

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF - 078095
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well Gas <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or tribe Name
2. Name of Operator BP AMERICA PRODUCTION COMPANY		7. If Unit or CA Agreement, Name and No
3a. Address P.O. BOX 3092 HOUSTON, TX 77079-2064	3b. Phone No. (include area code) 281-366-4081	8. Lease Name and Well No. Case A 3M
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface 2130' FSL & 1940' FWL NESW K At proposed prod. Zone 2440' FNL & 1820' FWL SENW F		9. API Well No. 30-045-33410
14. Distance in miles and direction from nearest town or post office* 8.6 MILES NORTH FROM AZTEC, NM		10. Field and Pool, or Exploratory Basin Dakota & Blanco Mesaverde
15. Distance from proposed* Location to nearest Property or lease line, ft. (Also to nearest drig. Ujnit line, if any) 700'	16. No. of Acres in lease 310.22	11. Sec., T., R., M., or Blk. and survey or Area SECTION 5 T31N & R11W K
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1400'	19. Proposed Depth 7658' MD 7585' TVD	12. County or Parish SAN JUAN
21. Elevations (show whether DF, KDB., RT, GL, etc.) 6267' GL	22. Approximate date work will start* 01/25/06	13. State NEW MEXICO
23. Estimated duration 8 DAYS		

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>Cherry Hlava</i>	Name (Printed/typed) Cherry Hlava	Date 10/20/2005
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Title

Regulatory Analyst

Approved by (Signature) <i>[Signature]</i>	Name (Printed/Typed)	Date 11/28/05
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Title

Acting Field Manager - Minerals

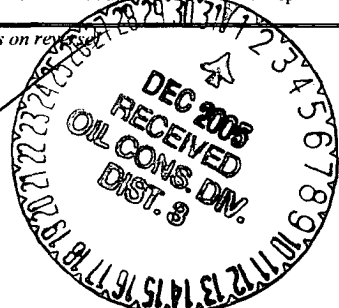
Office

Application approval does not warrant or certify 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 reverse)



HOLD C104 FOR Directional Survey

NMOCD

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

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

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

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-33410	Pool Code 71599; 72319	Pool Name Basin Dakota; Blanco Mesaverde
Property Code 361	Property Name Case A	Well Number # 3M
OGRID No. 778	Operator Name BP AMERICA PRODUCTION COMPANY	Elevation 6267

10 Surface Location

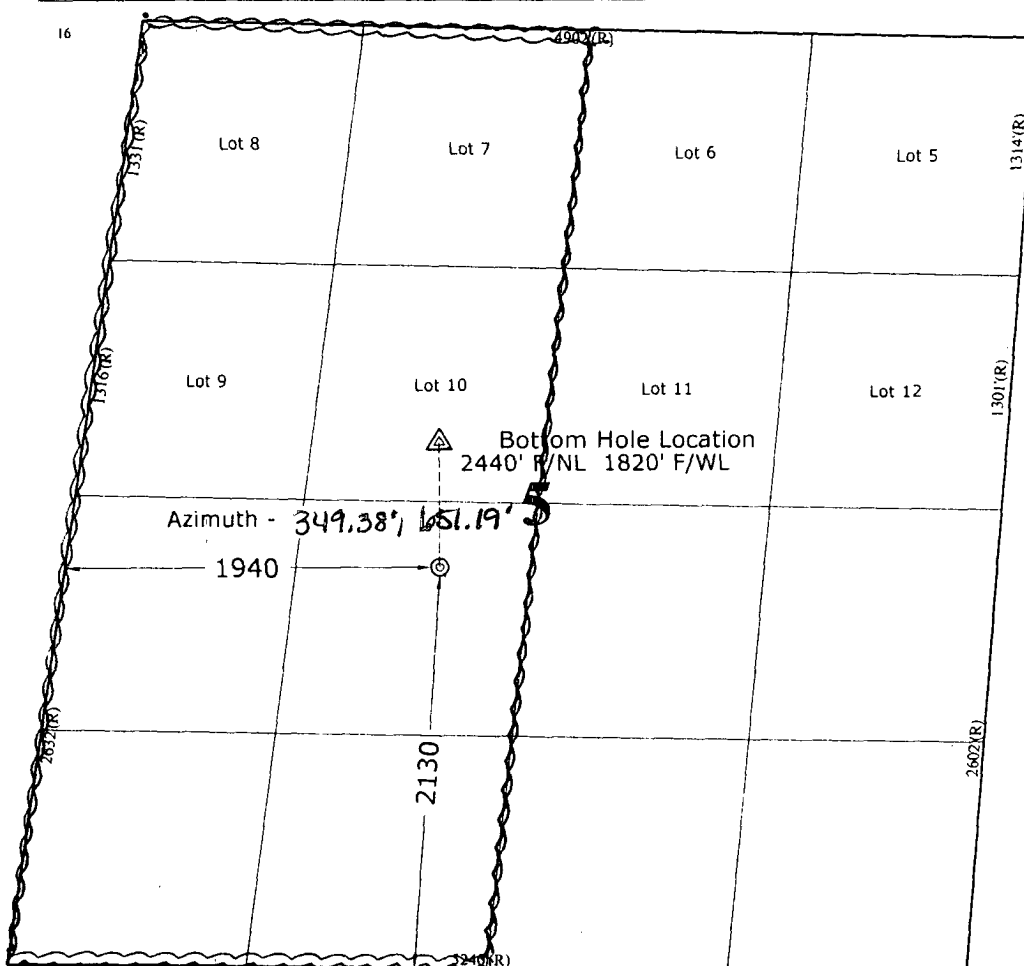
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	5	31 N	11 W		2130	SOUTH	1940	WEST	SAN JUAN

