OPERATOR'S COPY

Form 3160-3 WELL MUST BE CAPABLE OF PRODUCING BY 116		FORM APPROVED				
(February 2005)		OMB NO. 1004-0137 Expires: March 31,2007				
UNITED STATES DEPARTMENT OF THE INTE	5	5. Lease Serial No.				
BUREAU OF LAND MANAGE		NM-101579				
APPLICATION FOR PERMIT TO DRILL		6	6. If Indian, Allottee or Tribe Name			
7.1 2.67.11.67.1 2.11.11.7 (0.01.11.11.11.11.11.11.11.11.11.11.11.11			N/A			
		7	7. If Unit or CA Agreement, Name and No.			
1a. Type of Work: X DRILL REEN	TER	L	N/A / acan			
1b. Type of Well: Oil Well X Gas Well Other X	Single Zone Multiple Z	1	Lease Name and Well No Quarterback "BQG"	•		
	Janigle Zolic Multiple 2		API Well No.			
2. Name of Operator	1 //2>	, '	30-005-	616128		
Yates Petroleum Corporation	(25575)	/				
3a. Address 3b. Ph	one No. (include area code)	110). Field and Pool, or Explor	Trans		
105 South Fourth Street, Artesia, NM 88210	505-748-1471		Wilden	Gas		
4. Location of well (Report location clearly and In accordance with an	y State requirements.*)	11	. Sec., T., R., M., or Blk. A	And Survey or Area		
At surface	T linie I					
1980' FSL &1980' FE At proposed prod. zonc	sis, Omi J		Section 6-T12	S-R27E		
Sai	ne		n :)	112 0		
14. Distance in miles and direction from the nearest town or post office*	•	12	. County or Parish	13. State		
		, l_	Chaves	NM		
15. Distance from proposed*	16. No. of acres in lease	17. Spacir	ng Unit dedicated to this we	211		
location to nearest property or lease line, ft.						
(Also to nearest drlg. unit line, if any) 660'	1443.30		NWSE, Sec. 6-T12S-R27E			
18. Distance from proposed location*	19. Proposed Depth	20. BLM/	BIA Bond No. on file			
to nearest well, drilling, completed,	5700'	,	NATIONNUDE BOND #N	JB470000424		
applied for, on this lease, ft. 21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Aproximate date work will		NATIONWIDE BOND #N 23. Estimated duration	NIMB000434		
3699' GL	ASAP		30 da	<u> </u>		
	t be capable of production by		ROSWELL CONTROLLED V	MATER BASIM		
The following, completed in accordance with the requirements of Onshore	e Oil and Gas Order No. I shall t	be attached	to this form:	•		
1. Well plat certified by a registered surveyor.	4. Bond to cover the	operations u	nless covered by existing b	ond on file(see		
2. A Drilling Plan.	item 20 above).					
 A Surface Use Plan (if the location is on National Forest System Lan SUPO must be filed with the appropriate Forest Service Office). 	[·		ation and/ or plans as may	he required by the		
SOLO must be then with the appropriate Potest Service Office).	BLM	cine intom	ation and/ or plans as may	be required by the		
25. Signature \(\int \) \(\int \) \(\text{Name} \)	(Printed/ Typed)		Date			
(Litter 18) ay	1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1	Clifton Ma	i	9/29/2010		
Title						
Land Regulatory Agent						
Approved By (Signature) Name	(Printed/Typed)		Date			
- mill II/ands	Mul Ma	es.	10.2	22-10-		
Title Assistant Field Manager, Office	ROSWELL FIELD	,	÷.			
Lands And Minerals			1			
Application approval does not warrant or certify that the applicant holds le operations thereon.	gal or equitable title to those rigi	nts in the su	•	. **		
Conditions of approval, if any, are attached.			APPHUVED	FOR 2 YEARS		
Fitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a co	rime for any person knowingly a	nd wilfully	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	n.				
* (Instructions on page 2)						
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State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102 Revised July 16, 2010

Submit one copy to appropriate District Office

Certificate No. Gary L. Jones

BASIN SURVEYS

7977 23429

OIL CONSERVATION DIVISION

DISTRICT III 1220 South St. Francis Dr. 1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV 1220 S. St. Francis Dr., Santa Fe, NM 87505 Santa Fe, New Mexico 87505

