

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: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. SF - 0800597 080597
1b. Type of Well: <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator BP AMERICA PRODUCTION COMPANY Contact: MARY CORLEY E-Mail: corleyml@bp.com		7. If Unit or CA Agreement, Name and No.
3a. Address P.O. BOX 3092 HOUSTON, TX 77253	3b. Phone No. (include area code) Ph: 281.366.4491 Fx: 281.366.0700	8. Lease Name and Well No. GARTNER A 5M
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface SWSW Lot L 1945FSL 1150FWL 36.46900 N Lat, 107.40100 W Lon At proposed prod. zone NESW Lot K 2500FSL 1980FWL 36.46900 N Lat, 107.40100 W Lon		9. API Well No. 30045 31171
14. Distance in miles and direction from nearest town or post office* 22 MILES FROM BLOOMFIELD, NEW MEXICO		10. Field and Pool, or Exploratory BASIN DAKOTA/BLANCO MESAVER
15. Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1150	16. No. of Acres in Lease 320.00	11. Sec., T., R., M., or Blk. and Survey or Area L Sec 27 T30N R8W Mer NMP
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft. 500	19. Proposed Depth 7515 MD 7398 TVD	12. County or Parish SAN JUAN
21. Elevations (Show whether DF, KB, RT, GL, etc.) 6142 GL	22. Approximate date work will start 10/08/2002	13. State NM
23. Estimated duration 7 DAYS		17. Spacing Unit dedicated to this well 320.00 w/2
20. BLM/BIA Bond No. on file WY2924		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 (Electronic Submission)	Name (Printed/Typed) MARY CORLEY	Date 08/15/2002
Title AUTHORIZED REPRESENTATIVE		
Approved by (Signature) /s/ David J. Mankiewicz	Name (Printed/Typed)	Date SEP 19
Title AFM	Office FEO	

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)

Electronic Submission #13577 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

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

HOLD C104 FOR Direct and Survey NMOC
and change in status to #5R

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 30-045-31171		2 Pool Code 71599 72319		3 Pool Name BASIN DAKOTA ? BLANCO MESAVERDE		
4 Property Code 00589		5 Property Name GARTNER A			6 Well Number 5M	
7 GRID No. 000778		8 Operator Name BP AMERICA PRODUCTION COMPANY			9 Elevation 6142	

10 Surface Location

UL or Lot No. L	Section 27	Township 30 N	Range 8 W	Lot Idn	Feet from the 1945	North/South line SOUTH	Feet from the 1150	East/West line WEST	County SAN JUAN
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11 Bottom Hole Location If Different From Surface

