

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

MAR 16 2009

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

|   |  |   |
|---|--|---|
| 1a Type of work <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER  |  | 5 Lease Serial No.<br>NM-31263  |
| 1b Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone |  | 6 If Indian, Allottee or Tribe Name                                   |
| 2 Name of Operator<br>Cameron Oil & Gas Co., Inc. /   |  | 7 If Unit or CA Agreement, Name and No                                |
| 3a Address P.O. Box 1455<br>Roswell, NM 88202   | 3b Phone No. (include area code)<br>575.627.3284   | 8 Lease Name and Well No. 27019<br>Amoco Federal, Well No. 2          |
| 4 Location of Well (Report location clearly and in accordance with any State requirements *)<br>At surface 660' FNL & 990' FEL<br>At proposed prod zone same  |  | 9 API Well No.<br>30-005-64108  |
| 14 Distance in miles and direction from nearest town or post office*<br>21 road miles N. of Loco Hills, NM  |  | 10 Field and Pool, or Exploratory<br>Double L Queen Association 19100 |
| 15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drg. unit line, if any) 660'   |  | 11 Sec, T R M or Blk and Survey or Area<br>Sec. 23-T14S-R29E          |
| 16 No. of acres in lease 160 (1120)   |  | 12 County or Parish<br>Chaves   |
| 17 Spacing Unit dedicated to this well 40   |  | 13 State<br>NM  |
| 18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 1650'  |  | 19 Proposed Depth 1,880'  |
| 20 BLM/BIA Bond No. on file NM-2722   |  |   |
| 21 Elevations (Show whether DF, KDB, RT, GL, etc.)<br>3772' GL  | 22 Approximate date work will start*<br>01/26/2009 | 23 Estimated duration<br>4 weeks                                      |

24. Attachments

ROSWELL CONTROLLED WATER BASIN

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

- |  |  |
|--|--|
| 1. Well plat certified by a registered surveyor  | 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<br><i>George R. Smith</i> | Name (Printed/Typed)<br>George R. Smith | Date<br>01/07/2009 |
|--|---|--------------------|

Title  
POA agent for Cameron Oil & Gas Co., Inc.

|   |                                     |                     |
|---|-------------------------------------|---------------------|
| Approved by (Signature)<br><i>/s/ Angel Mayes</i> | Name (Printed/Typed)<br>Angel Mayes | Date<br>MAR 12 2009 |
|---|-------------------------------------|---------------------|

|   |                                |
|---|--------------------------------|
| Title<br>Assistant Field Manager,<br>Lands And Minerals | Office<br>ROSWELL FIELD OFFICE |
|---|--------------------------------|

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any, are attached.

APPROVED FOR 2 YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*(Instructions on page 2)

DECLARED WATER BASIN

CEMENT BEHIND THE 85"  
CASING MUST BE CIRCULATED

WITNESS

*Searched  
Mr 3-19-09*

APPROVAL SUBJECT TO  
GENERAL REQUIREMENTS AND  
SPECIAL STIPULATIONS ATTACHED

District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

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

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

|   |  |   |  |  |                                |
|---|--|---|--|--|--------------------------------|
| <sup>1</sup> API Number<br>30-005-64108   |  | <sup>2</sup> Pool Code<br>19100                           |  | <sup>3</sup> Pool Name<br>Double LaQueen (Association) |                                |
| <sup>4</sup> Property Code<br>27109-27019 |  | <sup>5</sup> Property Name<br>AMOCO FEDERAL               |  |  | <sup>6</sup> Well Number<br>2  |
| <sup>7</sup> OGRID No.<br>181109          |  | <sup>8</sup> Operator Name<br>Cameron Oil & Gas Co., Inc. |  |  | <sup>9</sup> Elevation<br>3772 |

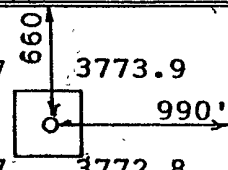
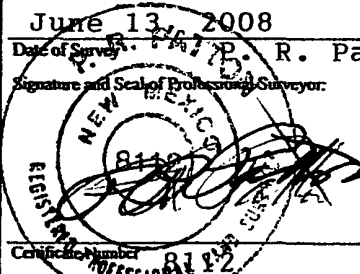
**10 Surface Location**

|                    |               |                  |               |         |                      |                           |                      |                        |                  |
|--------------------|---------------|------------------|---------------|---------|----------------------|---------------------------|----------------------|------------------------|------------------|
| UL or lot no.<br>A | Section<br>23 | Township<br>14 S | Range<br>29 E | Lot Idn | Feet from the<br>660 | North/South line<br>NORTH | Feet from the<br>990 | East/West line<br>EAST | County<br>CHAVES |
|--------------------|---------------|------------------|---------------|---------|----------------------|---------------------------|----------------------|------------------------|------------------|

**11 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 |
| <sup>12</sup> Dedicated Acres<br>40 ac |         |          |       |         |               |                  |               |                |        |
| <sup>13</sup> Joint or Infill          |         |          |       |         |               |                  |               |                |        |
| <sup>14</sup> Consolidation Code       |         |          |       |         |               |                  |               |                |        |
| <sup>15</sup> 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.

|               |   |  |  |
|---------------|---|--|--|
| <sup>16</sup> |  | Loc.<br>lat. 33.09393 N<br>long. 103.99283 W | <b>17 OPERATOR CERTIFICATION</b><br>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or released mineral interest in the land including the proposed bottom hole location 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.<br><br>Signature: <u>David Sweeney</u> Date: <u>1-9-09</u><br><br>Printed Name: <u>David Sweeney, Supt.</u><br><u>(575) 420-1108</u> |
|               |   |  | <b>18 SURVEYOR CERTIFICATION</b><br>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.<br><br>Date of Survey: <u>June 13, 2008</u><br>Signature and Seal of Professional Surveyor: <u>P. R. Patton</u><br><br>   |
|               |   |  | Certification Number: <u>8110</u>  |