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
F	5	31 N	11 W		2440	NORTH	1820	WEST	SAN JUAN

Dedicated Acres 310.22	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.

Signature
Cherry Hlava
Printed Name
Cherry Hlava
Title
Regulatory Analyst
Date
10-13-05

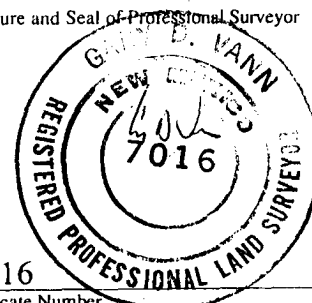
18 SURVEYOR CERTIFICATION

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.

Revised September 23, 2005
August 9, 2005

Date of Survey

Signature and Seal of Professional Surveyor



7016

Certificate Number

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. NEW WELL 30-045-33410
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Case A (APD filed with BLM SF 078095)
8. Well Number 3 M
9. OGRID Number 000778
10. Pool name or Wildcat Basin Dakota & Blanco Mesaverde

Pit or Below-grade Tank Application ☒ or Closure ☐

Pit type DRILLING Depth to Groundwater >100' Distance from nearest fresh water well >1000' Distance from nearest surface water >1000'

Pit Liner Thickness: 12 mil Below-Grade Tank: Volume bbls; Construction Material

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other ☐

2. Name of Operator
BP AMERICA PRODUCTION COMPANY

3. Address of Operator
P.O. BOX 3092 HOUSTON, TX 77079-2064

4. Well Location
Unit Letter K : 2130 feet from the South line and 1940 feet from the West line
Section 5 Township 31N Range 11W NMPM SAN JUAN County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
6267'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: LINED DRILLING PIT ☒

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Construct a lined drilling pit per BP America – San Juan Basin Drilling/ Workover Pit Construction Plan issued date of 11/17/2004. Pit will be closed according to closure plan on file.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☒, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Cherry Hlava TITLE Regulatory Analyst DATE 10/31/2005

Type or print name Cherry Hlava E-mail address: hlavac1@bp.com Telephone No. 281-366-4081

