Form 3160-3
(August 1999)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMSF - 078319-A

6. If Indian, Allottee or Tribe Name

1a. Type of Work: ☒ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No.

1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
RIDDLE C LS 3B

2. Name of Operator
BP AMERICA PRODUCTION COMPANY
Contact: MARY CORLEY
E-Mail: corleym@bp.com

9. API Well No.
30 045 31084

3a. Address
P.O. BOX 3092
HOUSTON, TX 77253

3b. Phone No. (include area code)
Ph: 281.366.4491
Fx: 281.366.0700

10. Field and Pool, or Exploratory
BLANCO MESAVERDE

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface NESW Lot 7 2180FSL 1425FWL 36.00000 N Lat, 107.00000 W Lon

At proposed prod. zone NESW Lot 8 1600FSL 860FWL 36.00000 N Lat, 107.00000 W Lon

11. Sec., T., R., M., or Blk. and Survey or Area
Sec 29 T31N R9W Mer NMP

14. Distance in miles and direction from nearest town or post office*
19 MILES NE FROM AZTEC

12. County or Parish
SAN JUAN

13. State
NM

15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
1425' FNL

16. No. of Acres in Lease
316.58

17. Spacing Unit dedicated to this well
316.58 W/2

18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.

19. Proposed Depth
5848 MD

20. BLM/BIA Bond No. on file
WY2924

21. Elevations (Show whether DF, KB, RT, GL, etc.
6308 GL

22. Approximate date work will start
06/01/2002

23. Estimated duration
7 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.
2. A Drilling Plan.
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).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature	Name (Printed/Typed)	Date
(Electronic Submission)	MARY CORLEY	04/25/2002

Title
AUTHORIZED REPRESENTATIVE

Approved by (Signature)	Name (Printed/Typed)	Date
FFO - CB		7-15-02
Title	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.

Additional Operator Remarks (see next page)

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

Electronic Submission #11097 verified by the BLM Well Information System
BP AMERICA PRODUCTION COMPANY, sent to the Farmington

