

RECEIVED

SEP 23 2009

RCVD OCT 13 '09
OIL CONS. DIV.
DIST. 3

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NMNM-083503
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name N/A
2. Name of Operator XTO Energy Inc.		7. If Unit or CA Agreement, Name and No. NMNM-087178 FC-report to lease
3a. Address 382 CR 3100 Aztec, NM 87410	3b. Phone No. (include area code) 505/ 333-3100	8. Lease Name and Well No. GRASSY CANYON #9
4. Location of Well (Report location clearly and in accordance with any State requirements.) At surface 705' FSL x 325' FWL At proposed prod. zone 1370' FSL x 1370' FWL		9. API-Well No. 30-045-35024
14. Distance in miles and direction from nearest town or post office* Approximately 22 miles NE of Aztec P.O.		10. Field and Pool, or Exploratory BASIN FRUITLAND COAL
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 325'	16. No. of acres in lease 1131.12	11. Sec., T. R. M. or Blk and Survey or Area (M) Sec 31, T32N, R7W
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft 62'	19. Proposed Depth 4134'	12. County or Parish San Juan
21. Elevations (Show whether DF, KDB, RT, GL, etc) 6721' Ground Elevation	22. Approximate date work will start* 10/15/2009	13. State NM
17. Spacing Unit dedicated to this well W2 FC: 9/2 320 313.80		
20. BLM/BIA Bond No. on file UTB000138		
23. Estimated duration 2 Weeks		

24. Attachments

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

- | | |
|--|--|
| 1. Well plat certified by a registered surveyor | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan. | 5. Operator certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office) | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Malia Villers</i>	Name (Printed/Typed) Malia Villers	Date 09/22/2009
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Title
Permitting Tech.

Approved by (Signature) <i>Jim Lohs</i>	Name (Printed/Typed) Office	Date 10/5/09
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Title
Acting AFM Minerals

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

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

*(Instructions on page 2)

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

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

NMOCK
OPERATOR

ON THIS DATE AS AUTHORIZED ARE
SUBMITTED TO THE BLM ATTACHED
"GENERAL"

Hold C104

for Directional Survey
and "As Drilled" plat

OCT 13 2009

NOTIFY AZTEC OCD 24 HRS.
PRIOR TO CASING & CEMENT
APD/ROW

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
1301 W Grand Avenue, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, N.M. 87410

DISTRICT IV
1220 South St Francis Dr Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr
Santa Fe, NM 87504-2088

Form C-102
Revised October 12, 2005
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 30-045-35024		Pool Code 71629	Pool Name Basin Fruitland Coal
Property Code 303846		Property Name GRASSY CANYON	Well Number 9
OCRID No 5380		Operator Name XTO ENERGY INC.	Elevation 6721'

10 Surface Location

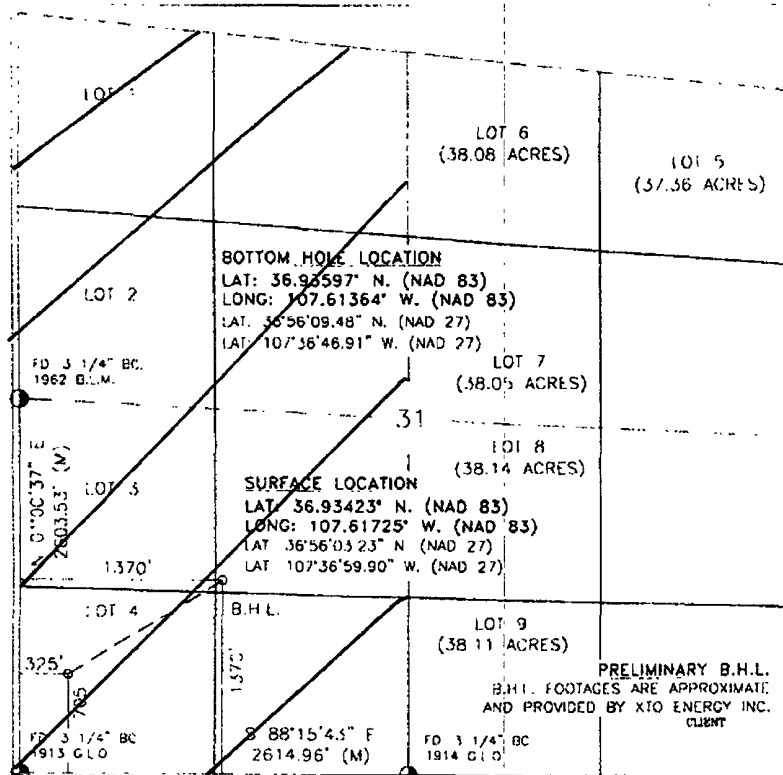
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	31	32-N	7-W		705	SOUTH	325	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
X	31	32-N	7-W		1370	SOUTH	1370	WEST	SAN JUAN

