9/9/0' DATE IN		W. Jones Engineer	24 9/07	TYPE DHC	APP NO. 0 TD. S070404/9
	·····		· · · · · · · · · · · · · · · · · · ·	(3853)	<i>p.,000,107</i>
			VE THIS LINE FOR DIVISION USE ON		1913 .
	NE	W MEXICO OIL CO	nservation ring Bureau -	DIVISION	
		1220 South St. Francis I		1 87505	
			· · · · · ·		
	AD	MINISTRATIV	E APPLICAT	ION CHECK	(LIST
THIS CH	ECKLIST IS MANDA	ATORY FOR ALL ADMINISTRAT WHICH REQUIRE PROC			SION RULES AND REGULATION
	Acronyms:				
-		rd Location] [NSP-Non-3 le Commingling] [CTE	Standard Proration I-Lease Commingli		neous Dedication] ease Commingling]
	[PC-Pool C	ommingling] [OLS - O	)ff-Lease Storage]	[OLM-Off-Lease	Measurement]
	[WF	X-Waterflood Expansion SWD-Salt Water Dispo		-	
	[EOR-Qualified	d Enhanced Oil Recover			-
[1] <b>TY</b>	ре об аррі і	ICATION - Check Thos	e Which Apply for	[A]	
-] -		ocation - Spacing Unit - S			
	Ĺ	] NSL 🗍 NSP 🗌	] SD		
	Check On	e Only for [B] or [C]			
	[B] <u>C</u>	ommingling - Storage - N			
	S X	DHC 🗌 СТВ 🗌	PLC PC		DLM
	[C] In	jection - Disposal - Press	sure Increase - Enha	anced Oil Recovery	
		] WFX 🗌 PMX [			
		ther: Specify			
	1400 U				
[2] NO		N REQUIRED TO: - Ch Working Revelts or (			Apply
		Working, Royalty or C	Jvernunig Koyalty	micresi Owners	
		Offset Operators, Lea	seholders or Surfac	e Owner	
	[C]	Application is One W	hich Requires Publ	ished Legal Notice	
	[D] X	Notification and/or Co U.S. Bureau of Land Managemen	oncurrent Approval	by BLM or SLO	
	[E] [	For all of the above, I			Attached, and/or,
	[F] [	] Waivers are Attached	l		

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

**OF APPLICATION INDICATED ABOVE.** 

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Cherry Hlava	Churry Alava	<b>Regulatory Analyst</b>	2-6-2007
Print or Type Name	Signature /	Title	Date
		hlavacl@bp.com	

e-mail Address

* ,		
District I	State of New Mexico	Form C-107A
1625 N. French Drive, Hobbs, NM 88240	Energy, Minerals and Natural Resources Department	Revised June 10, 2003
District II		
1301 W. Grand Avenue, Artesia, NM 88210	Oil Conservation Division	APPLICATION TYPE
District III	1220 South St. Francis Dr.	X Single
Well		
1000 Rio Brazos Road, Aztec, NM 87410	Santa Fe, New Mexico 87505	Establish Pre-Approved Pools
District IV		EXISTING WELLBORE
1220 S. St. Francis Dr., Santa Fe, NM 87505	APPLICATION FOR DOWNHOLE COMMINGLING	<u>X</u> YesNo
BP America Production Company	P.O. Box 3092 Houston Tx 77253 DH-3	853)
Br America i roduction Company	P.O. DOX 3092 HOUSION TX 77235	
Operator	Address	
Lease Riddle F LS Well No	o. 4 Unit Letter-Section-Township-Range Unit B Section 29 T2	8N, R08W County San Juan

OGRID No.000778 Property Code 000978 API No.30-045-07186 Lease Type: X Federal State Fee

DATA ELEMENT	UPPER ZONE		INTERMEDIATE ZONE		LOWER ZONE			
Pool Name	Blanco Pictured Clif	ls no	Gov	Otero Chacra	as	BI	anco Mesaverde	Prope
Pool Code	72359 39			82329			72319	
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	2146' - 2220'		Т	To Be Determined		4528' - 4531'		
Method of Production (Flowing or Artificial Lift)	Artificial Lift		Artificial Lift		Artificial Lift			
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	425		430		590			
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1178		1165		1171			
Producing, Shut-In or New Zone Date and Oil/Gas/Water Rates of	Producing			New Zone			Producing	
Last Production. (Note: For new zones with no production history, applicant shall be required to attach production	Date:		Date:			Date:		
estimates and supporting data.)	Rates:		Rates:			Rates:		
Fixed Allocation Percentage (Note: If allocation is based upon something other	Oil Gas		Oil	Gas		Oil	Gas	]
than current or past production, supporting data or explanation will be required.)	%	%		%	%		%	%

