DATE IN 4/3/08	SUSPENSE	ENGINEER W Jones	LOGGED IN 4/3/08	TYPE DHC	APP NO. PKUR0809455718

ABOVE THIS LINE FOR DIVISION USE ONLY

4689

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505

ADMINISTRATIVE APPLICATION CHECKLIST

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 _____

RECEIVED
2008 APR 3 PM 2 06

[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.

Cherry Hlava	*Cherry Hlava*	**Regulatory Analyst**	**4/1/08**
Print or Type Name	Signature	Title	Date

hlavacl@bp.com
e-mail Address

District I
1625 N. French Drive, Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.

Santa Fe, New Mexico 87505

Form C-107A
Revised June 10, 2003

APPLICATION TYPE
__X__ Single
____ Establish Pre-Approved Pools
EXISTING WELLBORE
__X__ Yes ____ No

APPLICATION FOR DOWNHOLE COMMINGLING

DHC-4019

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

Lease **Russell** Well No. **2** Unit Letter-Section-Township-Range **Unit M Section 24 T28N, R08W** County **San Juan**

OGRID No.**000778** Property Code **000998** API No.**30-045-24050** Lease Type: __X__ Federal ____ State ____ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	~~Blanco~~ Otero Chacra	Blanco Mesaverde	Basin Dakota PRO
Pool Code	82329	72319	71599
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	(Estimate) 3703' – 3640'	4395' – 5179'	7018' – 7246'
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)	530	425	590
Oil Gravity or Gas BTU (Degree API or Gas BTU)	1165	1323	1320
Producing, Shut-In or New Zone	New Zone	Producing	Producing
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: Rates:	Date: 4/1/08 Rates: 142 mcfd	Date: 4/1/08 Rates: 21 mcfd
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil ____% Gas SUBTRACTION %	Oil ____% Gas 87 %	Oil ____% Gas Decline 13 %

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 Cherry Hlava TITLE Regulatory Analyst DATE 04/01/2008

TYPE OR PRINT NAME Cherry Hlava TELEPHONE NO. (281) 366-4081

E-MAIL ADDRESS hlavacl@bp.com

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
May 27, 2004

WELL API NO.
30-045-24050

5. Indicate Type of Lease
STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name
Russell

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

8. Well Number
2

2. Name of Operator
BP America Production Company Attn: Cherry Hlava

9. OGRID Number
778

3. Address of Operator
P.O. Box 3092 Houston, TX 77253

10. Pool name or Wildcat
Basin DK, Blanco MV & Otero Chacra

4. Well Location
Unit Letter **M** : **1275** feet from the **South** line and **945** feet from the **West** line
Section **24** Township **28N** Range **08W** NMPM **San Juan** County

11. Elevation *(Show whether DR, RKB, RT, GR, etc.)*

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type_____ **Depth to Groundwater**_____ **Distance from nearest fresh water well**_____ **Distance from nearest surface water**_____

Pit Liner Thickness: _____ **mil** **Below-Grade Tank: Volume** _____ **bbls; Construction Material** _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☐	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	P AND A	☐
PULL OR ALTER CASING	☐	MULTIPLE COMPL	☐	CASING/CEMENT JOB	☐		
OTHER: **Tri-Mingling**			☒	OTHER:			☐

13. 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 recompletion.

BP America requests permission to complete the subject well into the Chacra formations and tri-commingle production downhole with the existing Basin Dakota & Blanco Mesaverde.

Pools are Pre-Approved by order R-11363. Basin Dakota (71599), Blanco Mesaverde (72319) & Otero Chacra (82329).

The Interest owners are identical between the MV, DK & CH therefore no notification required.

Production is proposed to be allocated based on a fixed percentage. It is our intent to isolate the Dakota & MV, complete into the Chacra; flow back to stabilize the Chacra & perform a Chacra flow test. Drill out bridge plug between the MV & CH, perform a combined stream test on MV & CH. Chacra test will be subtracted from the total and a % calculated to determine the flow rate for the MV & CH. A decline will be used for the Dakota (see attached)

The BLM has been notified of the DHC via form 3160-5 for lease NM – 013860A

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

I hereby certify that the information above is true and complete to the best of my knowledge and belief. **I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.**

SIGNATURE *Cherry Hlava* TITLE **Regulatory Analyst** DATE 04/01/2008

Type or print name Cherry Hlava E-mail address: hlavacl@bp.com Telephone No. 281-366-4081

For State Use Only

APPROVED BY: _____ TITLE _____ DATE _____

Conditions of Approval (if any):

