	UNITED STATES DEPARTMENT OF THE INTERIOR		FORM APPROVED OMB No. 1004-0136 Expires November 30, 2000 5.5 Lease Serial No. SF- 078194 6. If Indian, Allottee or tribe Name						
	BUREAU OF LAND MANGEMENT APPLICATION OFOR PERMIT TO DRILL OF	11 35							
		6.							
_	la. Type of Work: DRILL REENTE	7.	7. If Unit or CA Agreement, Name and No						
	1b. Type of Well: Oil Well Gas Well Gas Other	tone 8.	8. Lease Name and Well Nog Ludwick LS 20N						
-	2. Name of Operator BP AMERICA PRODUCTION COMPANY	9.	9. API Well No. 30-045-3480\$						
-	3a. Address 3b. Phon	10.	10. Field and Pool, or Exploratory						
_		6-3866			anco Mesaverde				
	4. Loction of Well (Report location clearly and in accordance with any	y State requirements.*)		Sec., T., R., M., or Blk,	*				
Ц	At surface 2500' FSL & 815' FWL NWSW At proposed prod. Zone SAME	L SE	SECTION 29 T30N & R10W						
T	14. Distance in miles and direction from nearest town or post office* 6.3 MILES SOUTHEAST FROM AZTEC, NM		County or Parish N JUAN	13. State NEW MEXICO					
-	15. Distance from proposed* Location to nearest Property or lease line, ft. (Also to nearest drig. Ujnit line, if any) 815	16. No. of Acres in lease 313.30	 _	Spacing Unit dedicated to this well					
-	 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 			BLM/BIA Bond No. on file Y2924					
_	21. Elevations (show whether DF, KDB., RT, GL, etc. 6093' GL	22. Approximate date work v 02/08/07	will start*	start* 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, 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 lite 20 above). 5. Operator certification. 6. Such other site specific information and/or plans as may be required by a suthorized officer.								
	25. Signature Name (Print Kristin	1	Date 10/09/2006						
	Title								
-	Approved by (Signarray) Approved by (Signarray) Name (Printed/Typed) Date 2//7								
_	Title AFM Office FF								
	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.								
- 113	*(Instructions on reverse) This action is subject to technical and procedural review pursuant to 43 CFR 31 and appeal pursuant to 43 CFR 3165.4	105,3 \ / 6,00	RIECT TO CO	NATIONS AUTHORIZED CMPLIANCE WITH ATT JUIREMENTS".	ARE ACHED				

8 =/6/07 MMOCD

NOTIFY AZTEC OCD 244 IN TIME TO WITNESS C54

Districe 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

Form C-102 Revised February 21, 1994 Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

OIL CONSERVATION DIVISION PO Box 2088 Santa Fe, NM 87504-2088

2005 OCT 12 FM 11 16

AMENDED REPORT RCVD FEBG'07 AT CAMS. DIV

	WELL LOCATION AND	ACREAGE DEDICATION PLAT	011 0015. D
API Number	¹ Pool Code	Pool Name	
30-045-3400	05 11599 \$ 72319	BASIN DAKOTA & BLANCO G	ESAYERDE
Property Code	*	5 Property Name	6 Well Number
700811	Ludwick LS		# 20N
OGRID No.	***************************************	* Operator Name	9 Elevation
718	BP AMERICA PRO	DUCTION COMPANY	6093

North/South line Township Range Feet from the Feet from the East/West line County UL or Lot No. Section Lot Idn SAN JUAN 29 2500 **SOUTH** WEST 30 N 10 W 815 Lot 12 (L) "Bottom Hole Location If Different From Surface ' UL or lot no. Section Feet from the East/West line County Township Feet from the North/South line

