

DATE IN 6/19/97	SUSPENSE 7/9/97	ENGINEER DC	LOGGED KW	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

**NEW MEXICO OIL CONSERVATION DIVISION**  
- Engineering Bureau -

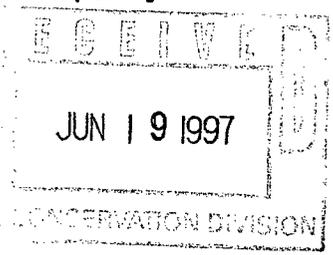
1610

**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**

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, LI, 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.

Regulatory/Compliance Administrator  
 Egg Bradfield  
 Signature: Egg Bradfield  
 Title: \_\_\_\_\_  
 Date: 6/18/97

# **BURLINGTON RESOURCES**

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SAN JUAN DIVISION

June 16, 1997

SENT FEDERAL EXPRESS

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

Re: Hancock B #10  
1830'FSL, 1460'FWL Section 28, T-28-N, R-9-W, San Juan County, NM  
API #30-045-20821

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Basin Fruitland Coal and the Aztec Pictured Cliffs in the subject well. It is intended to add the Fruitland Coal to the Pictured Cliffs and commingle.

To comply with the New Mexico Oil Conservation Division rules, Burlington Resources Oil & Gas Company 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 the Pictured Cliffs and expected production curve for the Fruitland Coal;
4. Notification list of offset operators;
5. Shut in wellhead pressure and calculated down hole pressure of surrounding wells;
6. Nine-section plats for the Fruitland Coal and Pictured Cliffs.

Notification of Fruitland Coal and Pictured Cliffs interest owners is unnecessary, as all interests are identical.

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

xc: Bureau of Land Management - hand delivered

**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 87505-6429

Form C-107-A  
New 3-12-96

APPROVAL PROCESS :

Administrative  Hearing

EXISTING WELLBORE

YES  NO

**APPLICATION FOR DOWNHOLE COMMINGLING**

**Burlington Resources Oil & Gas Company**

**PO Box 4289, Farmington, NM 87499**

Operator **HANCOCK B** Address **San Juan**  
Well No. **10** Unit Ltr. - Sec - Twp - Rge **K 28-28N-9W**

Lease \_\_\_\_\_ Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7078 API NO. 30-045-20821 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	Fruitland Coal - 71629		Aztec Pictured Cliffs - 71280
2. Top and Bottom of Pay Section (Perforations)	Will be supplied upon completion		2431' - 2461'
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. 254 psi (see attachment)	a.	a. 183 psi (see attachment)
	(Original) b. 492 psi (see attachment)	b.	b. 722 psi (see attachment)
6. Oil Gravity ( <sup>o</sup> API) or Gas BTU Content	BTU 1067		BTU 1093
7. Producing or Shut-in?	Shut - in		producing
Production Marginal? (yes or no)	no		yes
* If Shut-in and oil/gas/water rates of last production <small>Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data</small>	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: n/a Rates:	Date: Rates:	Date: n/a Rates:
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  No
11. 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  No
13. 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 Joan M. Easley TITLE Production Engineer DATE 6/5/97

TYPE OR PRINT NAME Joan M. Easley TELEPHONE NO. ( 505 ) 326-9700

District I  
PO Box 1980, Hobbs, NM 88241-1980  
District II  
PO Drawer DD, Artesia, NM 88211-0719  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico  
Energy, Minerals & Natural Resources Department

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

Form C-10  
Revised February 21, 1999  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number 30-045-20821		2 Pool Code 71620/71280		3 Pool Name Basin Fruitland Coal/Aztec Pictured Cliff	
4 Property Code 7078		5 Property Name Hancock B			6 Well Number 10
7 OGRID No. 14538		8 Operator Name BURLINGTON RESOURCES OIL & GAS COMPANY			9 Elevation 6286'

10 Surface Location

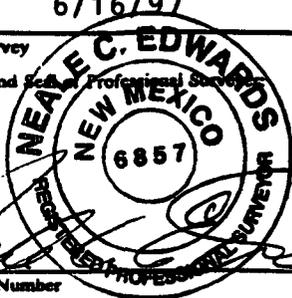
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
K	28	28-N	9-W		1830	South	1460	West	S.J.

