

**BUREAU OF LAND MANAGEMENT  
 ROSWELL FIELD OFFICE  
 DOI-BLM-NM-P010-2009-7-DNA  
 NINJA BNM STATE #1H OIL WELL**

<b>Resources</b>	<b>Not Present on Site</b>	<b>No Impacts</b>	<b>May Be Impacts</b>	<b>Mitigation Included</b>	<b>BLM Reviewer</b>	<b>Date</b>
Air Quality			√	√	SWA Spec/Hydrologist /s/ Michael McGee	11/18/08
Soil			√	√		
Watershed Hydrology			√	√		
Floodplains	√					
Water Quality - Surface			√	√		
Water Quality - Ground			√	√	Geologist/Hydrologist /s/ John Simitz	10/31/08
Cultural Resources	X				Archaeologist /s/Rebecca L. Hill 08-R-114-A	29Oct2008
Native American Religious Concerns	X					
Paleontology	X					
Areas of Critical Environmental Concern	X				Plan & Environ. Coord. /s/J H Parman	10/28/08
Farmlands, Prime or Unique	x				Realty /s/ sanderford	12/10/08
Rights-of-Way		x				
Invasive, Non-native Species			X	X	Range Mgmt. Spec. <i>Joseph M. Navarro</i>	10/27/08
Vegetation			X	X		
Livestock Grazing			X	X		
Wastes, Hazardous or Solid		X			Nat. Resource Spec. /s/ Brian Novosak	10/27/2008
Threatened or Endangered Species	x				Biologist /s/ D Baggao	10/29/08
Special Status Species	x					
Wildlife			x	x		
Wetlands/Riparian Zones	x					
Wild and Scenic Rivers					Outdoor Rec. Planer /s/Bill Murry	11/5/08
Wilderness	X					
Recreation		X				
Visual Resources			X	X		
Cave/Karst			X	X		
Environmental Justice		X			Nat. Resource Spec. /s/ Brian Novosak	10/27/2008
Public Health and Safety		X				
Solid Mineral Resources		√			Geologist /s/ Jerry Dutchover	11/04/08
Fluid Mineral Resources		√			Geologist /s/ john S. Simitz	10/31/08

**U.S. Department of the Interior  
Bureau of Land Management  
Pecos District  
Roswell Field Office**

**Documentation of Land Use Plan Compliance  
and NEPA Adequacy (DNA)  
DOI-BLM-NM-P010-2009-7-DNA**

A. Roswell Field Office

Lease/Serial/Case File No.: NM-105886

Proposed Action Title/Type:

Ninja BNM State Com #2H /Application for Permit to Drill

Location of Proposed Action:

Surface Location: 990' FNL & 200' FEL,  
Bottom-hole Location: 370' FNL & 330' FWL  
Section 11, T. 15 S., R.31 E.,  
Chaves County, New Mexico, NMPM.

Description of Proposed Action:

Yates Petroleum Corporation is proposing to drill the Ninja BNM State Com #2H oil well approximately 2 miles east of the existing well pad surface location of the 22 wells analyzed in the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA). Associated with the drilling of this well is a 425' x 425' well pad and 528' x 30' of new access road for a total of 4.51 acres of surface disturbance all on private surface and requiring no right-of-way.

Applicant (if any):

Yates Petroleum Corporation 025575  
105 S. 4<sup>th</sup> Street  
Artesia, New Mexico 88210

B. Land Use Plan (LUP) Conformance

LUP Name: Roswell Resource Management Plan, As Amended    Approved: October 1997

The proposed action is in conformance with the applicable LUP because it is specifically provided for in the following LUP decisions:

*Minerals Management, Fluid Minerals Goal: Provide for the leasing, exploration and development of oil and gas resources within the Roswell Resource Area.*

C. Identify applicable National Environmental Policy Act (NEPA) documents and other related documents that cover the proposed action.

Other document: RFO EA #: NM-510-2008-140

Date Approved: October 2008

D. NEPA Adequacy Criteria

1. Is the new proposed action a feature of, or essentially similar to, an alternative analyzed in the existing NEPA document(s)? Is the project within the same analysis area, or if the project location is different, are the geographic and resource conditions sufficiently similar to those analyzed in the existing NEPA document(s)? If there are differences, can you explain why they are not substantial?