**APPLICATION FOR DRILLING  
CAMERON OIL & GAS CO., INC.**

Amoco Federal, Well No. 2  
660' FNL & 990' FEL Sec. 23-T14S-R29E  
Chaves County, New Mexico  
Lease No.: NM-31263  
(Development Well)

In conjunction with Form 3160-3, Application for Permit to Drill subject well, Cameron Oil & Gas Co., Inc. submits the following items of pertinent information in accordance with BLM requirements:

- The geologic surface formation is recent Permian with quaternary alluvium and other surficial deposits.
- The estimated tops of geologic markers are as follows:

|         |        |              |        |
|---------|--------|--------------|--------|
| Rustler | 227'   | Seven Rivers | 1,209' |
| Salt    | 265'   | Queen        | 1,817' |
| Tansil  | 920'   | T.D          | 1,880' |
| Yates   | 1,081' |              |        |

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

Water: Surface water possible in the Triassic between 80' - 230'.  
Oil: Possible in the Queen below 1,817'  
Gas: Possible in the Queen below 1,817'

- Proposed New Casing Program:

| HOLE SIZE | CASING SIZE | WEIGHT | GRADE | JOINT | SETTING DEPTH FACTOR | COLLAPSE DESIGN FACTOR | BURST DESIGN FACTOR | TENSION DESIGN FACTOR |
|-----------|-------------|--------|-------|-------|----------------------|------------------------|---------------------|-----------------------|
| 12 1/4"   | 8 5/8"      | 24.0#  | J-55  | ST&C  | <del>350</del> 250'  | 1.2                    | 1.18                | 2.0                   |
| 7 7/8"    | 5 1/2"      | 14.0#  | J-55  | ST&C  | 1,880'               | 1.2                    | 1.18                | 2.0                   |
|           |             |        |       |       |                      |                        |                     |                       |

**Note:** A rat hole rig will drill the 350' of surface casing and the balance will be drilled with a cable tool rig.

- Proposed Control Equipment: A 2000 psi wp Hydrill Annular Preventer BOP will be installed on the 8 5/8" casing. Casing and BOP will be tested as per Onshore Oil & Gas Order No. 3 before drilling out with 7 7/8". See Exhibit "E".

- Cement Program

| CASING | SETTING DEPTH       | QUANTITY OF CEMENT        | TOP OF CEMENT | YEILD |
|--------|---------------------|---------------------------|---------------|-------|
| 8 5/8" | <del>430</del> 250' | 300 sx "C" plus additives | Surface       | 1.34  |
| 5 1/2" | 1,880'              | 350 sx "C" plus additives | Surface       | 1.34  |

- Mud Program:

| DEPTH     | MUD PROGRAM<br>MUD                                 |
|-----------|--|
| 0'-1,880' | Fresh water native drilling mud with gel additives |

**CAMERON OIL & GAS CO., INC.**

Amoco Federal, Well No. 2

Page 2

**8. Auxiliary Equipment: Blowout Preventer.**

**9. Testing, Logging, and Coring Program:**

Drill Stem Tests: None planned unless warranted.

Logging: T.D –Surface Casing: GR-CND

T.D. to surface: G/R

Coring: None planned unless warranted..

- 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. Estimated Surface Pressure = 564 psi (evac. hole) and BHP of 978 psi (evac) with temperature of 79°.
- 11. H<sub>2</sub>S:** None expected. The drilling operator will be cautioned to use a gas trap to detect H<sub>2</sub>S and if any is detected the mud will have the addition of H<sub>2</sub>S inhibitors sufficient to control the gas. H<sub>2</sub>S monitoring equipment will be installed before drilling out from the 8 5/8" casing
- 12.** Anticipated starting date: January 26, 2009.  
Anticipated completion of drilling operations: Approx. 4 weeks.

## **MULTI POINT SURFACE USE AND OPERATIONS PLAN**

**CAMERON OIL & GAS CO., INC.**  
Amoco Federal, Well No. 2  
660' FNL & 990' FEL, Sec.23-T14S-R29E  
Chaves County, New Mexico  
Lease No.: NM-31263  
(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 24.7 road miles east of Hagerman, NM. Traveling southeast of Hagerman on N.M Hwy 31 there will be approximately 21 miles of existing paved road and 3.7 miles of gravel oil field roads
- B. Directions: Travel southeast of Hagerman, NM on N M. Hwy 31 for 21 miles to Cindy County Rd., which is .6 mile east of the Hagerman Cut off Rd. Turn northeast on Cindy Rd. for approximately .4 mile; then turn NW on Cindy for .3 mile. CR Katrina starts at this "Y" and continues northwest for 1.2 mile to a road turning northwest. Continue on the oil field road for approximately 1.8 miles to the Amoco Federal, Well No. 1 well. The start of the proposed access road is on the northeast corner of the old pad and will run northeast for 1,300 feet to the SE corner of the proposed well pad.

### **2. PLANNED ACCESS ROAD:**

- A. Length and Width: The proposed new access road will be approximately 12 feet wide and 1,300 feet long. The proposed and existing roads are color coded on Exhibit "A".
- B. Construction: The proposed access road will be constructed by grading and compacting. The surface will be properly drained. The existing access road will be bladed, compacted and cleared of brush. No caliche will be used unless required or necessary on either road.
- C. Turnouts: None will be required.
- D. Culverts: None.
- E. Cuts and Fills: None required.
- F. Gates, Cattle guards: There is one existing on the east fence that will be cleaned out.
- G. Off lease right of way: None required for BLM. The existing East/West State road will require a Right of Way..

