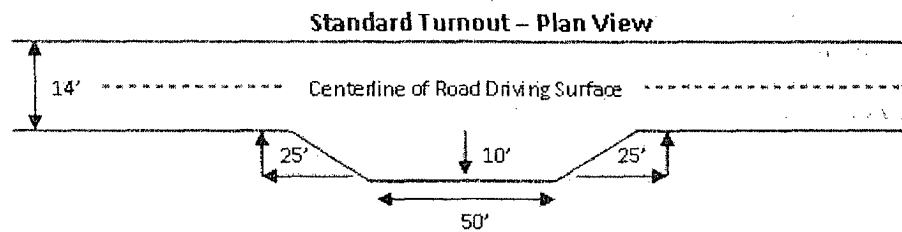
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

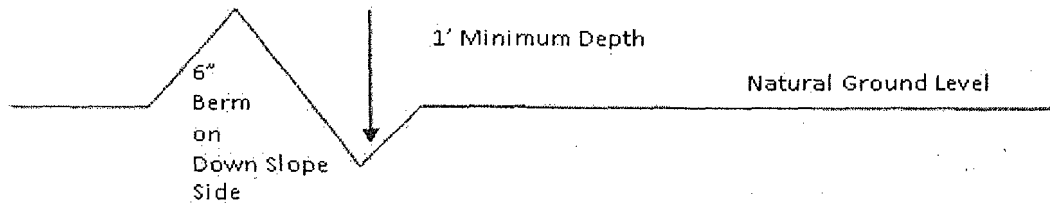


Drainage

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 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:

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

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

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

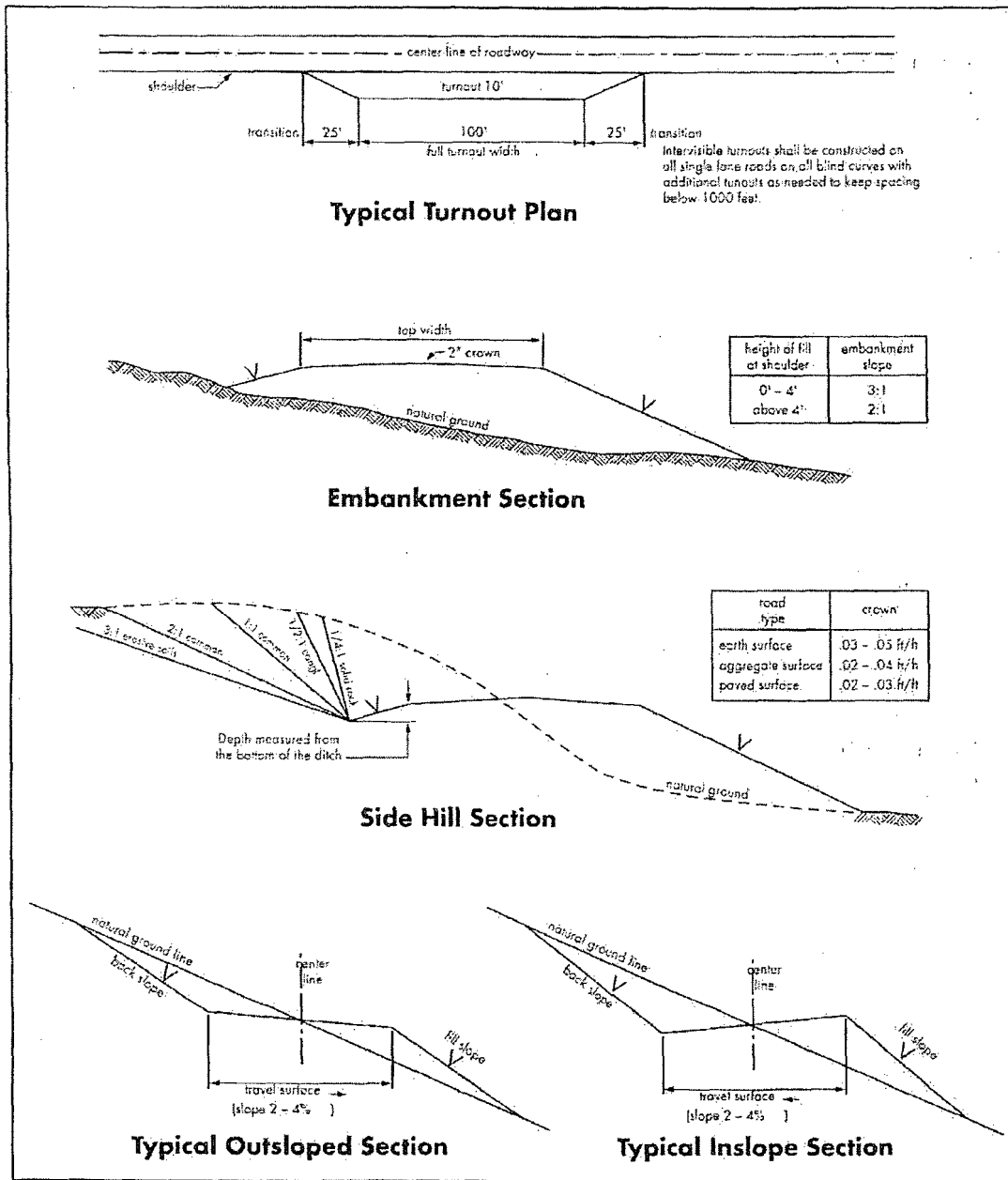
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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. 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

B. PIPELINES (not applied for in APD)

C. ELECTRIC LINES (not applied for in APD)

VIII. 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.

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