CC: NMOCD Aztec

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(505) 393-6161 Fax:(505) 393-0720
District II
1301 W. Grand Ave., Artesia, NM 88210
Phone:(505) 748-1283 Fax:(505) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-102
Permit 51714

WELL LOCATION AND ACREAGE DEDICATION PLAT

1. API Number	2. Pool Code	3. Pool Name	
30-045-24050	82329	OTERO CHACRA (GAS)	
4. Property Code	5. Property Name		6. Well No.
998	RUSSELL A		002
7. OGRID No.	8. Operator Name		9. Elevation
778	BP AMERICA PRODUCTION COMPANY		6238

10. Surface Location

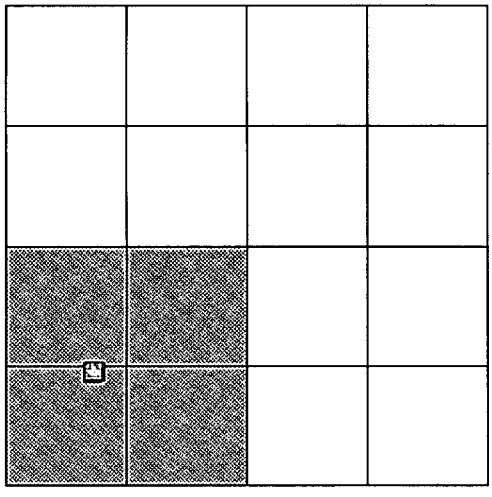
UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
M	24	28N	08W		1275	S	945	W	SAN JUAN

11. Bottom Hole Location If Different From Surface

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County

12. Dedicated Acres	13. Joint or Infill	14. Consolidation Code	15. Order No.
160.00			

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



OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

E-Signed By: Cherry Hlava
Title: Regulatory Analyst
Date: 4-1-08

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.

Surveyed By: Fred Kerr
Date of Survey: 8/29/1979
Certificate Number: 3950

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
311 South First,, Artesia, NM 88210
DISTRICTIII
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
2040 South Pacheco, Sante Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
2040 South Pacheco
Santa Fe, New Mexico 87505

Form C-102
Revised October 18, 1994
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number	Pool Code	Pool Name
30-045-24050	71599 & 72319	Basin Dakota & Blanco Mesaverde

Property Code	Property Name	Well Number
000997	Russell	2

OGRID No.	Operator Name	Elevation
000778	AMOCO PRODUCTION COMPANY	6238' GR

Surface Location

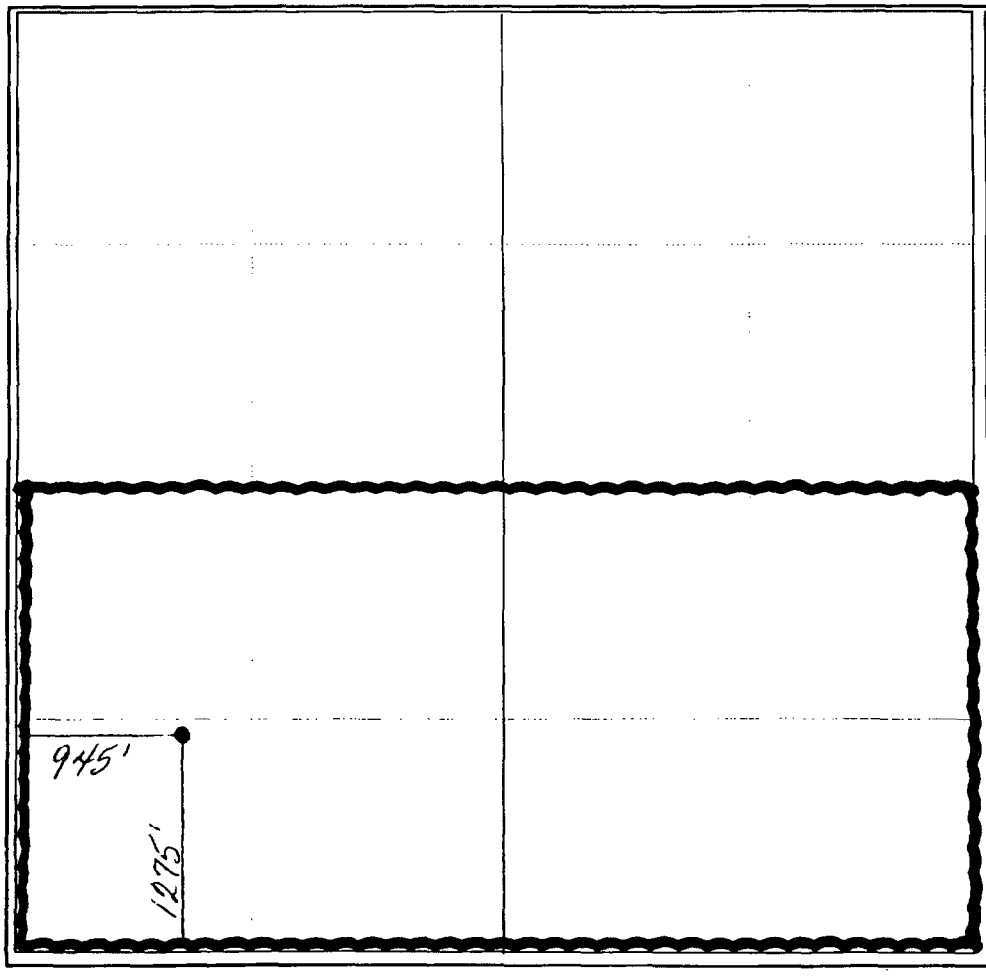
UL or lot no.	Section	Township	Range	Lot. Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
UNIT M	24	28N	8W		1275'	SOUTH	945'	WEST	San Juan