Surface Location

12 Dedicated Acres Joint or Infill ¹⁴ Consolidation Code 15 Order No. 313.30

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

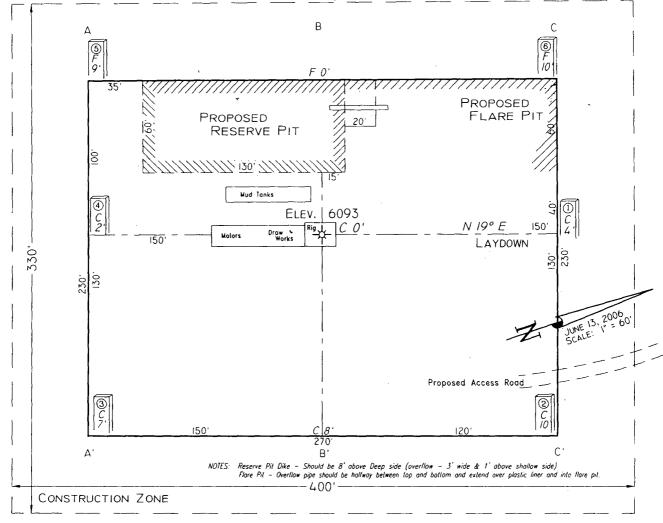
			EN APPROVED BY	
16	316.	(R)		"OPERATOR CERTIFICATION
				I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.
Lot 4	Lot 3	Lot 2	Lot 1	Sursina Sunto
ළි දි Lot 5	Lot 6	Lot 7	Lot 8	Printed Name KEGULATORY ANALYST Title
		0	8	Date 18 SURVEYOR CERTIFICATION 1 hereby certify that the well location shown on this plat
815'	3		542	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.
Lot 12	Lot 11	Lot 10	Lot 9	June 13, 2006 Date of Survey Signature and Seal of Professional Surveyor
00 97 7 7 13 Lot 13	Lot 14	Lot 15	Lot 16	RESISTANCE OF THE PARTY OF THE
	520	'(R)		7016 PROFESSIONIA

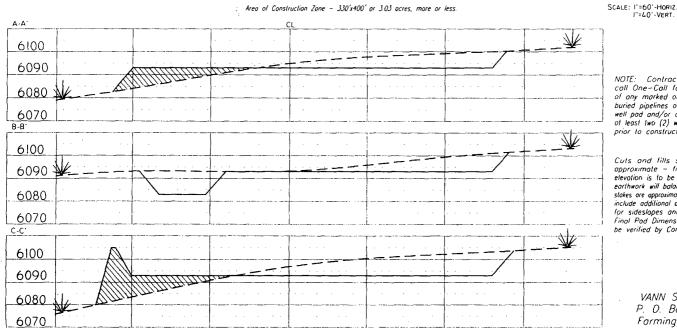
Submit 3 Copies To Appropriate District Office	State of N	ew Mexico		Form C-103
District I	Energy, Minerals ar	nd Natural Resources	WELL ADINO C.	May 27, 2004
1625 N. French Dr., Hobbs, NM 88240 District II			WELL API NO. 30-04	
1301 W. Grand Ave., Artesia, NM 88210		ATION DIVISION	5. Indicate Type of Lease	
<u>District III</u> 1000 Rio Brazos Rd., Aztec, NM 87410		St. Francis Dr.	STATE F	FEE 🗌
District IV	Santa Fe,	NM 87505	6. State Oil & Gas Lease 1	No.
1220 S. St. Francis Dr., Santa Fe, NM 87505		2006 OGT 12 FM 11	15	
	CES AND REPORTS ON		7. Lease Name or Unit Ag	
(DO NOT USE THIS FORM FOR PROPOSE DIFFERENT RESERVOIR. USE "APPLIC			Ludwick L	∠S
PROPOSALS.)		TOTAL LOST AL	8. Well Number	
1. Type of Well: Oil Well	Gas Well Other		20 N	
2. Name of Operator	*		9. OGRID Number	
BP AMERICA PRODUCTION (COMPANY		000778	
3. Address of Operator P.O. BOX 3092 HOUSTON, TX	77079-2064		10. Pool name or Wildcat Basin Dakota & Blanco M	
4. Well Location				
