DATE IN	SUSPENSE	ENGINEER	LOGGED IN	TYPE	APP NO.
3-14-05		Jones	3-16-05	DHC 3417	pSEM0507534048

ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -
1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

2005 MAR 14 PM 12 24

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
[DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
[PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
[WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
[SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
[EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR

[D] Other: Specify _____

[2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☒ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

[3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

[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.

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

Mary Corley	Mary Corley	Sr. Regulatory Analyst	03/08/2005
Print or Type Name	Signature	Title	Date

corleyml@bp.com
e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240

2000
District II
811 South First Street, Artesia, NM 88210

District III
1000 Rio Brazos Road, Aztec, NM 87410

Pools
District IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, New Mexico 87505

DHC-3417

APPLICATION FOR DOWNHOLE COMMINGLING

Form C-107A
Revised May 15,

APPLICATION TYPE
_X_ Single Well
___ Establish Pre-Approved

EXISTING WELLBORE
_X_ Yes ___ No

BP America Production Company Operator | **P. O. Box 3092 Houston, TX 77253** Address

Hughes C 1A Lease | Well No. | **Unit P Section 33 T29N, R08W** Unit Letter-Section-Township-Range | **San Juan** County

OGRID No. **000778** Property Code **000703** API No. **30-045-23150** Lease Type: **X** Federal ___ State ___ Fee

DATA ELEMENT	UPPER ZONE Gas	INTERMEDIATE ZONE WILDCAT	LOWER ZONE
Pool Name	**Blanco Pictured Cliffs**	~~Otero~~ **Chacra**	**Blanco Mesaverde**
Pool Code	**72359**	~~82329~~ 96745	**72319**
Top & Bottom of Pay Section (Perforated or Open-Hole Interval)	**2875' – 2944'**	**To Be Determined**	**4418' – 5537'**
Method of Production (Flowing or Artificial Lift)	**Artificial Lift**	**Artificial Lift**	**Artificial Lift**
Bottomhole Pressure	**425**	**430**	**590**
Oil Gravity or Gas BTU (Degree API or Gas BTU)	**950**	**980**	**950**
Producing, Shut-In or New Zone	**Producing**	**New Zone**	**Producing**
Date and Oil/Gas/Water Rates of Last Production.	Date: Rates:	Date: Rates:	Date: Rates:
Fixed Allocation Percentage	Oil % Gas %	Oil % Gas %	Oil % Gas %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes_X_ No_____
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes_____ 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? Yes_X_ No_____

NMOCD Reference Case No. applicable to this well: _____

Attachments:
- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- 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.

SIGNATURE Mary Corley TITLE **Sr. Regulatory Analyst** DATE **03/09/2005**

TYPE OR PRINT NAME **Mary Corley** TELEPHONE NO. (**281**) **366-4491**

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 South First, Artesia, NM 88210
District III
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

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, NM 87505

Form C-102
Revised August 15, 2000

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
30-045-07408	82329	Otero Chacra

[4] Property Code	[5] Property Name	[6] Well Number
000703	Hughes C	1A

[7] OGRID No.	[8] Operator Name	[9] Elevation
000778	BP America Production Company	6368' GR