Dedicated Acres W/2 313.80	Joint or Infill	Consolidation Code	Order No
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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, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Maria Villers 9/26/09
Signature Date
Maria Villers
Printed Name

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 knowledge and belief.

MAY 4, 2009
Date of Survey
Signature and Seal of Professional Surveyor
ROBERT A. RUSH
REGISTERED PROFESSIONAL LAND SURVEYOR
07-9-09
Certificate Number

XTO ENERGY INC.

Grassy Canyon #9

APD Data

September 22, 2009

Location: 705' FSL x 325' FWL Sec 31, T32N, R07W County: San Juan

State: NM

Bottomhole Location: 1370' FSL x 1370' FWL Sec 31, T32N, R07W

GREATEST PROJECTED TD: 4134' MD, 3850' TVD
APPROX GR ELEV: 6721'

OBJECTIVE: Fruitland Coal
Est KB ELEV: 6733' (12' AGL)

Please note attached directional program.

1. MUD PROGRAM:

INTERVAL	0' to 225'	225' to 4134'
HOLE SIZE	12.25"	7.875"
MUD TYPE	FW/Spud Mud	FW/Polymer
WEIGHT	8.6-9.0	8.4-9.2
VISCOSITY	28-32	28-32
WATER LOSS	NC	NC

Remarks: Use fibrous materials as needed to control seepage and lost circulation. Pump high viscosity sweeps as needed for hole cleaning. Raise viscosity at TD for logging. Reduce viscosity after logging for cementing purposes.

2. CASING PROGRAM:

Surface Casing: 8.625" casing to be set at $\pm$ 225' in a 12-1/4" hole filled with 8.50 ppg mud

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'-225'	225'	24.0#	J-55	ST&C	1370	2950	244	8.097	7.972	13.77	29.66	45.18

Production Casing: 5.5" casing to be set at TD ($\pm$ 4134') in 7-7/8" hole filled with 9.2 ppg mud.

Interval	Length	Wt	Gr	Cplg	Coll Rating (psi)	Burst Rating (psi)	Jt Str (M-lbs)	ID (in)	Drift (in)	SF Coll	SF Burst	SF Ten
0'-4134'	4134'	17.0#	J-55	ST&C	4910	5320	229	4.892	4.767	2.66	2.88	3.26

Note: Safety factors are calculated based on a 9.2 ppg mwe with no backup using measured depth assumed to be in a vertical wellbore.

3. WELLHEAD:

- A. Casing Head: Larkin Fig 92 (or equivalent), 9" nominal, 2,000 psig WP (4,000 psig test) with 8-5/8" 8rnd thread on bottom and 11-3/4" 8rnd thread on top.
- B. Tubing Head: Larkin Fig 612 (or equivalent), 6.456" nominal, 2,000 psig WP (4,000 psig test), 5-1/2" 8rnd female thread on bottom (or slip-on, weld-on), 8-5/8" 8rnd thread on top.

