

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

1a. TYPE OF WORK

DRILL ☒

DEEPEN ☐

1b. TYPE OF WELL

OIL
WELL ☐

GAS
WELL ☒

OTHER

SINGLE
ZONE ☐

MULTIPLE
ZONE ☒

2. NAME OF OPERATOR **AMOCO PRODUCTION COMPANY**
P.O. BOX 3092
HOUSTON, TX 77079

3. ADDRESS AND TELEPHONE NO.
MARY CORLEY
SUBMITTING CONTACT

PHONE 281.366.4491 EXT:
FAX: 281.366.0700
EMAIL: corleyml@bp.com

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. *)

At Surface
1960FNL AND 1290FEL SENE SEC 23 T30N R9W
At proposed prod. zone

14. DISTANCE IN MILES AND DIRECTION FROM THE NEAREST TOWN OR POST OFFICE
15.5 MILES FROM AZTEC, NM

15. DISTANCE FROM PROPOSED*
LOCATION TO NEAREST
PROPERTY OR LEASE LINE, FT.
(Also to nearest drlg. unit line, if any)

16. NO. ACRES IN LEASE
320.00

18. DISTANCE FROM PROPOSED LOCATION*
TO NEAREST WELL, DRILLING, COMPLETED,
OR APPLIED FOR, ON THIS LEASE FT.

19. PROPOSED DEPTH
7447 MD / TVD

17. NO. OF ACRES ASSIGNED
TO THIS WELL
320.00

20. ROTARY OR CABLE TOOLS
ROTARY

21. ELEVATIONS (Show whether DF, RT, GR, etc.)

6013 GL

22. APPROX. DATE WORK WILL START*
04/20/2001

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT

Notice of Staking Submitted 12-07-2000 as Florance Gas Com #7B. Please change well number to 7M. Amoco Production Company respectfully request permission to drill the subject well to a total depth of approximately 7447', complete in the Basin Dakota Pool, produce the well for approximately 30 days to establish production rate, add the Blanco Mesaverde Pool and commingle production downhole. Application for downhole commingling authority (NMOCD order R-11363) will be submitted to all appropriate parties for approval after production has been established in the Basin Dakota Pool and prior to completion of and downhole commingling with the Blanco Mesaverde. In support of our application for permit to drill we have attached 8 documents (1 .doc and 7 .pdf files).

This action is subject to technical and
procedural review pursuant to 43 CFR 3165.3
and appeal pursuant to 43 CFR 3165.4.



RECEIVED BY THE BLM WELL INFORMATION SYSTEM
SENT TO THE FARMINGTON FIELD OFFICE
"RECEIVED BY THE BLM WELL INFORMATION SYSTEM"

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen, give data on present productive zone and proposed productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24. ELECTRONIC SUBMISSION #2698 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
FOR AMOCO PRODUCTION COMPANY SENT TO THE FARMINGTON FIELD OFFICE

SIGNED **MARY CORLEY**

TITLE **SUBMITTING CONTACT**

DATE **02/20/2001**

PERMIT NO. _____

APPROVAL DATE _____

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
CONDITIONS OF APPROVAL, IF ANY:

APPROVED BY _____

/s/ Joel Farrell

TITLE _____

DATE _____

MAR 28

District I
PO Box 1980, Hobbs NM 88241-1980
District II
PO Drawer KK, Artesia, NM 87211-0719
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-30571		Pool Code 71599 & 72319	Pool Name Basin Dakota & Blanco Mesaverde
Property Code 000540	Property Name FLORANCE GAS COM S		Well Number 7M
OGRID No. 000778	Operator Name AMOCO PRODUCTION COMPANY		Elevation 6013

Surface Location

UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	23	30 N	9 W		1960	NORTH	1290	EAST	SAN JUAN