Yes. The proposed Ninja BNM State Com #1H oil well is to be drilled in the same manner approximately 2 miles east of the existing well pad surface location of the 22 wells analyzed in the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA). The current resource concerns and circumstances have not changed significantly since approval of the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA) approved October 2008.

2. Is the range of alternatives analyzed in the existing NEPA document(s) appropriate with respect to the new proposed action, given current environmental concerns, interests, and resource values?

Yes. The range of alternatives in the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA) EA document is appropriate for the proposed drilling of the Ninja BNM State Com #1H oil well.

3. Is the existing analysis valid in light of any new information or circumstances (such as, rangeland health standard assessment, recent endangered species listings, updated lists of BLM-sensitive species)? Can you reasonably conclude that new information and new circumstances would not substantially change the analysis of the new proposed action?

Yes. The existing analysis of the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA) is valid for the proposed Ninja BNM State Com #1H oil well, as it is to be drilled approximately 2 miles east of the existing well pad surface location of the 22 wells analyzed in the Cimarex Caprock Queen NEPA document and in a similar environment. No new information has been revealed or new circumstances occurred since approval of the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA) approved October 2008.

4. Are the direct, indirect, and cumulative effects that would result from implementation of the new proposed action similar (both quantitatively and qualitatively) to those analyzed in the existing NEPA document?

Yes. The existing environmental assessment used to analyze the proposed drilling of the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA) gas well was specifically structured and reviewed by the RFO Interdisciplinary Team to evaluate site-specific direct and indirect impacts of drilling multiple gas wells in similar environmental area as the new pad location will be approximately 2 miles east of the existing well pad surface location of the 22 wells analyzed in the Cimarex Caprock Queen NEPA document . The cumulative impacts were addressed in the existing Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA).

E. Persons/Agencies /BLM Staff Consulted

Refer to the Cimarex Caprock Queen NEPA document (NM-510-2008-140-EA) and the internal DNA checklist for a complete list of the team members participating in the preparation of the original environmental analysis or planning documents and review of this document.

**Conclusion:**

Based on the review documented above, I conclude that this proposal conforms to the applicable land use plan and that the NEPA documentation fully covers the proposed action and constitutes BLM's compliance with the requirements of the NEPA. Including the attached amended Conditions of Approval (COA's) for subsurface drilling requirements and location map.

/s/ Brian Novosak

01/29/2009

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B A Novosak  
Natural Resource Specialist

\_\_\_\_\_  
Date

/s/ J H Parman

01/29/2009

\_\_\_\_\_  
J H Parman  
NEPA Coordinator

\_\_\_\_\_  
Date

**Department of the Interior  
Bureau of Land Management  
Roswell Field Office  
2909 W. Second Street  
Roswell, New Mexico 88201**

Project: Ninja BNM State Com #2H  
NEPA #: DOI-BLM- NM- 010- 2009- 7 – DNA  
Location: 1980' FSL & 660' FWL, Sec 6, T12S-R27E  
Lease Number: NM-101580  
Applicant: Yates Petroleum Corporation  
Roswell Field Office: (575) 627-0272

**Decision Record**

Based upon the analysis of the original EA (NM-510-2008-140-EA), the proposed drilling of the above well is approved. This includes a 425' x 425' well pad and 528' x 30' of new access road for a total of 4.51 acres of surface disturbance all on private surface and requiring no right-of-way.

The Bureau of Land Management's approval of the APD does not relieve the lessee and operator from obtaining required authorizations from the private surface owner.

This proposed action is in compliance with the 1997 Roswell Resource Management Plan, as amended. This proposed action also has been reviewed to determine if the proposed action conforms to the land-use planning terms and conditions required by 43 CFR 1610.5. This action does not conflict with existing county land-use planning or zoning.