### **ADDITIONAL DATA**

Are all working, royalty and overriding royalty interests identical in all commingled zones? If not, have all working, royalty and overriding royalty interest owners been notified by certified mail?	Yes_X Yes	_ No No
Are all produced fluids from all commingled zones compatible with each other?	Yes_X	No
Will commingling decrease the value of production?	Yes	No_X
If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application?	YesX_	No
NMOCD Reference Case No. applicable to this well:		

Production curve for each zone for at least one year. (If not available, attach explanation.) For zones with no production history, estimated production rates and supporting data.

Data to support allocation method or formula.

Notification list of working, royalty and overriding royalty interests for uncommon interest cases.

Any additional statements, data or documents required to support commingling.

## PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools List of all operators within the proposed Pre-Approved Pools Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application. Bottomhole pressure data.

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

	•	5	8
SIGNATURE Cherry Have	_TITLE_	Regulatory Analyst	
TYPE OR PRINT NAME <u>Cherry Hlava</u>	_	<b>TELEPHONE NO. (28</b>	1) <u>366-4081</u>

E-MAIL ADDRESS hlavacl@bp.com

Submit 3 Copies To Appropriate District Office District I	State of New Mexico Energy, Minerals and Natural R	esources	Form C-103 Revised March 25, 1999			
1625 N. French Dr., Hobbs, NM 88240District II811 South First, Artesia, NM 88210District III1000 Rio Brazos Rd., Aztec, NM 87410District IV1220 S. St. Francis Dr., Santa Fe, NM	OIL CONSERVATION DIV 1220 South St. Francis I Santa Fe, NM 87505	/ISION 5. Inc	L API NO. 30-045-07186 licate Type of Lease STATE FEE tate Oil & Gas Lease No.			
(DO NOT USE THIS FORM FOR PROP	TCES AND REPORTS ON WELLS DSALS TO DRILL OR TO DEEPEN OR PLUG BA ICATION FOR PERMIT" (FORM C-101) FOR SUG	CK TO A CH	ase Name or Unit Agreement Name: Riddle F LS otified BLM of DHC intent on APD filing (NMSF 080112)			
2. Name of Operator BP America Production Company	Attn: Cherry Hlava	8. W	ell No. 4			
3. Address of Operator P.O. Box 3092 Houston, TX 77253	• • • • • • • • • • • • • • • • • • •		ol name or Wildcat Dakota & Blanco Mesaverde			
4. Well Location	· · · · · · · · · · · · · · · · · · ·	···	· · · · · · · · · · · · · · · · · · ·			
Unit Letter <u>B</u>	1000 feet from the <u>North</u> line ar	nd <u>1550</u> feet from	the <u>East</u> line			
Section 29	Township 28N Range 08W	NMPM	San Juan County			
	10. Elevation (Show whether DR, RK 5821' GR					
	Appropriate Box to Indicate Nature					
	NTENTION TO:		JENT REPORT OF:			
	] CHANGE PLANS 🔲 CO	MMENCE DRILLING				
PULL OR ALTER CASING		SING TEST AND MENT JOB				
OTHER: Downhole Tri-mingle		HER:				
<ol> <li>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 recompilation.</li> <li>BP America Production Co. request permission to complete the subject well into the Otero Chacra Pool &amp; commingle production</li> </ol>						
Downhole with the existing Blanco Mesaverde & Pictured Cliffs production as per the attached procedure.						

The Basin Dakota (71599) Blanco Mesaverde (72319) & Chacra (82329 Pools are Pre-Approved for Downhole Commingling per NMOCD The working and overriding royalty interest owners in the proposed commingled pools are identical, therefore no Order R - 11363.

further notification of this application is required.

1

Production is proposed to be allocated based on the subtraction method using the projected future decline for production from the Pictured Cliffs and Mesaverde Pools. This production shall serve as a base for production subtracted from the total production for the commingled well. The balance of the production will be attributed to the Chacra. Attached are the future production decline estimates for the PC & MV Pools.

Commingling Production Downhole in the subject well from the proposed pools with not reduce the value of the total remaining production.