Bottom Hole Location If Different From Surface

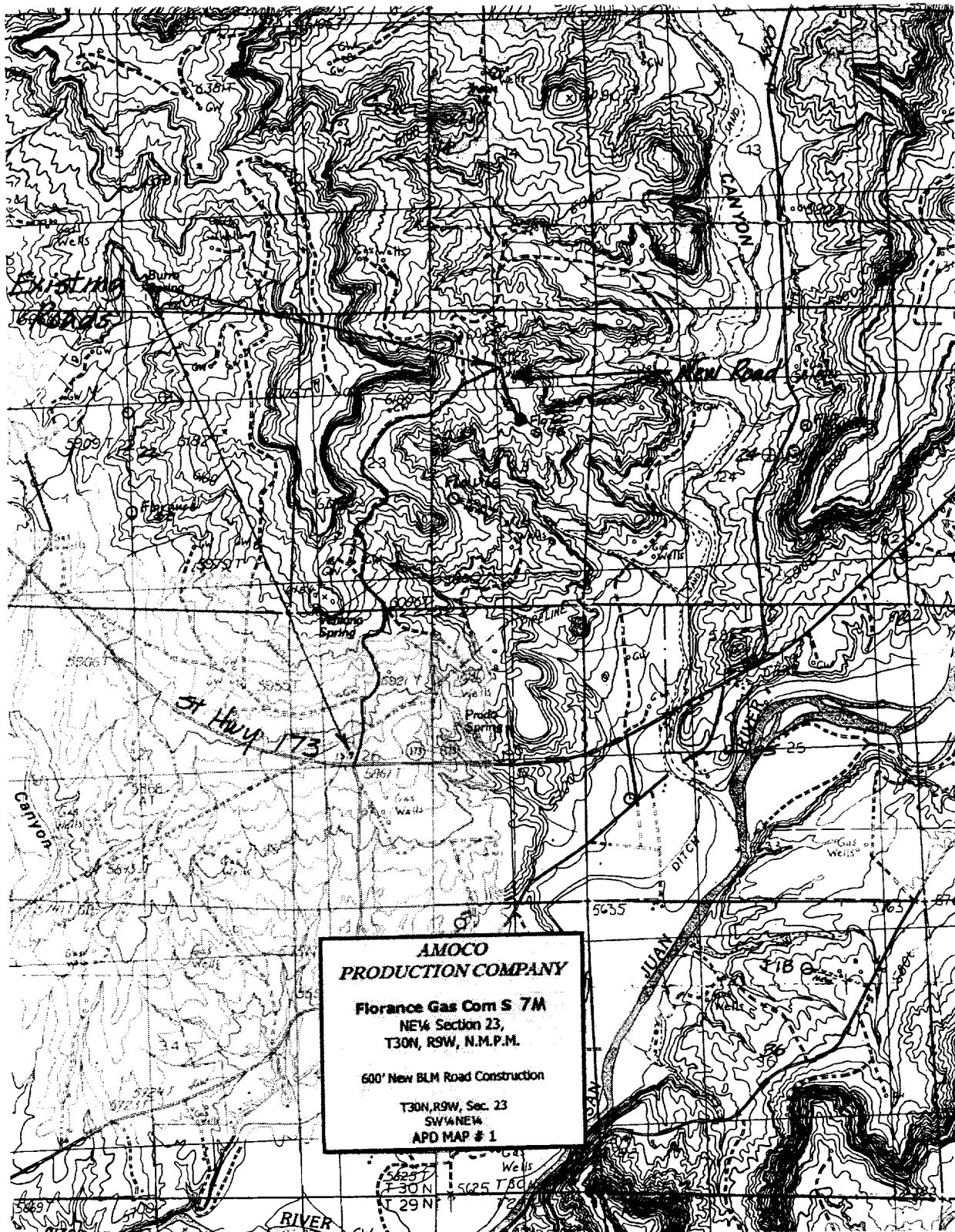
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Dedicated Acres 320.00		Joins or Infill		Order No.					

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature <i>Mary Cortez</i> Printed Name Mary Cortez Title Sr. Regulatory Analyst Date 02/19/2001	
	18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. November 22, 2000 Date of Survey Signature and Seal of Professional Surveyor 7016 Certificate Number	

(R) - BLM Record





**AMOCO
PRODUCTION COMPANY**

Florance Gas Com S 7M
NE¼ Section 23,
T30N, R9W, N.M.P.M.