11 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

12 Dedicated Acres PC-160 ETC-S/320	13 Joint or Infill	14 Consolidation Code	15 Order No.
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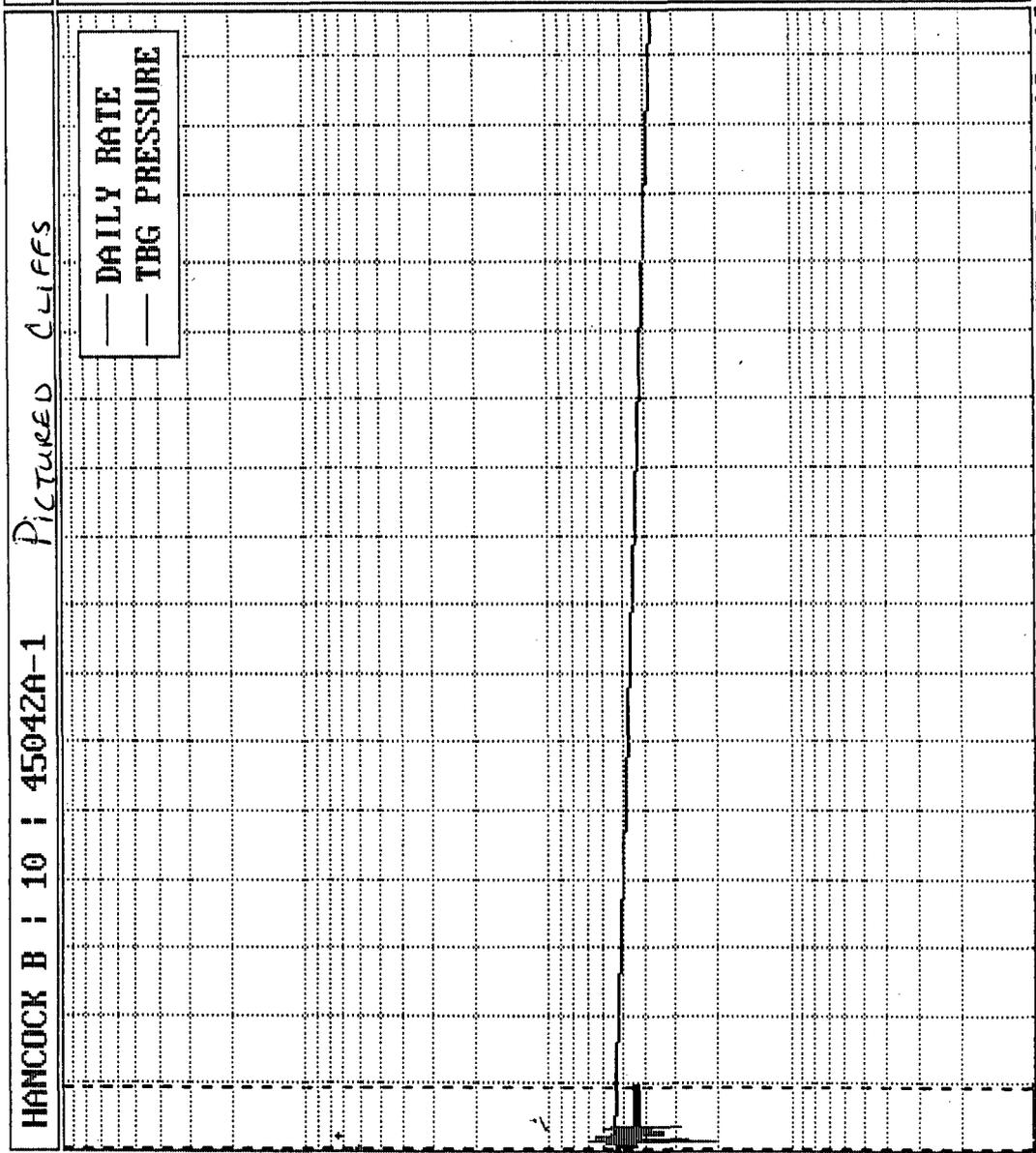
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16	Not resurveyed, prepared from a plat by David O. Vilven dated 4-29-71.	17 OPERATOR CERTIFICATION	
		I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
		 Signature Peggy Bradfield Printed Name Regulatory Administrator Title 6-18-97 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.	
		6/16/97	
		Date of Survey	
		Signature and Seal of Professional Surveyor	
		 Certificate Number	