4. CEMENT PROGRAM (Slurry design may change slightly, but the plan is to circulate cement to surface on both casing strings):

A. Surface: 8.625", 24.0#, J-55, ST&C casing to be set at $\pm 225'$ in 12-1/4" hole.

134 sx of Type III cement (or equivalent) typically containing accelerator and LCM, mixed at 14.5 ppg, 1.39 ft³/sk, & 6.70 gal wtr/sk.

Total slurry volume is 186 ft³, 100% excess of calculated annular volume to 225'.

B. Production: 5.5", 17.0#, J-55 (or K-55), ST&C casing to be set at $\pm 4134'$ in 7.875" hole.

LEAD:

± 423 sx of Premium Lite HS (Type III/Poz/Gel) or equivalent, with dispersant, fluid loss, accelerator, & LCM mixed at 12.5 ppg, 2.01 ft³/sk, 10.55 gal wtr/sx.

TAIL:

± 100 sx Type III or equivalent cement with bonding additive, LCM, dispersant, & fluid loss mixed at 14.2 ppg, 1.54 cuft/sx, 8.00 gal/sx.

Total estimated slurry volume for the 5-1/2" production casing is 1003 ft³.

Note: The slurry design may change slightly based upon actual conditions. Final cement volumes will be determined from the caliper logs plus 40%. It will be attempted to circulate cement to the surface.

5. LOGGING PROGRAM:

A. Mud Logger: If requested by Fort Worth Geology, the mud logger will come on at 1,500' and will remain on the hole until TD. The mud will be logged in 10' intervals.

B. Open Hole Logs as follows: Run Array Induction/SFL/GR/SP fr/TD (4134') to the bottom of the surface csg. Run Neutron/Lithodensity/Pe/GR/Cal from TD (4134') to the bottom of the surface csg.

6. FORMATION TOPS:

Please see directional plat for estimated formation tops. BHP anticipated to be less than 1,500 psi.

7. COMPANY PERSONNEL:

Name	Title	Office Phone	Home Phone
Justin Niederhofer	Drilling Engineer	505-333-3199	505-320-0158
Bobby Jackson	Drilling Superintendent	505-333-3224	505-486-4706
John Klutsch	Project Geologist	817-885-2800	N/A