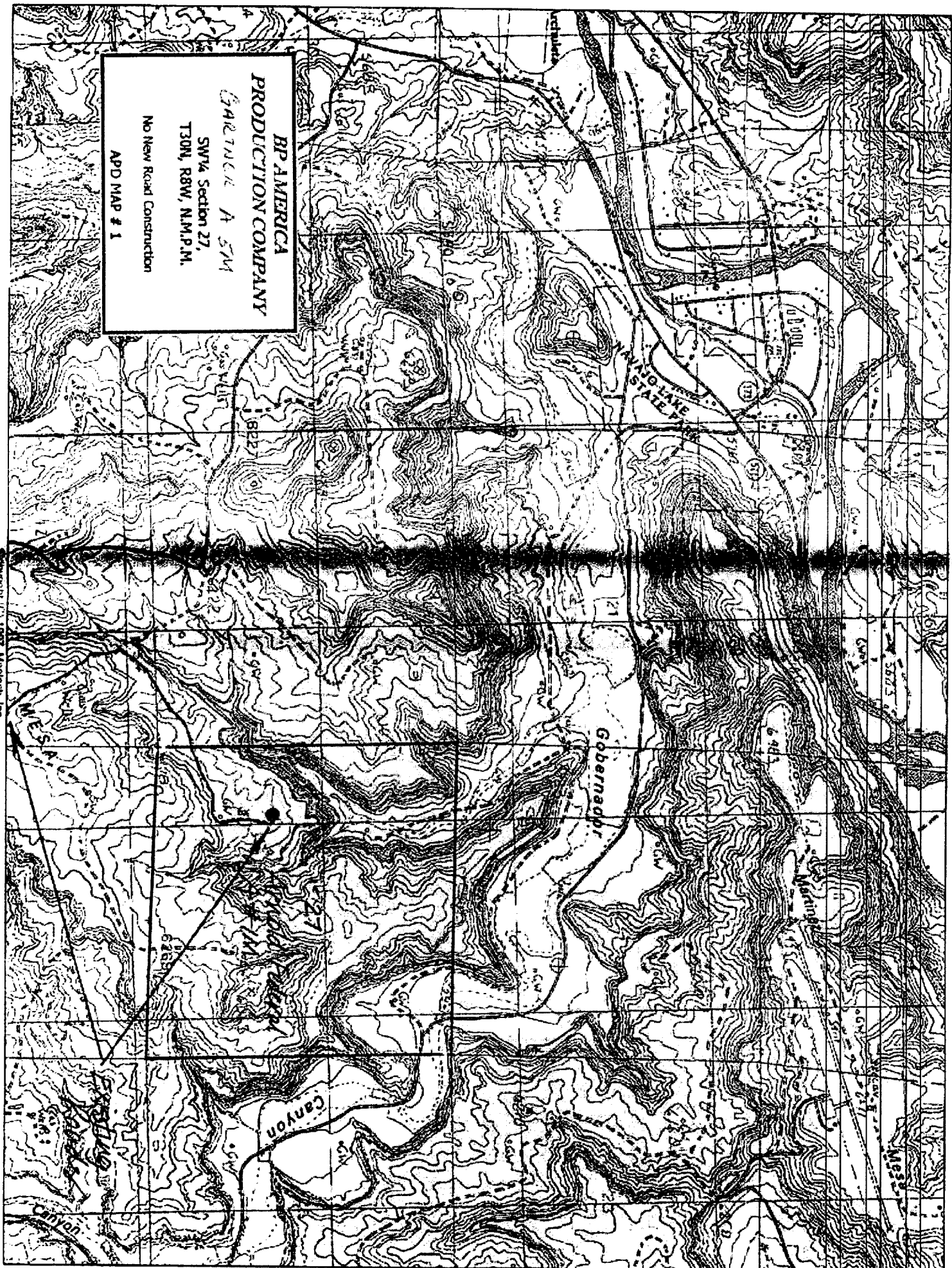
UL or lot no. K	Section 27	Township 30 N	Range 8 W	Lot Idn	Feet from the 2500	North/South line SOUTH	Feet from the 1980	East/West line WEST	County SAN JUAN
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12 Dedicated Acres 320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	<p>17 OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p>Signature: <i>Mary Corley</i></p> <p>Printed Name: <i>Mary Corley</i></p> <p>Title: <i>Sr. Regulatory Analyst</i></p> <p>Date: <i>08.15.2002</i></p>
	<p>18 SURVEYOR CERTIFICATION</p> <p>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.</p> <p>Date of Survey: <i>July 19, 2002</i></p> <p>Signature and Seal of Professional Surveyor: </p> <p>Certificate Number: <i>7016</i></p>

BP AMERICA
PRODUCTION COMPANY
GARFIELD A 5M
SW1/4, Section 27,
T30N, R8W, N.M.P.M.
No New Road Construction
ADD MAP # 1



**BP AMERICA PRODUCTION COMPANY
DRILLING AND COMPLETION PROGRAM**

Prospect Name: Gartner A
Lease: Gartner A

County: San Juan
State: New Mexico
Date: August, 9, 2002

Well No: 5M
Surface Location: 27-30N-08W, 1940 FSL, 1150
FWL
Field: Blanco Mesaverde/Basin Dakota
Bottom Location: 27-30N08W, 1940FSL, 1980FWL

OBJECTIVE: Drill 50' below the base of the Lower Cubero, set 4 1/2" production casing, Stimulate LS, CH, MF, PL and DK intervals

METHOD OF DRILLING		APPROXIMATE DEPTHS OF GEOLOGICAL MARKER			
TYPE OF TOOLS	DEPTH OF DRILLING	Estimated GL: 6144		Estimated KB: 6158	
Rotary	0 - TD	MARKER		TVD	MEAS. DEPTH
LOG PROGRAM		Ojo Alamo		1742	1783
		Kirtland		1956	2007
		Fruitland Coal	*	2513	2589
		Pictured Cliffs	*	2922	3017
		Lewis Shale	#	3180	3288
		Cliff House	#	4450	4567
		Menefee Shale	#	4790	4907
		Point Lookout	#	5127	5244
		Mancos		5516	5633
		Greenhorn		7106	7223
		Bentonite Marker		7156	7273
		Two Wells	#	7212	7329
		Paguate	#	7293	7410
		Upper Cubero	*	7321	7438
		Lower Cubero	*	7348	7465
		TOTAL DEPTH		7398	7515
REMARKS:		# Probable completion interval * Possible Pay			
- Please report any flares (magnitude & duration).					

