

DATE IN 3/27/97	SUSPENSE 4/16/97	ENGINEER BS	LOGGED KN	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

### ADMINISTRATIVE APPLICATION COVERSHEET

THIS COVERSHEET IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS

#### Application Acronyms:

[NSP-Non-Standard Proration Unit] [NSL-Non-Standard Location]  
 [DD-Directional Drilling] [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]

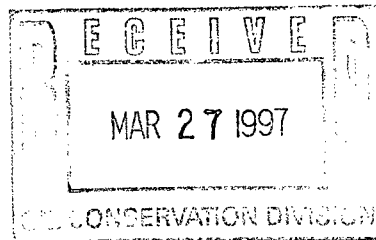
#### [1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Directional Drilling  
☐ NSL ☐ NSP ☐ DD ☐ SD

Check One Only for [B] and [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



#### [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] INFORMATION / DATA SUBMITTED IS COMPLETE - Statement of Understanding

I hereby certify that I, or personnel under my supervision, have read and complied with all applicable Rules and Regulations of the Oil Conservation Division. Further, I assert that the attached application for administrative approval is accurate and complete to the best of my knowledge and where applicable, verify that all interest (WI, RI, ORRI) is common. I understand that any omission of data, information or notification is cause to have the application package returned with no action taken.

Note: Statement must be completed by an individual with supervisory capacity.

Peggy Bradfield

Print or Type Name

Signature

Regulatory/Compliance Administrator

Title

Date

3-26-97

# **BURLINGTON RESOURCES**

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SAN JUAN DIVISION

March 26, 1997

SENT FEDERAL EXPRESS

Mr. William LeMay  
New Mexico Oil Conservation Division  
2040 South Pacheco Street  
Santa Fe, New Mexico 87505

Re: Riddle B #1A  
1600'FSL, 910'FEL Section 27, T-30-N, R-10-W, San Juan County, NM  
API #30-045-23157

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Blanco Pictured Cliffs and Blanco Mesa Verde in the subject well. This well was originally drilled as a Pictured Cliffs/Mesa Verde dual; it is intended to commingle.

To comply with the New Mexico Oil Conservation Division rules, Burlington Resources Oil & Gas is submitting the following for your approval of this commingling:

1. Form C107A - Application for Downhole Commingling;
2. C-102 plat for each zone showing its spacing unit and acreage dedication;
3. Production curve for Pictured Cliffs and Mesa Verde for at least one year;
4. Notification list of offset operators;
5. Shut in wellhead pressure and calculated down hole pressure;
6. Nine-section plats for the Mesa Verde and Pictured Cliffs

We will consult with the Supervisor of the Aztec District Office of the New Mexico Oil Conservation Division to establish an allocation formula.

Please let me know if you require additional data.

Sincerely,



Peggy Bradfield  
Regulatory/Compliance Administrator  
encs.

xc: Bureau of Land Management

## DISTRICT I

P.O. Box 1980, Hobbs, NM 88241-1980

## DISTRICT II

811 South First St., Artesia, NM 88210-2835

## DISTRICT III

1000 Rio Brazos Rd, Aztec, NM 87410-1693

State of New Mexico  
Energy, Minerals and Natural Resources Department

## OIL CONSERVATION DIVISION

2040 S. Pacheco  
Santa Fe, New Mexico 87505-6429Form C-107-A  
New 3-12-98

## APPROVAL PROCESS :

☒ Administrative ☐ Hearing

## APPLICATION FOR DOWNHOLE COMMINGLING

## EXISTING WELLBORE

☒ YES ☐ NOBurlington Resources Oil & Gas Company  
87499

PO Box 4289, Farmington, NM

Operator

Riddle B

Address

1A

I 27-30-10

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7427 API NO. 30-045-23157 Federal ☒ , State , (and/or) Fee