	2500feet from the _S		feet from the West	line
Section 29	Township 30N		NMPM SAN JUAN	County
		ther DR, RKB, RT, GR, etc., 6093') 	
Pit or Below-grade Tank Application 🛛 o			1	22001
Pit typeDRILLINGDepth to Ground	lwater <u>>100'</u> Distance from ne	earest fresh water well > 1000'	Distance from nearest surface was	ter <u>≰1000'</u>
Pit Liner Thickness: 12 mil I	Below-Grade Tank: Volume	bbls; Construc	tion Material	
12. Check A	Appropriate Box to Ind	icate Nature of Notice,	Report or Other Data	
NOTICE OF IN	TENTION TO:	l SIIR	SEQUENT REPORT	OE:
PERFORM REMEDIAL WORK		☐ REMEDIAL WOR		ING CASING
TEMPORARILY ABANDON	CHANGE PLANS	☐ COMMENCE DR		
PULL OR ALTER CASING	MULTIPLE COMPL	☐ CASING/CEMEN	T JOB 🔲	
OTHER: LINED DRILLING PI	Г	OTHER:		
13. Describe proposed or comp				
of starting any proposed we or recompletion.	ork). SEE RULE 1103. Fo	or Multiple Completions: A	ttach wellbore diagram of pro	oposed completion
			ATT I DIEGO	
Construct a lined drilling pit issued date of 11/17/2004. Pi				ruction Plan
issued date of 11/1//2004. Fi	t will be closed accor	uing to closure plan o	n me.	
•	1			
,				
	/ .,			
I hereby certify that the information grade tank has been/will be constructed or	above is true and complete closed according to NMOCD g	e to the best of my knowledguidelines 🛛, a general permit 🗀	se and belief. I further certify to an (attached) alternative OCI	that any pit or below- D-approved plan □.
SIGNATURE MINING	The T	ITLE Regulatory Anal	yst DATE 10/09/06	
Type or print name Kristina Hurts	E-mail address: 1	urtk0@hn.com	Telephone No. 283	1-366-3866
For State Use Only	address. I	im ikoloop.com	1010phone 140. <u>20.</u>	<u> </u>
APPROVED BY:	4 Mm	TILE DEPUTY OIL & GAS IN	SPECTOR, DIST. A DATE	FEB 0 6 2007
Conditions of Approval (if any):		II DL	- B DAID	1 660 0 0 600

