

DATE IN 10/21/97	SUSPENSE 11/10/97	ENGINEER DC	LOGGED W	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -

1720

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]

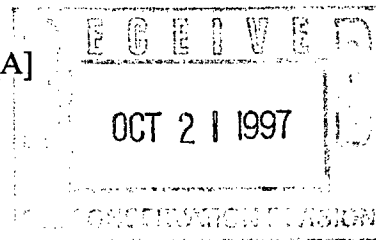
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[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

Regulatory/Compliance Administrator

Print or Type Name Peggy Bradfield Signature Peggy Bradfield

Title

Date

10-20-97

BURLINGTON RESOURCES

SAN JUAN DIVISION

October 16, 1997

SENT FEDERAL EXPRESS

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

Re: Hancock #2
1650' FSL, 800' FWL, Section 29, T-28-N, R-9-W
30-045-07139

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Mesa Verde and Pictured Cliffs in the subject well.

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 curves for Mesa Verde and Pictured Cliffs;
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 Mesa Verde and Pictured Cliffs.

Working, overriding and royalty interests are identical in the commingled zones.

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
OCD - Aztec District Office
Offset operators listed

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 3-12-96

APPROVAL PROCESS :

☒ Administrative
☐ Hearing

APPLICATION FOR DOWNHOLE COMMINGLING

EXISTING WELLBORE

☒ YES ☐ NO

BURLINGTON RESOURCES OIL & GAS COMPANY

PO Box 4289, Farmington, NM 87499

Operator

Address

Hancock

2

L, Sec. 29, T28N, R09W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 14538 Property Code 7076 API NO. 30-045-07139 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	Pictured Cliffs - 71280 <i>Aztec</i>		Mesa Verde - 72319
2. Top and Bottom of Pay Section (Perforations)	2070' - 2110'		3941' - 4480'
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. 163 Psia @ 2090' (Original) b. 696 Psia	a. b.	a. 189 Psia @ 4210' b. 1132 Psia
6. Oil Gravity (^o API) or Gas BTU Content	1102 BTU		1224 BTU
7. Producing or Shut-In?	Shut-In		Producing
Production Marginal? (yes or no)	Yes		Yes
* 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: 9/96 Rates: 8 MCFD	Date: Rates:	Date: Rates:
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: Rates:	Date: Rates:	Date: 9/21/97 Rates: 40 MCFD
8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)	Oil: Will be supplied upon completion 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. NMOC 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 Kevin L. Midkiff TITLE Sr. Operations Eng. DATE October 15, 1997TYPE OR PRINT NAME Kevin L. Midkiff TELEPHONE NO. (505) 326-9700

Well Location and Acreage Dedication Plat

Section A.

Date **MARCH 17, 1958**

Operator **EL PASO NATURAL GAS COMPANY** Lease **HANCOCK** NM **03541**
 Well No. **2 (PM)** Unit Letter **L** Section **29** Township **28-N** Range **9-W** NMPM
 Located **1650** Feet From **SOUTH** Line, **800** Feet From **WEST** Line
 County **SAN JUAN** G. L. Elevation **5945** Dedicated Acreage **320 & 160** Acres
 Name of Producing Formation **MESA VERDE & PICTURED CLIFF** Pool **BLANCO MV, AZTEC PC**

1. Is the Operator the only owner in the dedicated acreage outlined on the plat below?
 Yes **X** No _____
2. If the answer to question one is "no", have the interests of all the owners been consolidated by communitization agreement or otherwise? Yes _____ No _____. If answer is "yes", Type of Consolidation.

3. If the answer to question two is "no", list all the owners and their respective interests below:

Owner

Land Description

RECEIVED

MAR 24 1958

U. S. DEPARTMENT OF THE INTERIOR
 BUREAU OF LAND MANAGEMENT

Section B.

Note: All distances must be from outer boundaries of section.

This is to certify that the information in Section A above is true and complete to the best of my knowledge and belief.