Administrative Review and Appeal: Under BLM regulations, this Decision Record (DR) is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this DR must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

/s/ Jerry Dutchover

02/02/2009

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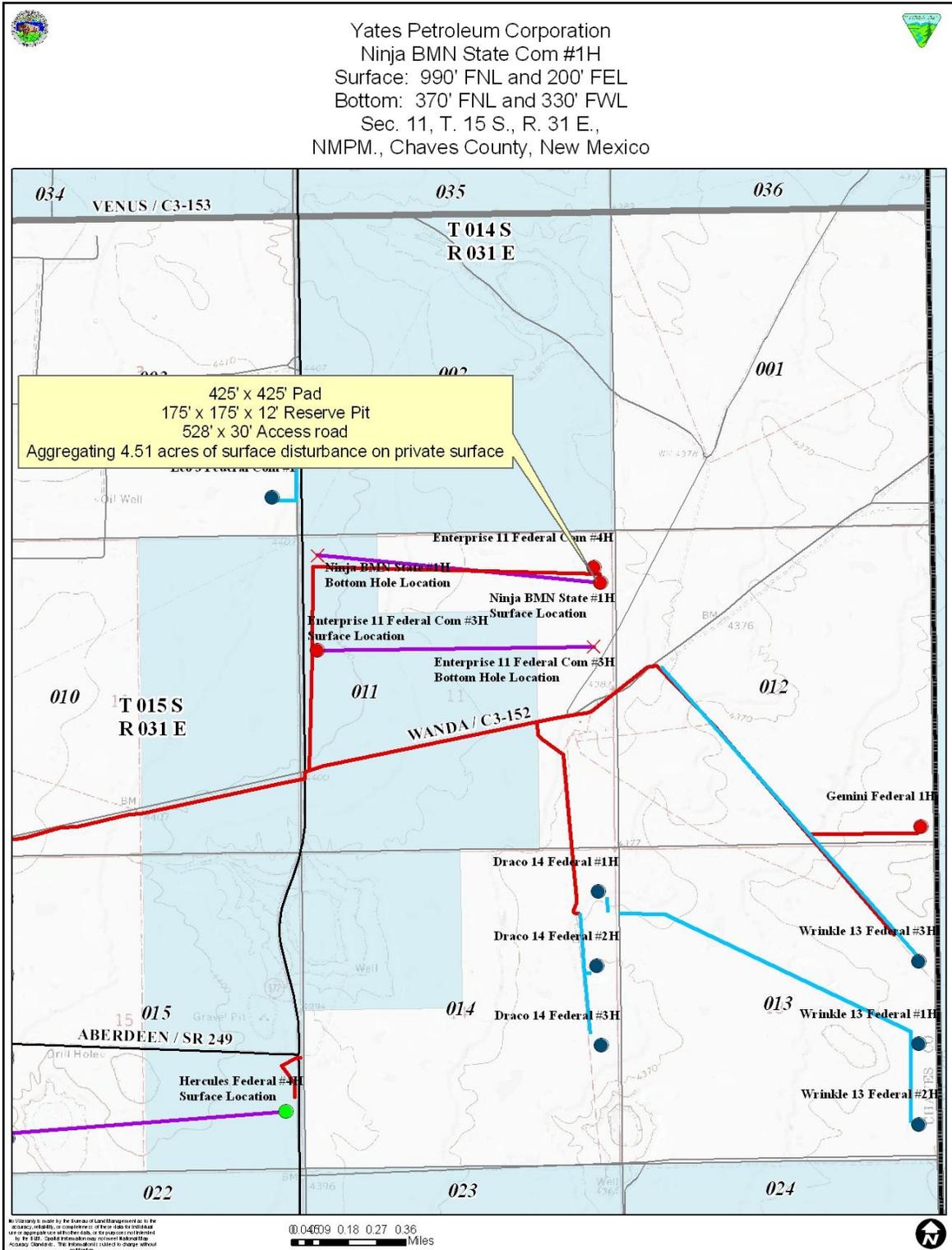
For Angel Mayes  
Assistant Field Manager – Lands & Minerals

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Date

# Exhibit A General Location Map

Yates Petroleum Corporation  
Ninja BMN State Com #1H  
Surface: 990' FNL and 200' FEL  
Bottom: 370' FNL and 330' FWL  
Sec. 11, T. 15 S., R. 31 E.,  
NMPM., Chaves County, New Mexico



