Form 3160-3
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER	5. Lease Serial No. NMSF - 079511-A
	6. If Indian, Allottee or Tribe Name
	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. ARCHULETA 1C
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: MARY CORLEY E-Mail: corleyml@bp.com	9. API Well No. 30045 32317
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 NENW Lot C 355FNL 960FWL 36.48200 N Lat, 107.43200 W Lon At proposed prod. zone	11. Sec., T., R., M., or Blk. and Survey or Area C Sec 19 T30N R8W Mer NMP SME: BLM
14. Distance in miles and direction from nearest town or post office* 12 MILES FROM AZTEC, NEW MEXICO	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) 355 — 16. No. of Acres in Lease 342.54	17. Spacing Unit dedicated to this well 342.54 R-120 unit #3
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 1904 — 19. Proposed Depth 5623 MD	20. BLM/BIA Bond No. on file WY2924
21. Elevations (Show whether DF, KB, RT, GL, etc. 6272 GL — 22. Approximate date work will start 06/01/2004	23. Estimated duration 5 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	04/22/2004

Title: AUTHORIZED REPRESENTATIVE

Approved by (Signature)	Name (Printed/Typed)	Date
Jim Lovato		6/21/04
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. Non standard Location will be required, Approved

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)

Electronic Submission #29879 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington

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

HOLD C104 FOR NSL

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

NMOCD

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
30-045-32317	72319	BLANCO MESAVERDE

4 Property Code	5 Property Name	6 Well Number
000268	Archuleta	#1C

7 OGRID No.	8 Operator Name	9 Elevation
000778	BP AMERICA PRODUCTION COMPANY	6272

10 Surface Location

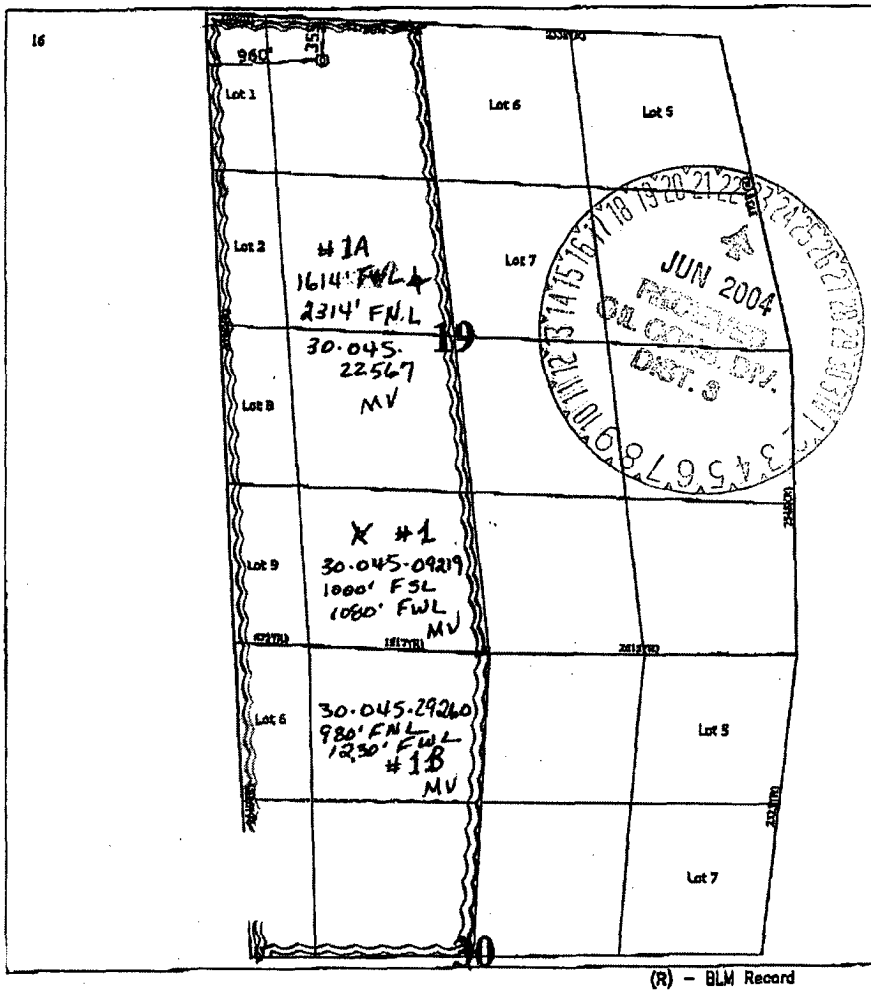
UL or Lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	19	30 N	8 W		355	NORTH	960	WEST	SAN JUAN

11 Bottom Hole Location If Different From Surface

1 UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
342.54			R-120 unit #3

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



(R) – BLM Record

17 OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Mary Corley
Signature

Mary Corley
Printed Name

Sr Regulatory Analyst
Title

04.22.2004
Date

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 15, 2003
Date of Survey

Signature & Seal of Professional Surveyor

GARY D. VANN
NEW MEXICO
7016
REGISTERED PROFESSIONAL LAND SURVEYOR

7016
Certificate Number

Additional Operator Remarks:

1C

Notice of Staking was submitted on 11/24/2003.