El Paso Natural Gas Company

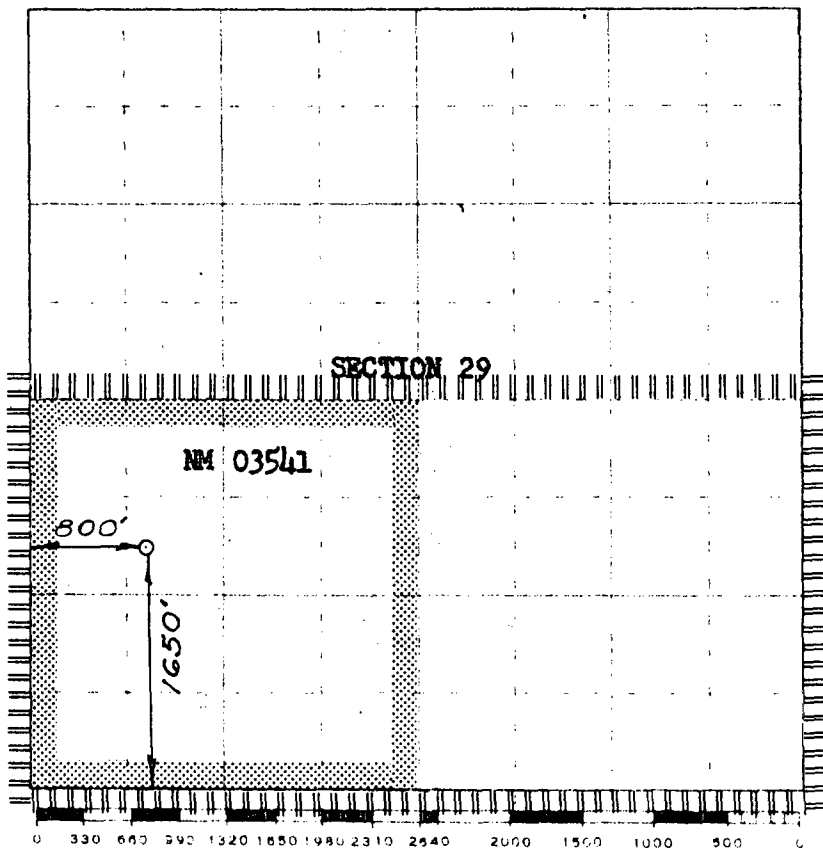
(Operator)
 Original Signed **D. C. Johnston**

(Representative)

Box 997

(Address)