SPECIAL TESTS		DRILL CUTTING SAMPLES		DRILLING TIME	
TYPE		FREQUENCY	DEPTH	FREQUENCY	DEPTH
None		none	Production hole	Geolograph	0-TD
REMARKS:					

MUD PROGRAM:					
Approx. Interval	Type Mud	Weight, #/ga	Vis, sec/qt	W/L cc's/30 min	Other Specification
0 - 200	Spud	8.6-9.2			
200 - 3392 (1)	Water/LSND	8.6-9.2		<6	
3392 - 7515	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	200	9 5/8"	H-40 ST&C	32#	12.25"	1
Intermediate	3392	7"	J/K-55 ST&C	20#	8.75"	1,2
Production	7515	4 1/2"	J-55	11.6#	6.25"	3

REMARKS:
(1) Circulate Cement to Surface
(2) Set casing 100' into Lewis Shale
(3) Bring cement 100' above 7" shoe

CORING PROGRAM:
None

COMPLETION PROGRAM:
Rigless, 4-6 Stage Limited Entry Hydraulic Frac

GENERAL REMARKS:
Notify BLM/NMOCDD 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		9 th August 2002	
Form 46 12-00 MNP		Version 1.0	

BP America Production Company BOP Pressure Testing Requirements

Well Name: Gartner A
County: San Juan

5M
State: New Mexico

Formation	TVD	Anticipated Bottom Hole Pressure	Maximum Anticipated Surface Pressure **
Ojo Alamo	1742		
Kirtland	1956		
Fruitland Coal	2513		
PC	2922		
Lewis Shale	3180		
Cliff House	4450	500	0
Menefee Shale	4790		
Point Lookout	5127	600	0
Mancos	5516		
Dakota	7293	2600	1391

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

Requested BOP Pressure Test Exception: 1500 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.

Cementing Program

Well Name:	Gartner A 5M	Field:	Blanco Mesaverde / Basin Dakota
Location:	27-30N-8W, 1940 FSL, 1150 FWL	API No.	
County:	San Juan	Well Flac	
State:	New Mexico	Formation:	Dakota MesaVerde
		KB Elev (est)	6158
		GL Elev. (est)	6144

Casing Program:

Casing String	Est. Depth (ft.)	Hole Size (in.)	Casing Size (in.)	Thread	TOC (ft.)	Stage Tool Or TOL (ft.)	Cnt Cir. Out (bbl.)
Surface	200	12.25	9.625	ST&C	Surface	NA	
Intermediate	3392	8.75	7	LT&C	Surface	NA	
Production -	7515	6.25	4.5	?	3292	NA	

Casing Properties:

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	Recommended Mud Properties Prio Cementing:
			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	110 sx Class G Cement		125 cuft
TOC@Surface	+ 2% CaCl ₂ (accelerator)		
	0.25 #/sk Cellophane Flake (lost circulation additive)		0.3132 cuft/ft OH
	0.1% D46 antifoam		
Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)
Slurry 1	15.8	1.16	4.95

Cementing Program

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

Intermediate:

Fresh Water 20 bbl fresh water

Lead 290 sx Class "G" Cement 743 cuft
 Slurry 1 + 3% D79 extender
 TOC@Surface + 2% S1 Calcium Chloride
 + 1/4 #/sk. Cellophane Flake
 + 0.1% D46 antifoam'

Tail 60 sx 50/50 Class "G"/Poz 75 cuft
 Slurry 2 + 2% gel (extender)

500 ft fill 0.1% D46 antifoam 0.1503 cuft/ft OH
 + 1/4 #/sk. Cellophane Flake 0.1746 cuft/ft csg ann
 + 2% CaCl2 (accelerator)

Slurry Properties:	Density (lb/gal)	Yield (ft3/sk)	Water (gal/sk)
Slurry 1	11.4	2.61	17.77
Slurry 2	13.5	1.27	5.72

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

1 Float Shoe (autofill with minimal LCM in mud)
 1 Float Collar (autofill with minimal LCM in mud)
 1 Stop Ring
 14 Centralizers (one in middle of first joint, then every third collar)
 2 Fluidmaster vane centralizers @ base of Ojo
 1 Top Rubber Plug
 1 Thread Lock Compound

Production:

Fresh Water 10 bbl CW100

Lead 160 LiteCrete D961 / D124 / D154 394 cuft
 Slurry 1 + 0.03 gps D47 antifoam
 TOC, 100' above 7" shoe + 0.5% D112 fluid loss
 + 0.11% D65 TIC

Tail 140 sx 50/50 Class "G"/Poz 199 cuft
 Slurry 2 + 5% D20 gel (extender)
 1382 ft fill + 0.15% D65 TIC
 + 0.1% D46 antifoam + 0.1% D800 retarder
 + 1/4 #/sk. Cellophane Flake
 + 0.25% D167 Fluid Loss

0.1026 cuft/ft OH

Cementing Program

Slurry Properties:	Density (lb/gal)	Yield (ft ³ /sk)	Water (gal/sk)	0.1169 cuft/ft csg ann
Slurry 1	9.5	2.52	6.38	
Slurry 2	13	1.44	6.5	Top of Mancos 5633

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