BP America Production Company respectfully request permission to drill the subject well to a total depth of approximately 5623' and complete in the Blanco Mesaverde Pool.

As an alternate to the drilling of the surface hole with drilling mud as stated on the attached Form 46, BP request permission to either drill with drilling mud or with air/air mist. Additionally, BP request as a possible alternate to the cementing of the surface casing to be either the cementing program stated on the cementing report or with approximately 94 CU/FT TYPE I-II, 20% FLYASH, 14.5 PPG, 7.41 GAL/SK, 1.61 CF/SK YIELD, 80 DEG BHST READY MIX CMT.

SUPPLEMENTAL TO SURFACE USE PLAN

New facilities:

A 4 1/2" diameter buried steel pipeline that is + or 150 feet in length will be constructed. The pipe wall thickness is .156 and the pipe wall strength is 42,000. It will be adjacent to the access road and tie the well into an Archuleta #2 well meter operated by BP America Production Company. The pipeline will not be used to transport gas to drill the well. After the well is spud the pipeline will be authorized by a right-of-way issued to El Paso Field Services, refer to the attached survey plat.

BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM

Prospect Name: Archuleta
Lease: Archuleta
County: San Juan
State: New Mexico
Date: April 20, 2004

Well No: 1 C
Surface Location: 19-30N-8W, 355 FNL, 960 FWL

Field: Blanco Mesaverde

OBJECTIVE: Drill 400' below the top of the Point Lookout Sandstone, set 2 7/8" production long string, Stimulate 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-CBL	TD to 5 1/2" shoe

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

APPROXIMATE DEPTHS OF GEOLOGICAL MARKER

Estimated GL: 6278' Estimated KB: 6289'

MARKER		SUBSEA	TVD
Ojo Alamo		4375	1917
Kirtland		4296	1996
Fruitland		3744	2548
Fruitland Coal	*	3581	2711
Pictured Cliffs	*	3279	3013
Lewis	*	3006	3286
Cliff House	#	1748	4544
Menefee	#	1417	4875
Point Lookout	#	1069	5223
Mancos		681	5611
TOTAL DEPTH		669	5623

Probable completion interval * Possible Pay

SPECIAL TESTS

TYPE
None

REMARKS:

DRILL CUTTING SAMPLES

FREQUENCY	DEPTH
None	Production hole

DRILLING TIME

FREQUENCY	DEPTH
Geolograph	0-TD

MUD PROGRAM:

Approx. Interval			Type Mud	Weight, #/gal	Vis, sec/qt	W/L cc's/30 min	Other Specification
0	- 120		Spud	8.6-9.2			
120	- 2661	(1)	Water/LSND	8.6-9.2		<6	
2661	- 5623		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	8 5/8"	X-42 ST&C	20#	12.25"	1
Intermediate 1	2661	5 1/2"	J-55 ST&C	15.5#	7.875"	1,2
Production	5623	2 7/8"	J-55	6.5#	4.75"	3,4

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 50' above Fruitland Coal
(3) Bring cement 100' above 5 1/2" 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/JMP		April 20, 2004 Version 2.0	

Form 46 12-00 MNP

BP America Production Company
BOP Pressure Testing Requirements

Well Name: Archuleta 1 C
County: San Juan **State:** New Mexico

Formation	Estimated TVD/MD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1917		
Fruitland Coal	2711		
PC	3013		
Lewis Shale	3286		
Cliff House	4544	500	0
Menefee Shale	4876		
Point Lookout	5223	600	0
Mancos	5611		
Dakota	-	2600	1374

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

Requested BOP Pressure Test Exception: 750 psi

SAN JUAN BASIN
Mesaverde Formation
Pressure Control Equipment

Background

The objective Mesaverde 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 rigs 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 Mesaverde. No abnormal temperature, pressure, or H2S anticipated.