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

RECEIVED
2002 MAY 29 AM 9:11
070 FARMINGTON NM

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

HOLD C104 FOR Directional Survey

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

1 API Number	2 Pool Code	3 Pool Name
30-045-31084	72319	BLANCO MESAVERDE

4 Property Code	5 Property Name	6 Well Number
000976	RIDDLE C LS	# 3B

7 OGRID No.	8 Operator Name	9 Elevation
000778	BP AMERICA ~~AMOCO~~ PRODUCTION COMPANY	6308

10 Surface Location

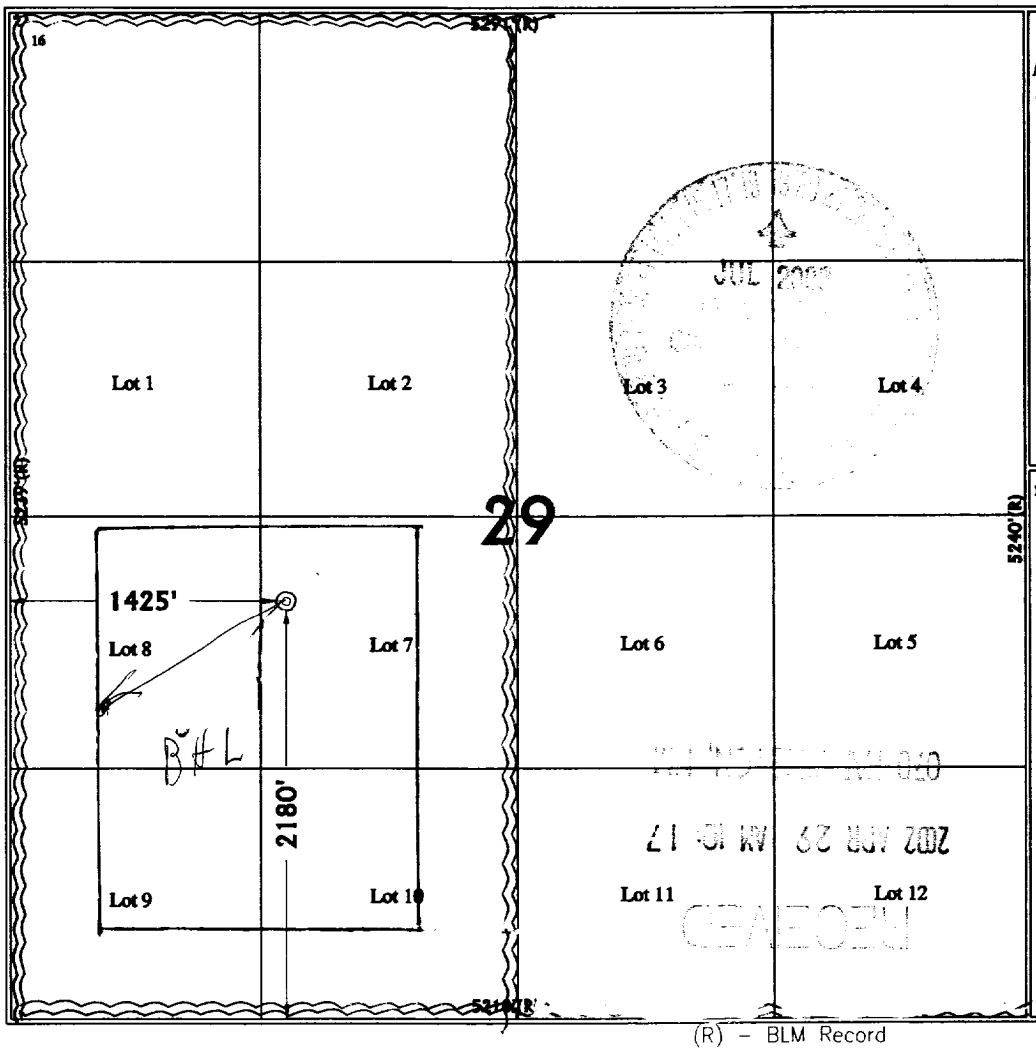
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K (Lot 7)	29	31 N	9 W		2180	SOUTH	1425	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

7 UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L (Lot 8					1600	South	660	West	

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
316.58			

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: Mary Corley

Printed Name: Mary Corley

Title: Sr. Regulatory Analyst

Date: 04.25.2002

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.