Well Name: Grassy Canyon #9

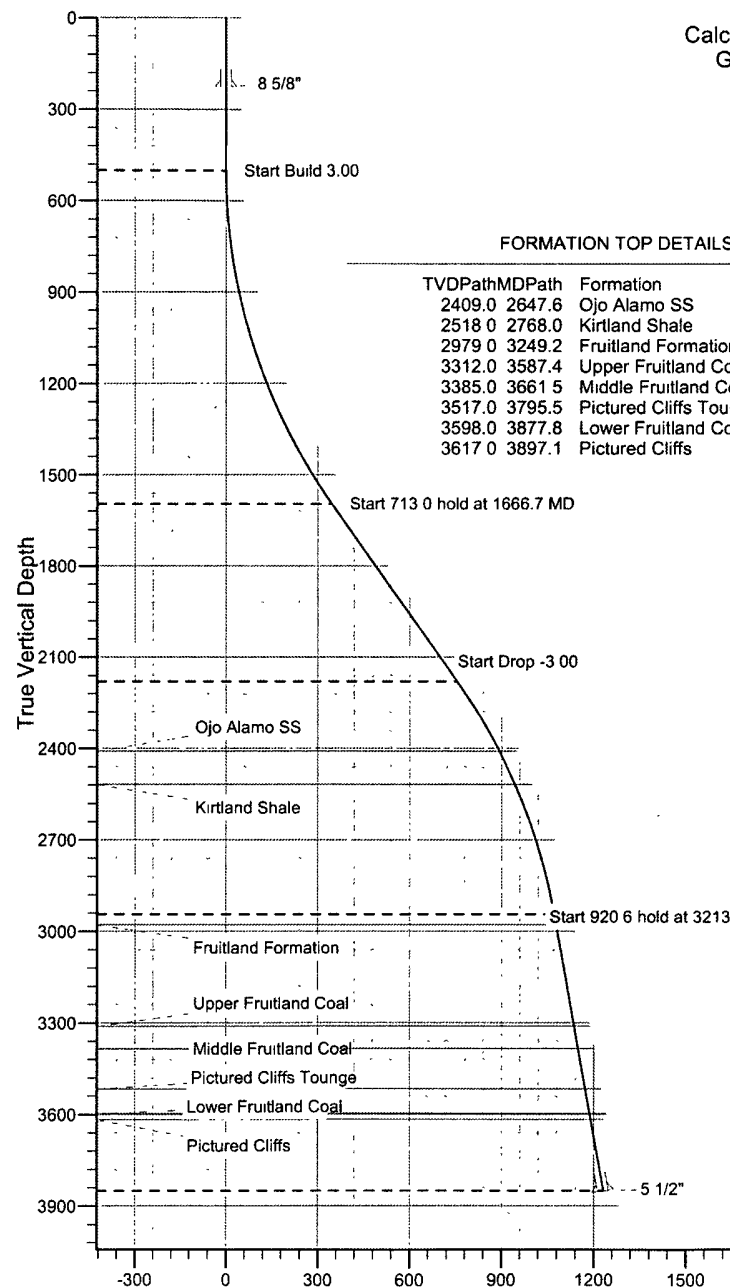
San Juan Division
Drilling Department

Calculation Method: Minimum Curvature
Geodetic Datum: North American Datum 1983
Lat: 36° 56' 3.228 N
Long: 107° 37' 2.100 W



Azimuths to True North
Magnetic North: 10.05°

Magnetic Field
Strength: 51063.9snT
Dip Angle: 63.71°
Date: 9/22/2009
Model: IGRF200510



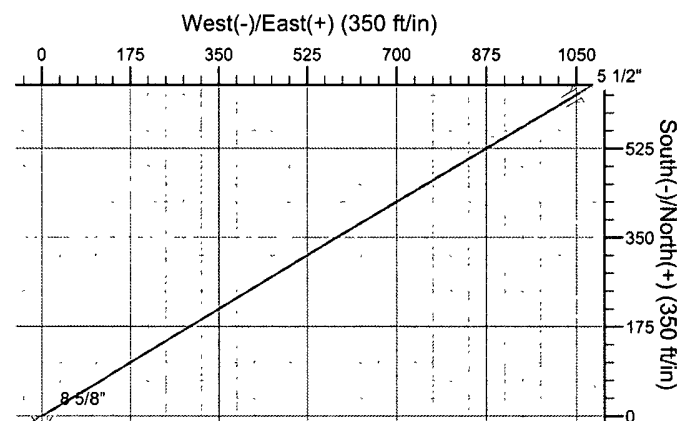
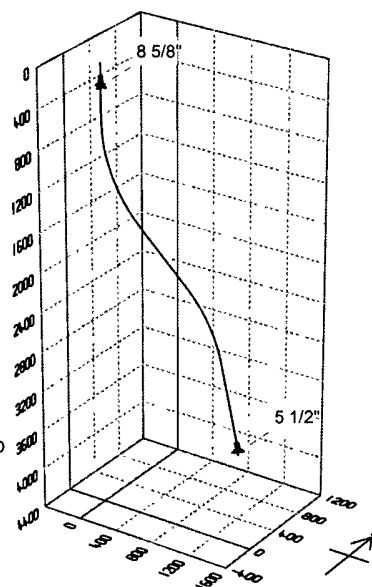
Vertical Section at 59.02°