☐ AMENDED REPORT

			WELL LC	CATION	AND ACKE.	AGE DEDICATI	ON PLAI		
30-	Number	64138	9	Pool Code 7361	,	COYOTE; Wolfcamp (645)			
Property C				Property Name			Well Number		umber
3937:	2	<u> </u>	QL	JARTERBACK "BQG" FEDERAL COM			1		
OGRID No	-				Operator Na			Eleve 369	
025575		<u></u>		YAIL	S PETROLEU				
					Surface Loc	ation			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
J	6	12 S	27 E		1980	SOUTH	1980	EAST	CHAVES
			Bottom	Hole Lo	cation If Diff	erent From Sur	face		
UL or lot No.	Section	Township	Range	Lot ldn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres	Joint o	or Infill C	onsolidation	Code Or	der No.				<u> </u>
320	John		Ollondarion	Code	del No.				
NO ALLO	WABLE V	WILL BE A	SSIGNED	TO THIS	COMPLETION	UNTIL ALL INTER	RESTS HAVE BE	EN CONSOLID	ATED
						APPROVED BY			
	 			Lat - N Long - W NMSPCE-	E LOCATION 33'18'18.63" 104'16'16.88" N 838574.816 E 559427.998		I hereby cer contained hereis the best of my this organization interest or unde land including t location or has this location pur ounter of such to or to a voluntar compulsory pool the division. Signature Cliftor Printed Name cliff@y Email Address	May atespetrol	mation lets to f, and that king t in the hole well at with an y interest, or a entered by 9/10 Date eum.com
NM-1015	579 			3700.7' 1 1 3702.8'		- 1980'	on this plat we actual surveys supervison, am correct to the Date Street.	that the well local is plotted from fiel made by me or it that the same is best of my belief all of Surveyor	d notes of under my strue and of.
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YATES PETROLEUM CORPORATION

Quarterback BQG Federal Com #1

1980' FSL and 1980' FEL, Unit J (NWSE) Section 6, T12S-R27E Chaves County, New Mexico

1. The estimated tops of geologic markers are as follows:

Seven Rivers	282'	Tubb	3850'
Queen	660'	Abo	4625'
Grayburg	950'	Wolfcamp	5226'
San Andres	1180'	Wolfcamp Lime	5375'
Glorieta	2360'	TD .	5700'

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

Water: 100' – 150' Oil or Gas: Below

Glorieta	2360'
Tubb	3850'
Abo	4625' Gas
Wolfcamp Dolomite	5226' Gas
Wolfcamp Lime	5375' Gas
TD	5700'

3. Pressure Control Equipment: 3000 psi BOP nippled up on 8 5/8" casing, systems will be consistent with API RP 53. Pressure tests will be conducted before drilling out from under all casing strings which are set and cemented in place. Blowout Preventor controls will be installed prior to drilling the surface plug and will remain in use until the well is completed or abandoned. Preventors will be inspected and operated at least daily to ensure good mechanical working order, and this inspection recorded on the daily drilling report. See Exhibit B.

Auxiliary Equipment:

- A. Auxiliary Equipment: Kelly cock, pit level indicators, flow sensor equipment and a sub with full opening valve to fit the drill pipe and collars will be available on the rig floor in the open position at all times for use when kelly is not in use.
- 4. THE PROPOSED CASING AND CEMENTING PROGRAM:
 - A. Casing Program: (All New)

Hole Size	Casing Size	Wt./Ft	<u>Grade</u>	Coupling	Interval
12 1/4	8 5/8"	24#	J-55	ST&C	0-1250'
7 7/8"	5 1/2"	17#	L-80	LT&C	0-5700'

Minimum Casing Design Factors: Collapse 1.125, Burst 1.0, Tensile Strength 1.8

Quarterback BQG Federal Com #1 Page 2

B. CEMENTING PROGRAM:

Surface Casing: 400 sx C Lite (YLD 2.00 WT 12.50). Tail in with 200 sx C

plus 2% aCI2 (YLD 1.32 WT 14.80).

Production Casing: 400 sx LiteCrete (YLD 2.92 WT 9.80). Tail in with 400 sx PecosVilt

(YLD 1.41 WT 13.00).

