

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

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*

FORM APPROVED  
OMB No. 1004-0135  
Expires November 30, 2000

**SUBMIT IN TRIPLICATE – Other instructions on reverse side**

|  |  |  |
|--|--|--|
| 1. Type of Well<br><input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other |  | 5. Lease Serial No.<br><b>SF - 078046</b>  |
| 2. Name of Operator<br><b>BP America Production Company Attn: Cherry Hlava</b>   |  | 6. If Indian, Allottee or tribe Name   |
| 3a. Address<br><b>P.O. Box 3092 Houston, TX 77253</b>  | 3b. Phone No. (include area code)<br><b>281-366-4081</b> | 7. Unit or CA/Agreement, Name and/or No.   |
| 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)<br><b>1450' FNL &amp; 1750' FWL Sec 29 T29N R08W</b>      |  | 8. Well Name and No.<br><b>Hughes B 7A</b>   |
|  |  | 9. API Well No.<br><b>30-045-22831</b>   |
|  |  | 10. Field and Pool, or Exploratory Area<br><b>Blanco Mesaver &amp; Pictured Cliffs</b> |
|  |  | 11. County or Parish, State<br><b>San Juan County, New Mexico</b>                      |

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OR 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"/> Deepen           | <input type="checkbox"/> Production (Start/Resume) | <input type="checkbox"/> Water shut-Off |
| <input type="checkbox"/> Subsequent Report           | <input type="checkbox"/> Alter Casing             | <input type="checkbox"/> Fracture Treat   | <input type="checkbox"/> Reclamation               | <input type="checkbox"/> Well Integrity |
| <input type="checkbox"/> Final Abandonment Notice    | <input checked="" type="checkbox"/> Casing Repair | <input type="checkbox"/> New Construction | <input type="checkbox"/> Recomplete                | <input type="checkbox"/> Abandon        |
|  | <input type="checkbox"/> Change Plans             | <input type="checkbox"/> Plug and Abandon | <input type="checkbox"/> Water Disposal            |   |
|  | <input type="checkbox"/> Injection                | <input type="checkbox"/> Plug Back        | <input type="checkbox"/> Other                     |   |

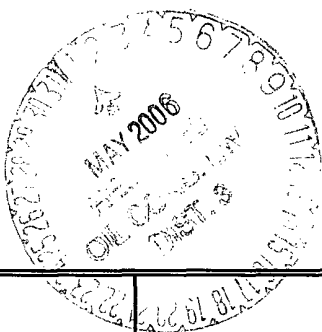
13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths 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.

BP America request permission to perform casing repair operations on the subject well as per the attached procedure.

Casing leak is suspected on above well. It is planned to do a pressure test on the casing and perform cement squeeze if necessary.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations.



206 APR 24 AM 9 05  
RECEIVED  
070 FARRINGTON NM

|   |                                    |
|---|------------------------------------|
| 14. I hereby certify that the foregoing is true and correct |                                    |
| Name (Printed/typed)<br><b>Cherry Hlava</b>                 | Title<br><b>Regulatory Analyst</b> |
| Signature<br><i>Cherry Hlava</i>                            | Date<br><b>04/20/2006</b>          |

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

|   |                         |                        |
|---|-------------------------|------------------------|
| Approved by<br><i>Matt Halbert</i>  | Title<br><i>PET ENG</i> | Date<br><i>4-27-06</i> |
| 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<br><i>BLM- FFO</i>   |                         |                        |

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.

NMOC

## **SJ Basin Well Work Procedure**

**Well Name:** Hughes B 7A PC/MV  
**Date:** April, 13 2006  
**API #:** 30-045-22831  
**Location:** T29N-R8W-Sec29  
**County:** San Juan  
**State:** New Mexico  
**Horizon:** PC/MV

**Repair Type:** Cleanout & Repair Casing Leak

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**Objective:** Pull tubing, RIH with CIBP and retrievable plug to locate casing leak, squeeze casing, Pressure test casing, remove CIBP, cleanout wellbore, and return to production.