Bottom Hole Location If Different From Surface

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

Dedicated Acreage:	Joint or Infill	Consolidation Code	Order No.
320			

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



OPERATOR CERTIFICATION

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

Signature: Mary Corley

Printed Name: Mary Corley

Position: Sr. Regulatory Analyst

Date: 07/06/2000

SURVEY 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 knowledge and belief.

8/29/1979

Date of Survey

Signature & Seal of Professional Surveyor

Fred B Kerr Jr

Certificate No.

3950

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1-78

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
TENNECO OIL COMPANY	RUSSELL	2

Unit Letter	Section	Township	Range	County
M	24	28N	8W	San Juan

Actual Footage Location of Well:
1275 feet from the South line and 945 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6238	Dakota	Dakota Basin	320.00 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

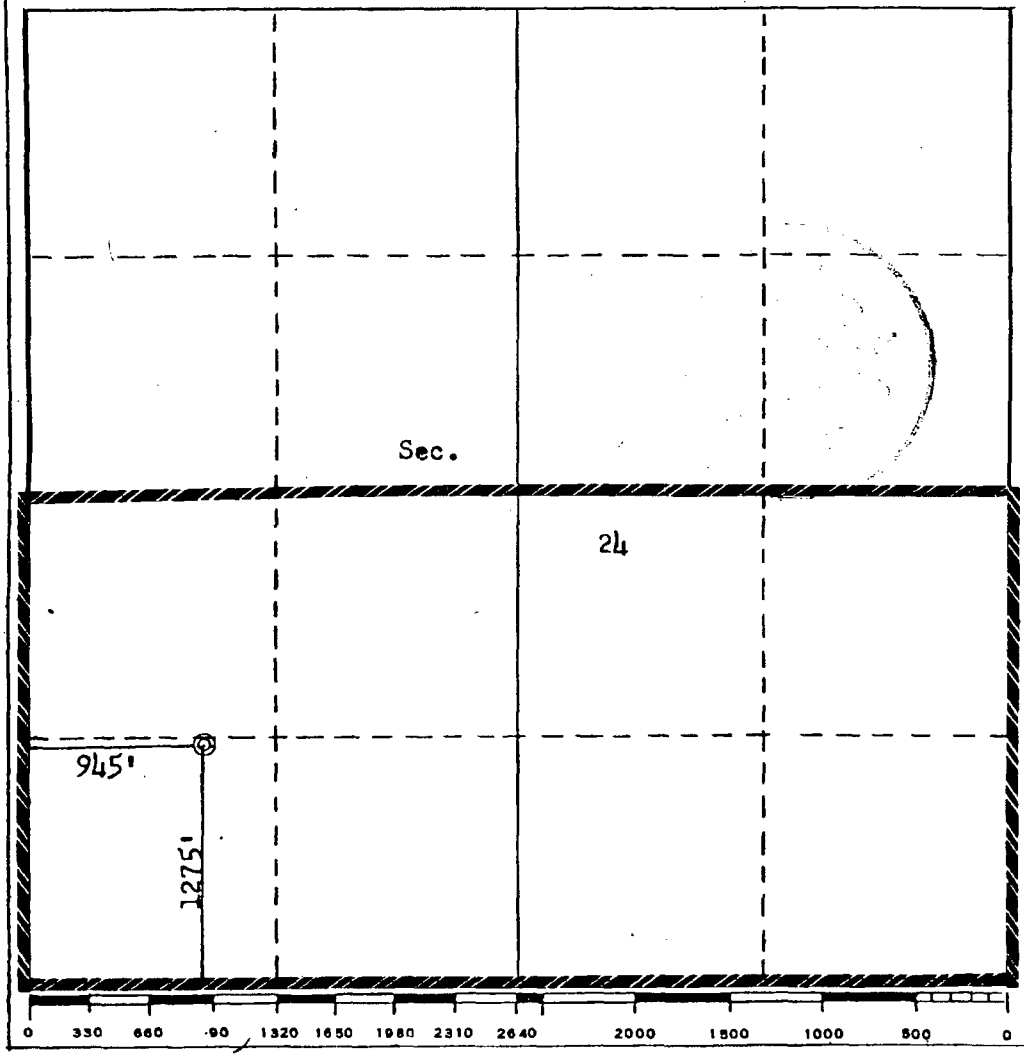
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: Martin DeLeeuw