For State Use Only

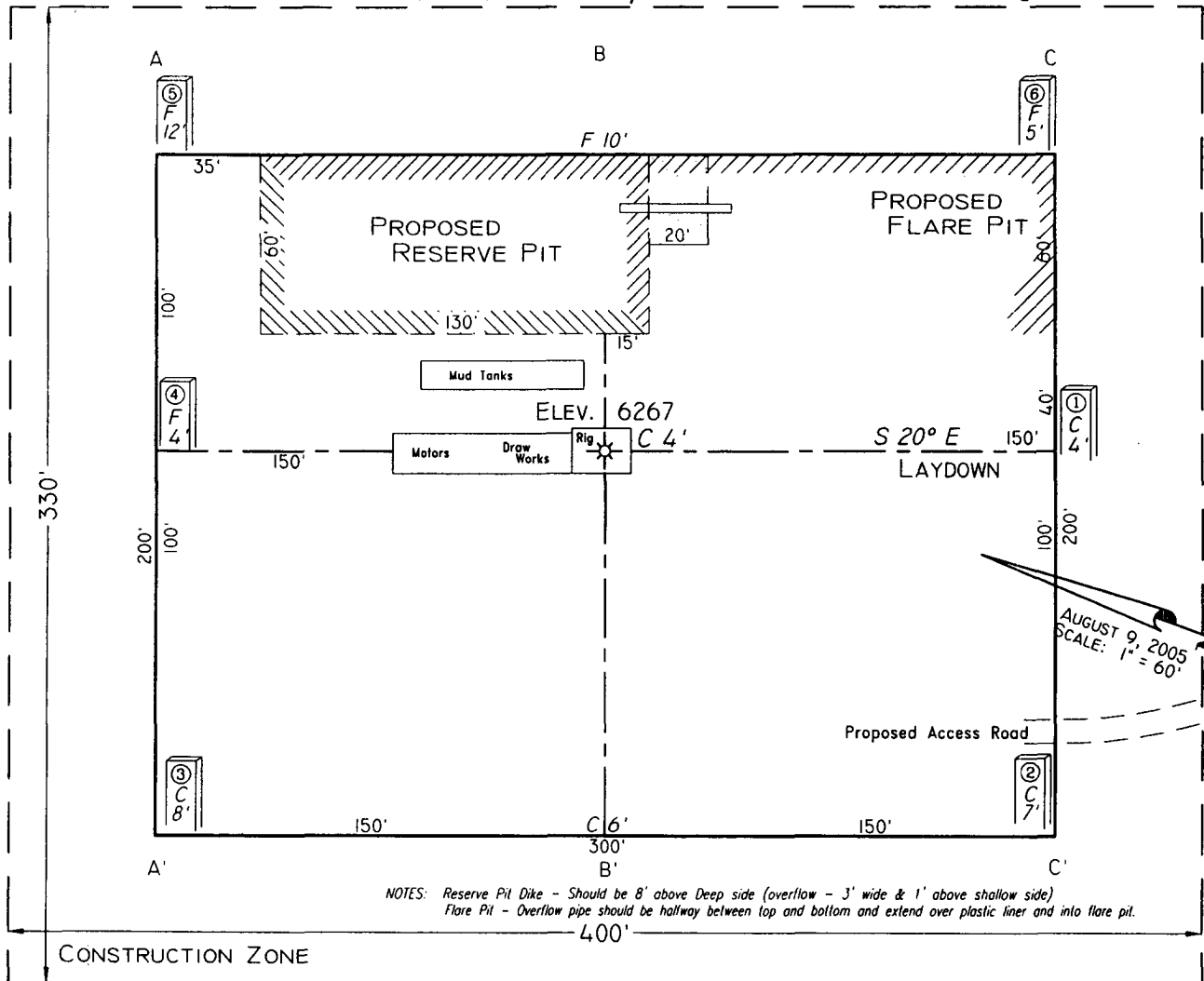
APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR, DIST. III

Conditions of Approval (if any):