1. TOH with completion string.
2. RIH with CIBP and retrievable plug to locate casing leak.
3. Squeeze casing leak
4. Pressure test casing
5. Pull CIBP
6. Cleanout wellbore
7. Return well to production.

**History:** Well completed on 4/78 as single MV. Well recompleted to PC dual well in 9/85. Downhole commingled well in 4/96 and ran new tubing in 9/02. Well is suspected to have a casing leak – unable to swab on thru tubing. Well has been flowing up the backside since 8/23/05.

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Engr: Andrew Berhost  
ph (505) 326-9208  
mobile: (505) 486-0139  
fax (505) 326-9262

### **Procedure:**

1. Contact NMOCD and BLM prior to starting well repair work.
2. Perform pre-rig site inspection. Check for: size of location, Gas Taps, other wells, other operators, running equipment, wetlands, wash (dikes req.), H2S, barriers needed for equipment, Landowner issues, location of pits (buried lines in pits), Raptor nesting, critical location, check anchors. Check ID wellhead; if earth pit is required have One Call made 48 hours prior to digging.
3. Perform second site visit after lines are marked to ensure all lines clear marked pit locations. Planning and scheduling to ready location for rig.
4. RU slickline unit. Pressure test lubricator and equipment. RIH and set **two** barriers (CIBP, tbg collar stop w/plug, or plug set in nipple) for isolation in tubing string.

5. Check and record tubing, casing, and bradenhead pressures. Ensure production casing has double casing valves installed. Double valve all casing strings.
6. MIRU workover rig. LOTO all necessary equipment including but not limited to: meter run, automation, separator, and water line.
7. Blow down well. Kill with 2% KCL water ONLY if necessary.
8. Check all casing strings to ensure no pressure exist on any annulus. **The operations of removal of wellhead and installation of BOP's will be performed under a dispensation for one (1) barrier on the backside.**
9. Nipple down Wellhead. NU BOPs and diversion spool with 3" outlets and 3" pipe to the blow tank. Pressure test BOPs to 200 psi above BHP. Monitor flowing casing pressure with gauge (with casing flowing to blow tank) throughout workover.
10. Install stripping rubber, pull tubing hanger and shut pipe rams. Strip tubing hanger out of hole.
11. RIH and tag PBSD', then TOOH with 2-3/8" production tubing currently set at 5506'. Visually inspect tubing while POOH.
12. TIH with bit and scraper for 7" casing to top of 4-1/2" liner @ 3197'. TOH
13. TIH with bit and scraper for 4-1/2" casing to top of MV perforations @ 4634'. TOH.
14. TIH with 4-1/2" RBP and packer. Set RBP 50-100' above MV perforations @4600'. TOH one joint and set packer. Pressure test RBP to 1,000psi.
15. Locate casing leak, if any, by moving packer up the hole and repeating pressure test. Once above 4-1/2" liner top and no leaks are found. TOH with packer and RBP.
16. TIH with 7" RPB at set above PC top perforation @ 3000'. TOH one joint and set packer. Pressure test RBP to 1,000psi. Locate casing leak, if any, by moving packer up the hole and repeating pressure test.
17. Run CBL from 2,500' to surface under 1,000 psi.
18. If leak found above 2500', establish injection rate into leak and attempt to circulate to surface.
19. If leak is below the PC perforation – contact engineer.
20. Release packer and spot sand on RBP and TOH with packer.
21. Perforate casing around depth of located leak.