I hereby certify that the information above is true		and belief.
SIGNATURE Kerry Hlave	TITLE Regulatory Analyst	DATE 02/06/2007
Type or print name Cherry Hlava		Telephone No. 281-366-4081
(This space for State use)		······································
APPPROVED BY	TITLE	DATE

			D'1		
Cor	nditions	of a	pproval,	if	any:

<u>District I</u> 1625 N. French Dr., Hobbs, NM 88240

<u>District II</u> 811 South First, Artesia, NM 88210

District III

۰.

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

2040 South Pacheco, Santa Fe, NM 87505

#### State of New Mexico Energy, Minerals & Natural Resources Department

Form C-102 Revised August 15, 2000

## OIL CONSERVATION DIVISION 2040 South Pacheco Santa Fe, NM 87505

Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

1

#### AMENDED REPORT

<sup>1</sup> API Number 30-045-07186	<sup>2</sup> Pool Code <sup>3</sup> Pool Name 82329 Otero Chacra		
<sup>4</sup> Property Code	<sup>5</sup> Property Name		<sup>6</sup> Well Number
000978	Riddle F LS		4
<sup>7</sup> OGRID Nø.	<sup>3</sup> Operator Name		<sup>9</sup> Elevation
000778	BP America Production Company		5821'

WELL LOCATION AND ACREAGE DEDICATION PLAT

				I	<sup>•</sup> Surface I	ocation	·		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet from	East/West	County
В	29	28N	08W		1000'	North	1550	East	San Juan
<sup>11</sup> Bottom Hole Location If Different From Surface									
UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet	East/West	County
<sup>12</sup> Dedicate	ed Acres	<sup>13</sup> Joint o	r Infill		<sup>14</sup> Consolidation C	Code		<sup>15</sup> C	Drder No.
16	0								

## 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

	<sup>7</sup> OPERATOR CERTIFICATION Thereby certify that the information contained
	herein is true and complete to the best of my
○ ◀	Cherry Hlava
	Cherry Hlava
	Printed Name Regulatory Analyst
	Fitle 12/4/2006
	<sup>18</sup> 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. On File
	Date of Survey Signature and Seal of Professional Surveyor: Fred B Kerr 3950 Certificate Number

