

BURLINGTON RESOURCES

SAN JUAN DIVISION

October 11, 1996

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

RECEIVED
OCT 15 1996

OIL CON. DIV.
DIST. 3

Re: Patterson A Com #1 0
990'FSL, 1650'FEL Section 2, T-31-N, R-12-W, San Juan County, NM
API #30-045-11012

Dear Mr. LeMay:

This is a request for administrative approval for downhole commingling the Blanco Mesa Verde and Basin Dakota pools in the subject well. This is currently a dual Mesa Verde/Dakota 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 curve for both the Dakota and Mesa Verde for at least one year;
4. Notification list of offset operators - Burlington is the offset operator;
5. Shut in wellhead pressure and calculated down hole pressure;
6. Nine-section plats for the Mesa Verde and Dakota.

The ownership for both the Mesa Verde and Dakota are common in this well. No notification to interest owners is required.

The allocation formula is included, showing 59% from the Mesa Verde and 41% from the Dakota formation.

Please let me know if you require additional data.

Sincerely,



Peggy Bradfield
Regulatory/Compliance Administrator

encs.

DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
511 South First St., Artesia, NM 87210-2835
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

Address

Patterson A Com

1

O-2-31N-12W

San Juan

Lease

Well No.

Unit Ltr. - Sec - Twp - Rge

County

Spacing Unit Lease Types: (check 1 or more)

GRID NO. 14538 Property Code 18598 API NO. 30-045-11012 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 Mesaverde - 72319		Basin Dakota - 71599
2. Top and Bottom of Pay Section (Perforations)	5052-5174		7295-7427'
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. 453 psi (see attachment) (Original) b. 1232 psi (see attachment)	a. DIST. 3 b.	a. 668 psi (see attachment) b. 1942 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1200		BTU 1147
7. Producing or Shut-In?	producing		producing
Production Marginal? (yes or no)	no		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: N/A Rates:	Date: Rates:	Date: N/A Rates:
* If Producing, give data and oil/gas/water of recent test (within 60 days)	Date: 8/96 rates: 100 MCF/D, 0.23 BOPD	Date: Rates:	Date: 8/96 Rates: 70 MCF/D, 0.10 BOPD
8. Fixed Percentage Allocation Formula -% for each zone (total of %'s to equal 100%)	Oil: % Gas: % See attachment		Oil: % Gas: % See attachment

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 Peggy Bradfield TITLE Regulatory Administrator DATE 10-11-96

TYPE OR PRINT NAME Peggy Bradfield TELEPHONE NO. (505) 326-9700

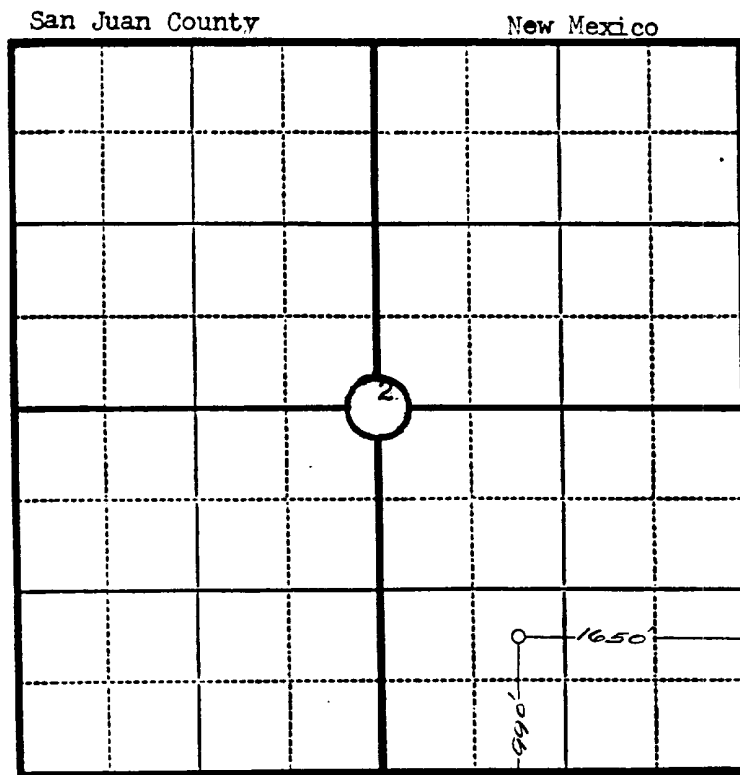
Consistent P.