Position: Staff Production Analyst

Company: Tenneco Oil Company

Date: 12-4-79

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 knowledge and belief.

Date Surveyed: August 2nd 1979

Registered Professional Engineer and/or Land Surveyor: Fred B. Kerr Jr.

Certificate No. 3950

REGISTERED LAND SURVEYOR — FRED B. KERR, JR.

SJ Basin Well Work Procedure

Well Name: Russell 2
Version: 1
Date: April 1, 2008
Repair Type: Recomplete
Location: T28N-R8W-Sec24
County: San Juan
State: New Mexico
Horizon: DK/MV/CH

API #: 30-045-24050

Engr: Matt Mientka
ph (281) 366-5721
cell (806) 283-6343
fax (281) 366-0700

Objective: Recomplete well to include Chacra formation and downhole commingle Chacra and Dakota.

1. TOH with completion.
2. Run CBL log.
3. Perforate and frac Chacra
4. Clean out to TD and land tubing.
5. Return well to production, downhole commingle Chacra and Dakota

---

Well History:

This well was originally drilled in 1980 by Tenneco Oil company. It was completed with 7" Production casing with a 4-1/2" liner, producing from a frac'd Dakota sand. In October, 2000, the Mesa Verfe was added with fracture stimulation in the Upper Menefee/Cliffhouse and the Lower Menefee/Point Lookout. The well currently averages 175 MCF/day for production.

The objective is to recomplete this well to include the Chacra horizon and commingle the production with the existing Dakota & Mesaverd horizon. The job scope is to perforate and fracture stimulate the Chacra formation, clean out to TD, and trimingle production after performing a 24 hour test on the Chacra. The anticipated uplift is 200 mcfd. A CIBP will be set at 5000' to isolate the Dakota throughout the recomplete.

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 string.

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, pull tubing hanger up above pipe rams, and shut pipe rams. Remove stripping rubber. Strip tubing hanger out of hole. Re-install stripping rubber.

10. TOH with 2-3/8" production tubing currently set at 7051'. Using approved "Under Balance Well Control Tripping Procedure". Visually inspect tubing while POOH, note any signs of pitting or corrosion and please document with pictures. Strap tubing out of hole. Recover isolation plugs from tubing.

11. PU and TIH with bit and 4-1/2"" 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 and scrape pipe to PBTD (~7271'). POOH. Lay down bit and scraper.

12. Pick up CIBP and set at +/- 4200'. Pressure test bridge plug to ensure it is holding. Fill casing w/ 2% KCl. POOH.

13. RU E-line equipment. Pressure test lubricator and equipment.

14. **Log well w/ CBL and RST log from 4200' to 3154' (liner top).** Contact engineer after determining TOC in 4-1/2" liner to discuss perforation placement or need for remedial cement squeeze if cement coverage is inadequate for the pay-add or if integrity of casing appears sub-par. Contact operations geologist, Mark Durio, for final perf interval selection from the RST.

15. Replace wellhead (if needed)

16. Pressure test 7" 23# K-55 casing and 4 ½" 10.5# K-55 liner to ~3200 psi (75% of burst is 3592 psi). Monitor outer annulus pressure closely. (To perform pressure test, RIH with tension set packer, set packer in casing just below lowest casing valve and test casing to desired pressure.)

17. 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. 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.

18. RIH with **3-1/8" HEG Gun. 1 SPF, 120 Degree Phasing** w/lubricator and perforate Chacra formation.

Estimated Perforated intervals:

Chacra formation: 3703' – 3640'

NOTE: Verify final perf intervals with engineer/geologist.

POOH with perforating guns.

19. TIH w/ 3150' 2-7/8" N-80/L-80 frac string 4 ½" x 2-7/8" packer. Configure packer assembly as 2-7/8" x 4 ½"; 2-7/8" downhole shutoff valve; This assembly will be made up and pressure tested in the packer service shop. TIH with downhole shutoff valve in the closed position.