Prop 5742 \*

- \* WATER Bbls/d
- \* GAS Mcf/d
- \* WATER/GAS
- \* OIL Bbl/d

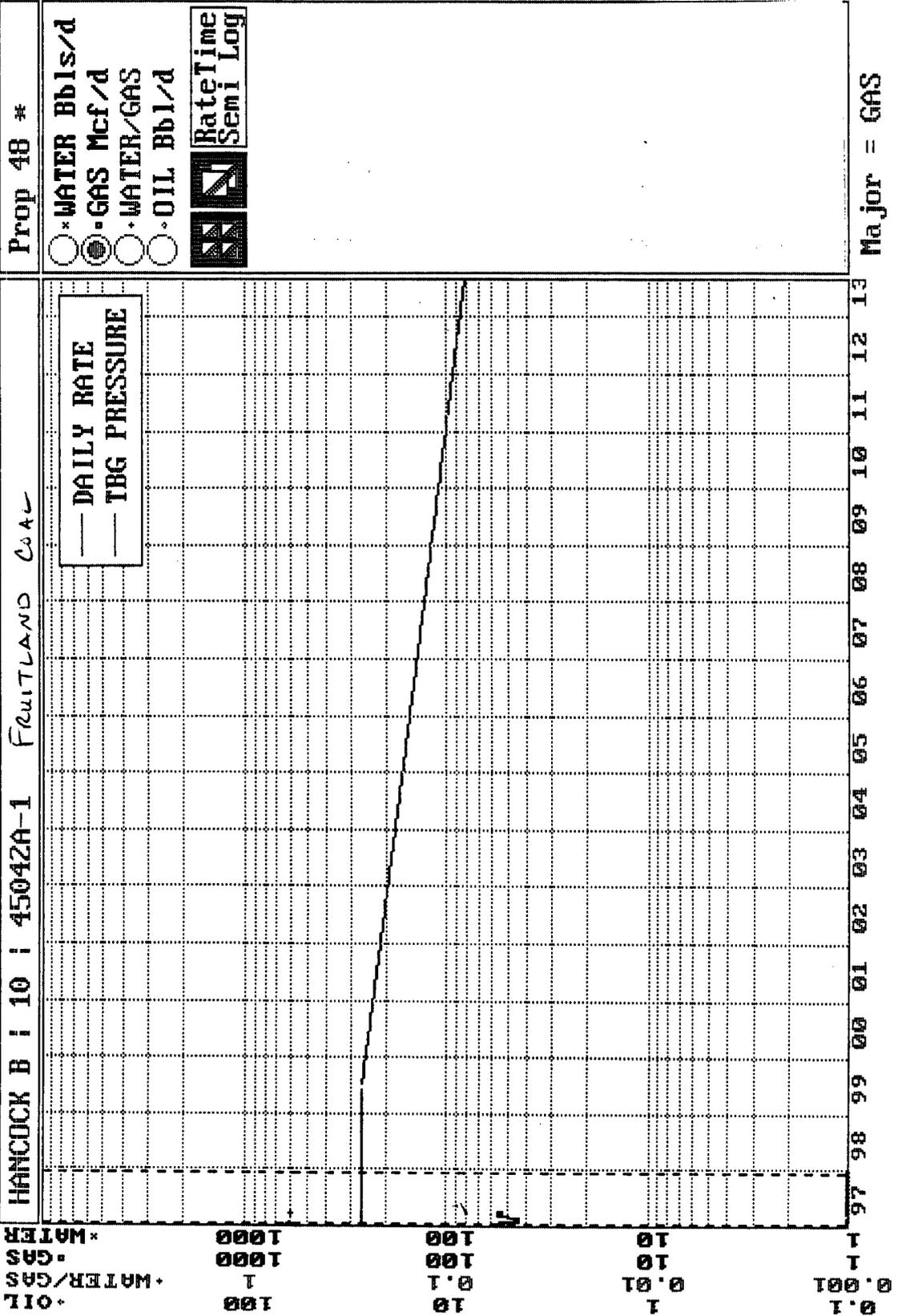
Rate Time  
Semi Log



\* OIL 100  
\* WATER/GAS 1  
\* GAS 1000  
\* WATER 1000

Major = GAS

ANTICIPATED PRODUCTION



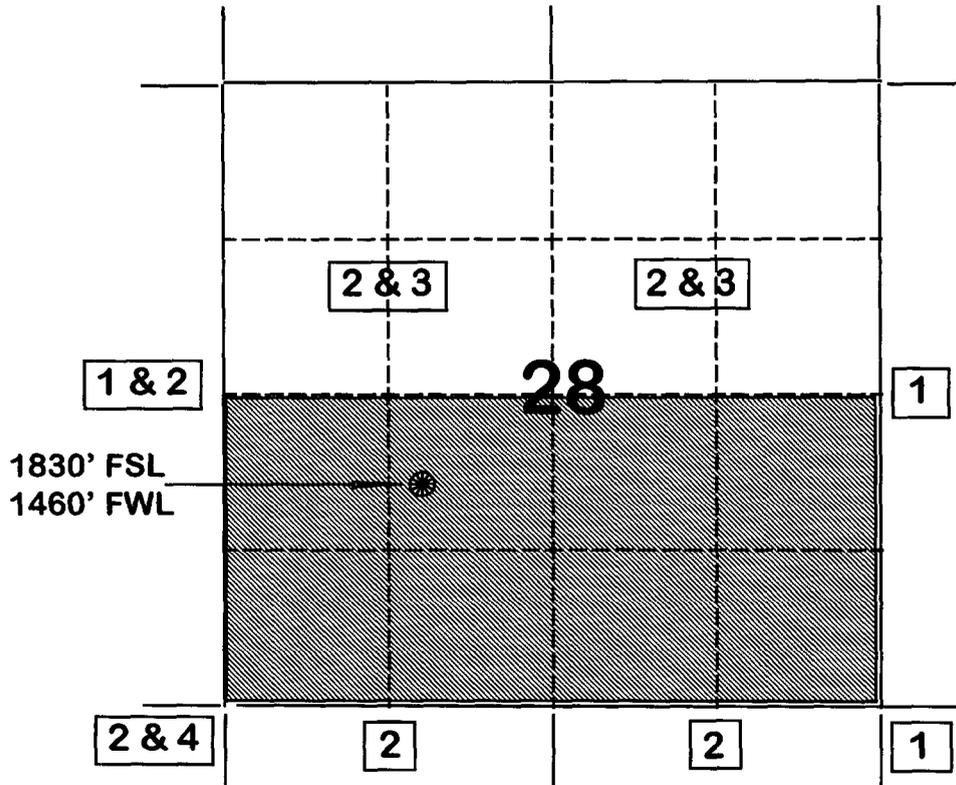
**BURLINGTON RESOURCES OIL AND GAS COMPANY**

**Hancock B #10**

**OFFSET OPERATOR \ OWNER PLAT**

**Pictured Cliffs (SW/4)/Fruitland Coal (S/2) Formations Commingle Well**

**Township 28 North, Range 9 West**



1) Burlington Resources Oil and Gas Company

2) Amoco Production Company

Attn: Bruce Zimney

P.O. Box 800

Denver, CO 80201

3) S G Interest

811 Dallas, Suite 1605

Houston, TX 77002

4) Richardson Operating Co.

1700 Lincoln Street, Suite 1700

Denver, CO 80203

Page No.: 4

Print Time: Thu May 22 10:22:03 1997

*Pictured Cliffs*

Property ID: 5742

Property Name: HANCOCK B | 10 | 45042A-1

Table Name: K:\ARIES\RR98PDP\TEST.DBF

--DATE-- ---CUM GAS-- M SIWHP  
Mcf Psi

08/11/71	0	680.0	← initial
05/18/72	51000	358.0	
09/07/72	69265	367.0	
06/06/73	111718	340.0	
04/01/75	205835	247.0	
07/11/77	307323	194.0	
07/09/79	387405	195.0	
06/23/81	457251	187.0	
06/07/83	507110	230.0	
08/01/85	566704	221.0	
09/01/88	1168437	207.0	