The following facts are submitted in support of downhole commingling.	Upper Zone	Intermediate Zone	Lower Zone
1. Pool Name and Pool Code	Blanco Pictured Cliffs - 72359		Blanco Mesaverde - 72319
2. Top and Bottom of Pay Section (Perforations)	2590-2692'		4148-5264'
3. Type of production (Oil or Gas)	gas		gas
4. Method of Production (Flowing or Artificial Lift)	flowing		flowing
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	(Current) a. 467 psi (see attachment)  (Original) b. 977 psi (see attachment)	a.  b.	a. 378 psi (see attachment)  b. 825 psi (see attachment)
6. Oil Gravity ( <sup>o</sup> API) or Gas BTU Content	BTU 1172		BTU 1189
7. Producing or Shut-In?	producing		producing
Production Marginal? (yes or no)	yes		no
* If Shut-In 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: n/a Rates:	Date: Rates:	Date: n/a Rates:
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: 1-97 Rates: 68 mcf/d; 0 bopd	Date: Rates:	Date: 1-97 Rates: 88 mcf/d; 0.50 bopd
8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)	Oil: % Gas: %  will be supplied upon completion	Oil: % Gas: %	Oil: % Gas: %  will be supplied upon completion

9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.

10. Are all working, overriding, and royalty interests identical in all commingled zones? ☒ Yes ☐ No  
If not, have all working, overriding, and royalty interests been notified by certified mail? ☐ Yes ☐ No  
Have all offset operators been given written notice of the proposed downhole commingling? ☒ Yes ☐ No11. Will cross-flow occur? ☒ Yes ☐ No If yes, are fluids compatible, will the formations not be damaged, will any cross-flowed production be recovered, and will the allocation formula be reliable. ☒ Yes ☐ No (If No, attach explanation)12. Are all produced fluids from all commingled zones compatible with each other? ☒ Yes ☐ No13. Will the value of production be decreased by commingling? ☐ Yes ☒ No (If Yes, attach explanation)14. If this well is on, or communitized with, state or federal lands, either the Commissioner of Public Lands or the United States Bureau of Land Management has been notified in writing of this application. ☒ Yes ☐ No

15. NMOCD Reference Cases for Rule 303(D) Exceptions: ORDER NO(S). \_\_\_\_\_

## 16. 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 all offset operators.
- \* Notification list of working, overriding, and royalty interests for uncommon interest cases.
- \* Any additional statements, data, or documents required to support commingling.

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

SIGNATURE Mary Ellen Lutey TITLE Production Engineer DATE 2/17/97TYPE OR PRINT NAME Mary Ellen Lutey TELEPHONE NO. ( 505 ) 326-9700