5. MUD PROGRAM AND AUXILIARY EQUIPMENT:

Interval	Type	Weight	<u>Viscosity</u>	Fluid Loss
0-1250'	Fresh Water Gel	• 9.3 – 9.9	32-36	N/C
1250'-4550'	Cut Brine	9.6 - 10.0	28-29	N/C
4550'-5700'	Salt Gel/Starch/4-6% KCL	9.6 – 9.9	45-55	>6

Sufficient mud material(s) to maintain mud properties, control lost circulation and contain a blow out will be available at the well site during drilling operations. Mud will be checked hourly by rig personnel.

6. EVALUATION PROGRAM:

Samples: 10' Samples—Surface to TD.

Logging: Plat form Express:

CNL/LDT/NGT from TD to surface casing

CNL/GR from TD to surface.

DLL-MSFL from TD to surface casing.
BHC-Sonic from TD to surface casing.

Coring: None Anticipated

DST's: Possible

Mudlogger: Intermediate casing to TD.

7. ABNORMAL CONDITIONS, BOTTOM HOLE PRESSURE, AND POTENTIAL HAZARDS:

Anticipated BHP:

From: 0 TO: 1250' Anticipated Max. BHP: 640 PSI

From: 1250' TO: 5700' Anticipated Max. BHP: 2935 PSI

Abnormal Pressures Anticipated: None

Lost Circulation Zones Anticipated: None.

H2S Zones Anticipated: None Anticipated

Maximum Bottom Hole Temperature: 120° F

8. ANTICIPATED STARTING DATE:

Plans are to drill this well as soon as possible after receiving approval. It should take approximately 45 days to drill the well with completion taking another 20 days.

MULTI-POINT SURFACE USE AND OPERATIONS PLAN YATES PETROLEUM CORPORATION

Quarterback BQG Federal Com #1

1980' FSL and 1980' FEL, Unit J (NWSE) Section 6, T12S-R27E Chaves County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

EXISTING ROADS: 1.

Exhibit A is a portion of the BLM map showing the well and roads in the vicinity of the proposed location. The proposed wellsite is located approximately 22 miles, east of Roswell, New Mexico and the access route to the location is indicated in red and green on Exhibit A.

DIRECTIONS:

Go east of Roswell, NM on Highway 380 for approximately 11.2 miles to NM 409. Turn right (south) and continue for approximately 6.5 miles to Wichita Road. Turn left onto Wichita Road and continue south for approximately 2.1 miles. Turn left (east) onto existing lease road with locked cattle guard (must remain closed and locked at all times) continue east approximately 1 mile, road turns north, turn left and continue north for approximately 1 mile. The road turns east prior to a cattle guard and travels on a ranch/lease road for approximately less than .5 of a mile where the lease_road_will_travel_north/east through cattle guard and continue for approximately .7 of a mile to (just prior to the YPC Football BCF Federal #2H location). Road turns to the right (east) and approximately 390' to cattle guard, continue traveling for approximately 0.1 of a mile to the southwest corner of the Grid Iron #2 location. Continue east for approximately 0.4 of a mile to the southwest corner of the pad.

2. PLANNED ACCESS ROAD:

- Α. The proposed new access will be approximately 2368.7 in length from the point of origin to the southwest corner of the drilling pad. The new road will lie in a west to east direction.
- The new road will be 30 feet in width with 16 feet in width (driving surface) and will В. be adequately drained to control runoff and soil erosion.
- С. The new road will be bladed with drainage on both sides if needed. Traffic turnouts if warranted.
- The route of the road is visible. D.
- Ε. Existing roads will be maintained in the same or better condition.

3. LOCATION OF EXISTING WELL:

- Α. There is drilling activity within a one-mile radius of the wellsite.
- В. Exhibit D shows existing wells within a one-mile radius of the proposed wellsite.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

There are production facilities on this lease at the present time.

Quarterback BQG Federal Com #1 Page 2

- B. If the well is productive oil, a gas or diesel self-contained unit will be used to provide the necessary power until an electric line can be built, if needed. Power should not be required if the well is productive of gas.
- C. Should a Pipeline Right-Of-Way be required it will be filed under a separate application and/or by 3rd party if applicable.