FORMATION TOP DETAILS

TVDP	MD	Formation
2409.0	2647.6	Ojo Alamo SS
2518.0	2768.0	Kirtland Shale
2979.0	3249.2	Fruitland Formation
3312.0	3587.4	Upper Fruitland Coal
3385.0	3661.5	Middle Fruitland Coal
3517.0	3795.5	Pictured Cliffs Tongue
3598.0	3877.8	Lower Fruitland Coal
3617.0	3897.1	Pictured Cliffs

CASING DETAILS

TVDP	MD	Name	Size
225.0	225.0	8 5/8"	8.625
3850.0	4133.7	5 1/2"	5.500



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	500.0	0.00	0.00	500.0	0.0	0.0	0.00	0.00	0.0	
3	1666.7	35.00	59.02	1595.5	177.8	296.1	3.00	59.02	345.4	
4	2379.7	35.00	59.02	2179.5	388.3	646.7	0.00	0.00	754.4	
5	3213.0	10.00	59.02	2943.3	551.2	918.0	3.00	180.00	1070.8	
6	4133.7	10.00	59.02	3850.0	633.5	1055.0	0.00	0.00	1230.6	Proposed BHL -- Grassy Canyon #9

XTO Energy, Inc.
Planning Report

EDM 2003.21 Single User Db
XTO Energy
San Juan Basin (NAD 83)
Grassy Canyon #9
Grassy Canyon #9
Grassy Canyon #9
Permitted wellbore - Grassy Canyon #9

Well Grassy Canyon #9
Rig KB @ 6733.0ft (Aztec 507)
Rig KB @ 6733.0ft (Aztec 507)
True
Minimum Curvature