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

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.628</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.24</u>
%CO2	<u>0.49</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2.875</u>
DEPTH (FT)	<u>2450</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>100</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>680</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>721.9</u>

HANCOCK B #10 PICTURED CLIFFS - ORIGINAL PRESSURE

Page No.: 6

Print Time: Thu May 22 10:22:07 1997

Property ID: 7094

Property Name: STOREY C | 12 | 50496A-1

Table Name: K:\ARIES\RR98PDP\TEST.DBF

← nearest offset Pictured cliffs  
w/ current pressure  
data

(T28N - R09W - Sec. 34c)

--DATE--	---CUM_GAS--	M SIWHP
■■■■■■■■■■	■■■■■■■■■■Mcf■■■■■■■■■■	■■■■■■■■■■Psi■■■■■■■■■■
08/17/61	0	754.0
10/06/61	0	753.0
05/18/62	65000	481.0
02/14/63	81000	528.0
02/17/64	126000	480.0
02/19/65	201000	391.0
03/02/66	271000	370.0
03/13/67	333000	347.0
03/07/68	382000	331.0
06/30/69	445134	295.0
10/15/70	509289	252.0
07/30/71	544414	240.0
08/09/72	589793	228.0
09/13/73	632995	217.0
04/17/74	653366	212.0
04/14/76	722323	202.0
05/24/78	791802	163.0
06/09/80	856491	164.0
06/09/82	907461	180.0
08/01/84	945415	191.0
09/25/85	974059	148.0
09/01/88	1014373	185.0
05/08/90	1045889	205.0
07/28/92	1074528	219.0
06/17/94	1109178	174.0

← current

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.62
COND. OR MISC. (C/M)	C
%N2	0.17
%CO2	0.31
%H2S	0
DIAMETER (IN)	2.875
DEPTH (FT)	2375
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	100
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	174
BOTTOMHOLE PRESSURE (PSIA)	183.4

STOREY C #12 PICTURED CLIFFS - CURRENT PRESSURE

Page No.: 3

Print Time: Mon Jun 02 14:10:49 1997

FRUITLAND COAL

Property ID: 9246

Property Name: SHARP | 800 | 3719A-1 ←

Nearest offset w original pressure

Table Name: K:\ARIES\RR98PDP\TEST.DBF

(T28N-R08W-Sec.18)

--DATE--	---CUM_GAS--	M	SIBHP
.....	.....Mcf.....	.....	.....Psi.....

05/17/89

469.0

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

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.611</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.14</u>
%CO2	<u>0.52</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2.875</u>
DEPTH (FT)	<u>2060</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>90</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>469</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>491.9</u>

SHARP #800 FRUITLAND COAL - ORIGINAL PRESSURE

**Pressure Buildup on Fruitland Coal Zone of Sharp #5  
Conducted January 1996**

↑  
Nearest offset 4  
Current pressure  
data  
(28N-8W-See 18N)

Hours	Bottomhole Pressure, psia	Temperature, deg F
90	254	91
119	254	91
120	194	93
122	189	93
124	179	93
128	170	93
130	164	93
132	159	93
134	165	93
135	164	93
136	168	93
138	164	93
140	159	93
142	164	92
144	162	93
146	156	92
147	157	92
148	159	92
150	160	92
154	157	92
156	229	91
157	229	91
158	234	92
160	237	92
162	238	92
164	240	92
166	241	92
168	242	92
170	243	92
174	244	91
178	245	91
182	246	91
183	246	91
188	247	91
196	248	91
206	249	91
220	250	91
240	251	91
268	252	91
310	253	91
370	254	91
431	254	91

← Current Fruitland Coal  
Bottomhole Pressure

FARMINGTON

1997 MONTHLY PRODUCTION FOR 45042A

PHS030M1

HANCOCK B 10

AZTEC PICTURED CLIFFS (GAS) FIELD

ICTURED CLIFFS ZONE

MO	T	S	DAYS		OIL		GAS				WATER	PROD	C	
			ON	PC	PROD	GRV	PC	PROD	ON	BTU				PRESS
1	2	F	31				01	1628	31	1092	15.025		1	
2	2	F	28				01	1378	28	1092	15.025			
3	2	F	31				01	1660	31	1092	15.025		1	
4														
5														
6														
7														
8														
9														
10														
11														
12														