20. Hold Risk Assessment (JHA) meeting prior to initiating pumping services.

21. RU 10,000 psi frac isolation equipment (Stinger Isolation Tool).

22. RU test pump and pressure test tubing to 5000 psi for 10-15 minutes.

23. Relief pressure off of frac string. Open downhole valve and set packer at 3150'.

24. Pressure test 2-7/8" x 4-1/2" annulus with 500 psi.

25. RU frac equipment. **NOTE:** Frac tanks should be filled with fresh water, the KCl will be added on the fly.

26. Pressure test iron to Stinger frac valve at 5000 psi for 10 minutes. Function test treating line check valve during the prime and pressure test operation.

27. The frac is expected to pump at approximately 3000 psi. Maximum allowable treating pressure will be **3200 psi**.

28. Set stagger pump trips to **3200-3400 psi**. Function test pump trips individually.

29. Install and monitor production casing and treating pressure during entire job in frac van via pressure transducers on production casing and treating line. Be sure to monitor the casing annulus pressure throughout the duration of stimulation treatment.

30. Spearhead 1000 gal 15% HCL, establish injection rate, and proceed with fracture stimulation according to Service Company schedule.

31. Flowback frac immediately. Flow well through choke manifold on ¼", ½" and ¾" 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.

32. Release packer. TOH and LD 2-7/8" frac string and packer.

33. Rig up air package/unit, pressure test all lines (Testing procedure to be supplied from air company).

34. TIH with 2-3/8" tubing with notched collar (muleshoe) and float check valve.

35. Clean fill to CBP set at 5000'

36. POOH with tubing and float.

37. RIH with tubing and wireline retrievable pump through plug. Hang off tubing at 3600'. Retrieve plug.

38. Flow test the Chacra for 24 hrs for regulatory, allocation, and deliverability purposes.

39. POOH with tubing.

40. TIH w/ tubing and bit for 4-1/2" liner. Drill out CBP set at 5000'. Cleanout to PBTD at 7271'. Blow well dry.

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

42. Land 2-3/8" production tubing at +/- 7051' or depth determined from logs. Lock down 2-3/8" tubing hanger and bonnet.

43. 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 BOP's and installation of wellhead will be performed under a dispensation for one (1) barrier on the backside.**

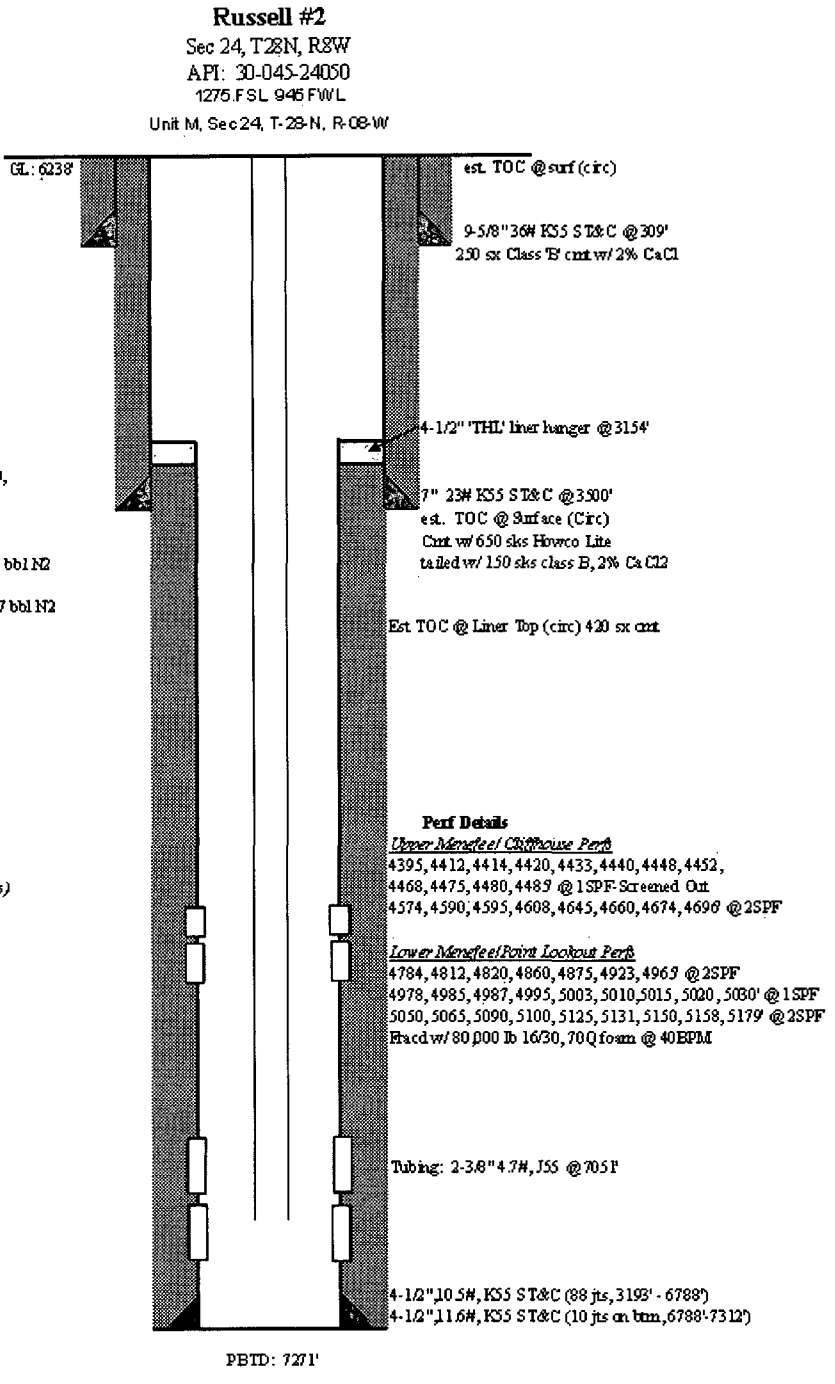
44. ND BOP's. NU Wellhead. During Master valve placement ensure the top of hanger has spacer nipple in place to bottom of bonnet flange so plunger equipment will not hang up through tree. Pressure test Wellhead.