**NEW MEXICO OIL CONSERVATION COMMISSION**  
**WELL LOCATION AND ACREAGE DEDICATION PLAT**

Form C-102  
 Supersedes C-128  
 Effective 1-1-65

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

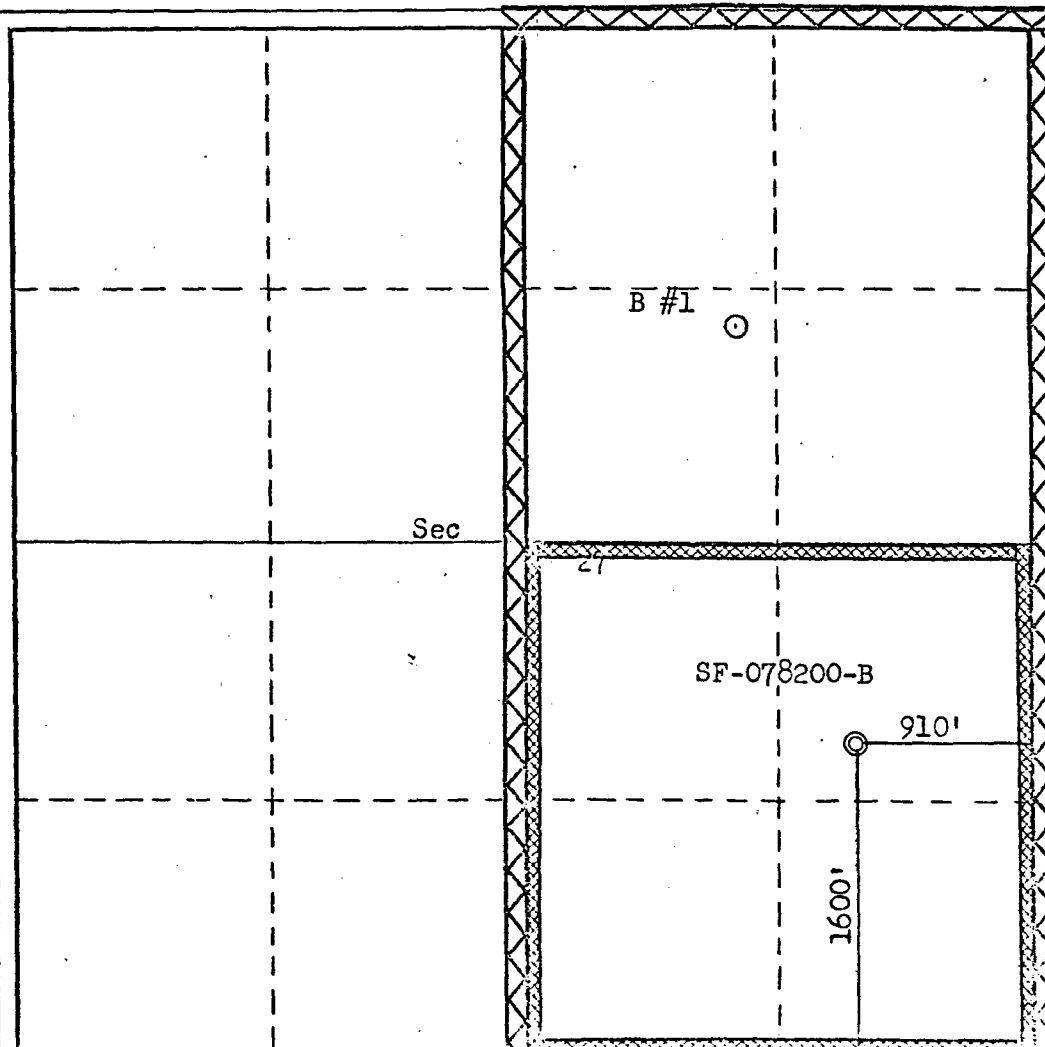
Operator <b>EL PASO NATURAL GAS COMPANY</b>			Lease <b>RIDDLE B (SF-078200-B)</b>		Well No. <b>1A</b>
Unit Letter <b>I</b>	Section <b>27</b>	Township <b>30N</b>	Range <b>10W</b>	County <b>San Juan</b>	
Actual Footage Location of Well: <b>1600</b> feet from the <b>South</b> line and <b>910</b> feet from the <b>East</b> line					
Ground Level Elev. <b>6037</b>	Producing Formation <b>Pictured Cliffs-Mesa Verde</b>		Pool <b>Aztec Pictured Cliffs Blanco Mesa Verde</b>	Dedicated Acreage: <b>159.36 &amp; 318.22 acres</b>	

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.