October 6, 1998

Date of Survey

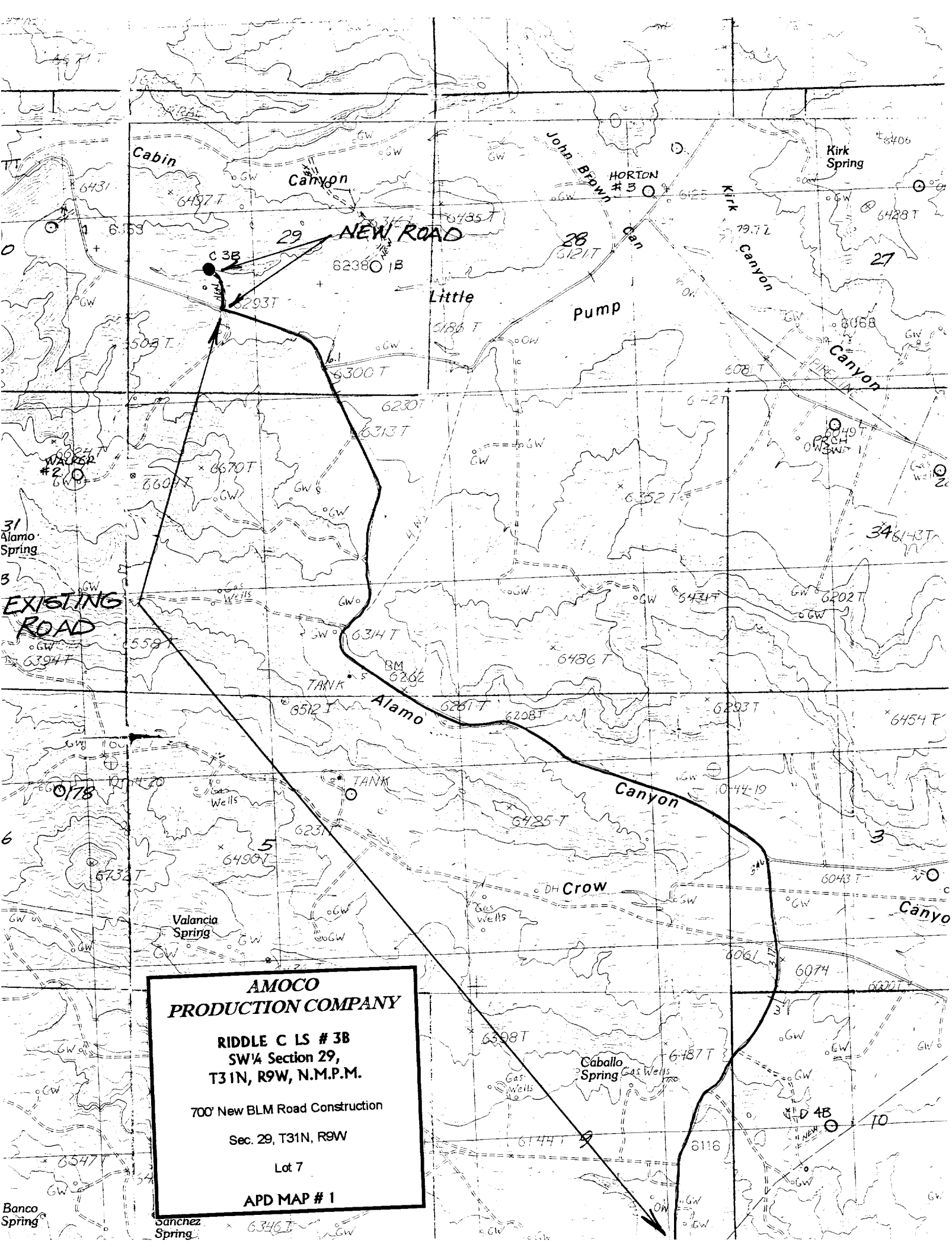
Signature and Seal of Professional Surveyor

GARY L. JONES — NEW MEXICO — 7016 — REGISTERED PROFESSIONAL LAND SURVEYOR

7016

Certificate Number

(R) – BLM Record


Cabin
Canyon
NEW ROAD
C 3B
6238
1B
Little
Pump
John Brown
HORTON #3
Kirk
Kirk Canyon
Kirk Spring
Can
Canyon
WALKER #2
Alamo Spring
EXISTING ROAD
Gas Wells
TANK
BM 6262
Alamo
Canyon
Crow
Valencia Spring
Caballo Spring
Banco Spring
Sanchez Spring
AMOCO PRODUCTION COMPANY
RIDDLE C LS # 3B
SW¼ Section 29,
T31N, R9W, N.M.P.M.
700' New BLM Road Construction
Sec. 29, T31N, R9W
Lot 7
APD MAP # 1

BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name:	Riddle C LS	**Well No:**	3B
Lease:	Riddle C LS	**Surface Location:**	29-31N-9W, 2180 FSL x1425 FWL
County:	San Juan	**Field:**	Blanco Mesaverde
State:	New Mexico	**Bottom Location:**	29-31N-9W, 1600 FSL x 860 FWL
Date:	April 25, 2002		

OBJECTIVE: Drill 50' below the base of the Mancos Shale, set 41/2" production liner, Stimulate LS, CH, MF and PL intervals

METHOD OF DRILLING

TYPE OF TOOLS	DEPTH OF DRILLING
Rotary	0 - TD

LOG PROGRAM

TYPE	DEPTH INVERAL
OPEN HOLE	
None	
CASED HOLE	
GR-CCL-TDT	TDT – TD to 7" shoe
CBL	Identify 4 ½" cement top

REMARKS:
- Please report any flares (magnitude & duration).