### **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. Cameron Oil & Gas Co., INC. has production facilities on the lease at this time.

**CAMERON OIL & GAS CO., INC.**

Amoco Federal, Well No. 2

Page 2

**4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES continued:**

- B. If the well proves to be commercial, the necessary production facilities, gas separation-process equipment and tank battery will be installed on the drilling pad. A 2" surface steel gas flow line will be installed parallel to the access road back to the Amoco Federal #1 gas line. The maximum gas pressure will be 30 – 40 psi.

**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, if required, for surfacing the proposed access road and well site pad will be obtained from the nearest available 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 cuttings and liquids will be stored in a Closed Loop Roll Off steel tank during the drilling operations and delivered to Gandy Marley, Inc., Permit No. NMI-6, as needed and at closure. A 3' deep cut will be made to lower the tank in with tracks.
- B. There will be no mud pits to be fenced.
- C. Water produced during operations will be collected in tanks until hauled to an approved disposal system, 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, reserve pits, and major rig components. The pad and pit area has been staked and flagged, 600' X 600'.
- B. Mat Size. 180' X 105', plus 50' X 180' pad to service the Pit Roll-Off Box mud system on the north.
- C. Cut & Fill: The location will require a .5 foot cut on the southwest with fill to the northwest.
- D. The surface will be bladed and compacted and caliche used, if necessary.

**CAMERON OIL & GAS CO., INC.**

Amoco Federal, Well No. 2

Page 3

**10. PLANS FOR RESTORATION OF THE SURFACE:**

- A After completion of drilling and/or completion operations, all equipment and other material not required for operations will be removed. The location will be cleaned of all trash and junk to leave the well site in an aesthetically pleasing a condition as possible.
- B There will be no unguarded pits containing fluids.
- C If the proposed well is non-productive, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible. Mud from the closed system will be disposed of as required.

**11. OTHER INFORMATION:**

- A. Topography: The proposed well site and access road are located on a .5% slope to the west. The location has an elevation of 3772' GL.
- B. Soil: The topsoil at the well site is a yellowish brown calcareous sand and gravel soil with possible caliche at 9" depth. The soil is part of the Tencee-Sotim association.
- C. Flora and Fauna: The location has a fair to poor grass cover of three awn, dropseed, fluff grass and grama 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.
- E. Residences and Other Structures: None in the immediate vicinity except oilfield equipment on producing wells.
- 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 has conducted an archaeological survey and their report has been submitted to the appropriate government agencies.

**12. OPERATOR'S REPRESENTATIVE:**

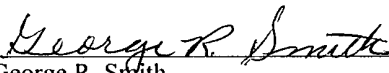
- A. The field representative for assuring compliance with the approved use and operations plan is as follows:

David Sweeney, Vice President  
CAMERON OIL & GAS CO., INC.  
P.O. Box 1456  
Roswell, NM 88202  
Office Phone: 575-627-3284  
Cell Phone: 575-420-1108

**CERTIFICATION:**

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

January 7, 2009

  
George R. Smith  
Agent for: CAMERON OIL & GAS CO., INC.