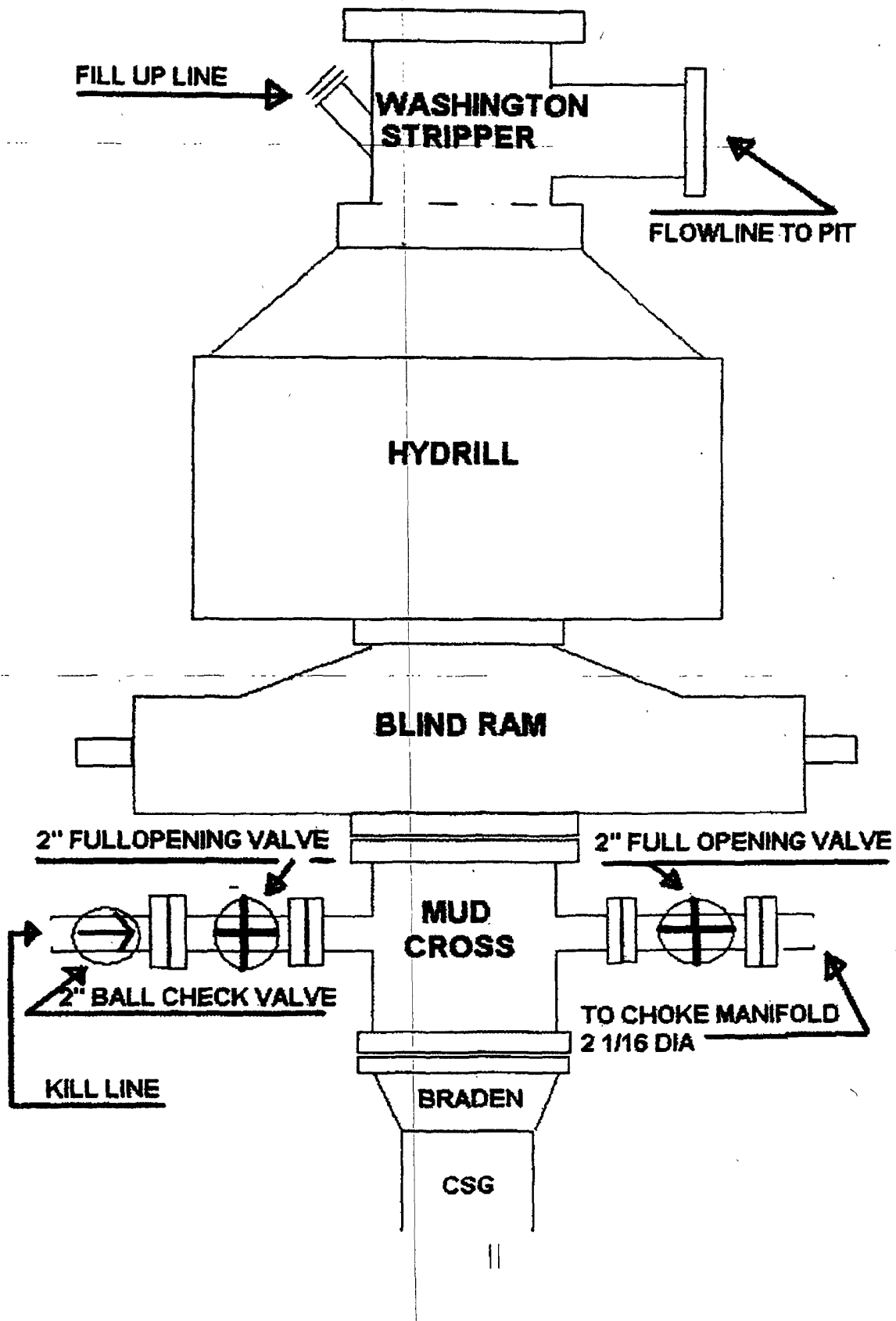
3,795.5	10.00	59.02	3,517.0	603.3	1,004.7	1,171.9	0.00	0.00	0.00
Pictured Cliffs Tongue									
3,800.0	10.00	59.02	3,521.4	603.7	1,005.4	1,172.7	0.00	0.00	0.00
3,877.8	10.00	59.02	3,598.0	610.6	1,016.9	1,186.2	0.00	0.00	0.00
Lower Fruitland Coal									
3,897.1	10.00	59.02	3,617.0	612.3	1,019.8	1,189.5	0.00	0.00	0.00
Pictured Cliffs									
3,900.0	10.00	59.02	3,619.9	612.6	1,020.3	1,190.0	0.00	0.00	0.00
4,000.0	10.00	59.02	3,718.4	621.5	1,035.1	1,207.4	0.00	0.00	0.00
4,100.0	10.00	59.02	3,816.8	630.5	1,050.0	1,224.8	0.00	0.00	0.00
4,133.7	10.00	59.02	3,850.0	633.5	1,055.0	1,230.6	0.00	0.00	0.00

Proposed BHL - Grassy	0.00	0.00	3,850.0	633.5	1,055.0	658,398.47	849,570.04	36° 56' 9.482 N	107° 36' 49.104 W
- plan hits target									
- Rectangle (sides W20.0 H20.0 D0.0)									

225.0	225.0	8 5/8"	8.625	12.250
4,133.7	3,850.0	5 1/2"	5.500	7.875

Depth (ft)	Interval (ft)	Name	Depth (ft)	Interval (ft)
2,647.6	2,409.0	Ojo Alamo SS		0.00
2,768.0	2,518.0	Kirtland Shale		0.00
3,249.2	2,979.0	Fruitland Formation		0.00
3,587.4	3,312.0	Upper Fruitland Coal		0.00
3,661.5	3,385.0	Middle Fruitland Coal		0.00
3,795.5	3,517.0	Pictured Cliffs Tongue		0.00
3,677.8	3,598.0	Lower Fruitland Coal		0.00
3,897.1	3,617.0	Pictured Cliffs		0.00

AWS 507



CHOKE MANIFOLD SCHEMATIC FOR DRILLING OPERATIONS CLASS 1 (2M) NORMAL PRESSURE

1. Stake all lines from choke manifold to pit.
2. Pressure test choke manifold after installation.
3. Pressure test manifold at the same time with the BOP Stack. Test manifold to the same test pressures.

TESTING PROCEDURE