Company.....Southern Union Gas Company.....

Lease.....**W. S. Patterson**.....Well No. **1**.....

Sec. **2**....., T. **31 N.**....., R. **12 W.**....., N.M.P.M.

Location.....990' from the South line and 1650' from the East line.....



Scale—4 inches equal 1 mile.

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:

James P. Leese
Registered Professional
Engineer and Land Surveyor.

James P. Leese
N. Mex. Reg. No. 1463

Surveyed March 2 19...53

NEW MEXICO
OIL CONSERVATION COMMISSION

Gas Well Plat

Date March 11, 1957
Southern Union Gas Co. Patterson 1
Operator Lease Well No.
Name of Producing Formation Messavado Pool Elanco
No. Acres Dedicated to the Well 319.95

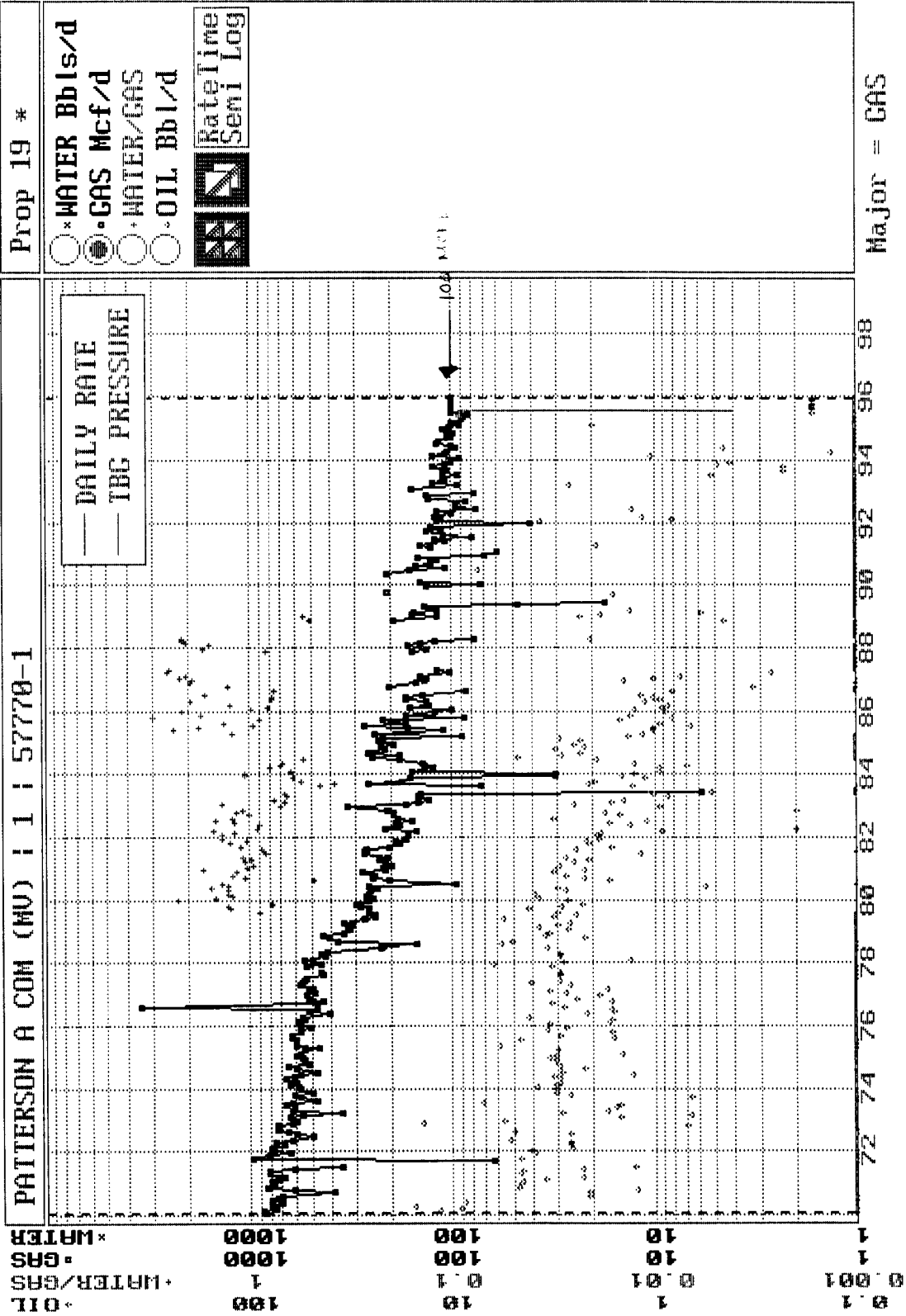
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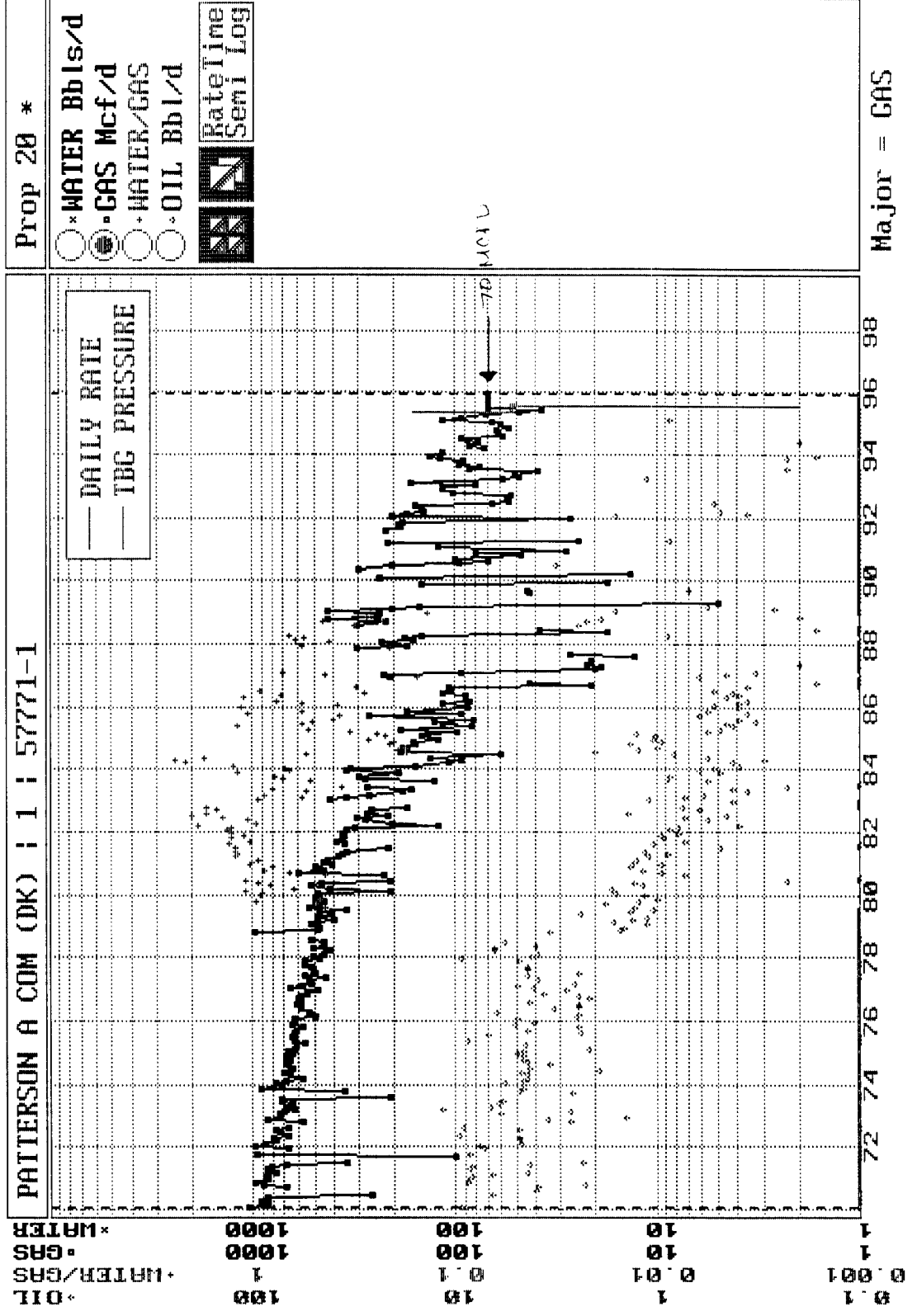
		S. U. G.	Patented
		Z	Z
		E.P.N.G. State E-3150-1	S. U.G. State E-11625-17
		S.U.G. State	B-11625-15