Farmington, New Mexico



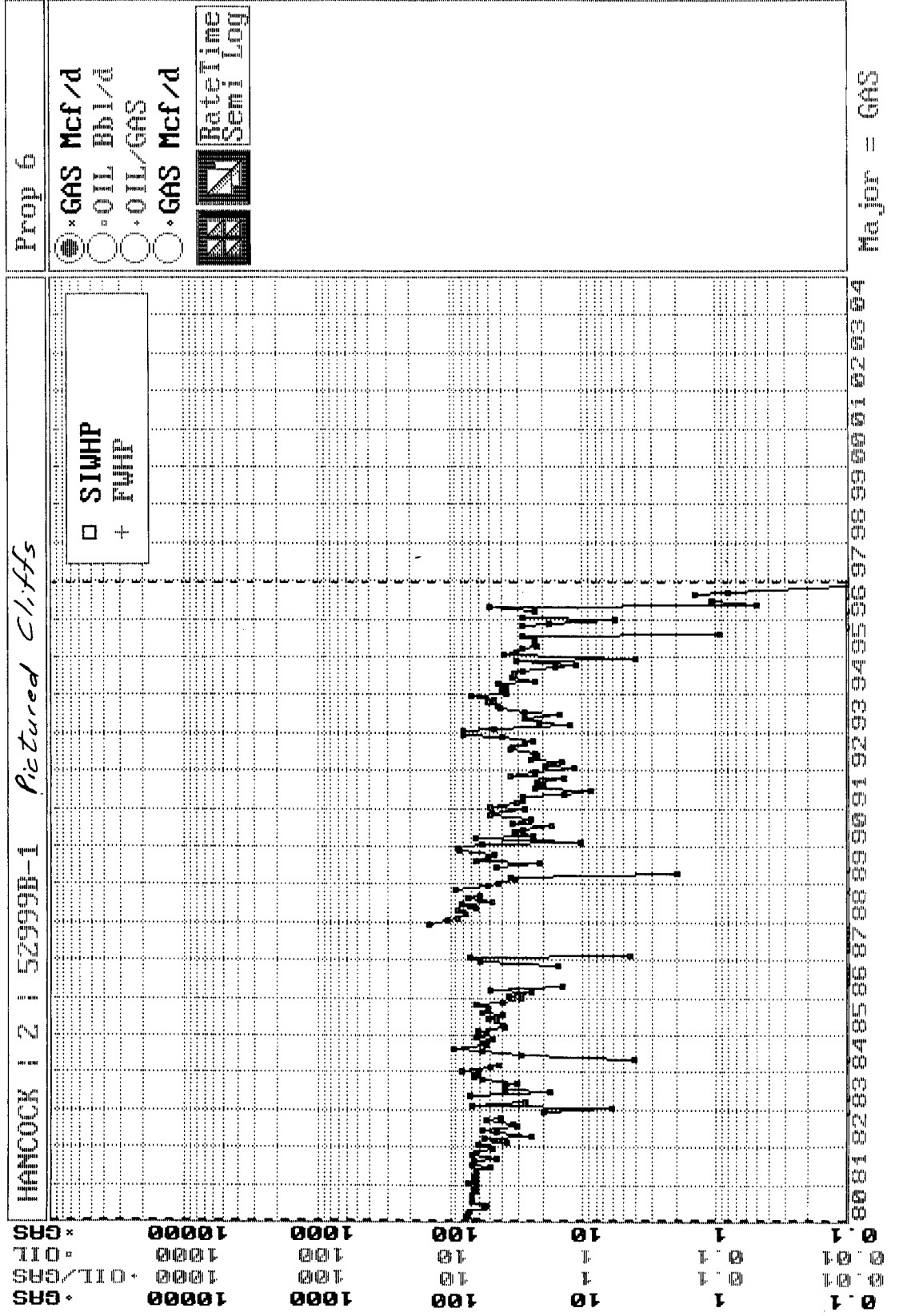
This is to certify that the above plat was prepared from field notes of actual surveys made by me or under my supervision and that the same are true and correct to the best of my knowledge and belief.