600' New BLM Road Construction

T30N, R9W, Sec. 23
SW¼ NE¼
APD MAP # 1

**AMOCO PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM**

Prospect Name: Florance Gas Com S
Lease: FLORANCE GAS COM S
County: San Juan
State: New Mexico
Date: February 20, 2001

Well No: 7M
Surface Location: 23-30N-9W, 1960 FNL, 1290 FEL
Field: Blanco Mesaverde/Basin Dakota

OBJECTIVE: Drill 400' below the base of the Greenhorn Limestone, set 4" Liner across Dakota, Stimulate LS, CH, MF, PL and DK intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS		Estimated GL: 6013		Estimated KB: 6027	
Rotary		DEPTH OF DRILLING		MARKER	
		0 - TD		SUBSEA	
				MEAS. DEPTH	
LOG PROGRAM					
TYPE		DEPTH INVERAL			
OPEN HOLE					
GR-Induction		TD to 5 ½" shoe			
Density/Neutron		TD to 5 ½" shoe			
Sonic		TD to 5 ½" shoe			
CASED HOLE					
GR-CCL-TDT		TDT - PBTD-7 5/8" shoe			
		GR-CCL - PBTD-0'			
CBL		Top of 4" - 50' above 7 5/8 "shoe			
REMARKS:					
- Please report any flares (magnitude & duration).					
		Ojo Alamo		4493	1534
		Fruitland Coal		*	2246
		Pictured Cliffs		*	2786
		Lewis Shale		#	2816
		Cliff House		#	4396
		Menefee Shale		#	4596
		Point Lookout		#	5006
		Mancos		921	5106
		Greenhorn		-963	6990
		Bentonite Marker		-1020	7047
		Two Wells		#	7097
		Dakota MB		#	7227
		Burro Canyon		*	7334
		Morrison		*	7384
		TOTAL DEPTH		-1420	7447
		# Probable completion interval			
		* Possible Pay			
SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE		FREQUENCY		FREQUENCY	
None		DEPTH		DEPTH	
		10 feet		Geolograph	
		Production hole		0-TD	
REMARKS:					

MUD PROGRAM:

Approx. Interval	Type Mud	Weight, #/gal	Vis, sec/qt	W/L cc's/30 min	Other Specification
0 - 120-135 3 jts.	Spud	8.6-9.2			
120-135 - 2196 (1)(2)	Water/LSND	8.6-9.2			
2196 - 7047	Gas/Air/Mist	Volume sufficient to maintain a stable and clean wellbore			
7047 - 7447	LSND	8.6-9.2			

REMARKS:

- (1) The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.
(2) Top set Fruitland Coal to minimize lost circulation, air volume to maintain hole stability.

CASING PROGRAM: (Normally, tubular goods allocation letter specifies casing sizes to be used. Hole sizes will be governed by Contract)

Casing String	Estimated Depth	Casing Size	Grade	Weight	Hole Size	Landing Pt, Cmt, Etc.
Surface/Conductor	120-135	10 3/4"	J-55 ST&C	40.5#	14.75"	1
Intermediate 1	2196	7 5/8"	K-55 LT&C	26.4#	9.875"	1,2
Intermediate 2	7047	5 1/2"	K-55 LT&C	15.5#	6.75"	4
Production (liner)	7447	4"	K-55 H 511	11#	4.75"	3

REMARKS:

- (1) Circulate Cement to Surface
(2) Set casing 50' above Fruitland Coal
(3) Liner Lap should be a minimum of 100'
(4) Bring cement 200' above 7 5/8" shoe

CORING PROGRAM:

None

COMPLETION PROGRAM:

Rigless, 4-6 Stage Limited Entry Hydraulic Frac

GENERAL REMARKS:

Notify BLM/NMOC 24 hours prior to Spud, BOP testing, and Casing and Cementing.