*D. G. Buices*

Name  
**Drilling Clerk**

Position  
**El Paso Natural Gas Co.**

Company  
**July 21, 1978**

Date

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  
**June 23, 1978**

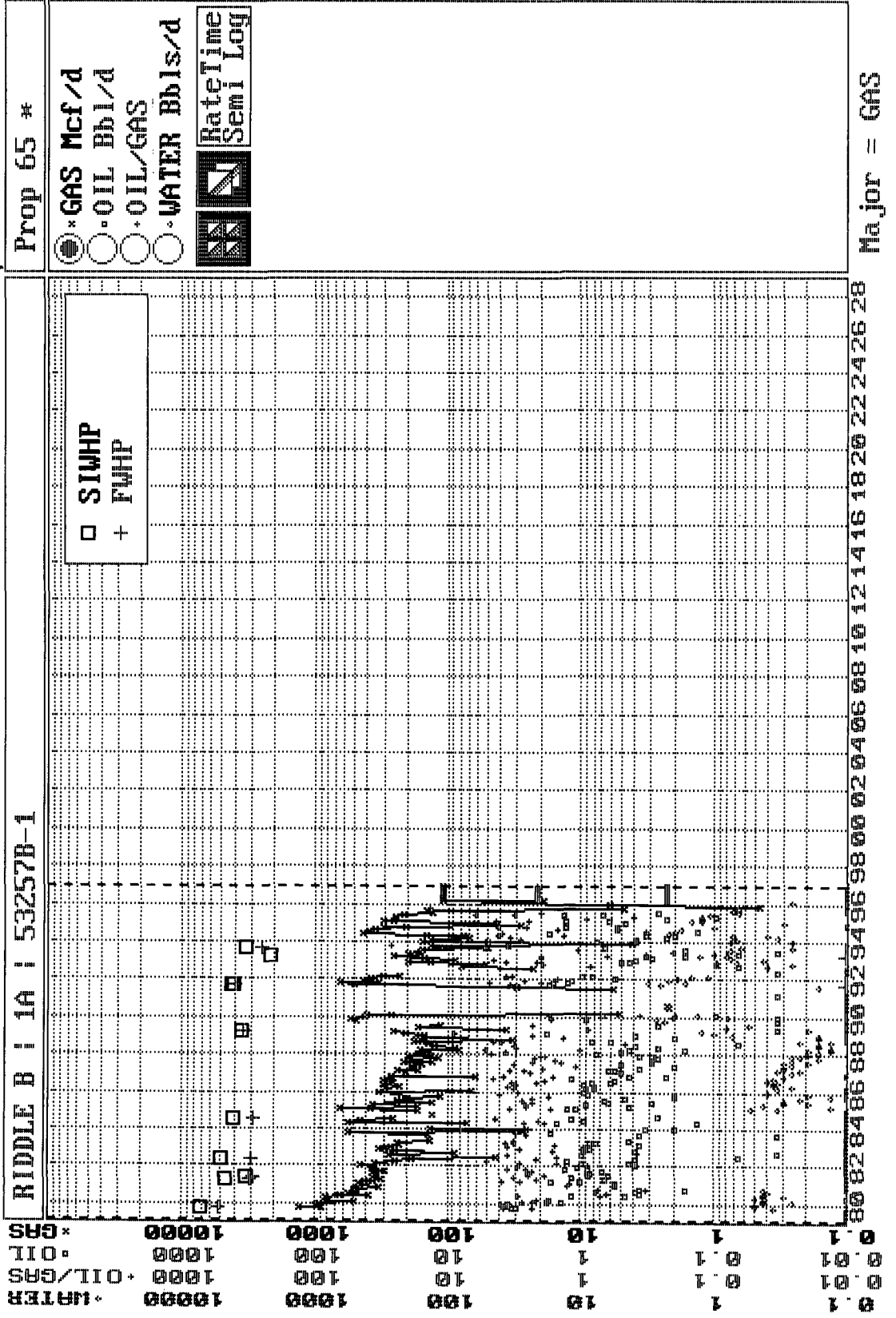
Registered Professional Engineer and/or Land Surveyor  
**2 3950**