Equipment Specification

Interval	BOP Equipment
Below conductor casing to total depth	9", 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 750 psi (high pressure), upon installation, following any repairs or equipment replacements, or at 30 day intervals. Accessories to BOP equipment will include kelly cock with a handle available, floor safety valves and choke manifold which will also be tested to equivalent pressure.

Cementing Program

Well Name:	Archuleta 1C	Field:	Blanco Mesaverde
Location:	19-30N-08W, 355 FNL, 960 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	MesaVerde
		KB Elev (est)	6289
		GL Elev. (est)	6278

Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)
Surface	120	12 1/4	8 5/8	ST&C	Surface	NA
Intermediate	2661	7 7/8	5 1/2	ST&C	Surface	NA
Production -	5623	4 3/4	2 7/8		2561	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	8 5/8	24	X42	2950	1370	244	0.06368	7.972
Intermediate	5 1/2	15.5	J55	4810	4040	202	0.0238	5.067
Production -	2 7/8	6.5	J-55	7264	7676	72	0.00579	2.375

Mud Program

Apx. Interval (ft.)	Mud Type	Mud Weight	Recommended Mud Properties Prio Cementing:
0 - SCP	Water/Spud	8.6-9.2	Fluid Loss <6
SCP - ICP	Water/LSND	8.6-9.2	
ICP - TD	Gas/Air Mist	NA	

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.

Surface:

	Preflush	20 bbl.	FreshWater
	Slurry 1	80 sx Class C Cement	102 ~~99~~ cuft
	TOC@Surface	+ 2% CaCl2 (accelerator)	0.413 cuft/ft OH
			100 % excess

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	15.2	1.27	5.8

Intermediate:

	Fresh Water	20 bbl	fresh water

Cementing Program

				757
Lead		290 sx Class "G" Cement		~~732~~ cuft
Slurry 1		+ 3% D79 extender		
TOC@Surface		+1/4 #/sk. Cellophane Flake		
		+ 0.1% D46 antifoam'		
		70 sx 50/50 Class "G"/Poz		89
Tail		+ 2% gel (extender)		~~87~~ cuft
Slurry 2		0.1% D46 antifoam		
	500 ft fill	+1/4 #/sk. Cellophane Flake		0.1733 cuft/ft OH
		+ 2% S1 Calcium Chloride		0.2009 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

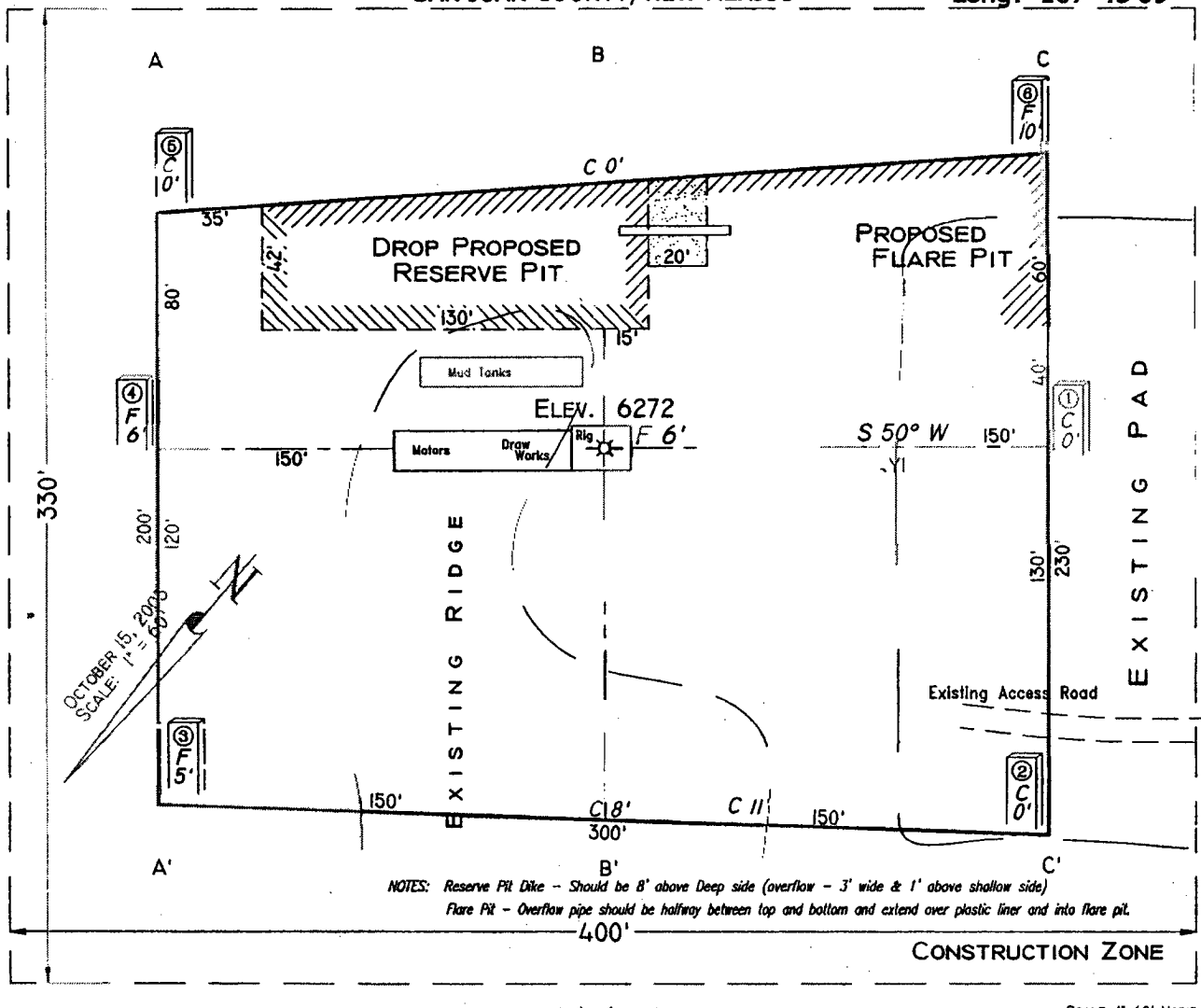
Production:

	Fresh Water	10 bbl	CW100	
				353
	Slurry		140 LiteCrete D961 / D124 / D154	~~336~~ cuft
			+ 0.03 gps D47 antifoam	
			+ 0.5% D112 fluid loss	
	TOC@Liner Top		+ 0.11% D65 TIC	
				0.078 cuft/ft OH
				40 % excess
				0.0886 cuft/ft csg ann

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

PAD LAYOUT PLAN & PROFILE
BP AMERICA PRODUCTION COMPANY
Archuleta # 1C
450' ~~355'~~ F/NL ~~960'~~ F/WL 850'
SEC. 19, T30N, R8W, N.M.P.M.
SAN JUAN COUNTY, NEW MEXICO

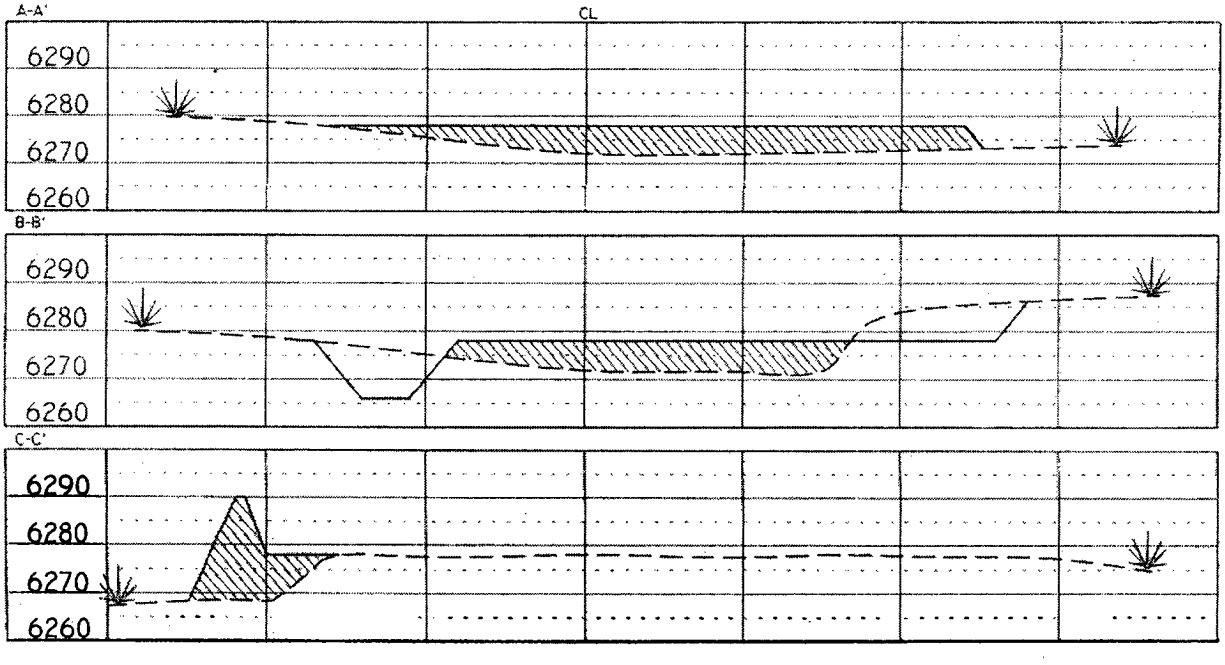
Lat: 36°48'10"
Long: 107°43'09"



NOTES: Reserve Pit Dike - Should be 8' above Deep side (overflow - 3' wide & 1' above shallow side)
Flare Pit - Overflow pipe should be halfway between top and bottom and extend over plastic liner and into flare pit.