Form 46 Reviewed by: _____ Logging program reviewed by: N/A

PREPARED BY:	APPROVED:	DATE:	
KAS/KAT		January 5, 2001	
Form 46 12-00 KAT		Version 1.0	

Cementing Program: Florance Gas Com S 7M

	Surface	Intermediate	I2	Liner
Excess %, Bit	100%	80	50	10
Excess %, Caliper	NA	NA	NA	30
BHST (est deg. F)	60	120	150	160
Pipe Movement	NA	Rotate/Reciprocate	Rotate/Reciprocate	as per Liner Co.
Rate, Max (bpm)	7	4	4	2
Rate Recommended (bpm)	6	4	3	2
Pressure, Max (psi)	200	2000	2000	2000
Shoe Joint	40	80	80	40
Batch Mix	NA	NA	NA	NA
Circulating prior cmtng (hr)	0.5	1.5	2.5	2
Time Between Stages, (hr)	NA	NA	NA	NA
Special Instructions	1,6,7	1,6,8	1,6,9	2,3,4,6

1. Do not wash pumps and lines.
2. Wash pumps and lines.
3. Reverse out
4. Run Blend Test on Cement
5. Record Rate, Pressure, and Density on 3.5" disk
6. Confirm densitometer with pressurized mud scales
7. 1" cement to surface if cement is not circulated.
8. If cement is not circulated to surface, run temp. survey 10-12 hr. after landing plug.

Notes:

*Do not wash up on top of plug. Wash lines before displacing liner cement job to minimize drillout.

** After cement set time the liner top will be drilled out and liner circulated clean with treated water.

*** Run TMD cased hole logs to identify pay; Perforating and CH logs can be run rigless.

Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	120sx Class G Cement		139cuft
TOC@Surface	+ 2% CaCl ₂ (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.5563cuft/ft OH
	0.1% D46 antifoam		100% excess
Slurry Properties:	Density	Yield	Water
	(lb/gal)	(ft ³ /sk)	(gal/sk)
Slurry 1	15.8	1.16	4.95
Casing Equipment:	10-3/4", 8R, ST&C		
	1 Guide Shoe		
	1 Top Wooden Plug		
	1 Autofill insert float valve		
	4 Centralizers		
	1 Stop Ring		
	1 Thread Lock Compound		

Cementing Program: Florance Gas Com S 7M

Intermediate:

Fresh Water	20 bbl	fresh water	
Lead	220sx	Class "G" Cement	637 cuft
Slurry 1		+ 3% D79 extender	
TOC@Surface		+ 2% S1 Calcium Chloride	
		+1/4 #/sk. Cellophane Flake	
		+ 0.1% D46 antifoam'	
Tail	152sx	50/50 Class "G"/Poz	193cuft
Slurry 2		+ 2% gel (extender)	
500ft fill		0.1% D46 antifoam	0.2148cuft/ft OH
		+1/4 #/sk. Cellophane Flake	0.2338cuft/ft csg ann
		+ 2% CaCl2 (accelerator)	80 % excess
Slurry Properties:	Density	Yield	Water
	(lb/gal)	(ft3/sk)	(gal/sk)
Slurry 1	11.4	2.9	17.77
Slurry 2	13.5	1.27	5.72
Casing Equipment:	7-5/8", 8R, ST&C		
	1 Float Shoe (autofill with minimal LCM in mud)		
	1 Float Collar (autofill with minimal LCM in mud)		
	1 Stop Ring		
	9 Centralizers (one in middle of first joint, then every third collar)		
	2 Fluidmaster vane centralizers @ base of Ojo		
	8 Centralizers one every 4th joint from Ojo to base of surface casing		
	1 Top Rubber Plug		
	1 Thread Lock Compound		

Int 2:

Fresh Water	10 bbl	CW100	
Lead	464	LiteCrete D961 / D124 / D154	993cuft
Slurry 1		+ 0.03 gps D47 antifoam	
TOC@Surface		+ 0.5% D112 fluid loss	
		+ 0.11% D65 TIC	
Tail	80sx	50/50 Class "G"/Poz	115cuft
Slurry 2		+ 5% D20 gel (extender)	+ 5 #/sk D24 gilsonite
500ft fill		+ 0.1% D46 antifoam	+ 0.15% D65 TIC
		+ 1/4 #/sk. Cellophane Flake	+ 0.1% D800 retarder
		+ 0.25% D167 Fluid Loss	
			0.1521 cuft/ft OH
			50 % excess
Slurry Properties:	Density	Yield	Water
	(lb/gal)	(ft3/sk)	(gal/sk)
Slurry 1	9.5	2.14	6.38
Slurry 2	13	1.44	6.5
Casing Equipment:	5-1/2", 8R, ST&C		
	1 Float Shoe (autofill with minimal LCM in mud)		
	1 Float Collar (autofill with minimal LCM in mud)		
	1 Stop Ring		
	35 Centralizers (every third joint)		
	1 Top Rubber Plug		
	1 Thread Lock Compound		