*Fred B. Kefauver*  
**Fred B. Kefauver**

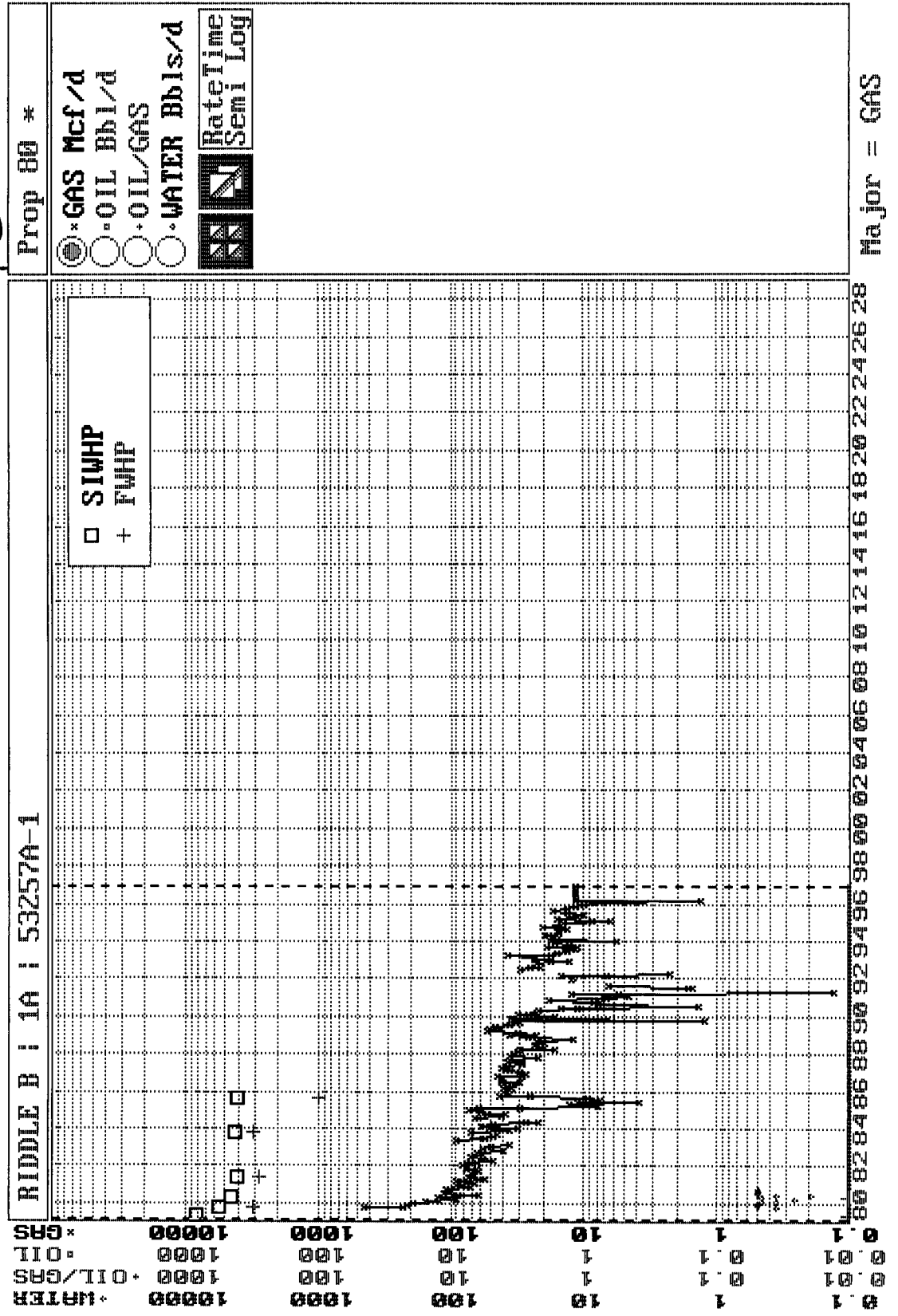
Certificate No. **3950**

0 330 660 990 1320 1650 1980 2310 2640 2000 1500 1000 500 0

MV



PC

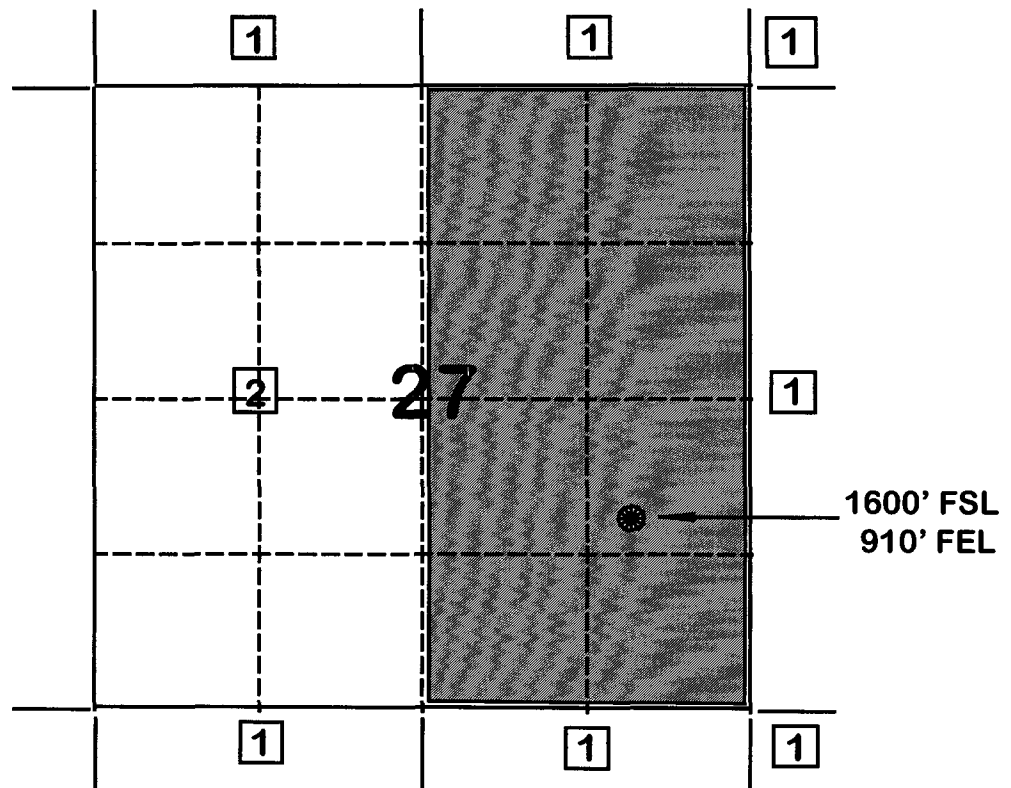


***BURLINGTON RESOURCES OIL AND GAS COMPANY***

**Riddle B #1A  
OFFSET OPERATOR \ OWNER PLAT**

**Mesaverde (E/2)/Pictured Cliffs (SE/4) Formations Commingle Well**

**Township 30 North, Range 10 West**



- 1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.
- 2) Amoco Production Company  
Attn: Bruce Zimney  
P.O. Box 800  
Denver, CO 80201

**FLOWING AND STATIC BHP  
CULLENDER AND SMITH METHOD**  
VERSION 1.0 3/13/94

GAS GRAVITY	0.69
COND. OR MISC. (C/M)	C
%N2	0.21
%CO2	0.97
%H2S	0
DIAMETER (IN)	2.4
DEPTH (FT)	5302
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	332
BOTTOMHOLE PRESSURE (PSIA)	377.6

RIDDLE B #1A MESAVERDE - (CURRENT )



**FLOWING AND STATIC BHP  
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	0.69
COND. OR MISC. (C/M)	C
%N2	0.21
%CO2	0.97
%H2S	0
DIAMETER (IN)	2.4
DEPTH (FT)	5302
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	719
BOTTOMHOLE PRESSURE (PSIA)	825.0

RIDDLE B #1A MESAVERDE - (ORIGINAL )

MV

Organize Data ScreenGraph Economics Report Plot Utility Quit  
 Browsing: RIDDLE B | 1A | 53257B-1 Property No.: 65  
 Table(T): TEST/M,P,H,E,T,Z,C,A,O,D,N,1,2,3,B,U,S Rec: 1/10/1231  
 Item: 2/3/33 Name: DATE Type: Date Len: 8/27/203

--DATE--	---CUM GAS--	M SIWHP
	Mcf	Psi
10/12/79	66447	719.0
04/01/81	378936	477.0
06/10/81	401012	335.0