Riddle F L												
MesaVerd	e Formation											
API #	3004507186											
Otra tira Al	07.4											
	97 thru <u>3/22</u>										-	
Exponenti		un of d	4 1.1 2000									
Qi =		mcfd mcfd	1-Jul-2006					_				
Qf = D =		per year										
U =	3.29% Gas			Gas	-		Gas			Gas	_ <u>_</u>	Ga
	Rate			Rate			Rate			Rate		Rat
Date	mcf/d		Date	mcf/d		Date	mcf/d		Date	mcf/d	Date	mcf/c
Jan-06	0		Apr-09	49		Jul-12	43		Oct-15	39	Jan-19	35
Feb-06	84		May-09	49	$\vdash$	Aug-12	43	_	Nov-15	39	Feb-19	3
Mar-06	67		Jun-09	48		Sep-12	43		Dec-15	39	Mar-19	35
Apr-06	63		Jul-09	48		Oct-12	43	-	Jan-16	39	Apr-19	3
May-06	50		Aug-09	48	┝	Nov-12	43	_	Feb-16	39	May-19	
Jun-06	52		Sep-09	48	⊢	Dec-12	43	_	Mar-16	38	Jun-19	
Jul-06	53		Oct-09	48		Jan-13	43		Apr-16	38	Jul-19	34
Aug-06	53		Nov-09	48		Feb-13	43	_	May-16	38	Aug-19	34
Sep-06	53		Dec-09	48		Mar-13	43		Jun-16	38	Sep-19	34
Oct-06	53		Jan-10	47	┢─	Apr-13	43	-	Jul-16	38	Oct-19	34
Nov-06	53		Feb-10	47		May-13	42	_	Aug-16	38	Nov-19	34
Dec-06	53		Mar-10	47		Jun-13	42	_	Sep-16	38	Dec-19	34
Jan-07	52		Apr-10	47		Jul-13	42		Oct-16	38	Jan-20	34
Feb-07	52		May-10	47		Aug-13	42	_	Nov-16	38	Feb-20	34
Mar-07	52		Jun-10	47		Sep-13	42	_	Dec-16	37	Mar-20	34
Apr-07	52		Jul-10	47		Oct-13	42		Jan-17	37	Apr-20	34
May-07	52		Aug-10	46		Nov-13	42		Feb-17	37	May-20	33
Jun-07	52		Sep-10	46		Dec-13	42	_	Mar-17	37	Jun-20	33
Jul-07	52		Oct-10	46		Jan-14	41		Apr-17	37	Jul-20	33
Aug-07	51		Nov-10	46	<u> </u>	Feb-14	41		May-17	37	Aug-20	33
Sep-07	51		Dec-10	46		Mar-14	41		Jun-17	37	Sep-20	33 33
Oct-07	51		Jan-11	46		Apr-14	41		Jul-17	37	Oct-20	33
Nov-07			Feb-11	46		May-14	41		Aug-17	37	Nov-20	
Dec-07	51		Mar-11	46		Jun-14	41		Sep-17	37	Dec-20	33
Jan-08	51		Apr-11	45		Jul-14	41		Oct-17	37	Jan-21	33
Feb-08	50		May-11	45		Aug-14	41		Nov-17	36	Feb-21	33
Mar-08			Jun-11	45		Sep-14	41		Dec-17	36	Mar-21	33
Apr-08			Jul-11	45		Oct-14	40		Jan-18	36	Apr-21	33
May-08	50		Aug-11	45		Nov-14	40		Feb-18	36	May-21	32
Jun-08	50		Sep-11	45		Dec-14	40		Mar-18	36	Jun-21	
Jul-08			Oct-11	45		Jan-15	40		Apr-18	36	Jul-21	32
Aug-08			Nov-11	45		Feb-15	40		May-18	36	Aug-21	32
Sep-08			Dec-11	44		Mar-15	40		Jun-18	36	Sep-21	32
Oct-08			Jan-12	44		Apr-15	40		Jul-18	36	Oct-21	32
Nov-08	49		Feb-12	44		May-15	40		Aug-18	36	Nov-21	32
Dec-08	49		Mar-12	44		Jun-15	40		Sep-18	35	Dec-21	32
Jan-09	49		Apr-12	44		Jul-15	39		Oct-18	35	Jan-22	32
Feb-09	49		May-12	44		Aug-15	39		Nov-18	35	Feb-22	32
Mar-09	49		Jun-12	44		Sep-15	39		Dec-18	35	Mar-22	32
<u> </u>												

Riddle F L	S 4							
Pictured C	liffs Forn	nation						×
API #	30-045-0	7186						
Starting 4/	05 thru <sup>/</sup>	  /23						
Exponenti	al Declin	e						
Qi =	40.3267	mcfd	1-Jul-2006					
Qf =	3.0	mcfd						
D =	6.63%	per yea	r					
	Gas			Gas	_		Gas	
	Rate			Rate			Rate	
Date	mcf/d		Date	mcf/d		Date	mcf/d	Da
Jan-06	42		Jun-09	33		Nov-12	26	Apr-'
Feb-06	48		Jul-09	33		Dec-12	26	May-1
Mar-06	42		Aug-09	33		Jan-13	26	Jun-1