45. RU WL unit. Run gauge ring for 2-3/8" tubing. Pull plugs. Set tubing stop for plunger and communicate plunger equipment status to IC room personnel.

46. RD WL unit.

47. Test well for air. Hook up well to surface facilities and return well to production and downhole commingle Mesa Verde and Dakota.

Wellbore Diagram:



History:
Orig. Completed in 9/80
- 6-1/4" OH drilled with air without problems
- 1500gal 15% HCL w/ perfit ball
- Frac DK w/ 80,000# 20/40. 25,500# 10/20, 80000gal 30# XL

MV recomplete 10/00
- Stage 1: 4784' - 5179' Frac w/ 80,000#, 801 bbl N2 Foam
- Stage 2: 4395' - 4696' Frac w/ 70,000#, 697 bbl N2 Foam

12/6/05: Ongoing H2S problems: installed continuous H2S injector

Mesa Verde Perforations 10/00:
SLB Prospector select fire (See Perf Details)
4395' - 4489' (12 shots) 1 spf
4574' - 4696' (16 shots) 2 spf
4784' - 5030' (14 shots) 2 spf
4978' - 5030' (9 shots) 1 spf
5050' - 5179' (16 shots) 2 spf

Original Dakota Perforations 9/80:
7018' - 7034' 2 spf
7104' - 7110' 2 spf
7142' - 7146' 2 spf
7174' - 7178' 2 spf
7194' - 7200' 2 spf
7206' - 7212' 2 spf
7236' - 7246' 2 spf

2008 Plan:
1. TOH with tubing
2. Place CIBP above MV and DK
3. Perf and Frac Chacra Sand
4. Cleanout liner to PBTD
5. Land tubing, produce tri-mingled

Notes:
- **reversed 6 bbls cmt off liner top**
- **Good circulation throughout cmt job**
- **Plunger not running/liquid loading.**
- **Compressor on well.**
- **No known bradenhead or casing leak issues.**

updated: mm 3/18/2008

Russell #2

Future Dakota Production Decline Estimate (Monthly Factor .0029)

Month	Gas Volume
Jan-2000	**35**
Feb-2000	**73**
Mar-2000	**63**
Apr-2000	**59**
May-2000	**56**
Jun-2000	**52**
Jul-2000	50
Aug-2000	50
Sep-2000	50
Oct-2000	50
Nov-2000	50
Dec-2000	50
Jan-2001	50
Feb-2001	49
Mar-2001	49
Apr-2001	49
May-2001	49
Jun-2001	49
Jul-2001	49
Aug-2001	49
Sep-2001	48
Oct-2001	48
Nov-2001	48
Dec-2001	48
Jan-2002	48
Feb-2002	48
Mar-2002	48
Apr-2002	47
May-2002	47
Jun-2002	47
Jul-2002	47
Aug-2002	47
Sep-2002	47
Oct-2002	47
Nov-2002	46
Dec-2002	46