05/10/82	510630	501.0
07/17/84	651583	412.0
04/07/89	955241	357.0
09/17/91	1045670	415.0
10/01/91	1063931	427.0
04/15/93	1170815	215.0
08/16/93	1169384	332.0

F1=Help F3=PrvPro F5=PrvTbl F7=Calcu F9=Utils Alt+TableLtr=Change Table  
 F2=Jump F4=NxtPro F6=NxtTbl F8=Print F10=Exit Shift+<- ->=Fast Tbl R & L

**FLOWING AND STATIC BHP  
CULLENDER AND SMITH METHOD**

VERSION 10.3/13/94

GAS GRAVITY	<u>0.67</u>
COND. OR MISC. (C/M)	<u>C</u>
%N <sub>2</sub>	<u>0.44</u>
%CO <sub>2</sub>	<u>0.48</u>
%H <sub>2</sub> S	<u>0</u>
DIAMETER (IN)	<u>1.25</u>
DEPTH (FT)	<u>5302</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>110</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>409</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>466.6</u>

RIDDLE B #1A PICTURED CLIFFS - (CURRENT )

**FLOWING AND STATIC BHP  
CULLENDER AND SMITH METHOD**

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.67</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.44</u>
%CO2	<u>0.48</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>1.25</u>
DEPTH (FT)	<u>5302</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>110</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>847</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>977.4</u>

RIDDLE B #1A PICTURED CLIFFS - (ORIGINAL )

PL

Organize Data ScreenGraph Economics Report Plot Utility Quit  
Browsing: RIDDLE B | 1A | 53257A-1 Property No.: 80  
Table(T): TEST/M,P,H,E,T,Z,C,A,O,D,N,1,2,3,B,U,S Rec: 1/6/1231  
Item: 2/3/33 Name: DATE Type: Date Len: 8/27/203