PAD LAYOUT PLAN & PROFILE BP AMERICA PRODUCTION COMPANY

Ludwick LS # 20N 2500' F/SL 815' F/WL

SEC. 29, T30N, R10W, N.M.P.M. SAN JUAN COUNTY, NEW MEXICO Lat: 36.78262° (83) Long: 107.91365° (83)





NOTE: Contractor should NOTE: Contractor snows call One-Call for location of any morked or unmarked buried pipelines or cables on well pad and/or access road of 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 7/10/2006 Lease: Ludwick LS Field: Blanco Mesaverde/Basin Dakota Well Name & No. Ludwick LS #20N Surface Location: 29-30N-10W: 2550' FSL, 815' FWL San Juan, New Mexico County: Surface: Lat: 36,7825299 deg; Long: -107,9130840 deg Minerals: State Aztec 184 BH Location: same Ria: DIJECTIVE: Drill 230' below the top of the Two Wells Mbr, set 4-1/2" production liner, Stimulate DK, MF, and PL intervals METHOD OF DRILLING APPROXIMATE DEPTHS OF GEOLOGICAL MARKER TYPE OF TOOLS **DEPTH OF DRILLING** Actual GL: 6093 Estimated KB: 6,107.0 SUBSEA TVD APPROX. MD 0 - TD Marker Rotary LOG PROGRAM Ojo Alamo 4,907 1,200 1,200 Depth Interval Kirtland 4,765 1-342 1,342 Type Fruitland 4,206 1,901 1,901' Single Run Fruitland Coal 3.857' 2,250 2.250' Pictured Cliffs 3.575 2,532 2.532 Lewis 3.365 2,742 2,742' Cased Hole Cliff House # 2.064 4.043 4.043' 4.346 RST-CBL TD to 7" shoe Menefee 1.761' 4.346 Point Lookout # 4,868 4.868 Identify 4 1/2" cement top 1.239 EMARKS: 862' 5,245 5,245 Mancos -713' 6,820 6,820' Greenhorn Graneros (bent,mkr) -760' 6.867 6.867 Two Wells -818 6,925 6,925 # he recommended TD is intended to penetrate the ENCN (~30') in order to **Paguate** # -888' 6,995 6,995 -944' Cubero # 7,051 7,051 valuate, and possibly produce it. Offsetting wells encountered no water flow # -983' 7,090 7,090 L. Cubero this depth. See attached cross-section. -1,019 7,126 7,126' Encinal Cyn # he intermediate casing should be set 100 ft. into the MENF to minimize the TOTAL DEPTH: -1,048 7,155' 7,155 # Probable completion interval * Possible Pay sks encountered drilling through the possibly water productive CLFH. **PECIAL TESTS DRILL CUTTING SAMPLES DRILLING TIME** FREQUENCY DEPTH YPE **FREQUENCY** DEPTH 30'/10' intervals 4,446 to TD 0 - TD Geolograph one EMARKS: **UD PROGRAM:** /30 min Interval TypeMud #/gal Vis, sec/qt Other Specification 8.8 - 9.0 Sufficient to clean hole. 2001 Spud 4.446 Water/LSND 8.4 - 9.0 Sweep hole while whilst water drilling, LCM onsite <9 Volume sufficient to maintain a stable and clean wellbore 7,155 Air 1 1000 cfm for hammer **ASING PROGRAM:** CasingString Depth Casing Size Grade, Thread Weight Landing Point Cement Size urface/Conductor 200' 13 1/2" 9-5/8" H-40 ST&C 32# cmt to surface termediate 0' - 4000' 8-3/4" J/K-55 ST&C 20# 7' termediate 4000' - 4446' 8 3/4" 7" N-80 ST&C 23# 100' below MENF cmt to surface 7,155 DKOT oduction 6-1/4 4-1/2" J-55 11.6# 150' inside Intermediate -TOC survey required DRING PROGRAM: OMPLETION PROGRAM: gless, 2-3 Stage Limited Entry Hydraulic Frac, FMC Unihead **ENERAL REMARKS:** tify BLM/NMOCD 24 hours prior to Spud, BOP testing, and Casing and Cementing. **OP Pressure Testing Requirements Formation** Depth Anticipated bottom hole pressure Max anticipated surface pressure** Cliffhouse 4.043 500 0 **Point Lookout** 4,868 600 0 Dakota 6,925 2600 1076.5 Requested BOP Pressure Test Exception = 1500 psi ** Note: Determined using the following formula: ABHP - (.22*TVD) = ASP Logging program reviewed by: m 46 Reviewed by: **LEPARED BY:** APPROVED: DATE: DATE: APPROVED: JMP/GGZ 10-Jul-06 For Production Dept. m 46 7-84bw For Drilling Dept.