5. LOCATION AND TYPE OF WATER SUPPLY:

A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit A.

6. SOURCE OF CONSTRUCTION MATERIALS:

Dirt contractor will locate nearest pit and obtain any permits and materials needed for construction.

METHODS OF HANDLING WASTE DISPOSAL:

- A. Drill cuttings will be collected in tanks until hauled to an approved disposal system.
- B. A closed loop system will be constructed, maintained and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division—the "Pit Rule" 19.15.17 NMAC.—Form—C-144-attached——Exhibit E.
- C. Drilling fluids will be removed after drilling and completions are finalized.
- D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
- E. Oil produced during operations will be stored in tanks until sold.
- F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
- G. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES: NONE

9. WELLSITE LAYOUT:

- A. Exhibit C C1 shows the relative location and dimensions of the well pad, the closed loop design plan, the location of the drilling equipment, orientation and access road approach.
- B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division the "Pit Rule" 19.15.17 NMAC. Form C-144 is attached Exhibit E.
- C. A 600' x 600' area has been staked and flagged.

10. PLANS FOR RESTORATION:

A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be

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Quarterback BQG Federal Com #1 Page 3

cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible.

B. If the proposed well is plugged and abandoned, all rehabilitation and/or vegetation requirements of the Bureau of Land Management will be complied with and will be accomplished as expeditiously as possible.

11. SURFACE OWNERSHIP:

Fee
Elliott G. McMaster and Evelyn McMaster
Trust under Trust Agreement dated December 18, 1990
P.O. Box 176
Datil, NM 87821

The private surface owner has been contacted. The operator and the surface owner have entered into a mutually acceptable agreement that sets forth the rights and obligations of the parties with respect to the surface activities conducted by the operator.

Minerals: USA-Federal-NM-101579
Administered by: Bureau of Land Management
Roswell Field Office
2909 West Second
Roswell, NM 88201

Phone: (575) 627-0276 Fax (575) 627-0276

12. OTHER INFORMATION:

- A. The primary use of the surface is for grazing.
- B. Refer to the archaeological report for a description of the topography, flora, fauna, soil Characteristics, dwellings, and historical and cultural sites.

CERTIFICATION

YATES PETROLEUM CORPORATION Quarterback BQG Federal Com #1 1980' FSL and 1980' FEL, Unit J (NWSE) Section 6, T12S-R27E Chaves County, New Mexico

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

Executed this 29th day of September, 2010.
Name Clifton May
Signature Cliftin May
Position TitleLand Regulatory Agent
Address 105 South Fourth Street 88210
E-mail (optional) <u>cliff@yatespetroleum.com</u>
Telephone_575-748-4347
Field Representative (if not above signatory) Tim Bussell
Address (if different from above) Same
Telephone (if different from above) 575-748-1471
E-mail (optional)

CONDITIONS OF APPROVAL

October 22, 2010

OPERATORS NAME: Yates Petroleum Corporation

LEASE NO.: NM-101579

WELL NAME & NO: Quarterback "BQG" Federal Com#1 SURFACE HOLE FOOTAGE: 1980' FSL & 1980' FEL LOCATION: Section 6, T. 12 S., R. 27 E., NMPM

COUNTY: Chaves County, New Mexico

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 (575) 627-0272 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 in shallow rows 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. The topsoil will not be used to construct the containment structure or earthen dike that is constructed and maintained on the outside boundaries of the constructed well pad.

C. CLOSED SYSTEMS OR STEEL TANKS:

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

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

D. FEDERAL MINERAL MATERIALS PIT:

Payment shall be made to the BLM prior to removal of any federal mineral materials from any site. Call the Roswell Field Office at (575) 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 southeast 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.

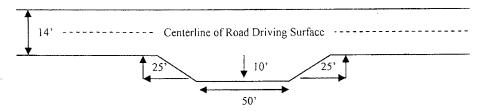
Ditching

Ditching shall be required on both sides of the road.