DATE DEC 01 2005

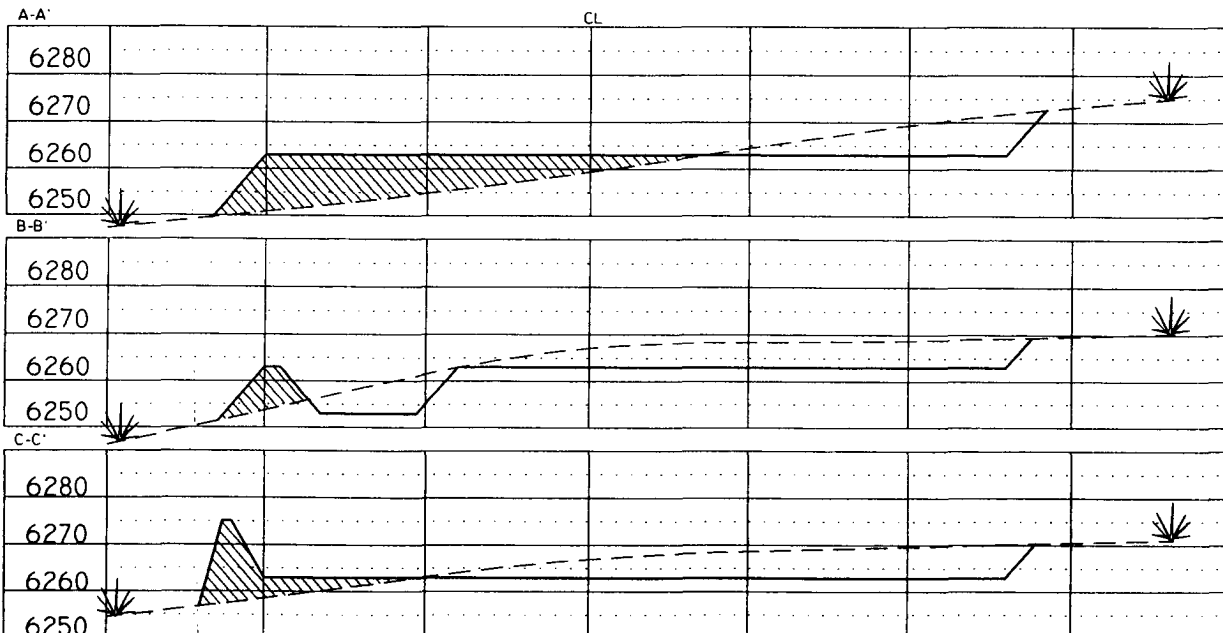
PAD LAYOUT PLAN & PROFILE
BP AMERICA PRODUCTION COMPANY
 Case A # 3M
 2130' F/SL 1940' F/WL
 SEC. 5, T31N, R11W, N.M.P.M.
 SAN JUAN COUNTY, NEW MEXICO

Lat: 36.9258°
 Long: 108.0150°
 Lat: 36°55'33"
 Long: 108°00'54"



Area of Construction Zone - 330'x400' or 3.03 acres, more or less.

SCALE: 1"=60'-HORIZ.
 1"=40'-VERT.



NOTE: Contractor should call One-Call for location of any marked or unmarked buried pipelines or cables on well pad and/or access road at least two (2) working days prior to construction.

Cuts and fills shown are approximate - final finished elevation is to be adjusted so earthwork will balance. Corner stakes are approximate and do not include additional areas needed for sideslopes and drainages. Final Pad Dimensions are to be verified by Contractor.

VANN SURVEYS
 P. O. Box 1306
 Farmington, NM

BP AMERICA PRODUCTION COMPANY

DRILLING AND COMPLETION PROGRAM

9/27/2005

Lease:	Case A	Well Name & No.	Case A #3M	Field:	Blanco Mesaverde/Basin Dakota
County:	San Juan, New Mexico	Surface Location:	5-31N-11W: 2130' FSL, 1940' FWL		
Minerals:	State	Surface:	Lat: 36.9258213 deg; Long: -108.0142858 deg		
Rig :	Aztec 184	BH Location:	5-31N-11W: 2440' FNL, 1820' FWL; Lat: 36.9275724 deg; Long: -108.0144026 deg		
OBJECTIVE:	Drill 250' below the top of the Two Wells Mbr, set 4-1/2" production casing, Stimulate DK, MF, and PL intervals.				