Cementing Program

Well Name:	Ludwick LS #201							,	
ocation:		2550' FSL, 815' FW	L						
County:	San Juan				Well Flac				
State:	New Mexico				Formation:	Blanco M		Basin Dakota	
					KB Elev (es		6107		
					GL Elev. (es	st)	6093		
asing Program:									
Casing String	Est. Depth		ng Size T	hread	TOC				
	(ft.)	(in.) (in.)			(ft.)				تد
Surface	200	13.5	9,625	ST&C	Surface				
ntermediate	4446	8.75	7	ST&C	Surface				,
Production -	7155	6.25	4.5	ST&C	4296				
Casing Properties		(No Safety Factor							
Casing String	Size	Weight Grad		urst	Collapse				
_		(lb/ft)	.,	osi.)	(psi.)				
Surface	9.625			2270		1400			
ntermediate	7			3740		2270			
ntermediate	7			6340		3830			
Production -	4.5	11.6 J-55		5350		4960			
Mud Program									
Apx. Interval	Mud Type	Mud Weight	<u>F</u>	lècomm	ended Mud F	roperties Prio	Cementing	<u>:</u>	
(ft.)			P	V	<20				
			Υ	P	<10			•	
- SCP	Water/Spud	8.6-9.2	F	luid Los	: <15				
SCP - ICP	Water/LSND	8.6-9.2							
CP - ICP2	Gas/Air Mist	NA							
CP2 - TD	LSND	8.6 - 9.2							
Cementing Progra	m:								
			Surface		Intermedi	ate	Р	roduction	
Excess %, Lead			100		75	-		40	
Excess %, Tail			NA		0			40	
BHST (est deg. F)			75		120			183	
Special Instruction			1,6,7		1,6,8			2,4,6	
Special Matraction	1. Do not wash p	umne and lines	1,0,1		1,0,0			2,4,0	
	2. Wash pumps a	•							
	3. Reverse out	and inies.							
	4. Run Blend Tes	st on Comont							
			o 68 dia	1.					
		Pressure, and Dens	•						
		ometer with pressu		ies					
		urface if cement is a		CHOICH 1	0 12 hr 5#5	r landina alua			
lata a	o. ii cement is no	t circulated to surfa	ce, run temp.	survey	0-12 nr. ane	r landing plug.			_
Notes:	*Do not work we	on ton of plan Mar	ah linaa hafara	diantaa		a comentieb t	o minmi-o	deillout	
	Do not wash up	on top of plug. Was	sn lines before	displac	ng productio	n cement job t	o minmize	ariilout.	
Surface:									
Jui lave.	Preflush	20 b	ihl E	reshWa	ter				
		200		. 00/14/6					
	Slurry 1	154 ev C	class C Cemer	nt				195 cuf	ł
	TOC@Surface							155 001	•
	100@Sullace	+ 29	% CaCl2 (acce	elerator)				0.4007 - 5	W 011
								0.4887 cuf	иπ ОН
o		5 "							
Slurry Properties:		Density		/ield		Water			
		(lb/gal)	(ft3/sk)		(gal/sk)			
	Slurry 1	15.2		1.27	,		5.8		
Casing Equipment		9-5/8", 8R, ST&C							
		1 Guide Shoe							
		1 Top Wooden Plu	Ja						
		1 Autofill insert floa	-						
		Centralizers, as ne	eeded						
		1 Stop Ring							
		1 Thread Lock Co	mpound						
		1 Thread Lock Co	mpound						