Month	Gas Volume
Jan-2003	46
Feb-2003	46
Mar-2003	46
Apr-2003	46
May-2003	46
Jun-2003	46
Jul-2003	46
Aug-2003	46
Sep-2003	45
Oct-2003	45
Nov-2003	45
Dec-2003	45
Jan-2004	45
Feb-2004	45
Mar-2004	45
Apr-2004	45
May-2004	45
Jun-2004	45
Jul-2004	45
Aug-2004	44
Sep-2004	44
Oct-2004	44
Nov-2004	44
Dec-2004	44
Jan-2005	44
Feb-2005	44
Mar-2005	44
Apr-2005	44
May-2005	44
Jun-2005	44
Jul-2005	43
Aug-2005	43
Sep-2005	43
Oct-2005	43
Nov-2005	43
Dec-2005	43

Month	Gas Volume
Jan-2006	43
Feb-2006	43
Mar-2006	43
Apr-2006	43
May-2006	42
Jun-2006	42
Jul-2006	42
Aug-2006	42
Sep-2006	42
Oct-2006	42
Nov-2006	42
Dec-2006	42
Jan-2007	41
Feb-2007	41
Mar-2007	41
Apr-2007	41
May-2007	41
Jun-2007	41
Jul-2007	41
Aug-2007	41
Sep-2007	40
Oct-2007	40
Nov-2007	40
Dec-2007	40
Jan-2008	40
Feb-2008	40
Mar-2008	40
Apr-2008	40
May-2008	39
Jun-2008	39
Jul-2008	39
Aug-2008	39
Sep-2008	39
Oct-2008	39
Nov-2008	39
Dec-2008	39

Month	Gas Volume
Jan-2009	39
Feb-2009	38
Mar-2009	38
Apr-2009	38
May-2009	38
Jun-2009	38
Jul-2009	38
Aug-2009	38
Sep-2009	38
Oct-2009	38
Nov-2009	37
Dec-2009	37
Jan-2010	37
Feb-2010	37
Mar-2010	37
Apr-2010	37
May-2010	37
Jun-2010	37
Jul-2010	37
Aug-2010	36
Sep-2010	36
Oct-2010	36
Nov-2010	36
Dec-2010	36
Jan-2011	36
Feb-2011	36
Mar-2011	36
Apr-2011	36
May-2011	35
Jun-2011	35
Jul-2011	35
Aug-2011	35
Sep-2011	35
Oct-2011	35
Nov-2011	35
Dec-2011	35

Russell #2

4/1/2008

Future Dakota Production Decline Estimate (Monthly Factor .0029)

Month	Gas Volume
Jan-2012	35
Feb-2012	34
Mar-2012	34
Apr-2012	34
May-2012	34
Jun-2012	34
Jul-2012	34
Aug-2012	34
Sep-2012	34
Oct-2012	34
Nov-2012	34
Dec-2012	33
Jan-2013	33
Feb-2013	33
Mar-2013	33
Apr-2013	33
May-2013	33
Jun-2013	33
Jul-2013	33
Aug-2013	33
Sep-2013	33
Oct-2013	32
Nov-2013	32
Dec-2013	32
Jan-2014	32
Feb-2014	32
Mar-2014	32
Apr-2014	32
May-2014	32
Jun-2014	32
Jul-2014	32
Aug-2014	32
Sep-2014	31
Oct-2014	31
Nov-2014	31
Dec-2014	31

Month	Gas Volume
Jan-2015	31
Feb-2015	31
Mar-2015	31
Apr-2015	31
May-2015	31
Jun-2015	31
Jul-2015	30
Aug-2015	30
Sep-2015	30
Oct-2015	30
Nov-2015	30
Dec-2015	30
Jan-2016	30
Feb-2016	30
Mar-2016	30
Apr-2016	30
May-2016	30
Jun-2016	29
Jul-2016	29
Aug-2016	29
Sep-2016	29
Oct-2016	29
Nov-2016	29
Dec-2016	29
Jan-2017	29
Feb-2017	29
Mar-2017	29
Apr-2017	29
May-2017	29
Jun-2017	28
Jul-2017	28
Aug-2017	28
Sep-2017	28
Oct-2017	28
Nov-2017	28
Dec-2017	28