22. Depending on depth of hole and circulating pressure, a packer or cement retainer may be needed.
23. Mix and pump sufficient cement to circulate to surface. Shut bradenhead valve and attempt to walk squeeze to obtain a 1,000 psi squeeze pressure. WOC.
24. TIH with bit and scraper and drill out cement. Pressure test casing to 1,000 psi. TOH with bit and scraper.
25. TIH with retrieving head for RBP. Circulate sand off of RBP and TOH RBP.
26. If fill was tagged in step 7 cleanout to PBTD. TOH.
27. RIH with new 2-3/8" production tubing. (With muleshoe, F-nipple with plug, 4 ft pup, X-nipple with plug).
28. Land 2-3/8" production tubing at +/- 5506'. Lock down tubing hanger.
29. Pressure test tubing to 500 psi with air unit, make sure tubing spool valves are open. Care should be taken during pressure testing of the tubing due to potential problem caused if tubing parts close to the surface. Check all casing string for pressure. **The operations of removal of BOP's and installation of wellhead will be performed under a dispensation for one (1) barrier on the backside.**
30. ND BOP's. NU Wellhead. During Master valve placement ensure the top of hanger has spacer nipple in place to bottom of bonnet flange so plunger equipment will not hang up through tree. Pressure test Wellhead.
31. RU WL unit. Run gauge ring for 2-3/8" tubing. Pull plugs and set tubing stop for plunger. Communicate plunger equipment status to IC room personnel.
32. RD slickline unit.
33. Test well for air. Return well to production. RD and release all equipment. Remove all LOTO equipment.
34. Ensure all reports are loaded into DIMS. Print out summary of work and place in Wellfile. Have discussion with production about particulars of well when handing off the well file.

**Hughes B #7A**

Sec 29, T29N, R8W

API # 30-045-22831

GL: 6445'

History:

Completed as MV single in May 1978

Sept 1985 - Recompleted to PC and  
completed as dual well

Apr 1996 - Downhole commingled well

Sept 2002 - Ran new tubing

Pictured Cliffs Perforations

3006' - 3040' 2 spf

3086' - 3096' 2 spf

frac'd w/ 80,000# sand

Mesaverde Perforations

CH/MF: 4634' - 5154' w/ 84,000# sand

PL: 5240' - 5644' w/ 58,500# sand

est. TOC @ surface (circ)

9-5/8" 36# K55 @ 220'

224 cu ft cmt (circulated)

Est. TOC @ 2100' (temp surv)

Brown 4-1/2" liner hanger @ 3197'

7" 20#, K55 @ 3350'

321 cu ft cmt

Est. TOC @ TOL (reversed cmt)

Tubing: 2-3/8" 4.7#, J55 8rd @ 5499'

BHA - (X-nipple 4' sub, F-nipple, mule shoe @ 5506')

4-1/2" liner, 10.5#, K55 @ 5685'

438 cu ft cmt

PBD: 5667'

**NOTES:**

- 1) 1.90" OD slickline broach unable to work past tight spot at 5244'. Tubing replaced in 2002 workover

updated: 4/13/06 ADB

## **Bureau of Land Management Conditions of Approval:**

- 1) If cement squeeze work is necessary, contact Matt Halbert of the BLM Farmington Field Office @ (505) 599-6350.**
- 2) Pits must be lined with an impervious material at least 12 mils thick. The pit must be fenced on three (3) sides during workover operations and on the 4<sup>th</sup> side after the rig moves off location. Pits must be closed within 90 days of completion of the workover operations. Prior to closing the pit the liner must be cut off at mud level.**

### **BLM CONDITIONS OF APPROVAL FOR RECOMPLETION**

The following conditions of approval will apply to this well unless a particular Surface Managing Agency or private surface owner has supplied to BLM and the operator a contradictory environmental stipulation. The failure of the operator to comply with these requirements may result in the assessment of liquidated damages or penalties pursuant to 43 CFR 3163.1 or 3163.2. A copy of these conditions of approval shall be present on the location during construction, drilling and reclamation activity.

An agreement between operator and fee land owner will take precedence over BLM surface stipulations unless (In reference to 43 CFR Part 3160) 1) BLM determines that the operator's actions will affect adjacent Federal or Indian surface, or 2) the operator does not maintain well area and lease premises in a workmanlike manner with due regard for safety, conservation and appearance, or 3) no such agreement exists, or 4) in the event of well abandonment, minimal Federal restoration requirements will be required.