[10] Surface Location

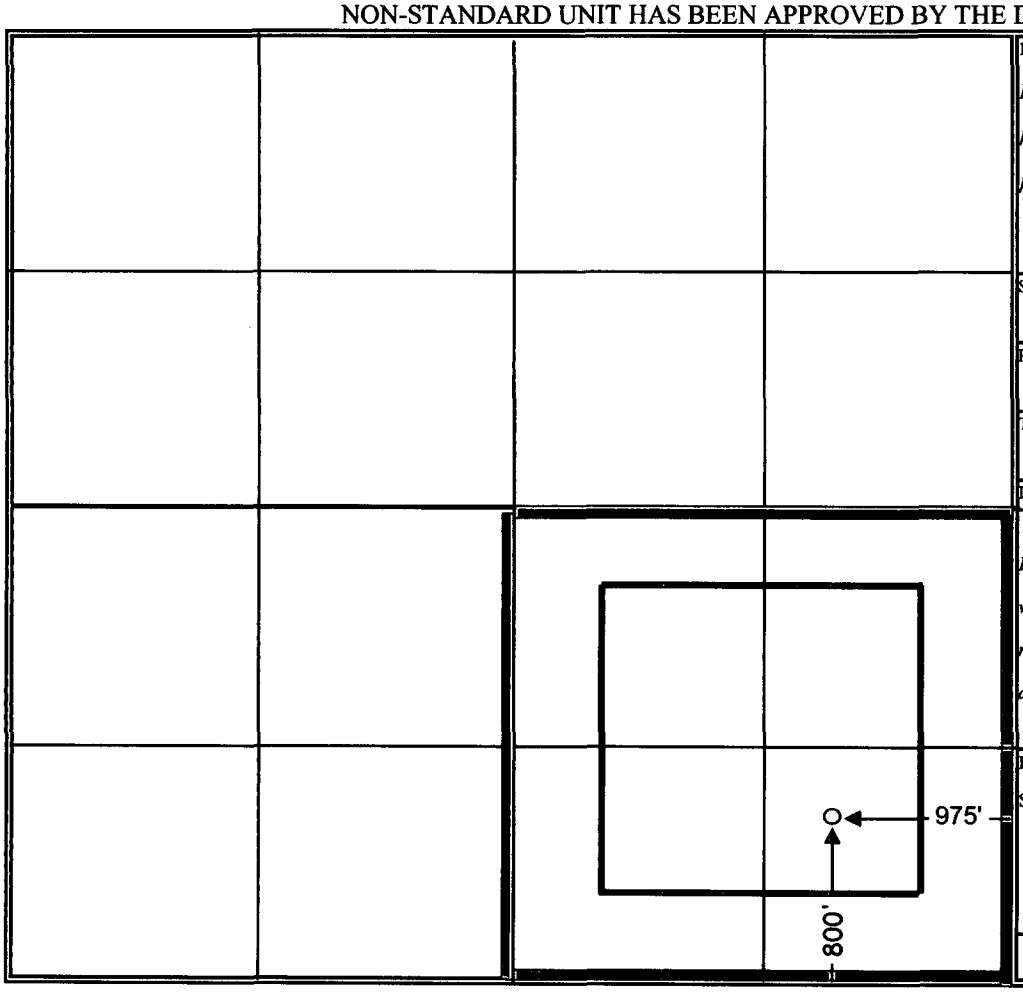
UL or lot no.	Section	Township	Range	Lot Idn	Feet from	North/South	Feet from	East/West	County
P	33	29N	08W		800	South	975	East	San Juan

[11] Bottom Hole Location If Different From Surface

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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160			

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.

Mary Corley

Signature: Mary Corley

Printed Name: Sr. Regulatory Analyst

Title: 2/21/2005

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.

On File

Date of Survey

Signature and Seal of Professional Surveyor:

Fred B Kerr 3950

Certificate Number

Allocation Method
Hughes C 1A

BP America Production Company request permission to complete the subject well into the Otero Chacra and tricommingle production downhole with the existing Blanco Pictured Cliffs and Blanco Mesaverde Pools as per the attached procedure.

The interest owners are identical between these three Pools, therefore, no additional notification is required prior to downhole commingling approval.

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 Pictured Cliffs & Mesaverde Pools.

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

Application has also been submitted to BLM on Form 3160-5, Federal Lease No. SF – 077123

Pre Approved Pools:
Blanco-Mesaverde (72319) & Blanco Pictured Cliffs (72359) Pools
Blanco-Mesaverde (72319) & Otero-Chacra (82329) Pools
Blanco Pictured Cliffs (72359) & Otero-Chacra (82329) Pools

Hughes C 1A

Future Production Decline Estimate

Mesaverde Daily Rates

Month	Gas Volume
Jan-2004	**125**
Feb-2004	**129**
Mar-2004	**122**
Apr-2004	**128**
May-2004	**122**
Jun-2004	**60**
Jul-2004	**141**
Aug-2004	**127**
Sep-2004	**115**
Oct-2004	**122**
Nov-2004	**124**
Dec-2004	**107**
Jan-2005	**128**
Feb-2005	**122**
Mar-2005	121
Apr-2005	121
May-2005	120
Jun-2005	119
Jul-2005	119
Aug-2005	118
Sep-2005	117
Oct-2005	117
Nov-2005	116
Dec-2005	115
Jan-2006	115
Feb-2006	114
Mar-2006	113
Apr-2006	113
May-2006	112
Jun-2006	111
Jul-2006	111
Aug-2006	110
Sep-2006	109
Oct-2006	109
Nov-2006	108
Dec-2006	108

ln(Qf/Qi) = -dt
Qf= 122
Qi= 127
rate= 122
time= 7
dt= -0.040166042
decline= -0.005738006