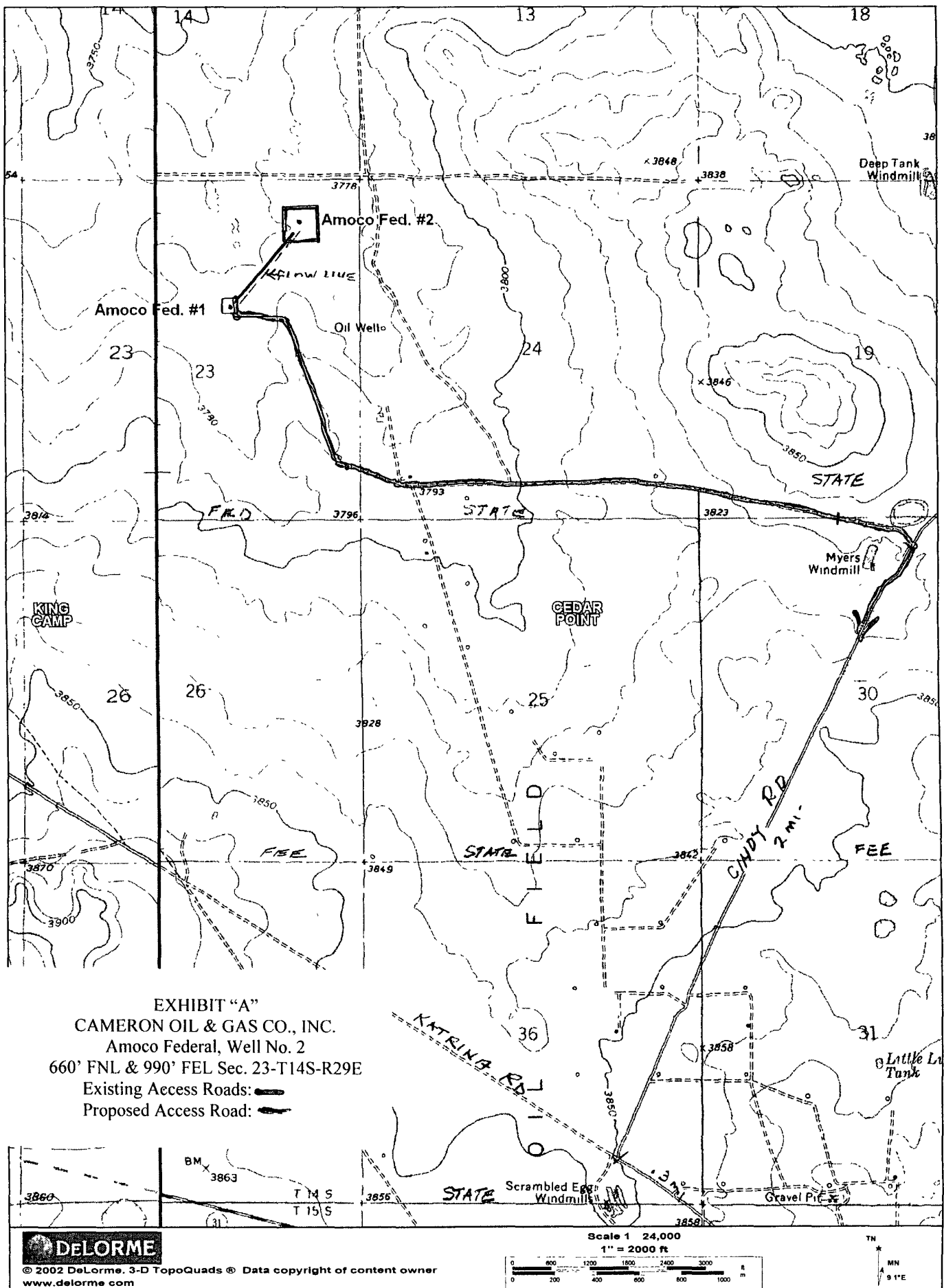
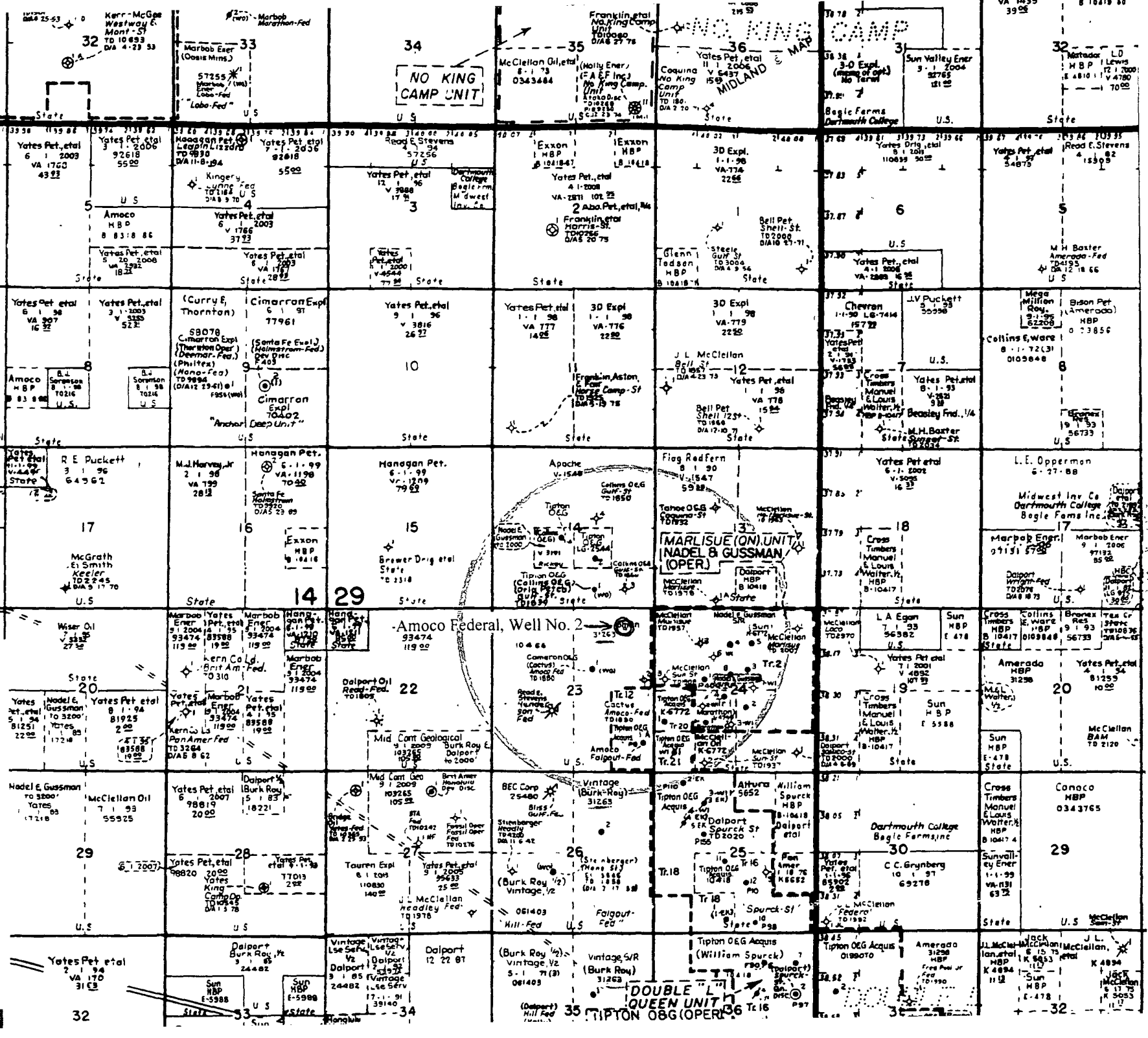


EXHIBIT "C"  
CAMERON OIL & GAS CO., INC.  
Amoco Federal, Well No. 2  
660' FNL & 990' FEL Sec. 23-T14S-R29E  
Existing Wells