**EXHIBIT B  
PECOS DISTRICT - RFO  
CONDITIONS OF APPROVAL**

**February 10, 2009**

Ninja BNM State Com #2H  
Surface Location: 990' FNL & 200' FEL,  
Bottom-hole Location: 370' FNL & 330' FWL  
Section 11, T. 15 S., R.31 E.,  
Chaves County, New Mexico, NMMPM  
Yates Petroleum Corporation  
NM-105886

**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 on the side of the well pad. The topsoil will be used for interim and final reclamation of the surface disturbance created by the construction of the well pad. The topsoil shall not be used to backfill the reserve pit and will be used for interim and final reclamation.

#### **C. RESERVE PITS:**

The reserve pit shall be constructed and closed in accordance with the NMOCD rules.

According to a Sundry received January 8, 2009, the reserve pit shall be constructed 175' X 175' X 12' on the SOUTHEAST side of the well pad.

The reserve pit shall be constructed, so that upon completion of drilling operations, the dried pit contents shall be buried a minimum depth of four (4) feet below ground level. Should the pit content level not meet the four (4) foot minimum depth requirement, the excess contents shall be removed until the required minimum depth of four feet below ground level has been met. The operator shall properly dispose of the excess contents at an authorized disposal site.

The reserve pit shall be constructed and maintained so that runoff water from outside the location is not allowed to enter the pit. The berms surrounding the entire perimeter of the pit shall extend a minimum of two (2) feet above ground level. At no time will standing fluids in the pit be allowed to rise above ground level.

The reserve pit shall be fenced on three (3) sides during drilling operations. The fourth side shall be fenced immediately upon rig release.

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

If the operator elects to surface the access road and/or well pad, mineral materials extracted during construction of the reserve pit may be used for surfacing the well pad and access road and other facilities on the lease.

Payment shall be made to the BLM prior to removal of any additional federal mineral materials from any site other than the reserve pit. 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 access road shall be constructed to access the corner of the well pad.

##### **Road Width**

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

##### **Surfacing**

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

Where possible, no improvements should be made on the un-surfaced access road other than to

remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

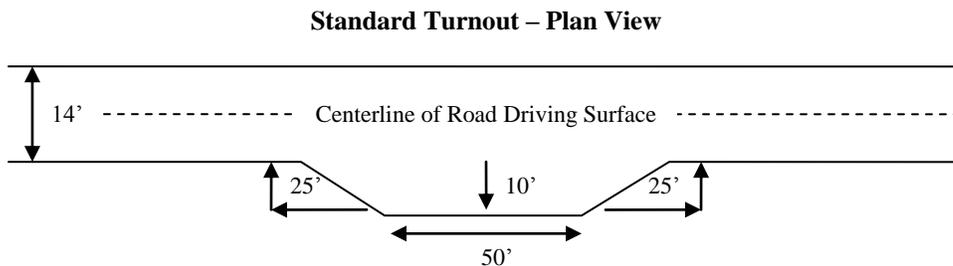
The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing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

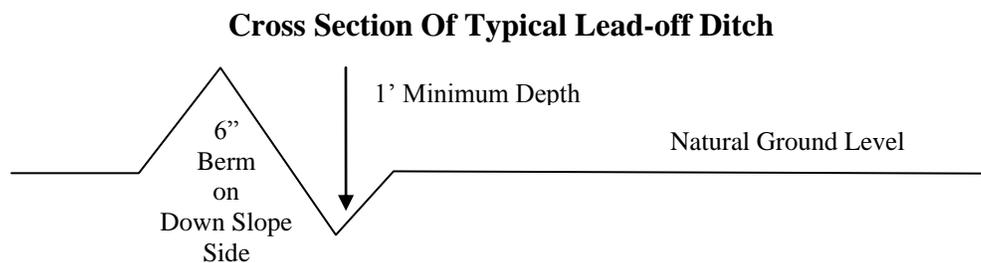
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