#### **Special Stipulations:**

\*\* The operator and his contractor will contact the BLM Farmington Field Office, Environmental Protection Staff (Bill Liess) to set up a pre-work meeting on any rehab or seeding done on this location at (505) 599-6321, approximately 48 hours **prior to any work being done.**

**\*\* Reserve pits will be closed and rehabed 90 days after recompletion. All pits used in recompletion remaining open after the 90 days will need written authorization from the Authorized Officer. This requirement is addressed in the General Requirements of Onshore Order # 7.**

\*\* Pits will be lined with an impervious material at least 12 mils thick. Prior to closing the pit, the liner will be cut off at mud level. The excess liner will be hauled to a licensed disposal area.

\*\* Diversion ditch(es) will be reconstructed if damaged by recompletion work.

\*\* If the cut and fill slopes of the well pad are used or damaged by completion work then the cut and fill slopes will be brought back to the original contour of the location before work was accomplished.

\*\* All above ground structures shall be painted to blend with the natural color of the landscape and will remain the same color as was previously stipulated in the APD

\*\* All disturbance will be seeded after the pit is closed with the appropriate seed mixture.

#### **SEED MIX : SPECIAL: > 10 inches of precipitation**

|   |           |
|---|-----------|
| Fourwing Saltbush ( <i>Atriplex canescens</i> ).....  | 1.0 lbs.  |
| Indian Ricegrass ( <i>Oryzopsis hymenoides</i> )..... | 1.0 lbs.  |
| Western Wheatgrass ( <i>Agropyron smithii</i> ).....  | 2.0 lbs.  |
| Blue Grama (Hatcheta or Alma).....                    | 0.25 lbs. |

|                               |           |
|-------------------------------|-----------|
| Small Burnet (Delar) .....    | 1.0 lbs.  |
| Pubescent Wheatgrass .....    | 2.0 lbs.  |
| Intermediate Wheatgrass ..... | 2.0 lbs.  |
| Smooth Brome .....            | 2.0 lbs.  |
| Antelope Bitterbrush .....    | 0.10 lbs. |

I. **LOCATION, ACCESS ROAD AND PIPELINE**

1. Well area and lease premises will be maintained in a workmanlike manner with due regard to safety, conservation and appearance. All liquid waste, completion fluids and drilling products associated with oil and gas operations will be contained and then buried in place, or removed and deposited in an approved disposal site.

2. Surface disturbance and vehicular traffic will be limited to the approved location and approved access road.

3. Mud and blow pits will be constructed so as not to leak, break or allow discharge of liquids or produced solids. At least half of the capacity of the reserve pit must be in cut. The top of the outside wall of reserve pit should be smoothed-off with a minimum of one blade width. The pit should have adequate capacity to maintain 2 feet of free board. Pits are not to be located in natural drainages. Pit walls are to be "walked down" by a crawler type tractor following construction and prior to usage. Any plastic material used to line pits must be removed to below-ground level before pits are covered. The final grade of reserve pit (after reclamation) shall allow for drainage away from pit area.

4. All unguarded pits (reserve/production/blow pits) containing liquids will be fenced with woven wire. Drilling pits will be fenced on three sides and once the rig leaves location, the fourth side will be fenced. All fencing must be a legal fence in accordance with New Mexico State Law. Liquids in pits will be allowed to evaporate, or be properly disposed of, before pits are filled and recontoured. (This office will be notified 24 hours prior to fluid hauling). Under no circumstances will pits be cut and drained. Aeration of pit fluids must be confined within pit area. Upon completion of the well the reserve pit will be covered with screening or netting and remained covered until the pit is reclaimed. All production pits 16 feet in diameter or larger will be covered with screening or netting.

5. No gravel or other related minerals from new or existing pits on federal land will be used in construction of roads, well sites, etc., without prior approval from the Surface Managing Agency.

6. Berms or firewalls will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks, or the combined capacity of tanks if a rupture could drain more than one tank. Berm walls will be compacted with appropriate equipment to assure proper construction.