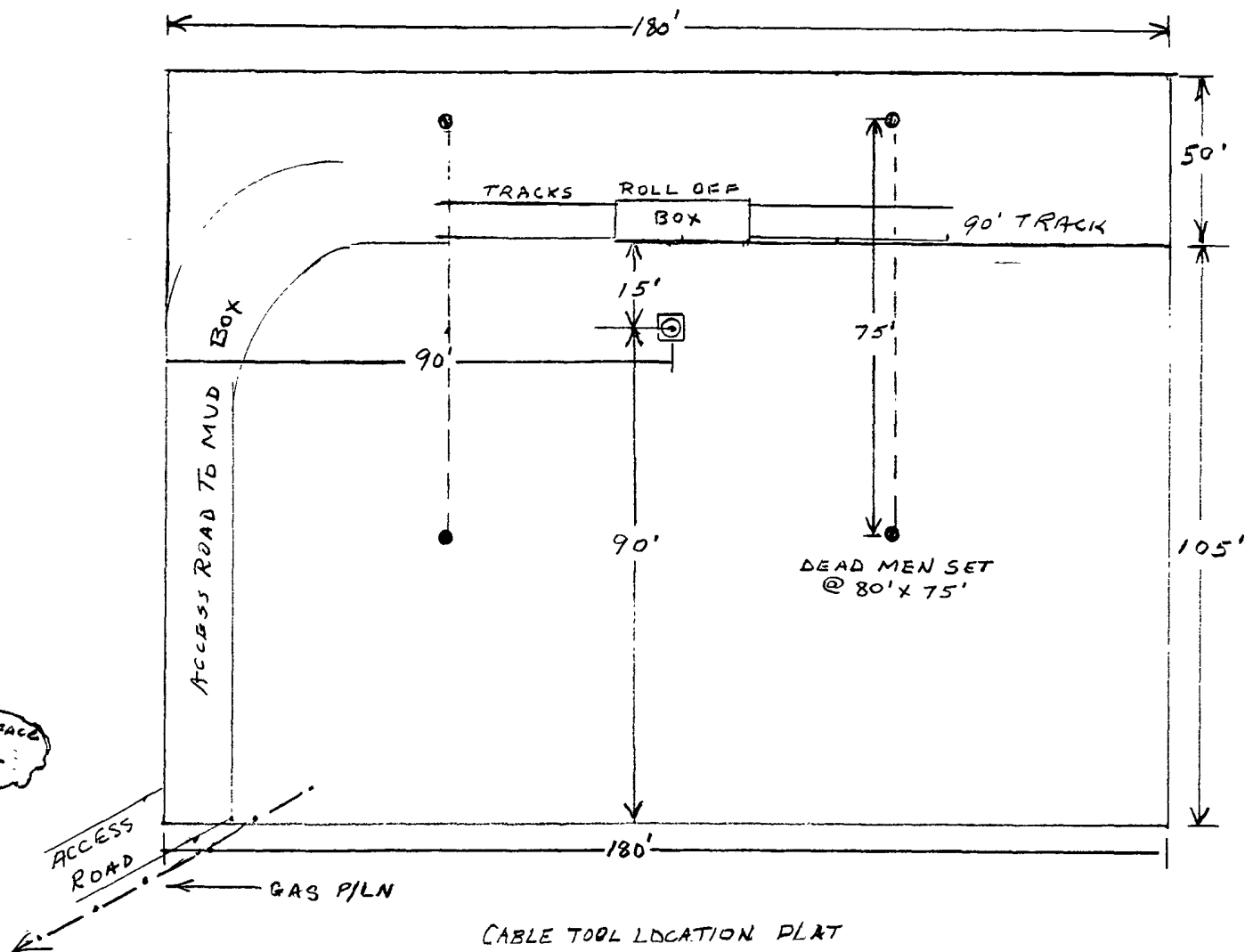


EXHIBIT "D"  
CAMERON OIL & GAS CO., INC.  
Amoco Federal, Well No. 2  
Pad & Pit Layout



# SHAFFER TOOL WORKS



## PREVENTERS

## SHAFFER MECHANICAL CONTROL GATES

(Patented)