--DATE--	---CUM GAS--	M SIWHP
	Mcf	Psi
05/03/79	0	847.0
10/12/79	20669	571.0
05/07/80	48065	458.0
06/10/81	83867	411.0
11/01/83	130507	426.0
08/16/85	152484	409.0

F1=Help F3=PrvPro F5=PrvTbl F7=Calcu F9=Utils Alt+TableLtr=Change Table  
F2=Jump F4=NxtPro F6=NxtTbl F8=Print F10=Exit Shift+<- ->=Fast Tbl R & L

FARMINGTON

1997 MONTHLY PRODUCTION FOR 53257A

PHS030M1

RIDDLE B 1A

AZTEC PICTURED CLIFFS (GAS) FIELD

PICTURED CLIFFS ZONE

MO	T	S	DAYS	ON	PC	OIL	PROD	GRV	PC	GAS	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F							01		2119	31	955	15.025			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

68 MCFD

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

00/00/00 00:00:00:0

PRS 03/05/97

B MY JOB

NUM LU #12

FARMINGTON

1997 MONTHLY PRODUCTION FOR 53257B

PHS030M1

RIDDLE B 1A

BLANCO MESAVERDE (PRORATED GAS FIELD

MESAVERDE ZONE

MO	T	S	DAYS	ON	PC	OIL	PROD	GRV	PC	GAS	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F		31	02		14		01		2736	31	1167	15.025			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

0.5 BOPD

88 MCFD

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

00/00/00 00:00:00:0

PRS 03/05/97

B MY JOB

NUM LU #12

RIDDLE B #1A  
SECTION 27. T30N. R10W  
MESAVERDE - PICTURED CLIFFS

<p>NM 824</p> <p>1A P</p> <p>2R P</p> <p>2 P</p> <p>21</p> <p>1 3 M</p> <p>Sunray D'</p> <p>2A P</p>	<p>NM 9455</p> <p>1A P</p> <p>22</p> <p>2 1 Errett Fed.</p> <p>T.D. 5207 Helms Federal</p>	<p>NM 818</p> <p>1 P</p> <p>2 1A King</p>	<p>NM 203. 22.30</p> <p>3A 6</p> <p>23</p> <p>7 3 Riddle B'</p>	<p>NM 203</p> <p>4 2</p> <p>5 2A NM 8971 136/AC M G</p>
<p>AMOCO</p> <p>3</p> <p>28</p> <p>4 1</p> <p>Stewart B' (F) Stewart Ls.</p> <p>6M D?</p>	<p>AMOCO</p> <p>IR</p> <p>1 Schoen Ls.</p> <p>27</p>	<p>NM 203 &amp; NMX 203</p> <p>1 9 IR</p> <p>1A P Riddle B'</p>	<p>020236-T</p> <p>1A P</p> <p>7</p> <p>1 Greiner A'</p> <p>26</p>	<p>NM 809</p> <p>5</p> <p>1 Sunray F' (P)</p> <p>NM 641</p> <p>1A 3 Kelly (P) Sunray F' (M)</p>
<p>CONOCO (P) AMOCO (MD)</p> <p>1</p> <p>1 Bassett B' (M) Gage (P)</p> <p>33</p>	<p>CONOCO (MD) AMOCO (P)</p> <p>M 2E</p> <p>2 FC Fed. Con. Bassett (P)</p>	<p>020236-T</p> <p>3M M</p> <p>2 PA '94</p> <p>3 M</p> <p>6</p> <p>Greiner A'</p> <p>34</p>	<p>020236-T (PMD)</p> <p>8 M</p> <p>5</p> <p>35</p>	<p>NM 340. 22</p> <p>2</p> <p>1 M-D</p>
<p>AMOCO.</p> <p>M M</p> <p>1 FS-PA Bassett (P) Bassett Con. (D)</p>	<p>CONOCO (PD)</p> <p>1</p> <p>Trieb-Fed (MD)</p>	<p>NM 9454</p> <p>1 3A</p> <p>2 F 3E M Sanchez</p>	<p>NM 9454</p> <p>8M 4 M Sanchez (P) Greiner A'</p>	<p>2A P Kelly</p>