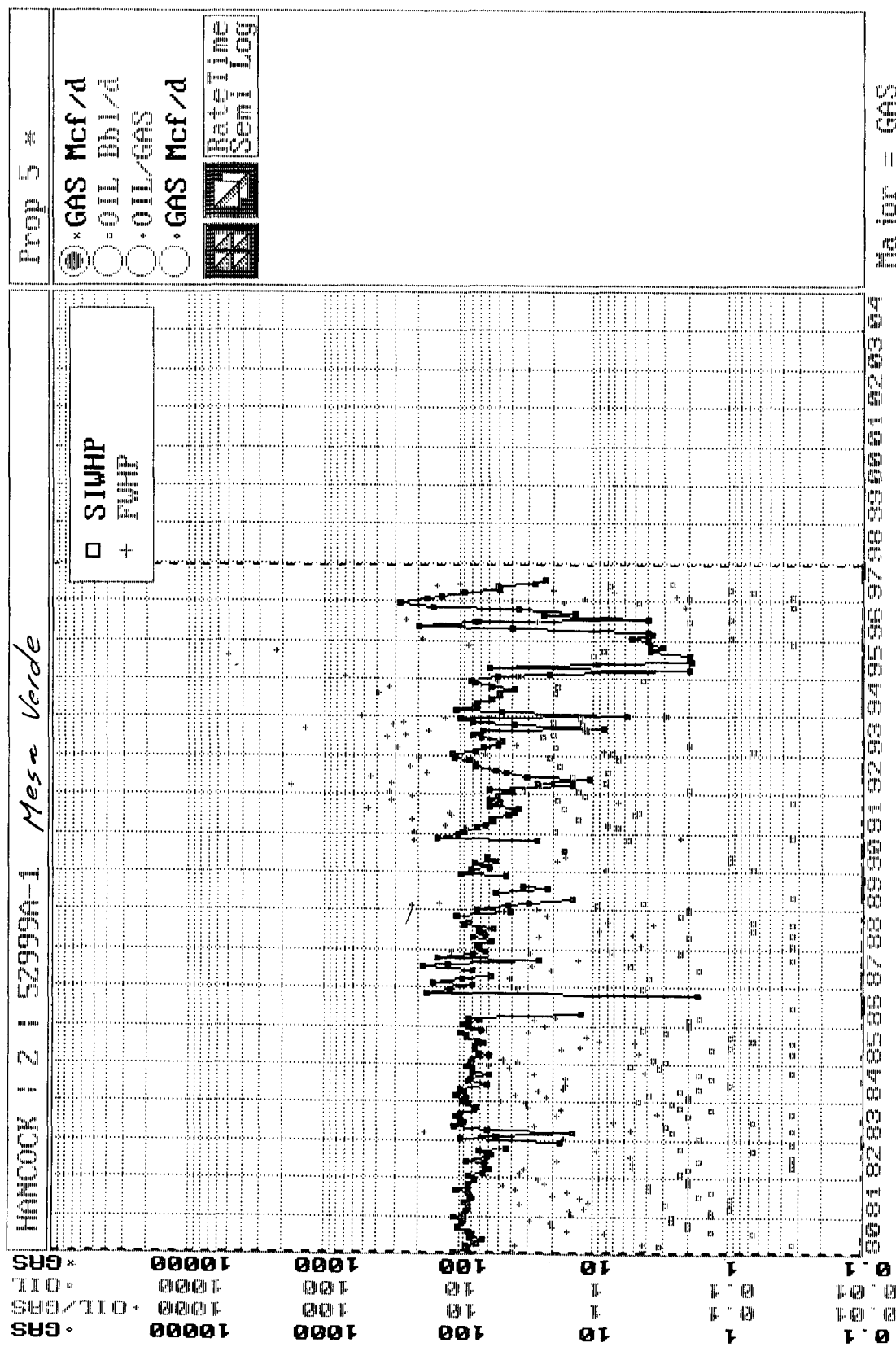
(Seal)