### PARTS FOR TYPE 45 SINGLE GATES

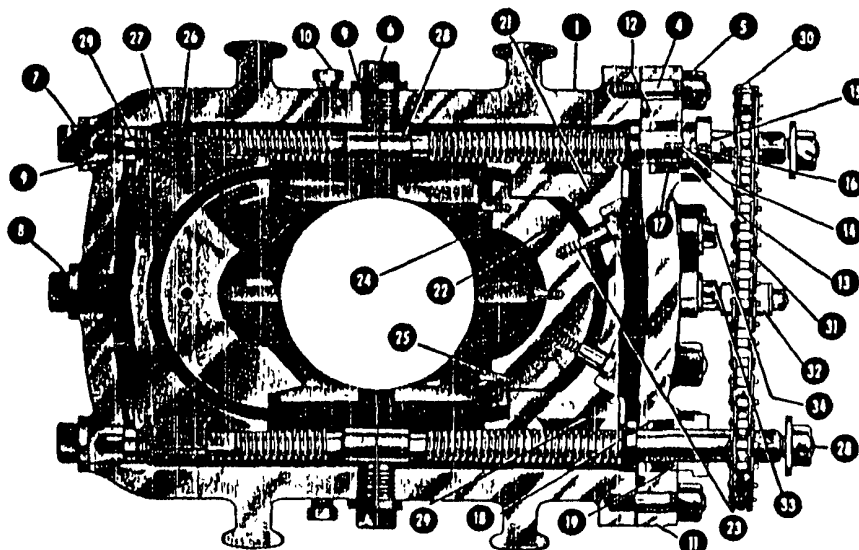


Fig. 84

Shaffer Type 45 Mechanical Single Control Gate—Top View

| Part No. | No. Req'd. | NAME OF PART   | Part No. | No. Req'd. | NAME OF PART                           | Part No. | No. Req'd.      | NAME OF PART                                      |
|----------|------------|--|----------|------------|--|----------|-----------------|---|
| 1        | 1          | Body   | 15       | 4          | Stuffing Box Gland Stud Nut            | 26       | 8               | Ram Clip  |
| 2        | Varies     | Body Flange Stud (Not Shown)                                     | 16       | 4          | Stuffing Box Gland Jam Nut             | 27       | 16              | Ram Clip Cap Screw                                |
| 3        | Varies     | Body Flange Stud Nut (Not Shown)                                 | 17       | 2 Sets     | Stuffing Box Packing (Chevron)         | 28       | 2               | Operating Screw with Nut                          |
| 4        | Varies     | Body End Cover Stud  | 18       | 2          | Stuffing Box Bronze Packing Ring       | 29       | 2 R.H. & 2 L.H. | Bronze Half Nut                                   |
| 5        | Varies     | Body End Cover Stud Nut  | 19       | 2          | Stuffing Box Bronze Packing Ring       | 30       | 2               | Sprocket  |
| 6        | 2          | Side Plug  | 20       | 2          | Flange (Not Shown)                     | 31       | 1               | Sprocket Chain (length varies)                    |
| 7        | 2          | End Bearing Plug   | 21       | 1 Set      | Ram Block Holder                       | 32       | 1               | Sprocket Chain Tightener                          |
| 8        | 1          | End Center Plug  | 22       | 1 Set      | Ram Block (Pipe or Complete Shut-Off)  | 33       | 1               | Screw with Ratchet Washer for Chain Tightener     |
| 9        | 5          | Copper Gasket for Side and End Plug                              | 23       | 4          | Ram Block Retracting Screw             | 34       | 1               | Screw with Plain Washer for Chain Tightener       |
| 10       | 2          | Washout Plug   | 24       | 1 Set      | Ram Rubber (Pipe or Complete Shut-Off) | 35       | 1               | Sprocket Chain Guard (Not Shown)                  |
| 11       | 1          | End Cover  | 25       | Varies     | Ram Rubber Retaining Screw             | 36       | 2               | Cap Screw with Washer for Chain Guard (Not Shown) |
| 12       | 1          | Hydraulic Packing for End Cover (Earlier Gates use Metal Gasket) |          |            |  |          |                 |   |
| 13       | 2          | Stuffing Box Gland   |          |            |  |          |                 |   |
| 14       | 4          | Stuffing Box Gland Stud  |          |            |  |          |                 |   |

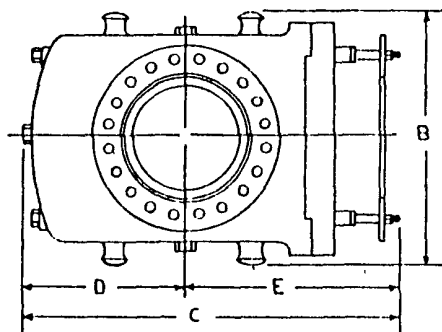


Fig. 85

Dimensional Plan—Shaffer Type 45 Mechanical Single Control Gate

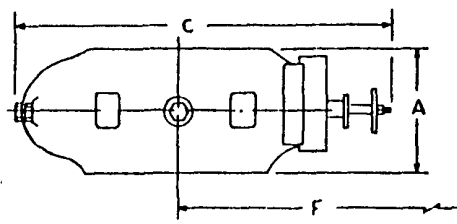


Fig. 86

Dimensional Elevation—Shaffer Type 45 Mechanical Single Control Gate

### DIMENSIONAL AND ENGINEERING DATA ON SHAFFER TYPE 45 MECHANICAL SINGLE CONTROL GATES

| Size | Max. Service Pressure Rating, psi | Test Pressure, psi | Vertical Bore | Approx. Weight, Pounds | Ram Size                 | A Height | B Width | C Length | D Center To Rear | E Center To Front | F Max. Distance Needed To Change Rams |
|------|-----------------------------------|--------------------|---------------|------------------------|--------------------------|----------|---------|----------|------------------|-------------------|---------------------------------------|
| 6"   | 3,000                             | 6,000              | 7 1/2"        | 1,500                  | C.S.O. Thru 5" O.D.      | 14"      | 27 1/2" | 34"      | 13 1/4"          | 20 1/4"           | 41 1/4"                               |
| 8"   | 3,000                             | 6,000              | 9"            | 2,050                  | C.S.O. Thru 7" O.D.      | 15 1/4"  | 29 1/2" | 40"      | 16 1/4"          | 23 1/4"           | 49 1/4"                               |
| 10"  | 3,000                             | 6,000              | 11"           | 2,580                  | C.S.O. Thru 8 1/2" O.D.  | 16       |         |          |                  |                   |                                       |
| 12"  | 3,000                             | 6,000              | 12 1/4"       | 3,315                  | C.S.O. Thru 10 1/4" O.D. | 17       |         |          |                  |                   |                                       |
| 16"  | 2,000                             | 3,000              | 15 1/4"       | 4,200                  | C.S.O. Thru 13 1/4" O.D. | 17       |         |          |                  |                   |                                       |

EXHIBIT "E"  
CAMERON OIL & GAS CO., INC.  
Amoco Federal. Well No. 2  
BOP Specifications