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER				
TYPE OF TOOLS	DEPTH OF DRILLING	Actual GL:	6267	Estimated KB:	6,281.0'	
Rotary	0 - TD	Marker		SUBSEA	TVD	APPROX. MD

LOG PROGRAM		Ojo Alamo		4,524'	1,757'	1,792'
Type	Depth Interval	Kirtland		4,453'	1,828'	1,865'
Single Run		Fruitland	*	3,996'	2,285'	2,337'
		Fruitland Coal	*	3,732'	2,549'	2,609'
		Pictured Cliffs	*	3,319'	2,962'	3,031'
		Lewis	*	3,082'	3,199'	3,271'
		Cliff House	#	1,869'	4,412'	4,485'
Cased Hole	TD to 7" shoe	Menefee	#	1,549'	4,732'	4,805'
RST- CBL		Point Lookout	#	1,096'	5,185'	5,258'
		Identify 4 1/2" cement top				

REMARKS:	Mancos		789'	5,492'	5,565'
This is an unconventional location, with a surface location in the SW/4 and BHL in the NW/4. BHL should be no further east than the footage requested (1820 FWL). See attached map.	Greenhorn		-946'	7,227'	7,300'
	Graneros (bent,mkr)		-998'	7,279'	7,352'
	Two Wells	#	-1,054'	7,335'	7,408'
	Paguate	#	-1,140'	7,421'	7,494'
	Cubero	#	-1,167'	7,448'	7,521'
The recommended TD is intended to penetrate the uppermost BRCN (~10') so that the entire ENCN can be produced. Offsetting wells encountered no water flow at this depth. See attached cross-section.	L. Cubero	#	-1,189'	7,470'	7,543'
	Encinal Cyn	#	-1,216'	7,497'	7,570'
- In this area the Cliffhouse member of the Mesa Verde Fm can be wet.	TOTAL DEPTH:		-1,304'	7,585'	7,658'
	# Probable completion interval			* Possible Pay	

SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE		FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		30'/10' intervals	3,371' to TD	Geolograph	0 - TD
REMARKS:					

MUD PROGRAM:					
Interval	TypeMud	#/gal	Vis, sec/qt	/30 min	Other Specification
200'	Spud	8.8 - 9.0	Sufficient to clean hole.		
3,371'	Water/LSND	8.4 - 9.0		<9	Sweep hole while whilst water drilling, LCM onsite
7,658'	Air	1	1000 cfm for hammer		Volume sufficient to maintain a stable and clean wellbore

CASING PROGRAM:							
CasingString	Depth	Size	Casing Size	Grade, Thread	Weight	Landing Point	Cement
Surface/Conductor	200'	13 1/2"	9-5/8"	H-40 ST&C	32#		cmt to surface
Intermediate 1	3,371'	8-3/4"	7"	J/K-55 ST&C	20#	100' below LWIS	cmt to surface
Production	7,658'	6-1/4"	4-1/2"	P-110	11.6#	DKOT	150' inside Intermediate - TOC survey required

CORING PROGRAM:	None
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COMPLETION PROGRAM:	Rigless, 2-3 Stage Limited Entry Hydraulic Frac, FMC Unihead
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GENERAL REMARKS:	Notify BLM/NMOCDD 24 hours prior to Spud, BOP testing, and Casing and Cementing.
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BOP Pressure Testing Requirements			
Formation	Depth	Anticipated bottom hole pressure	Max anticipated surface pressure**
Cliffhouse	4,412'	500	0
Point Lookout	5,185'	600	0
Dakota	7,335'	2600	986.3

Requested BOP Pressure Test Exception = 1500 psi	** Note: Determined using the following formula: ABHP - (.22*TVD) = ASP
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Form 46 Reviewed by:	Logging program reviewed by:	DATE:	APPROVED:	DATE:
HGJ	JMP	27-Sep-05		
Form 46 7-84bw	For Drilling Dept.		For Production Dept.	

Cementing Program

Well Name: Case A #3M
 Location: 5-31N-11W: 2130' FSL, 1940' FWL
 County: San Juan
 State: New Mexico

Well Flac
 Formation: Blanco Mesaverde/Basin Dakota
 KB Elev (est) 6281
 GL Elev. (est) 6267

Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)	Cmt Cir. Out (bbl.)
Surface	200	13.5	9.625	ST&C	Surface	NA	
Intermediate	3371	8.75	7	LT&C	Surface	NA	
Production -	7658	6.25	4.5	ST&C	3271	NA	

Casing Properties:

(No Safety Factor Included)								
Casing String	Size (in.)	Weight (lb/ft)	Grade	Burst (psi.)	Collapse (psi.)	Joint St. (1000 lbs.)	Capacity (bbl/ft.)	Drift (in.)
Surface	9.625	32	H-40	2270	1400	254	0.0787	8.845
Intermediate	7	20	K-55	3740	2270	234	0.0405	6.456
Production -	4.5	11.6	J-55	5350	4960	154	0.0155	3.875

Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight	<u>Recommended Mud Properties Prio Cementing:</u>	
			PV	<20
			YP	<10
			Fluid Loss:	<15
0 - SCP	Water/Spud	8.6-9.2		
SCP - ICP	Water/LSND	8.6-9.2		
ICP - ICP2	Gas/Air Mist	NA		
ICP2 - TD	LSND	8.6 - 9.2		

Cementing Program:

	Surface	Intermediate	Production
Excess %, Lead	100	75	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	75	120	183
Special Instructions	1,6,7	1,6,8	2,4,6

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 production cement job to minimize drillout.

Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	154 sx Class C Cement		195 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		

0.4887 cuft/ft OH

Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)
Slurry 1	15.2	1.27	5.8

Casing Equipment:	9-5/8", 8R, ST&C
	1 Guide Shoe
	1 Top Wooden Plug
	1 Autofill insert float valve
	Centralizers, 1 per joint except top joint
	1 Stop Ring
	1 Thread Lock Compound

**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 single 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

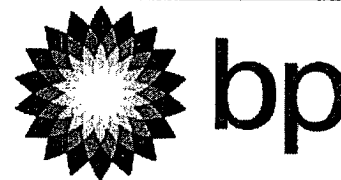
BOP Equipment

Below conductor casing to total depth 11" nominal or 7 1/16", 2000 psi Single ram preventer with 3000 psi annular preventer and rotating head. All ram type and annular preventers as well as related control equipment will be hydraulically tested to 250 psi (low pressure) and 1500 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.



Scientific Drilling
Directional Drilling Operations

Field: SAN JUAN, New Mexico
Site: SEC 5-T31N-R11W
Well: Case A #3M
Wellpath: OH
Plan: Plan #2



SECTION DETAILS

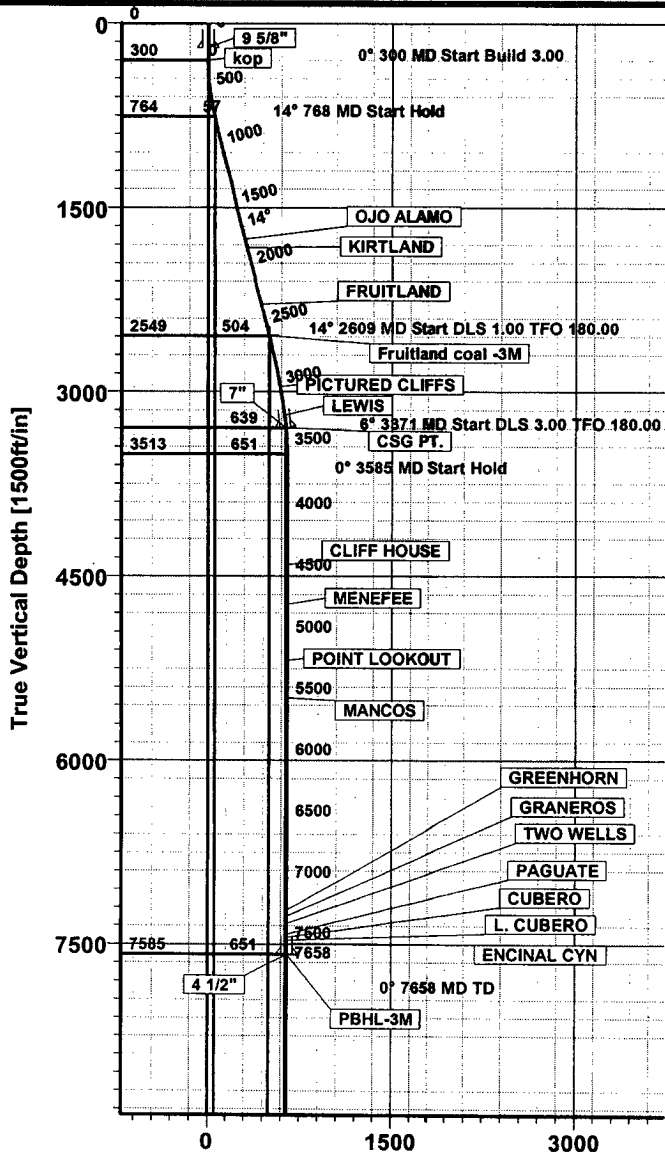
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
3	768.23	14.05	349.38	763.55	56.13	-10.52	3.00	349.38	57.11	
4	2608.71	14.05	349.38	2549.00	495.19	-92.85	0.00	0.00	503.82	Fruitland coal -3M
5	3371.40	6.42	349.38	3299.00	628.27	-117.80	1.00	180.00	639.22	CSG PT.
6	3585.39	0.00	0.00	3512.55	640.04	-120.01	3.00	180.00	651.19	
7	7657.84	0.00	0.00	7585.00	640.04	-120.01	0.00	0.00	651.19	PBHL-3M