Farmington, New Mexico

Date Surveyed **FEBRUARY 5, 1958**

David Q. Kilburn
 Registered Professional Engineer and/or Land Surveyor



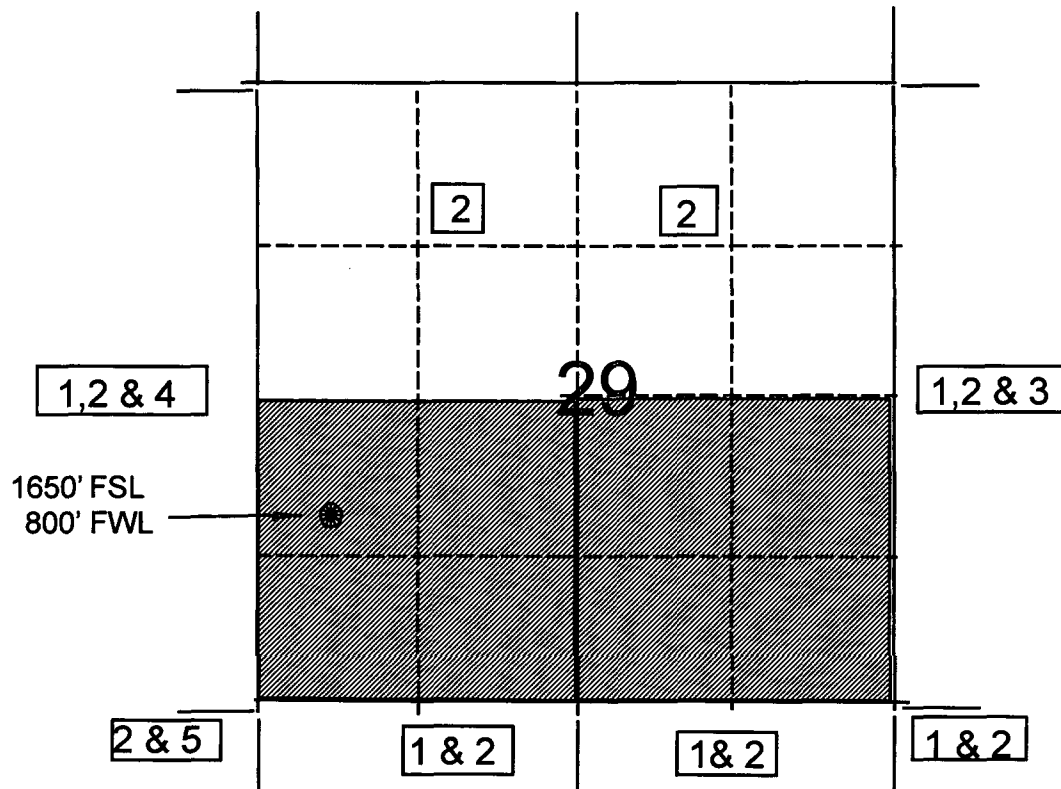


BURLINGTON RESOURCES OIL AND GAS COMPANY

**Hancock #2
OFFSET OPERATOR \ OWNER PLAT**

**Mesaverde (S/2) / Pictured Cliffs (SW/4) 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 I Ltd.
P.O. Box 338
Ignacio, CO 81137

- 4) Taurus Exploration USA, Inc.
2101 6th Avenue North
Birmingham, Alabama 35203-2784
- 5) Richardson Operating Co.
1700 Lincoln Street, Suite 1700
Denver, CO 80203

Page No.: 2 *PICTURED CLIFFS*
 Print Time: Tue Sep 23 08:01:58 1997
 Property ID: 5748
 Property Name: HANCOCK | 2 | 52999B-1
 Table Name: K:\ARIES\RR98PDP\TEST.DBF

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

05/06/58	0	661.0	<i>Initial Pressure</i>
06/11/58	0	660.0	
12/06/58	35000	424.0	
07/06/59	66000	413.0	
07/06/60	114000	355.0	
07/05/61	165000	333.0	
04/05/62	193000	339.0	
05/02/63	225000	320.0	
01/13/64	246000	354.0	
01/08/65	281000	319.0	
10/17/66	349000	279.0	
05/29/67	369000	279.0	
10/12/67	382000	266.0	
09/04/68	405000	240.0	
06/08/69	424679	250.0	
05/22/70	453832	250.0	
04/22/71	478066	239.0	
08/14/72	514463	238.0	
06/06/73	539858	204.0	
04/01/75	589800	194.0	
07/11/77	651616	182.0	
07/09/79	701750	183.0	
06/23/81	747778	186.0	
06/07/83	778785	231.0	
08/01/85	817421	224.0	

9/23/97	949,581	155	<i>Current pressure from Pressure vs. Cum. Gas Plot</i>
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Page No.: 1 *MESA VERDE*
 Print Time: Tue Sep 23 08:01:58 1997
 Property ID: 2840
 Property Name: HANCOCK | 2 | 52999A-1
 Table Name: K:\ARIES\RR98PDP\TEST.DBF

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

05/06/58	0	998.0
06/04/58	0	997.0
12/06/58	64000	820.0
07/06/59	125000	776.0
07/06/60	210000	607.0
07/05/61	277000	584.0
04/19/62	305000	537.0
05/02/63	337000	510.0
11/04/64	371000	519.0
06/16/65	386000	500.0
10/12/67	447000	268.0
09/04/68	501000	247.0
06/03/69	550279	275.0
06/30/70	606251	259.0
04/22/71	653145	213.0
08/14/72	721032	210.0
06/06/73	760361	169.0
09/13/74	814905	238.0
08/09/76	902032	245.0
05/11/78	977720	257.0
04/30/80	1056243	220.0
05/07/82	1119733	194.0
08/09/84	1181136	183.0
04/07/86	1226609	257.0
05/18/89	1297708	292.0
02/18/91	1329289	195.0
07/29/91	1337173	207.0
06/09/93	1378310	160.0