### 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.



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**

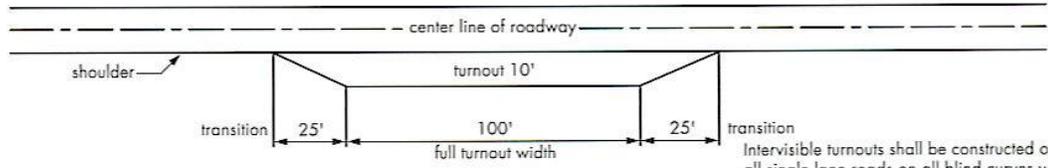
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

#### **Public Access**

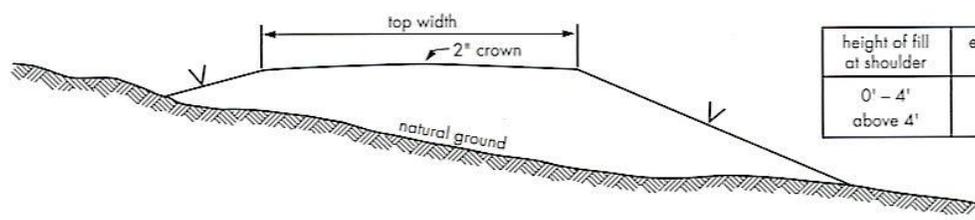
Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Figure 1 – Cross Sections and Plans For Typical Road Sections**



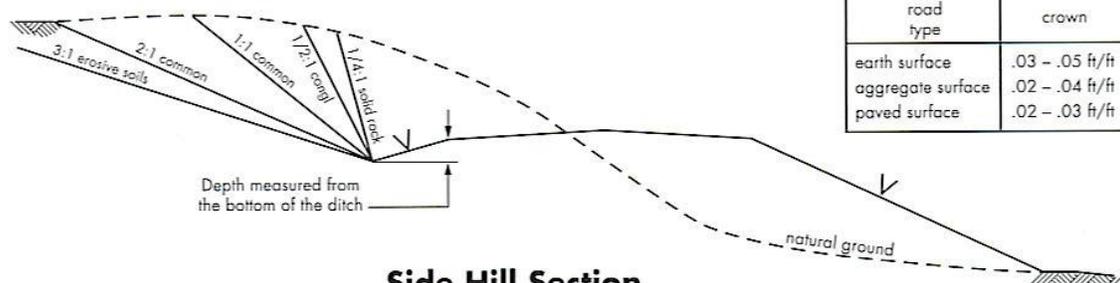
Intervisible turnouts shall be constructed on all single lane roads on all blind curves with additional turnouts as needed to keep spacing below 1000 feet.

**Typical Turnout Plan**



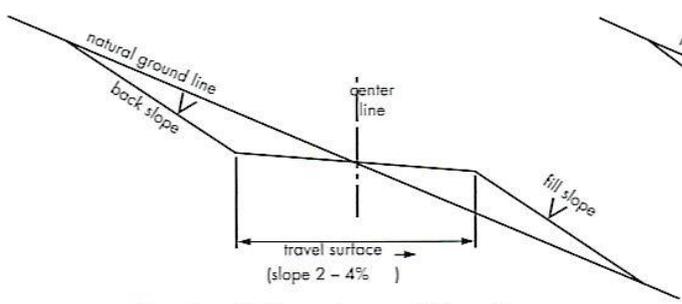
height of fill at shoulder	embankment slope
0' – 4'	3:1
above 4'	2:1

**Embankment Section**

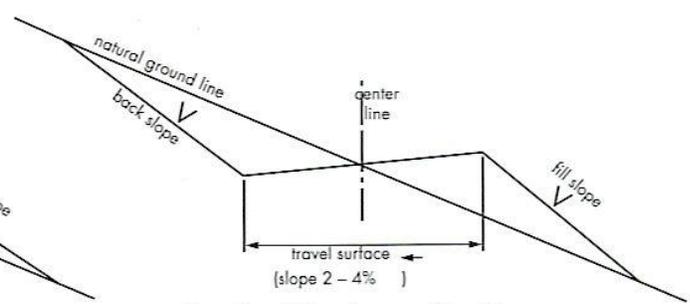


road type	crown
earth surface	.03 – .05 ft/ft
aggregate surface	.02 – .04 ft/ft
paved surface	.02 – .03 ft/ft