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.

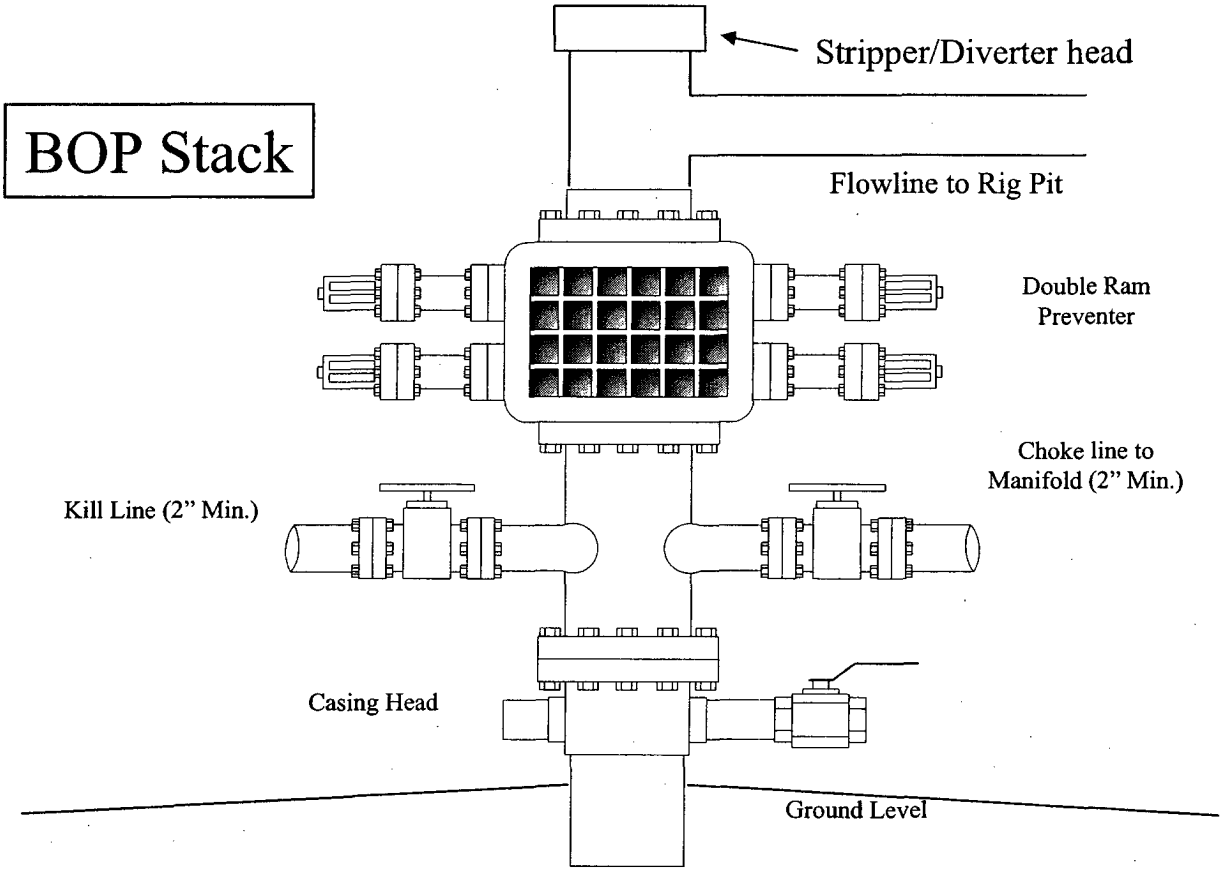
Cuts and fills shown are approximate - final finished elevation is to be adjusted so earthwork will balance. Corner stakes are approximate and do not include additional areas needed for sideslopes and drainages. Final Pad Dimensions are to be verified by Contractor.

VANN SURVEYS
P. O. Box 1306
Farmington, NM

BP American Production Company

Well Control Equipment Schematic

BOP Stack



Choke & Kill Manifold