Month	Gas Volume
Jan-2018	28
Feb-2018	28
Mar-2018	28
Apr-2018	27
May-2018	27
Jun-2018	27
Jul-2018	27
Aug-2018	27
Sep-2018	27
Oct-2018	27
Nov-2018	26
Dec-2018	26
Jan-2019	26
Feb-2019	26
Mar-2019	26
Apr-2019	26
May-2019	26
Jun-2019	26
Jul-2019	25
Aug-2019	25
Sep-2019	25
Oct-2019	25
Nov-2019	25
Dec-2019	25
Jan-2020	25
Feb-2020	25
Mar-2020	24
Apr-2020	24
May-2020	24
Jun-2020	24
Jul-2020	24
Aug-2020	24
Sep-2020	24
Oct-2020	24
Nov-2020	23
Dec-2020	23

Month	Gas Volume
Jan-2021	23
Feb-2021	23
Mar-2021	23
Apr-2021	23
May-2021	23
Jun-2021	23
Jul-2021	23
Aug-2021	22
Sep-2021	22
Oct-2021	22
Nov-2021	22
Dec-2021	22
Jan-2022	22
Feb-2022	22
Mar-2022	22
Apr-2022	22
May-2022	21
Jun-2022	21
Jul-2022	21
Aug-2022	21
Sep-2022	21
Oct-2022	21
Nov-2022	21
Dec-2022	21
Jan-2023	21
Feb-2023	20
Mar-2023	20
Apr-2023	20
May-2023	20
Jun-2023	20
Jul-2023	20
Aug-2023	20
Sep-2023	20
Oct-2023	20
Nov-2023	20
Dec-2023	19

Russell #2

Future Dakota Production Decline Estimate (Monthly Factor .0029)

Month	Gas Volume
Jan-2024	19
Feb-2024	19
Mar-2024	19
Apr-2024	19
May-2024	19
Jun-2024	19
Jul-2024	19
Aug-2024	19
Sep-2024	19
Oct-2024	19
Nov-2024	18
Dec-2024	18
Jan-2025	18
Feb-2025	18
Mar-2025	18
Apr-2025	18
May-2025	18
Jun-2025	18
Jul-2025	18
Aug-2025	18
Sep-2025	18
Oct-2025	17
Nov-2025	17
Dec-2025	17
Jan-2026	17
Feb-2026	17
Mar-2026	17
Apr-2026	17
May-2026	17
Jun-2026	17
Jul-2026	17
Aug-2026	17
Sep-2026	17
Oct-2026	16
Nov-2026	16
Dec-2026	16

Month	Gas Volume
Jan-2027	16
Feb-2027	16
Mar-2027	16
Apr-2027	16
May-2027	16
Jun-2027	16
Jul-2027	16
Aug-2027	16
Sep-2027	16
Oct-2027	15
Nov-2027	15
Dec-2027	15
Jan-2028	15
Feb-2028	15
Mar-2028	15
Apr-2028	15
May-2028	15
Jun-2028	15
Jul-2028	15
Aug-2028	15
Sep-2028	15
Oct-2028	15
Nov-2028	14
Dec-2028	14
Jan-2029	14
Feb-2029	14
Mar-2029	14
Apr-2029	14
May-2029	14
Jun-2029	14
Jul-2029	14
Aug-2029	14
Sep-2029	14
Oct-2029	14
Nov-2029	14
Dec-2029	14

Month	Gas Volume
Jan-2030	14
Feb-2030	13
Mar-2030	13
Apr-2030	13
May-2030	13
Jun-2030	13
Jul-2030	13
Aug-2030	13
Sep-2030	13
Oct-2030	13
Nov-2030	13
Dec-2030	13
Jan-2031	13
Feb-2031	13
Mar-2031	13
Apr-2031	12
May-2031	12
Jun-2031	12
Jul-2031	12
Aug-2031	12
Sep-2031	12
Oct-2031	12
Nov-2031	12
Dec-2031	12
Jan-2032	12
Feb-2032	12
Mar-2032	12
Apr-2032	12
May-2032	12
Jun-2032	12
Jul-2032	12
Aug-2032	12
Sep-2032	11
Oct-2032	11
Nov-2032	11
Dec-2032	11

Month	Gas Volume
Jan-2033	11
Feb-2033	11
Mar-2033	11
Apr-2033	11
May-2033	11
Jun-2033	11
Jul-2033	11
Aug-2033	11
Sep-2033	11
Oct-2033	11
Nov-2033	11
Dec-2033	11
Jan-2034	11
Feb-2034	11
Mar-2034	10
Apr-2034	10
May-2034	10
Jun-2034	10
Jul-2034	10
Aug-2034	10
Sep-2034	10
Oct-2034	10
Nov-2034	10
Dec-2034	10
Jan-2035	10
Feb-2035	10
Mar-2035	10
Apr-2035	10
May-2035	10
Jun-2035	10
Jul-2035	10
Aug-2035	10
Sep-2035	10
Oct-2035	10
Nov-2035	9
Dec-2035	9