**Side Hill Section**



**Typical Outsloped Section**



**Typical Insloped Section**

## V. DRILLING

### **A. DRILLING OPERATIONS REQUIREMENTS:**

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

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. A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.
6. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string(s) opposite competent rock. The record of the drilling rate along with the caliper-gamma ray-neutron well log run to surface will be submitted to this office as well as all other logs run on the borehole 30 days from completion
7. 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 **11-3/4** inch usable water protection casing string shall be set at approximately 400 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 **8-5/8** inch intermediate casing is **sufficient to circulate to the surface**. If cement does not circulate see B.1.a-d above.

3. 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.

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

5. 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 **11-3/4** 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. Before drilling below the **8-5/8** inch intermediate casing shoe, the blowout preventer assembly shall consist of a minimum of One Annular Preventer, Two Ram-Type Preventers, and a Kelly Cock/Stabbing Valve.

2. Before drilling below the **11-3/4** inch surface casing shoe, minimum working pressure of the blowout preventer and related equipment (BOPE) shall be **2000** psi. Before drilling below the **8-5/8** inch intermediate casing shoe, minimum working pressure of the BOPE shall be **3000** psi.

3. The BOPE shall be installed before drilling below the **11-3/4** inch surface casing and the **8-5/8** inch intermediate casing and shall be tested as described in Onshore Order No. 2. Any equipment failing to test satisfactorily shall be repaired or replaced.

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

- b. The tests shall be done by an independent service company.
- c. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.
- d. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the BLM Roswell Field Office at 2909 West Second Street, Roswell, New Mexico 88201.
- e. Testing fluid must be water or an appropriate clear liquid suitable for sub-freezing temperatures. Use of drilling mud for testing is not permitted since it can mask small leaks.
- f. Testing must be done in a safe workman like manner. Hard line connections shall be required.

## **VI. PRODUCTION**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim re-contouring and re-vegetation 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**

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

## **VII. INTERIM RECLAMATION & RESERVE PIT CLOSURE**

### **A. INTERIM RECLAMATION**

If the well is a producer, interim reclamation shall be conducted on the well site in accordance with the orders of the Authorized Officer. The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting 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.

During reclamation, the removal of caliche is important to increasing the success of re-vegetating 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 re-vegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be re-vegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

<b>Loamy, SD-3 Ecological Site; Loamy CP-2; Gyp Upland CP-2 (for Loamy HP-3)</b>		
<u>Common Name and Preferred Variety</u>	<u>Scientific Name</u>	<u>Pounds of Pure Live Seed Per Acre</u>
Blue grama,	<i>(Bouteloua gracilis)</i>	4.00 LBS.
Sideoats grama,	<i>(Bouteloua curtipendula)</i>	1.0 LB.
Sand dropseed	<i>(Sporobolus cryptandrus)</i>	0.5 LB.
Vine mesquite	<i>(Panicum obtusum)</i>	1.0 LB.
Plains bristlegrass	<i>(Setaria macrostachya)</i>	1.0 LB.
Indian blanketflower	<i>(Gaillardia aristata)</i>	0.5 LB.
Desert or Scarlet	<i>(Sphaeralcea ambigua)</i>	1.0 LB.
Globemallow or	<i>(S. coccinea)</i>	
Annual sunflower	<i>(Helianthus annuus)</i>	<u>0.75 LB.</u>
<b>TOTAL POUNDS PURE LIVE SEED (pls) PER ACRE</b>		<b>9.75 LBS.</b>

Certified Weed Free Seed. If one species is not available, increase ALL others proportionately. Use No Less than 4 species, including one forb. No less than 9.75 pounds lbs per acre shall be applied.

### **VIII. 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. On private surface/federal mineral estate land the reclamation procedures on the road and well pad shall be accomplished in accordance with the Private Surface Land Owner agreements and a copy of the release is to be submitted upon abandonment.

c. 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).

d. 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.