Cementing Program: Florance Gas Com S 7M

Production (liner):				
Preflush	10 bbl.	CW100 / LCM wash		
Lead Cement		2350/50 Poz/G		34 cuft
Slurry 1		5% D20 bentonite	0.1% D46 antifoam	
	100ft lap	0.25#/sk D29 cellophane		
	100ft cap	0.25% D167 Fluid loss		0.0358 cuft/ft OH
		0.15% D65 TIC		0.0464 cuft/ft csg ann
		0.15% D800 retarder		0.1336 cuft/ft csg
Slurry Properties:	Density		Water	10 % excess
	(lb/gal)	(ft3/sk)	(gal/sk)	
Slurry 1	13	1.44	6.5	
Liner Float Equipment:	Float Shoe and Float Collar (furnished by Liner Hanger Company)			
	1 Thread Lock Compound			
Note:				
1. Coordinate w/Liner hand to drop plug, or set/release Liner as required				
2. The job should be pumped at 2-3 bpm max rate. Do not exceed 3 bpm on displacement				
3. Wash pump and lines before displacement. Slow to 1 bpm for the last 30 bbl of displacement.				
4. This is to be a rigless completion. After cement set time, liner top will be dressed off an liner circulated clean with 2 % KCl or 2 gal/1000 gal L64.				

FEDERAL CEMENTING REQUIREMENTS

1. All permeable zones containing fresh water and other usable water containing 10,000 PPM or less total dissolved solids will be isolated and protected from contamination by cement circulated in place for the protection of permeable zones per the NTL-FRA 90-1 Section III A.
2. The hole size will be no smaller than 1 ½" larger diameter than the casing O.D. across all water zones.
3. An adequate spacer will be pumped ahead of the cement slurry to help prevent mud contamination of the cement.
4. An adequate number of casing centralizers will be run through usable water zones to ensure that the casing is centralized through these zones. The adequate number of centralizers to use will be determined by API SPEC 10D.
5. Centralizers will impart a swirling action around the casing and will be used just below and into the base of the lowest usable water zone.
6. A chronological log will be kept recording the pump and slurry information and will be sent to the BLM with the subsequent sundry.

**Amoco Production Company
BOP Pressure Testing Requirements**

Well Name: Florance Gas Com S 7M
County: San Juan

State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1534		
Fruitland Coal	2246		
PC	2786		
Lewis Shale	2816		
Cliff House	4396	500	0
Menefee Shale	4596		
Point Lookout	5006	600	0
Mancos	5106		
Dakota	7097	2600	1477

** Note: Determined using the following formula: $ABHP - (.22 * TVD) = ASP$

Requested BOP Pressure Test Exception: 3000 PSI

**SAN JUAN BASIN
Dakota Formation
Pressure Control Equipment**

Background

The objective Dakota formation maximum surface pressure is anticipated to be less than 1000 PSI, based on shut-in surface pressures from adjacent wells. Pressure control equipment working pressure minimum requirements are therefore 2000 PSI. Equipment to be used will conform to API RP-53 (Figure 2.C.2) for a 2000 PSI system per Federal Onshore Order No. 2. Due to available conventional equipment within the area, 3000 PSI rated pressure control equipment will typically be utilized in a double ram type arrangement. Regional drilling rights to be utilized have substructure height limitations which exclude the use of annular preventers; therefore a rotating head will be installed above these rams. This pressure control equipment will be utilized for conventional drilling below conductor to total depth in the Basin Dakota. No abnormal temperature, pressure, or H2S anticipated.

Equipment Specification

Interval

Below conductor casing to total depth

BOP Equipment

11" nominal or 7 1/16", 3000 PSI
double ram preventer with rotating
head.

All ram type preventers and related control equipment will be hydraulically tested to 250 PSI (low pressure) and 2000 PSI (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include kelly cock, upper kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.