7. All roads on public land must be maintained in good passable condition.

8. The holder shall conduct all activities associated with the construction, operation, and termination of the right-of-way within the authorized limits of the right-of-way.



9. A copy of these stipulations, including exhibits and the Plan(s) of Operation (if required), shall be at the project area and available to persons directing equipment operation.

10. Disposal of all liquid and solid waste produced during operation of this right-of-way shall be in an approved manner so it will not impact the air, soil, water, vegetation or animals.

11. The holder shall not violate applicable air and water quality standards or related facility siting standards established by or pursuant to applicable Federal and State law.

12. Use of pesticides and herbicides shall comply with applicable federal/state laws. Pesticides and herbicides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, holder shall obtain from the AO written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary. Emergency use of pesticides shall be approved in writing by the AO prior to use.

13. The holder shall be responsible for weed control and selective control of invasive weeds on disturbed and reclaimed areas within the limits of the well pad, associated road and pipeline ROW. The holder is responsible for consultation with the AO and/or local authorities for acceptable weed control methods within limits imposed in the conditions of approval.

14. The holder shall minimize disturbance to existing fences and other improvements on public land. Holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be H-braced on both sides of the passageway prior to cutting the fence.

15. Construction sites shall be maintained in a sanitary condition at all times; waste materials at those sites shall be disposed of promptly at an appropriate waste disposal site. **Waste** means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes and equipment.

16. The holder shall maintain the ROW in a safe, useable condition, as directed by the AO. (A regular maintenance program shall include, but is not limited to, soil stabilization.)

17. Unless otherwise approved in writing by the AO, this road will be designed and constructed to conform with the BLM, NM road construction/maintenance policy.

18. Public access along this road will not be restricted by the holder without specific written approval being granted by the AO. Gates or cattleguards on the public land will not be locked or closed to public use unless specifically determined by the AO.

19. Unless otherwise approved in writing by the AO, drainage dip location for grades over two (2) percent shall be determined by the formula:

$$\text{Spacing Interval} = \frac{400}{\text{road slope \%}} + 100'$$

**Example: For a road with a four (4) percent slope.**  
**Spacing Interval =  $\frac{400}{4\%} + 100' = 200$  feet**

20. Unless otherwise approved in writing by the AO, all turnout ditches shall be graded to drain water with a one (1) percent minimum to three (3) percent maximum ditch slope. The spacing interval for turnout ditches shall be determined according to the following table, but may be amended depending upon existing soil types and centerline road grade:

**SPACING INTERVAL FOR TURNOUT DITCHES**

| <u>Percent Slope</u> | <u>Spacing Interval</u> |
|----------------------|-------------------------|
| 0 - 4%               | 150 - 350 feet          |
| 4 - 6%               | 125 - 250 feet          |
| 6 - 8%               | 100 - 200 feet          |
| 8 - 10%              | 75 - 150 feet           |

21. Maintain the road so that user traffic remains within right-of-way and erosion is mitigated. Roads and road segments where serious erosional damage is occurring will be handled on a case-by-case basis. "Flat blading" will be avoided. A exemption would be permitted where bedrock is exposed at the surface. Roads will be maintained so that over time a proper road prism and good drainage is achieved. Maintenance will include drainage dips, turnout ditches, crowning and/or out-sloping/in-sloping, low water crossings and vehicle turnouts. Cattleguards and culverts will be cleaned and repaired or replaced. Surfacing may be required.

22. Failure of the holder to share maintenance costs in dollars, equipment, materials or man-power proportionate to the holder's use with other authorized users may be adequate grounds to terminate right-of-way grant. The determination as to whether this has occurred and the decision to terminate shall rest with the AO. Upon request, the AO shall be provided with copies of any maintenance agreement entered into.