**PECOS DISTRICT - RFO  
CONDITIONS OF APPROVAL**

**March 9, 2009**

Amoco Federal #2  
660' FNL & 990' FEL,  
Sec. 23, T. 14 S., R. 29 E.,  
NMPM., Chaves County, New Mexico  
Cameron Oil & Gas Co., Inc.  
NM-31263

**GENERAL PROVISIONS**

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

**I. PERMIT EXPIRATION**

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

**II. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

### **III. NOXIOUS WEEDS**

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

### **IV. CONSTRUCTION**

#### **A. NOTIFICATION:**

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

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

#### **B. TOPSOIL:**

The topsoil will be stripped to approximately 6 inches in depth within the area designated for construction of the well pad. The operator shall stockpile the stripped topsoil adjacent to the constructed well pad. The topsoil will be used for interim and final reclamation of the surface disturbance created by the construction of the well pad.

#### **C. CLOSED SYSTEMS OR STEEL TANKS:**

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

#### **D. FEDERAL MINERAL MATERIALS PIT:**

If the operator elects to surface the access road and/or well pad using federal mineral materials, payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Roswell Field Office at (505) 627-0236.

#### **E. WELL PAD SURFACING:**

Surfacing of the well pad is not required.

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

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

#### **F. ON LEASE ACCESS ROADS:**

##### **Road Egress and Ingress**

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

##### **Road Width**

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

##### **Surfacing**

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

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

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

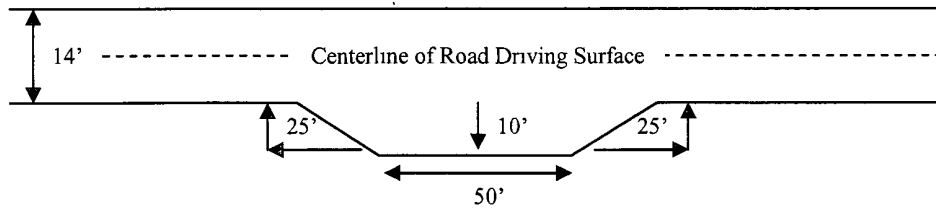
##### **Crowning**

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

##### **Turnouts**

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

### Standard Turnout – Plan View

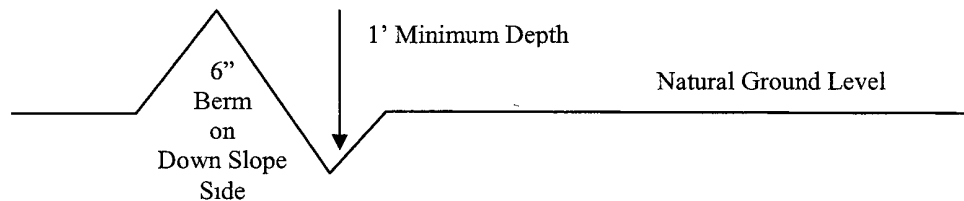


### Drainage

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

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

### Cross Section Of Typical Lead-off Ditch



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

### Formula For Spacing Interval Of Lead-off Ditches

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

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

### 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**

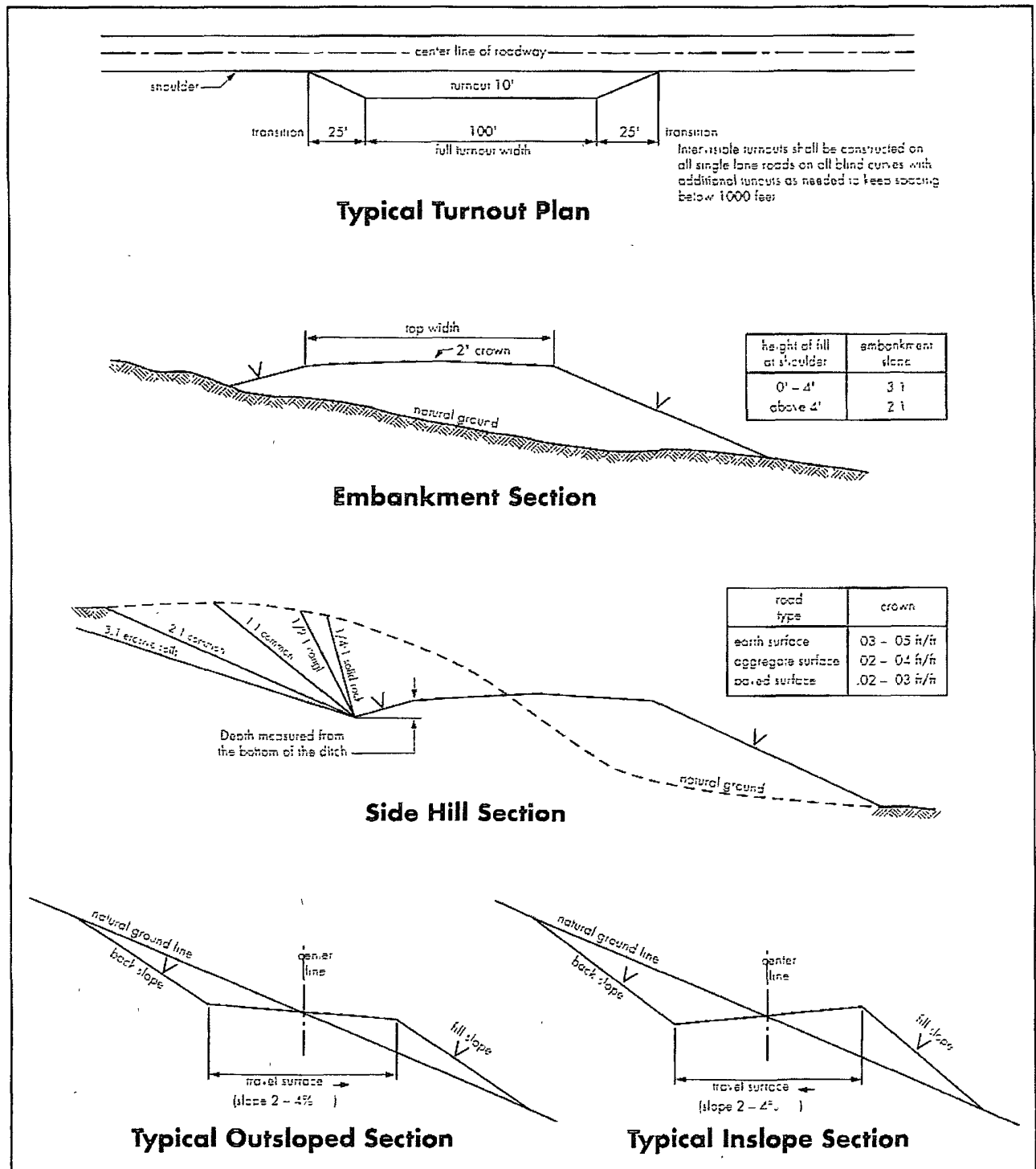
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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**