8/1/97 *1457542* *170* *Current Pressure from Pressure vs. Cum. Gas Plot*

Hancock No. 2
Bottom Hole Pressures
Flowing and Static BHP
Cullender and Smith Method
Version 1.0 3/13/94

Mesa Verde		Pictured Cliffs	
<u>MV - Current</u>		<u>PC-Current</u>	
GAS GRAVITY	0.714	GAS GRAVITY	0.635
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.42	%N2	0.25
%CO2	0.4	%CO2	0.53
%H2S	0	%H2S	0
DIAMETER (IN)	4.95	DIAMETER (IN)	6.97
DEPTH (FT)	4210	DEPTH (FT)	2090
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	123	BOTTOMHOLE TEMPERATURE (DEG F)	91
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	170	SURFACE PRESSURE (PSIA)	155
BOTTOMHOLE PRESSURE (PSIA)	189.0	BOTTOMHOLE PRESSURE (PSIA)	162.6
<u>MV - Original</u>		<u>PC-Original</u>	
GAS GRAVITY	0.714	GAS GRAVITY	0.635
COND. OR MISC. (C/M)	M	COND. OR MISC. (C/M)	M
%N2	0.42	%N2	0.25
%CO2	0.4	%CO2	0.53
%H2S	0	%H2S	0
DIAMETER (IN)	4.95	DIAMETER (IN)	6.97
DEPTH (FT)	4210	DEPTH (FT)	2090
SURFACE TEMPERATURE (DEG F)	60	SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	123	BOTTOMHOLE TEMPERATURE (DEG F)	91
FLOWRATE (MCFPD)	0	FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	998	SURFACE PRESSURE (PSIA)	661
BOTTOMHOLE PRESSURE (PSIA)	1132.4	BOTTOMHOLE PRESSURE (PSIA)	696.3

FARMINGTON

ANNUAL PRODUCTION FOR 52999A

PHS020M1

HANCOCK 2

BLANCO MESAVERDE (PRORATED GAS FIELD

MESAVERDE ZONE

===== OIL CUM =====

===== GAS CUM =====

===== WATER CUM =====

PC DATE

BBLs

PC DATE

MCF

DATE

BBLs

02 6912

4973

01 6912

578793

=====

YEAR	OIL	OIL CUM	GAS	GAS CUM	WATER	WATER CUM
1990	26	7163	18873	1324261	31	95
1991	314	7477	20736	1344997	32	127
1992	356	7833	19107	1364104	31	158
1993	426	8259	24352	1388456	37	195
1994	137	8396	21933	1410389	19	214
1995	167	8563	5024	1415413	6	220
1996	27	8590	25431	1440844	39	259
1997	43	8633	16698	1457542	24	283

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

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

D03 09/02/89

FARMINGTON

1997 MONTHLY PRODUCTION FOR 52999A

PHS030M1

HANCOCK

2

BLANCO MESAVERDE (PRORATED GAS FIELD

MESAVERDE ZONE

DAYS =====			OIL =====			===== GAS =====								
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F	31	02	6		01	5228	31	1092	15.025		8	
2	2	F	28	02	1		01	4084	28	1080	15.025		6	
3	2	F	31	02	2		01	2775	31	1148	15.025		4	
4	2	F	30	02	3		01	1525	30	1224	15.025		2	
5	2	F	27	02	23		01	1565	27	1224	15.025		2	
6	2	F	24	02	8		01	826	24	1224	15.025		1	
7	2	F	31	02			01	695	31	1224	15.025		1	
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 09/04/97

FDG055M4 37D7

WELL PRODUCTION 8/8'S VOLUME

09/23/97 09:40:59

START OF DATA

DP NO: 52999A

DATE: 970921 (YYMMDD FORMAT)