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

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

PRS 05/03/97

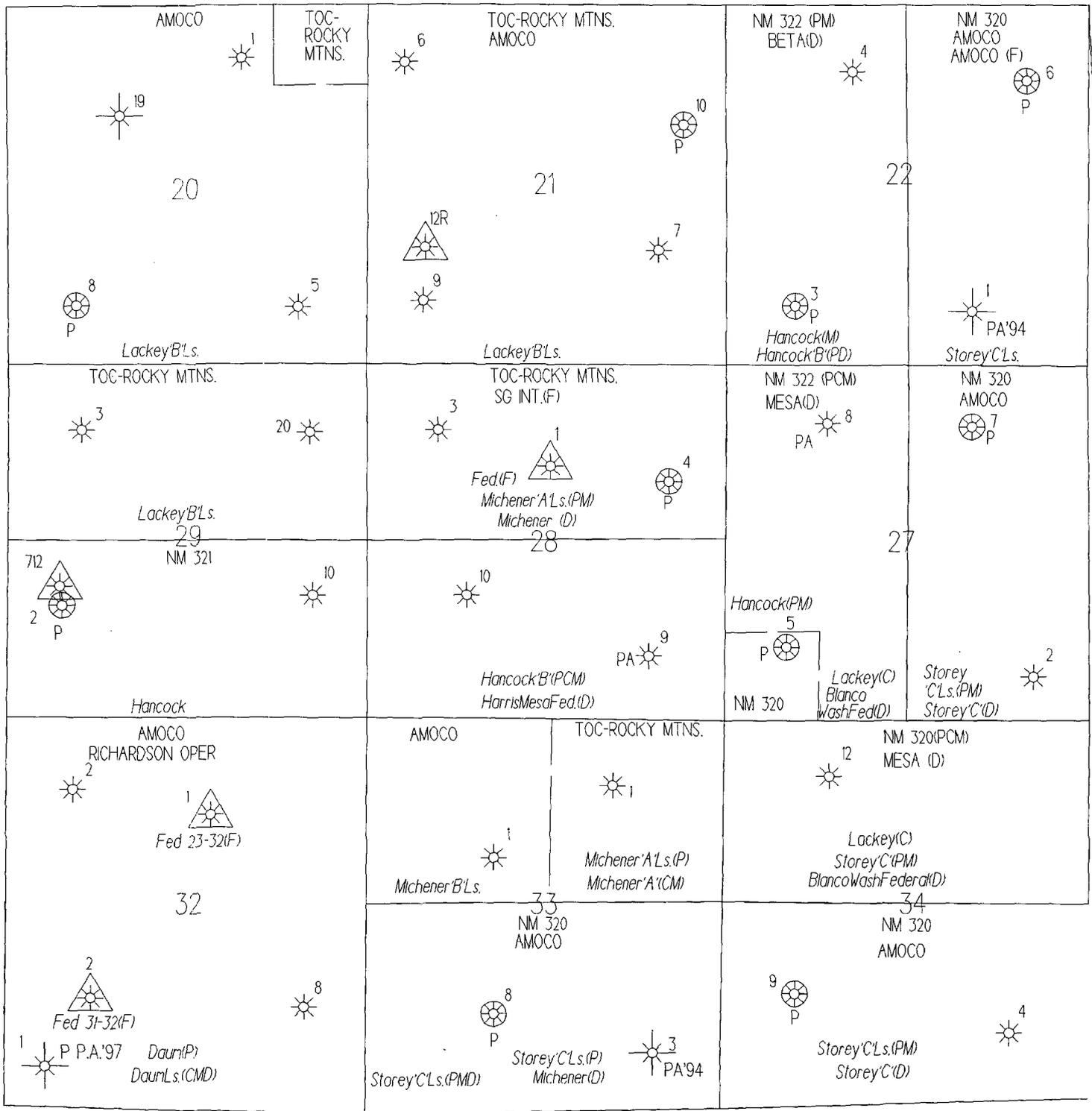
B MY JOB

NUM LU #5

# HANCOCK B #10

## Section 28, T28N, R9W

### Fruitland Coal / Pictured Cliffs



T  
28  
N

5