Cementing Program

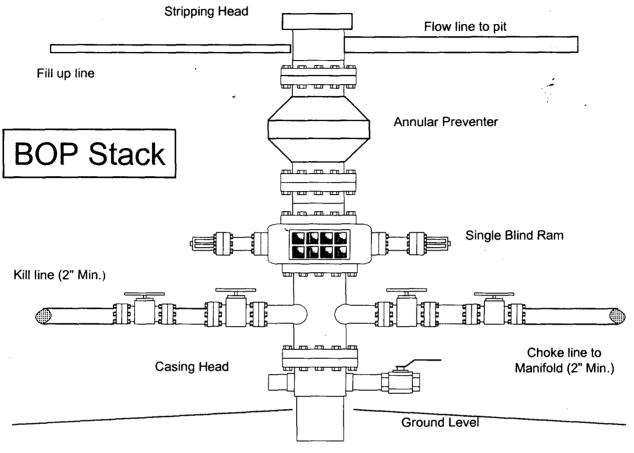
Intermediate:								
	Fresh Water	20 bb!		fresh water				
	Lead		388	sx Class "G" Cement		1020 cuft		
	Slurry 1			+ 3% D79 extender				
	TOC@Surface			+1/4 #/sk. Cellophane Flat	ke			
				+ 5 lb/sk Gilsonite				
	Tail		59	sx 50/50 Class "G"/Poz		75 cuft		
	Slurry 2	1		+ 2% gel (extender)				
	•) ft fill		+1/4 #/sk. Cellophane Fla	ke	0.1503 cuft/ft QHr		
		÷		+ 2% CaCl2 (accelerator)		0.1746 cuft/ft csg an		
				+ 5 lb/sk Gilsonite				
Slurry Properties:		Density		Yield	Water			
		(lb/gal)		(ft3/sk)	(gal/sk)			
Slurry 1		11.4		2.63	15.8			
Slurry 2		13.5		1.27	5.72			
Casing Equipmen	t:	7", 8R, ST&C						
		4.51. 4.01. 3. 4.50. 30		Nous n				
		1 Float Shoe (autofill with						
		1 Float Collar (autofill wit	h mini	mai LCM in mud)				
		1 Stop Ring						
		Centralizers as needed						
		1 Top Rubber Plug						
		1 Thread Lock Compoun	d					
Production:								
	Fresh Water	10 bbl		CW100				
	Lead		100	LiteCrete D961 / D124 / D	154	252 cuft		
	Slurry 1			+ 0.03 gps D47 antifoam				
	TOC, 400' above	e 7" shoe		+ 0.5% D112 fluid loss				
				+ 0.11% D65 TIC				
	Tail		141	sx 50/50 Class "G"/Poz		203 cuft		
	Slurry 2			+ 5% D20 gel (extender)				
	1410) ft fill		+ 0.1% D46 antifoam				
				+ 1/4 #/sk. Cellophane Fla	ake	1		
				+ 0.25% D167 Fluid Loss				
				+ 5 lb/sk Gilsonite				
				+0.1% d800, retarder				
				+0.15% D65, dispersant				
				. o. to /e boo, dispersalit		0.1026 cuft/ft OH		
Slurry Properties:		Density		Yield	Water	5520 Odisit Off		
•		(lb/gal)		(ft3/sk)	(gal/sk)	0.1169 cuft/ft csg-an		
Sturry 1		9.5		2.52	6.38	555 Salett Gag-ai		
Slurry 2		13		1.44		Top of Manage		
July Z		13		1. 44	6.5	Top of Mancos 5245		
Casing Equipmen	ıt:	4-1/2", 8R, ST&C				0 <u>2</u> 10		
3 - 4 - 4		1 Float Shoe (autofill with minimal LCM in mud)						
		1 Float Collar (autofill with minimal LCM in mud)						
		1 Stop Ring						
		Centralizers, as needed						
		1 Top Rubber Plug						

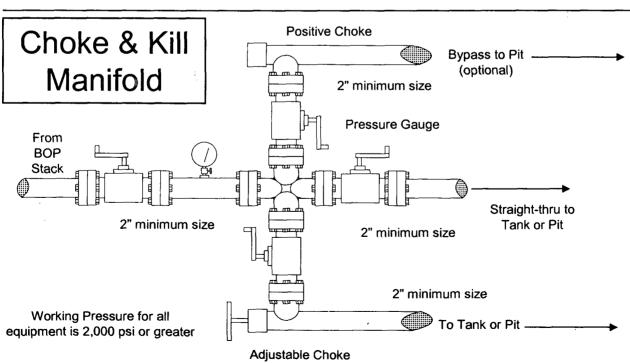
1 Thread Lock Compound

BP American Production Company

Well Control Equipment Schematic







Additional Operator Remarks Ludwick LS 20N APD

NOTICE OF STAKING WAS SUBMITTED ON 06/11/06

BP America Production Company respectfully requests permission to drill the subject well to a total depth of approximately 7155' MD. Complete in the Basin Dakota Pool, isolate the Dakota; complete into the Blanco Mesaverde, establish a production rate; drill out the bridge plug and commingle production downhole.

Application for Downhole Commingling authority (NMOCD order R-11363) will be submitted to all appropriate for approval after Permit to Drill has been approved.

If terrain allows it is our intent to pre-set the 9 5/8" casing on the above mentioned well by drilling a surface hole with air/air mist in lieu of drilling mud and the surface casing be cemented with 94.5 cu/ft type I-II, 20% FLYASH, 14.5 PPG, 7.41 gal/sk, 1.61 cf/sk Yield, 80 DEG BHST ready mix cement. If the area will not allow for pre-set the approved cement program will be followed.

SUPPLEMENTAL TO SURFACE USE PLAN

New Facilities:

A 4.5" diameter buried steel pipeline that is +/- 2000 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 existing gas 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 by El Paso Field Services.

APD/ROW

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.