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Fruitland coal -3M	2549.00	495.19	-92.85	2156876.45	2670308.89	Point
CSG PT.	3299.00	628.27	-117.80	2157009.52	2670283.94	Point
PBHL-3M	7585.00	640.00	-120.00	2157021.25	2670281.74	Circle (Radius: 100)

WELL DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
Case A #3M	-1459.19	1125.00	2156381.30	2670401.73	36°55'32.960N	108°00'49.019W	N/A

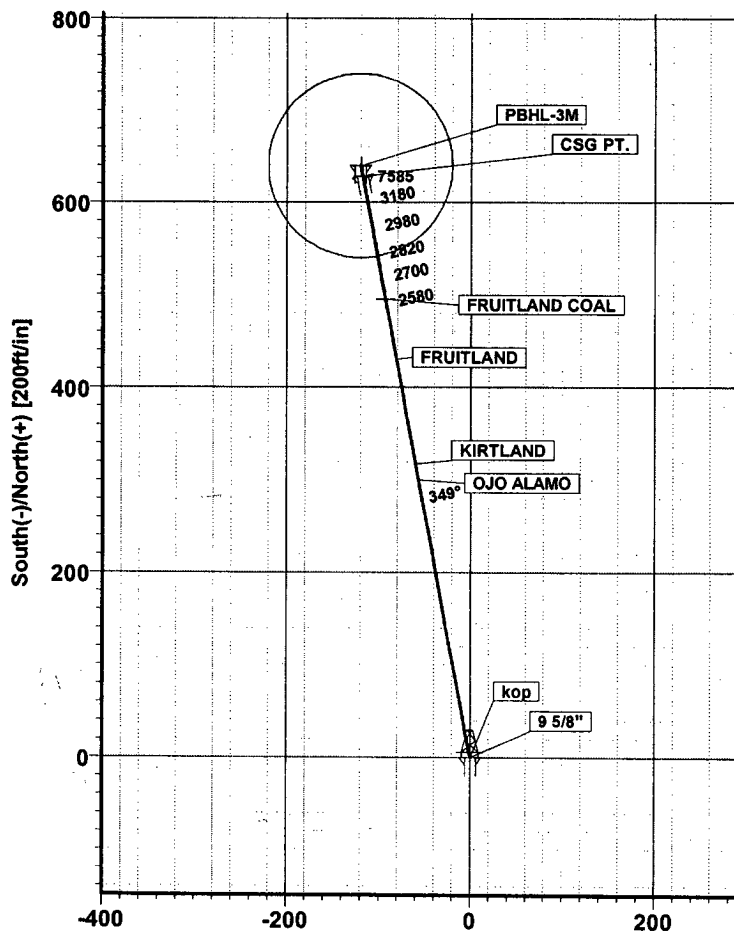


Vertical Section at 349.38° [1500ft/in]

SITE DETAILS

SEC 5-T31N-R11W
SAN JUAN NEW MEXICO

Ground Level: 6538.00
Positional Uncertainty: 0.00
Convergence: -0.11



West(-)/East(+) [200ft/in]