Month	Gas Volume
Jan-2007	107
Feb-2007	106
Mar-2007	106
Apr-2007	105
May-2007	104
Jun-2007	104
Jul-2007	103
Aug-2007	103
Sep-2007	102
Oct-2007	102
Nov-2007	101
Dec-2007	100
Jan-2008	100
Feb-2008	99
Mar-2008	99
Apr-2008	98
May-2008	98
Jul-2008	97
Aug-2008	96
Sep-2008	96
Oct-2008	95
Nov-2008	95
Dec-2008	94
Jan-2009	94
Feb-2009	93
Mar-2009	93
Apr-2009	92
May-2009	92
Jun-2009	91
Jul-2009	91
Aug-2009	90
Sep-2009	89
Oct-2009	89
Nov-2009	88
Dec-2009	88
Jan-2010	87

Month	Gas Volume
Feb-2010	87
Mar-2010	86
Apr-2010	86
May-2010	85
Jun-2010	85
Jul-2010	85
Aug-2010	84
Sep-2010	84
Oct-2010	83
Nov-2010	83
Dec-2010	82
Jan-2011	82
Feb-2011	81
Mar-2011	81
Apr-2011	80
May-2011	80
Jun-2011	79
Jul-2011	79
Aug-2011	78
Sep-2011	78
Oct-2011	78
Nov-2011	77
Dec-2011	77
Jan-2012	76
Feb-2012	76
Mar-2012	75
Apr-2012	75
May-2012	74
Jun-2012	74
Jul-2012	74
Aug-2012	73
Sep-2012	73
Oct-2012	72
Nov-2012	72
Dec-2012	72
Jan-2013	71

Hughes C 1A

Future Production Decline Estimate

Mesaverde Daily Rates

Month	Gas Volume
Feb-2013	71
Mar-2013	70
Apr-2013	70
May-2013	70
Jun-2013	69
Jul-2013	69
Aug-2013	68
Sep-2013	68
Oct-2013	68
Nov-2013	67
Dec-2013	67
Jan-2014	66
Feb-2014	66
Mar-2014	66
Apr-2014	65
May-2014	65
Jun-2014	65
Jul-2014	64
Aug-2014	64
Sep-2014	63
Oct-2014	63
Nov-2014	63
Dec-2014	62
Jan-2015	62
Feb-2015	62
Mar-2015	61
Apr-2015	61
May-2015	61
Jun-2015	60
Jul-2015	60
Aug-2015	60
Sep-2015	59
Oct-2015	59
Nov-2015	59
Dec-2015	58
Jan-2016	58

Month	Gas Volume
Feb-2016	58
Mar-2016	57
Apr-2016	57
May-2016	57
Jun-2016	56
Jul-2016	56
Aug-2016	56
Sep-2016	55
Oct-2016	55
Nov-2016	55
Dec-2016	54
Jan-2017	54
Feb-2017	54
Mar-2017	53
Apr-2017	53
May-2017	53
Jun-2017	52
Jul-2017	52
Aug-2017	52
Sep-2017	52
Oct-2017	51
Nov-2017	51
Dec-2017	51
Jan-2018	50
Feb-2018	50
Mar-2018	50
Apr-2018	50
May-2018	49
Jun-2018	49
Jul-2018	49
Aug-2018	48
Sep-2018	48
Oct-2018	48
Nov-2018	48
Dec-2018	47
Jan-2019	47

Hughes C 1A

Future Production Decline Estimate

Pictured Cliffs Daily Rates

Month	Gas Volume
Jan-2004	**26**
Feb-2004	**26**
Mar-2004	**25**
Apr-2004	**26**
May-2004	**25**
Jun-2004	**12**
Jul-2004	**29**
Aug-2004	**26**
Sep-2004	**24**
Oct-2004	**25**
Nov-2004	**25**
Dec-2004	**22**
Jan-2005	**26**
Feb-2005	**25**
Mar-2005	25
Apr-2005	25
May-2005	25
Jun-2005	24
Jul-2005	24
Aug-2005	24
Sep-2005	24
Oct-2005	24
Nov-2005	24
Dec-2005	24
Jan-2006	24
Feb-2006	23
Mar-2006	23
Apr-2006	23
May-2006	23
Jun-2006	23
Jul-2006	23
Aug-2006	23
Sep-2006	22
Oct-2006	22
Nov-2006	22
Dec-2006	22

ln(Qf/Qi) = -dt

Qf=	25
Qi=	26
rate=	25
time=	7
dt=	-0.039220713
decline=	-0.005602959

Month	Gas Volume
Jan-2007	22
Feb-2007	22
Mar-2007	22
Apr-2007	22
May-2007	21
Jun-2007	21
Jul-2007	21
Aug-2007	21
Sep-2007	21
Oct-2007	21
Nov-2007	21
Dec-2007	21
Jan-2008	21
Feb-2008	20
Mar-2008	20
Apr-2008	20
May-2008	20
Jul-2008	20
Aug-2008	20
Sep-2008	20
Oct-2008	20
Nov-2008	20
Dec-2008	19
Jan-2009	19
Feb-2009	19
Mar-2009	19
Apr-2009	19
May-2009	19
Jun-2009	19
Jul-2009	19
Aug-2009	19
Sep-2009	18
Oct-2009	18
Nov-2009	18
Dec-2009	18
Jan-2010	18