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 6308 Estimated KB: 6322

MARKER		TVD	MEASURED
Ojo Alamo		1687	1745
Kirkland		1837	1904
Fruitland		2570	2682
Fruitland Coal	*	2769	2892
Pictured Cliffs	*	3121	3248
Lewis Shale	#	3297	3424
Cliff House	#	4776	4903
Menefee Shale	#	4965	5092
Point Lookout	#	5321	5448
Mancos		5671	5798
TOTAL DEPTH		5721	5848

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES

FREQUENCY	DEPTH
none	Production hole

DRILLING TIME

FREQUENCY	DEPTH
Geograph	0-TD

MUD PROGRAM:

Approx. Interval			Type Mud	Weight, #/ga	Vis, sec/qt	W/L cc's/30 min	Other Specification
0	- 120		Spud	8.6-9.2			
120	- 2840	(1)	Water/LSND	8.6-9.2		<6	
2840	- 5848		Gas/Air/N2/Mist	Volume sufficient to maintain a stable and clean wellbore			

REMARKS:
(1) The hole will require sweeps to keep unloaded while fresh water drilling. Let hole conditions dictate frequency.

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	9 5/8"	H-40 ST&C	32#	12.25"	1
Intermediate	2840	7"	J/K-55 ST&C	20#	8.75"	1,2
Production Liner	5848	4 1/2"	J-55	10.5#	6.25"	3,4

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 50' above Fruitland Coal
(3) Bring cement 100' above 7" shoe
(4) 100' Overlap

CORING PROGRAM:
None

COMPLETION PROGRAM:
Rigless, 2-3 Stage Limited Entry Hydraulic Frac

GENERAL REMARKS:
Notify BLM/NMOCD 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:	
HGJ/MNP		18th April 2002 Version 1.0	

Form 46 12-00 MNP

Cementing Program

Well Name:	Riddle C LS 3B	Field:	Blanco Mesaverde / Basin Dakota
Location:	29-31N-9W, 2180 FSL, 1425 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	MesaVerde
		KB Elev (est)	6322
		GL Elev. (est)	6308

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	120	12.25	9.625	ST&C	Surface	NA	
Intermediate	2840	8.75	7	LT&C	Surface	NA	
Production -	5848	6.25	4.5		2740	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	3370	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
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

Recommended Mud Properties Prio Cementing:

PV	<20
YP	<10
Fluid Los	<15

Cementing Program:

	Surface	Intermediate	Production
Excess %, Lead	100	100	40
Excess %, Tail	NA	0	40
BHST (est deg. F)	72	110	159
Time Between Stages, (hr)	NA	NA	NA
Special Instructions	1,6	1,6	2,6

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 minmize drillout.

Surface:

Preflush	20 bbl.	FreshWater	
Slurry 1	70 sx Class G Cement		75 cuft
TOC@Surface	+ 2% CaCl2 (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.3132 cuft/ft OH
	0.1% D46 antifoam		100 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

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

Cementing Program

1 Stop Ring
1 Thread Lock Compound

Intermediate:

	Fresh Water	20 bbl	fresh water	
	Lead	270 sx	Class "G" Cement	688 cuft
	Slurry 1		+ 3% D79 extender	
	TOC@Surface		+1/4 #/sk. Cellophane Flake	
			+ 0.1% D46 antifoam'	
		60 sx	50/50 Class "G"/Poz	
	Tail		+ 2% gel (extender)	75 cuft
	Slurry 2		0.1% D46 antifoam	
	500 ft fill		+1/4 #/sk. Cellophane Flake	0.1503 cuft/ft OH
			+ 2% S1 Calcium Chloride	0.1746 cuft/ft csg ann
				80 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.7	2.61	17.77
Slurry 2	13.5	1.27	5.72

Casing Equipment: 7", 8R, ST&C

1 Float Shoe
1 Float Collar
1 Stop Ring
Centralizers, one every other joint to base of Ojo
2 Turbolizers across Ojo
Centalizers, one every 4th joint from Ojo to base of surface casing
1 Top Rubber Plug
1 Thread Lock Compound

Production:

	Fresh Water	10 bbl	CW100	
	Slurry	180	LiteCrete D961 / D124 / D154	
			+ 0.03 gps D47 antifoam	448 cuft
			+ 0.5% D112 fluid loss	
	TOC@Liner Top		+ 0.11% D65 TIC	
				0.1026 cuft/ft OH
				40 % excess
				0.1169 cuft/ft csg ann

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry	9.5	2.52	6.38

Casing Equipment: 4-1/2", 8R, ST&C
1 Float Shoe (autofill with minimal LCM in mud)
1 Float Collar (autofill with minimal LCM in mud)
1 Stop Ring
Centralizers, every 4th joint in mud drilled holes, none in air drilled holes
1 Top Rubber Plug
1 Thread Lock Compound

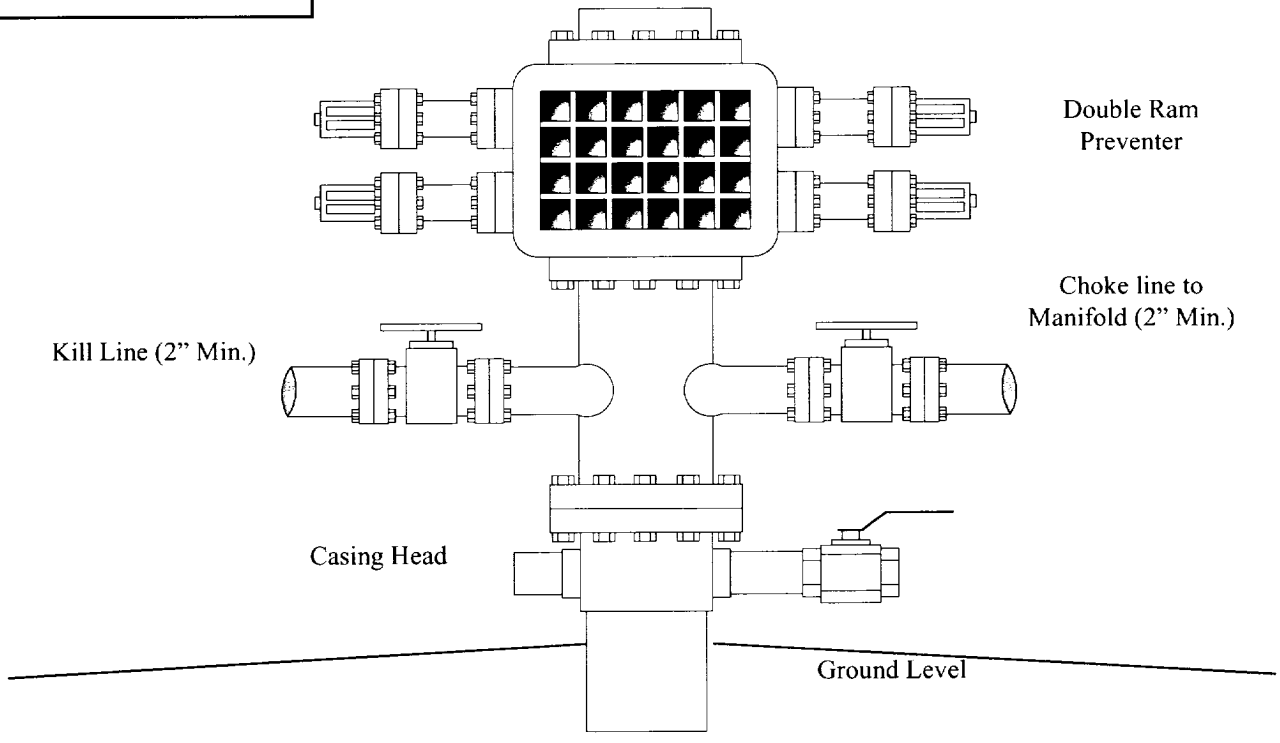
BP American Production Company

Well Control Equipment Schematic

Riddle C LS 3B

Se/4
Sec. 14, T29N, R13W, NMPM
San Juan, New Mexico

BOP Stack



Choke & Kill Manifold