## **II. CULTURAL RESOURCES (ARCHAEOLOGY)**

**1. Discovery of Cultural Resources in the Absence of Monitoring:** If, in its operations, operator/holder discovers any previously unidentified historic or prehistoric cultural resources, then work in the vicinity of the discovery will be suspended and the discovery promptly reported to BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, BLM will evaluate the significance of discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed. Failure to notify BLM about a discovery may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

**2. Discovery of Cultural Resources During Monitoring:** If monitoring confirms the presence of previously unidentified cultural resources, then work in the vicinity of the discovery

will be suspended and the monitor will promptly report the discovery to the BLM Field Manager. BLM will then specify what action is to be taken. If there is an approved "discovery plan" in place for the project, then the plan will be executed. In the absence of an approved plan, the BLM will evaluate the significance of the discovery and consult with the State Historic Preservation Officer in accordance with 36 CFR Section 800.11. Minor recordation, stabilization, or data recovery may be performed by BLM or a permitted cultural resources consultant. If warranted, more extensive treatment by a permitted cultural resources consultant may be required of the operator/holder prior to allowing the project to proceed. Further damage to significant cultural resources will not be allowed until any required treatment is completed.

3. **Damage to Sites:** If, in its operations, operator/holder damages, or is found to have damaged any previously documented or undocumented historic or prehistoric cultural resources, excluding "discoveries" as noted above, the operator/holder agrees at his/her expense to have a permitted cultural resources consultant prepare and have executed a BLM approved data recovery plan. Damage to cultural resources may result in civil or criminal penalties in accordance with the Archeological Resources Protection Act of 1979 (as amended).

### III. **RESEEDING AND ABANDONMENT**

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

Present Pure Live Seed (PLS) = Purity X Germination/100

Two lots of seed can be compared on the basis of PLS as follows:

| <u>Source No. One (poor quality)</u>                   |            | <u>Source No. two (better quality)</u>                 |            |
|--|------------|--|------------|
| Purity   | 50 percent | Purity   | 80 percent |
| Germination  | 40 percent | Germination  | 63 percent |
| Percent PLS  | 20 percent | Percent PLS  | 50 percent |
| <b>5 lb. bulk seed required to<br/>make 1 lb. PLS.</b> |            | <b>2 lb. bulk seed required to<br/>make 1 lb. PLS.</b> |            |

Seed mixture used must be *certified*. There shall be NO primary or secondary noxious weeds in seed mixture. Seed labels from each bag shall be available for inspection while seed is being sown.

Seeding shall be accomplished between July 1 and September 15 (later date may be extended on a case-by-case basis with AO approval). Seeding shall be repeated if a satisfactory stand is not obtained as determined by the AO upon evaluation after the second growing season.

Compacted areas shall be ripped to a depth of 12" and disked to a depth of six inches before seeding. Seed with a disk-type drill with two boxes for various seed sizes. The drill rows shall be eight to ten inches apart. Seed shall be planted at not less than one-half inch deep or more than one inch deep. The seeder shall be followed with a drag, packer, or roller to ensure uniform coverage of the seed, and adequate compaction. Drilling shall be done on the contour where possible, not up and down the slope.

Where slopes are too steep for contour drilling a "cyclone" hand seeder or similar broadcast seeder shall be used. Seed shall then be covered to the depth described above by whatever

means is practical, i.e. hand raked. If the seed is not covered, the prescribed seed mixture amount (pounds/acre/PLS) will be doubled.

If, upon abandonment of wells, the retention of access road is not considered necessary for the management and multiple use of the natural resources, it will be ripped a minimum of 12" in depth. After ripping, water bars will be installed. All ripped surfaces are to be protected from vehicular travel by construction of a dead end ditch and earthen barricade at the entrance to these ripped areas. (Reseeding of affected areas may be required.)

**ABANDONMENT:** Ninety days prior to termination of the ROW, the holder shall contact the AO to arrange a joint inspection of the ROW. This inspection will be held to agree to an acceptable termination (and rehabilitation) plan. This plan shall include, but is not limited to, removal of facilities, drainage structures, or surfacing material, recontouring, topsoiling or seeding. The AO must approve the plan in writing prior to the holder's commencement of any termination actions.