Month	Gas Volume
Feb-2010	18
Mar-2010	18
Apr-2010	18
May-2010	18
Jun-2010	18
Jul-2010	17
Aug-2010	17
Sep-2010	17
Oct-2010	17
Nov-2010	17
Dec-2010	17
Jan-2011	17
Feb-2011	17
Mar-2011	17
Apr-2011	17
May-2011	17
Jun-2011	16
Jul-2011	16
Aug-2011	16
Sep-2011	16
Oct-2011	16
Nov-2011	16
Dec-2011	16
Jan-2012	16
Feb-2012	16
Mar-2012	16
Apr-2012	16
May-2012	15
Jun-2012	15
Jul-2012	15
Aug-2012	15
Sep-2012	15
Oct-2012	15
Nov-2012	15
Dec-2012	15
Jan-2013	15

Hughes C 1A

Future Production Decline Estimate

Pictured Cliffs Daily Rates

Month	Gas Volume
Feb-2013	15
Mar-2013	15
Apr-2013	15
May-2013	14
Jun-2013	14
Jul-2013	14
Aug-2013	14
Sep-2013	14
Oct-2013	14
Nov-2013	14
Dec-2013	14
Jan-2014	14
Feb-2014	14
Mar-2014	14
Apr-2014	14
May-2014	13
Jun-2014	13
Jul-2014	13
Aug-2014	13
Sep-2014	13
Oct-2014	13
Nov-2014	13
Dec-2014	13
Jan-2015	13
Feb-2015	13
Mar-2015	13
Apr-2015	13
May-2015	13
Jun-2015	13
Jul-2015	12
Aug-2015	12
Sep-2015	12
Oct-2015	12
Nov-2015	12
Dec-2015	12
Jan-2016	12

Month	Gas Volume
Feb-2016	12
Mar-2016	12
Apr-2016	12
May-2016	12
Jun-2016	12
Jul-2016	12
Aug-2016	12
Sep-2016	12
Oct-2016	11
Nov-2016	11
Dec-2016	11
Jan-2017	11
Feb-2017	11
Mar-2017	11
Apr-2017	11
May-2017	11
Jun-2017	11
Jul-2017	11
Aug-2017	11
Sep-2017	11
Oct-2017	11
Nov-2017	11
Dec-2017	11
Jan-2018	11
Feb-2018	10
Mar-2018	10
Apr-2018	10
May-2018	10
Jun-2018	10
Jul-2018	10
Aug-2018	10
Sep-2018	10
Oct-2018	10
Nov-2018	10
Dec-2018	10
Jan-2019	10

Hughes C 1 A API #: 30-045-23150
Complete into the Chacra & DHC with the MV & PC
February 14, 2005

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

9. Install stripping rubber.

10. TOH and LD 2-3/8" production tubing currently set at 5400'. Using approved "Under Balance Well Control Tripping Procedure".

11. TIH w/ scraper for 4-1/2". 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 5,595'. POOH.

12. Set bridge plug at 4,300'.

13. 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.

14. RIH with 3-1/8" casing guns w/lubricator. Perforate Chacra formation w/ 4 SPF.

15. RIH w/ packer and 3-1/2" by 2-7/8" frac string. Set packer at 3,200'.

16. 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.

17. Flowback frac immediately. Flow well through choke manifold on ¼", ½" and ¾" chokes increasing drawdown until well dies or stabilizes. This is to aid in reducing sand flowback. Recommend 8 hours of flow for each choke size.

18. Rig up air package/unit, pressure test all lines (Testing procedure to be supplied from air company), TIH with tubing and bit for 4-1/2" casing. Cleanout fill to top of BP set at 4,300'. **Perform well test on Chacra for regulatory and document well test in DIMS.**

19. Cleanout fill and BP set at 4,300'. Cleanout to PBTD at 5,595'. Blow well dry.

20. Rabbit tubing and RIH with 2-3/8" production tubing (with muleshoe, F-nipple with plug, 4 ft pup, X-nipple with plug).

21. Land 2-3/8" production tubing at +/-5,490'. Lock down hanger.

22. 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.**

23. 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.