## **V. DRILLING**

### **DRILLING OPERATIONS REQUIREMENTS**

1. Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201. During office hours call (575) 627-0205 or after office hours call (575) 910-6024. Engineer on call during office hours call (575) 627-0275 or after office hours call (575) 626-5749.
2. The BLM is to be notified a minimum of 24 hours in advance for a representative to witness:
  - a. Spudding well
  - b. Setting and/or Cementing of all casing strings

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

#### **BOPE Tests**

3. 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.
4. Include the API Number assigned to well by NMOCD on the subsequent report of setting the first casing string.
5. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string(s) opposite competent rock. The record of the drilling rate along with the caliper-gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the borehole 30 days from completion
6. Air, air-mist or fresh water and non toxic drilling mud shall be used to drill to the base of the usable water protection casing string(s). Any polymers used will be water based and non-toxic.

## **B. CASING**

1. The 8 5/8 inch usable water protection casing string(s) shall be set at approximately 250 ft. in competent bedrock.

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

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

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

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

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

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

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

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

### **C. PRESSURE CONTROL:**

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

2. Before drilling below the 8-5/8 inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi.

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

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

b. The 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.

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

- d. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
  - e. Testing must be done in a safe workman like manner. Hard line connections shall be required.
  - f. The requested variance to test the BOPE prior to **drilling below the 8-5/8 inch surface casing** to the reduced pressure of **1000** psi using the rig pumps is approved.
4. All casing shall be new or reconditioned and tested casing and meet API standards for new casing. The use of reconditioned and tested casing shall be subject to approval by the authorized officer. Approval will be contingent upon the wall thickness of any casing being verified to be at least 87-1/2 per cent of the nominal wall thickness of new casing.

## **VI. PRODUCTION**

### **Placement of Production Facilities**

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

### **Containment Structures**

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

### **Painting Requirement**

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

### **VRM Facility Requirement – VRM Class IV**

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

## **VII. INTERIM RECLAMATION**

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

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

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche may be used in road repairs, fire walls or for building other roads and locations. In addition, in order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

PECOS DISTRICT  
SEED MIX FOR  
Ecological Site: Shallow Sand SD-3  
Ecological Site: Sandy SD-3

| Common Name<br>and Preferred Variety       | Scientific Name                 | Pounds of Pure<br>Live Seed Per Acre |
|--|---------------------------------|--------------------------------------|
| Black grama                                | <i>(Bouteloua eriopoda)</i>     | 3.0                                  |
| or Blue grama,                             | <i>(Bouteloua gracilis)</i>     |                                      |
| Sideoats grama                             | <i>(Bouteloua curtipendula)</i> | 2.0                                  |
| Sand dropseed                              | <i>(Sporobolus cryptandrus)</i> | 1.5                                  |
| or Mesa dropseed                           | <i>(S. flexuosus)</i>           |                                      |
| or Spike dropseed                          | <i>(S. contractus)</i>          |                                      |
| Desert or Scarlet                          | <i>(Sphaeralcea ambigua)</i>    | 1.0                                  |
| Globemallow or                             | <i>(S. coccinea)</i>            |                                      |
| Croton                                     | <i>(Croton spp.)</i>            | <u>1.0</u>                           |
| TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE |                                 | 8.5                                  |

Certified Weed Free Seed

IF ONE SPECIES IS NOT AVAILABLE,  
INCREASE ALL OTHERS PROPORTIONATELY

Use no less than 4 species, including 1 forb

No less than 8.5 pounds pls per acre shall be applied

### C. FINAL ABANDONMENT & REHABILITATION REQUIREMENTS

- a. Upon abandonment of the well and/or when the access road is no longer in service, a Notice of Intent for Final Abandonment with the proposed surface restoration procedure must be submitted for approval.
- b. Upon abandonment of the well, all casing shall be cut-off at the base of the cellar or 3-feet below final restored ground level (whichever is deeper). A 4-inch pipe, 10 feet in length, shall be installed 4 feet above ground and embedded in cement. The following information shall be permanently inscribed on the dry hole marker: Well name and number, the name of the operator, the lease serial number, the surveyed location (the quarter-quarter section, section, township and range or other authorized survey designation acceptable to the authorized officer; such as metes and bounds).

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

# GENERAL LOCATION MAP