Riddle F L	64		<u>т                                    </u>	I				I	T:	
Pictured C		otion					+ +		+. +	
API #	30-045-0								+	
	30-045-0	100								
			<u> </u>		<b>-</b>		+		1	
Starting 4/	05 thru (	102					+			
Exponenti							+ +			
Qi =	40.3267		1-Jul-2006				++		· · · · · · · · · · · · · · · · · · ·	
Qf =		mcfd	1-501-2000				+			
D =		per yea					+ +			
0-	0.03 /8	рег уеа					1 1		+	
	Gas			Gas		Gas		Gas		Gas
	Rate			Rate		Rate		Rate		Rate
Date	mcf/d		Date	mcf/d	Date	mcf/d	Date	mcf/d	Date	mcf/d
Jan-06			Jun-09	33	Nov-12	26	Apr-16	21	Sep-19	16
Feb-06			Jul-09	33	Dec-12	26	May-16	20	Oct-19	16
Mar-06			Aug-09	33	Jan-13	26	Jun-16	20	Nov-19	16
Apr-06			Sep-09	32	Feb-13	26	Jul-16	20	Dec-19	16
May-06			Oct-09	32	Mar-13	25	Aug-16	20	Jan-20	16
Jun-06			Nov-09	32	Apr-13	25	Sep-16	20	Feb-20	16
Jul-06			Dec-09	32	May-13	25	Oct-16	20	Mar-20	16
Aug-06			Jan-10	32	Jun-13	25	Nov-16	20	Apr-20	16
Sep-06			Feb-10	31	Jul-13	25	Dec-16	20	May-20	16
Oct-06			Mar-10	31	Aug-13	25	Jan-17	20	Jun-20	15
Nov-06			Apr-10	31	Sep-13	25	Feb-17	19	Jul-20	15
Dec-06	39		May-10	31	Oct-13	24	Mar-17	19	Aug-20	15
Jan-07	39	<u> </u>	Jun-10	31	Nov-13	24	Apr-17	19	Sep-20	15
Feb-07	39		Jul-10	31	Dec-13	24	May-17	19	Oct-20	15
Mar-07	38		Aug-10	30	Jan-14	24	Jun-17	19	Nov-20	15
Apr-07	38		Sep-10	30	Feb-14	24	Jul-17	19	Dec-20	15
May-07	38		Oct-10	30	Mar-14	24	Aug-17	19	Jan-21	15
Jun-07	38		Nov-10	30	Apr-14	24	Sep-17	19	Feb-21	15
Jul-07	38		Dec-10	30	May-14	24	Oct-17	19	Mar-21	15
Aug-07	37		Jan-11	30	Jun-14	23	Nov-17	18	Apr-21	15
Sep-07	37		Feb-11	29	Jul-14	23	Dec-17	18	May-21	15
Oct-07	37		Mar-11	29	Aug-14	23	Jan-18	18	Jun-21	13
Nov-07	37		Apr-11	29	Sep-14	23	Feb-18	18	Jul-21	14
Dec-07			May-11	29	Oct-14	23	Mar-18	18	Aug-21	14
Jan-08			Jun-11	29	Nov-14	23	Apr-18	18	Sep-21	14
Feb-08			Jul-11	29	Dec-14	23	May-18	18	Oct-21	14
Mar-08			Aug-11	28	Jan-15	20	Jun-18	18	Nov-21	14
Apr-08			Sep-11	28	Feb-15	22	Jul-18	18	.Dec-21	14
May-08			Oct-11	28	Mar-15	22	Aug-18	18	Jan-22	14
Jun-08			Nov-11	28	Apr-15	22	Sep-18	10	Feb-22	14
Jul-08			Dec-11	28	May-15	22	Oct-18	17	Mar-22	14
Aug-08			Jan-12	28	Jun-15	22	Nov-18	17	Apr-22	14
Sep-08			Feb-12	27	Jul-15	22	Dec-18	17	May-22	14
Oct-08		-	Mar-12	27	Aug-15	22	Jan-19	17	Jun-22	14
Nov-08			Apr-12	27	Sep-15	21	Feb-19	17	Jul-22	13
Dec-08			May-12	27	Oct-15	21	Mar-19	17	Aug-22	13
Jan-09			Jun-12	27	Nov-15	21	Apr-19	17	Sep-22	13
Feb-09			Jul-12	27	Dec-15	21	May-19	17	Oct-22	13
Mar-09			Aug-12	26	Jan-16	21	Jun-19	17	Nov-22	13
Apr-09			Sep-12	26	Feb-16	21	Jul-19	16	Dec-22	13
May-09			Oct-12	26	Mar-16	21	Aug-19	16	Jan-23	13

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## SJ Basin Well Work Procedure

Well Name:Riddle F LS 4Date:Nov 28, 2006Repair Type:Payadd

Location: County:	T28N-R8W-Sec29 San Juan	API #: 30-045-07186	
State:	New Mexico	Engr: Jesse Gracia	
Horizon:	Mesaverde/Chacra/PC	ph (281) 366-1946 fax (281) 366-0700	