24. 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.

25. RD slickline unit.

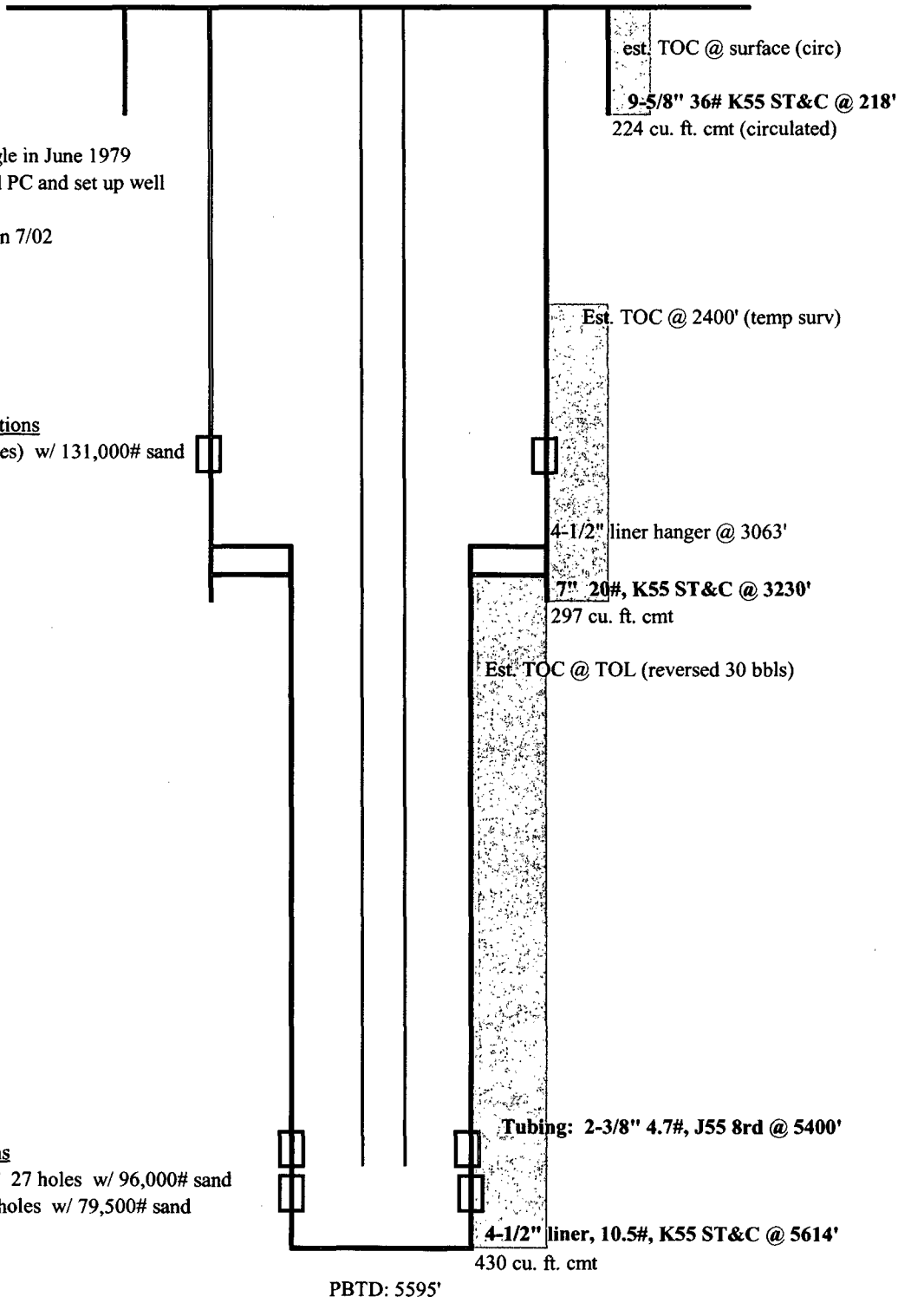
26. Test well for air. Return well to production and downhole tri-mingle PC, Chacra and Mesaverde.

Hughes C 1 A

Sec 33, T29N, R8W

API # 30-045-23150

GL: 6368'



History:

Completed as MV single in June 1979

Sept 1985: Completed PC and set up well as dual completion

Downhole comingled in 7/02

Pictured Cliffs Perforations

2875' - 2944' (100 holes) w/ 131,000# sand

Mesaverde Perforations

CH/MF: 4418' - 5060' 27 holes w/ 96,000# sand

PL: 5094' - 5537' 26 holes w/ 79,500# sand

updated: 2/10/05 CFR