Turnouts

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

Standard Turnout - Plan View

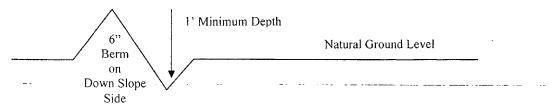


Drainage

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 foot road with 4% road slope:
$$\frac{400'}{40\%}$$
 + 100' = 200' lead-off ditch interval

Culvert Installations

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

Cattleguards

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

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

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

Fence Requirement

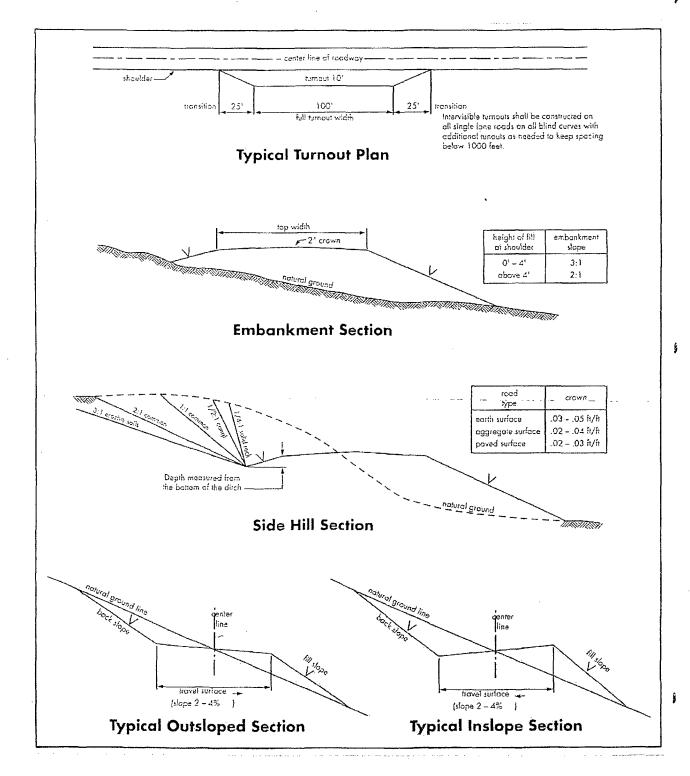
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

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

Public Access

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

Figure 1 - Cross Sections and Plans For Typical Road Sections



V. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

- 1. Chaves and Roosevelt Counties
 Call the Roswell Field Office, 2909 West Second St., Roswell, NM 88201, 24 hours at
 (575) 627-0205.
- 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. The operator will accurately measure the drilling rate in ft/min to set the base of the usable water protection casing string 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.
- 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. 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. Any polymers used will be water based and non-toxic.

B. CASING

1. The 8-5/8 inch usable water protection casing string shall be set at approximately 1250 ft. in competent bedrock.

If not the operator is required to set usable water protection casing string 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 <u>8-5/8</u> inch intermediate casing is <u>sufficient</u> 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 <u>5-1/2</u> inch production casing is <u>sufficient to</u> <u>tie back 500 feet above the uppermost perforation in the pay zone</u>. 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 <u>8-5/8</u> 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 <u>8-5/8</u> inch surface 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

Placement of Production Facilities

Production facilities should be located on the Quarterback "BQG" Fed Com#1 well pad next to well pad entrance to maximize intremreclamation.

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, <u>Juniper Green</u> (Standard Environmental Color Chart June 2008).

VRM Facility Requirement

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

VII. 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. Earthwork for interim and final reclamation must be completed within 6 months of well completion or well plugging (weather permitting). The operator shall submit a Sundry Notices and Reports on Wells (Notice of Intent), Form 3160-5, prior to conducting interim reclamation.

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.

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). The well bore shall then be covered with a metal plate at least ¼ inch thick and welded in place. 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.

IX. PIPELINE PROTECTION REQUIREMENT

Precautionary measures shall be taken by the operator during construction of the access road to protect existing pipelines that the access road will cross over. An earthen berm; 2 feet high by 3 feet wide and 14 feet across the access road travelway (2' X 3' X 14'), shall be constructed over existing pipelines. The operator shall be held responsible for any damage to existing pipelines. If the pipeline is ruptured and/or damaged the operator shall immediately cease construction operations and repair the pipeline. The operator shall be held liable for any unsafe construction operations that threaten human life and/or cause the destruction of equipment.