# Objective: Perforate and frac Chacra & downhole tri-mingle with existing Pictured Cliffs and Mesaverde

### **Procedure:**

- 1. Perform pre-rig site inspection. Check for: size of location, Gas Taps, other wells, other operators, running equipment, wetlands, wash (dikes req.), H2S, barriers needed for equipment, Landowner issues, location of pits (buried lines in pits), Raptor nesting, critical location, check anchors. Check ID wellhead, if earth pit is required have One Call made 48 hours prior to digging.
- 2. Perform second site visit after lines are marked to ensure all lines clear marked pit locations. Planning and Scheduling to ready location for rig.
- 3. RU slickline unit or wireline unit. Pressure test lubricator and equipment. RIH and set **two** barriers (CIBP, tbg collar stop w/plug, or plug set in nipple) for isolation in both tubing strings.
- 4. Check and record tubing, casing, and bradenhead pressures. Ensure production casing has double casing valves installed. Double valve all casing strings.
- 5. MIRU workover rig. LO/TO all necessary equipment including but not limited to: meter run, Automation, Separators and water lines.
- 6. Blow down well. Kill with 2% KCL water ONLY if necessary.
- 7. Check all casing strings to ensure no pressure exist on any annulus. The operations of removal of wellhead and installation of BOP's will be performed under a dispensation for one (1) barrier on the backside.
- 8. Nipple down Wellhead. NU BOPs and diversion spool with 3" outlets and 3" pipe to the blow tank. BOP should be equipped with 1 <sup>1</sup>/<sub>4</sub>" offset pipe ram. Pressure test BOPs to

200 psi above BHP. Monitor flowing casing pressure with gauge (with casing flowing to blow tank) throughout workover.

, <sup>,</sup>

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- 9. Install stripping rubber, pull tubing hanger up above pipe rams, shut-in pipe rams, remove stripping rubber. Strip tubing hanger OOH. Re-install stripping rubber.
- 10. TOH and LD 1-1/4" EUE production tubing currently set at 2240'. Using approved "Under Balance Well Control Tripping Procedure".
- 11. Change BOP pipe ram and stripping rubber to 2". TOH w/ packer and 2" production tubing currently set at 4563'. Using approved "Under Balance Well Control Tripping Procedure".
- 12. TIH w/ 5-1/2" scraper. Check the distance between the top of the blind rams and the length of the bottom hole assembly that is being run. If the BHA is too long then the well has to be top killed and monitored prior to opening bind rams. RIH to PBTD at 4,615". POOH.
- Set composite bridge plug at +/-4,400'. Fill casing w/ 2%KCl from the bottom to PC (2220').
- 14. RU E-line equipment. Pressure test lubricator and equipment. Log well w/ CBL from 4,440' to TOL @ 2329'. Contact Jesse Gracia after determining TOC in 5 <sup>1</sup>/<sub>2</sub>" liner to discuss packer placement or remedial cement squeeze.
- 15. Replace wellhead if needed.
- 16. TIH with 2 7/8" x 5 1/2" test packer on 3 1/2" tubing. Set Packer at +/-2380'
- 17. Pressure test 5 <sup>1</sup>/<sub>2</sub>" casing down tubing to 2000 psi surface pressure. Note with 2% KCl fluid in the hole, the 5 <sup>1</sup>/<sub>2</sub>" casing will be tested to approximately 3100 psi.
- 18. TOH w/ tubing and packer.
- 19. Prepare for explosive operations. Follow Schlumberger Explosive SOP including radio silence, suspension of welding operations, and isolation of electrical devices from the work area. Perform Pre-job Safety Meeting to review JSA and procedures. Meeting should address the VDR (vehicle data recorder) System that Bp people have installed on their vehicles. They must be shut off at the 300 foot sign by hitting 00 and then the enter button, and then wait for about 5 minutes for the unit to turn off. When the green light goes out, call the control center at 326-9475. This number is on a pickup list in the Optimizer room and should be your first point of contact followed by the front desk then the weekend pager. Verify the unit is not transmitting. You then can drive to location and park, but do not to exceed 10 Miles/hr. Note: 20 MPH will turn unit back on. If someone has On Star on their vehicle they cannot enter closer than 300 foot. On Star cannot be turned off. PLEASE take special caution. This is in conjunction with all cell phones, pagers, radios and any electronic devise that transmits a signal.
- 20. RIH with 3-1/8" casing guns w/lubricator and perforate Chacra formation. (50 Holes Total)