HANCOCK

2 SCROLL FORWARD BY DATE: _

S *MESA VERDE*

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-
L PRODUCED	ON	(BOPD	BOPM)	(MCFD MCFM)	(BWPD BWPM)
-	09/21/97	24.0	0.00	0.00	40 647 0.00 0.00
-	09/20/97	24.0	0.00	0.00	40 607 0.00 0.00
-	09/19/97	24.0	0.00	0.00	38 567 0.00 0.00
-	09/18/97	24.0	0.00	0.00	26 529 0.00 0.00
-	09/17/97	24.0	0.00	0.00	42 503 0.00 0.00
-	09/16/97	24.0	0.00	0.00	40 461 0.00 0.00
-	09/15/97	24.0	0.00	0.00	20 421 0.00 0.00
-	09/14/97	24.0	0.00	0.00	37 401 0.00 0.00
-	09/13/97	24.0	0.00	0.00	31 364 0.00 0.00
-	09/12/97	24.0	0.00	0.00	16 333 0.00 0.00
-	09/11/97	24.0	0.00	0.00	32 317 0.00 0.00

ENTER I UNDER SEL FOR MAINTENANCE

PF6=NRI PF10=BROWSE MENU PF11=INQ/UPDATE MENU
 PF12=MAIN MENU ENTER=BACKWARDS PF24=HELP

FARMINGTON

ANNUAL PRODUCTION FOR 52999B

PHS020M1

HANCOCK 2

AZTEC PICTURED CLIFFS (GAS) FIELD

ICTURED CLIFFS ZONE

===== OIL CUM =====

===== GAS CUM =====

===== WATER CUM =====

PC DATE BBLs

PC DATE

MCF

DATE

BBLs

02 6912

01 6912

440444

=====

YEAR	OIL	OIL CUM	GAS	GAS CUM	WATER	WATER CUM
1990			12680	889565	15	62
1991			9073	898638	10	72
1992			10777	909415	13	85
1993			14683	924098	18	103
1994			10348	934446	11	114
1995			7533	941979	9	123
1996			3214	945193	4	127
1997				945193		127

POSITION CURSOR BY YEAR AND PRESS ENTER TO DISPLAY MONTHLY PRODUCTION

ENTER - CONTINUES ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF6 - RETURN TO WELL-INFO DISPLAY

PF9 - ANNUAL INJECTION DISPLAY

PF10 - HELP INFORMATION

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

D03 09/02/89

FDG055M4 37D7

WELL PRODUCTION 8/8'S VOLUME

09/23/97 09:41:25

START OF DATA

DP NO: 52999B

DATE: 970921 (YYMMDD FORMAT)

HANCOCK

2 SCROLL FORWARD BY DATE: _

S *PICTURED CLIFFS*

E	DATE	HOURS	-OIL PRODN-	-GAS PRODN-	-WATER PRODN-	
L	PRODUCED	ON	(BOPD	BOPM)	(MCFD MCFM)	(BWPD BWPM)
_	09/21/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/20/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/19/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/18/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/17/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/16/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/15/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/14/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/13/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/12/97	0.0	0.00	0.00	0 0	0.00 0.00
_	09/11/97	0.0	0.00	0.00	0 0	0.00 0.00

ENTER I UNDER SEL FOR MAINTENANCE

PF6=NRI PF10=BROWSE MENU PF11=INQ/UPDATE MENU
PF12=MAIN MENU ENTER=BACKWARDS PF24=HELP

FARMINGTON

1996 MONTHLY PRODUCTION FOR 52999B

PHS030M1

HANCOCK 2

AZTEC PICTURED CLIFFS (GAS) FIELD

ICTURED CLIFFS ZONE

DAYS =====				OIL =====			=====			GAS =====					
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C	
1	2	F	31				01	872	31	1113	15.025		1		
2	2	F	29				01		29		15.025				
3	2	F	31				01	703	31	1102	15.025		1		
4	2	F	24				01	1521	24	1102	15.025		2		
5	2	F	31				01	15	31	1102	15.025				
6	2	F	30				01	33	30	1102	15.025				
7	2	F	31				01		31		15.025				
8	2	S	27				01	43	27	1101	15.025				
9	2	S	3				01	25	3	1101	15.025				
10	2	S	1				01	2	1	1101	15.025				
11	2	S					01				15.025				
12	2	S					01				15.025				

PF6 - RETURNS TO ANNUAL DISPLAY

PF3 - TRANSFER TO UPDATE

PF10 - HELP INFORMATION

PF9 - DISPLAY MONTHLY INJECTION

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

PRS 02/05/97