## 2 SPF:

- 21. TIH w/ 3-1/2" N-80 frac string with one jt of 2 7/8" N-80 and 5 ½" x 2 7/8" packer. Configure packer assembly as 2 7/8" x 5 ½ (full bore); 2 7/8 downhole shutoff valve. This assembly will be made up and pressure tested in the packer service shop.
- 22. RU 10,000 psi isolation tool (use full bore tool to reduce turbulence and chance for washout). Space out and land frac string.
- 23. Close shutoff valve. Load tubing and pressure test to approximately 1500 psi with rig pumps. RU test pump and pressure test tubing to 5000 psi for 10-15 minutes. Set packer at 2380'.
- 24. RU schlumberger frac equipment. Purge pumps and pressure test iron to frac valve at 6000 psi. Set pump trips at 5000 psi. Set PRV at 5100-5200 psi. Treat well at a maximum of 5000 psi.
- 25. Install and monitor production casing and treating pressure during entire job in frac van via pressure transducers on production casing and treating line. Spearhead 500 gal 15% HCL, establish injection rate, and proceed with fracture stimulation according to Schlumberger schedule. Maintain surface pressures less than 5,000 psi during frac job. Flush frac with foam. Fill out GWSI scorecard.
- 26. Flowback frac immediately. Flow well through choke manifold on <sup>1</sup>/4", <sup>1</sup>/<sub>2</sub>" and <sup>3</sup>/4" chokes slowly increasing drawdown until well dies or stabilizes. This is to aid in reducing sand flowback. Recommend 8 hours of flow for each choke size.
- 27. Release packer. TOH w/ 3 <sup>1</sup>/<sub>2</sub>:" frac string and packer.
- 28. Rig up air package/unit, pressure test all lines (Testing procedure to be supplied from air company), TIH with tubing and bit for 5 1/2" casing. Cleanout fill to BP set at +/-4,400'.
- 29. RIH w/ frac string and 3 <sup>1</sup>/<sub>2</sub>" x 5 <sup>1</sup>/<sub>2</sub>" packer. Set packer at +/- 2380' and perform flow test on Chacra and document in DIMS.
- 30. Release packer. TOH w/  $3 \frac{1}{2}$ " frac string and packer.
- 31. TIH w/ tubing and bit for 5-1/2" casing. Drill out BP set at 4,400'. Cleanout to PBTD at 4,615'.
- 32. Rabbit tubing and RIH with 2-3/8" production tubing (with muleshoe, F-nipple with plug, 4 ft pup, X-nipple with plug).
- 33. Land 2-3/8" production tubing at +/-4,563'. Lock down 2 3/8" tubing hanger and bonnet.
- 34. Pressure test tubing to 500 psi with air unit, make sure tubing spool valves are open. Care should be taken during pressure testing of the tubing due to potential problem

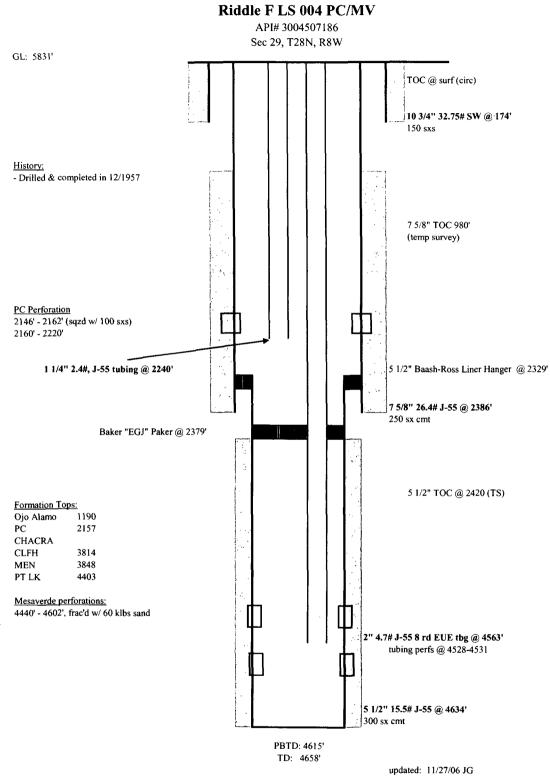
caused if tubing parts close to surface or above the hanger. Check all casing string for pressure. The operations of removal of wellhead and installation of BOP's will be performed under a dispensation for one (1) barrier on the backside.

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- 35. ND BOP's. NU Wellhead. During Master valve placement ensure the top of hanger has spacer nipple in place to bottom of bonnet flange so plunger equipment will not hang up through tree. Pressure test Wellhead.
- 36. RU WL unit. Run gauge ring for 2-3/8" tubing. Pull plugs and set tubing stop for plunger. Communicate plunger equipment status to IC room personnel.
- 37. RD slickline unit.
- 38. Test well for air. Return well to production and downhole tri-mingle PC, Chacra and Mesaverde.



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