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

Original Signed By
A. M. WIEDERKEHR
Name Engineer
Position Southern Union Gas Co.
Representing Burt Bldg., Dallas
Address

(over)



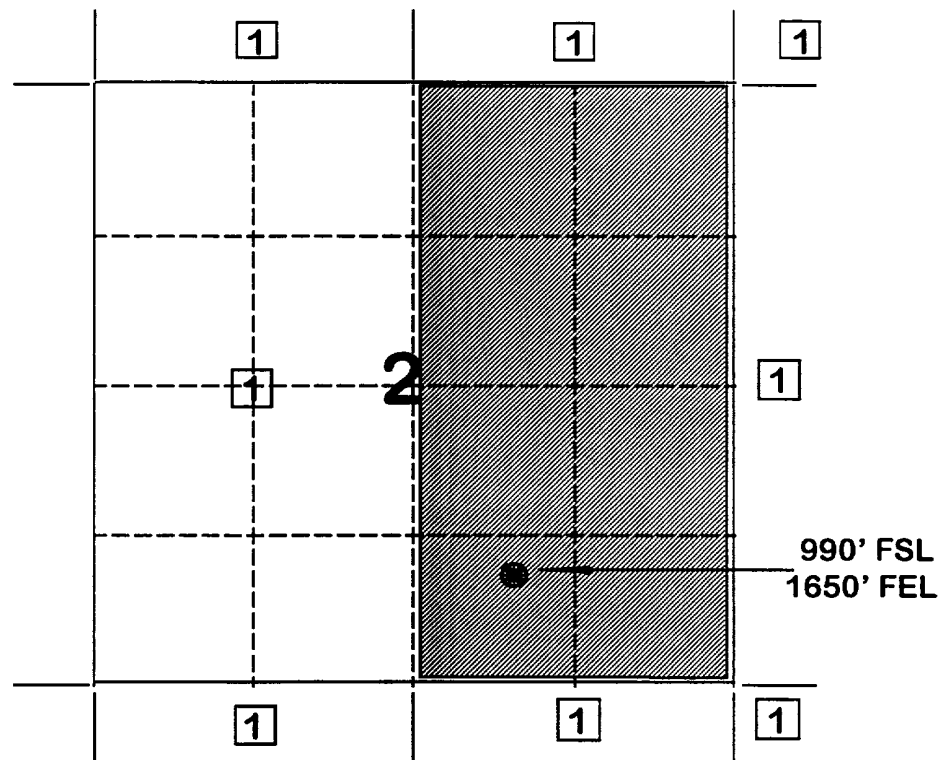


BURLINGTON RESOURCES OIL AND GAS COMPANY

**Patterson A Com #1
OFFSET OPERATOR \ OWNER PLAT**

Mesaverde/Dakota Formations Commingle Well

Township 31 North, Range 12 West



1) Burlington Resources Oil and Gas Company Successor to Meridian Oil Inc.

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

GAS GRAVITY	0.71
COND. OR MISC. (C/M)	C
%N2	0.28
%CO2	1.02
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	5174
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	397
BOTTOMHOLE PRESSURE (PSIA)	452.6

PATTERSON A COM #1 MESAVERDE - (CURRENT)

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.71
COND. OR MISC. (C/M)	C
%N2	0.28
%CO2	1.02
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	5174
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1063
BOTTOMHOLE PRESSURE (PSIA)	1232.2

PATTERSON A COM #1 MESAVERDE - (ORIGINAL)

COMMAND ==>

State: 30	Lease Name: PATTERSON A COM	
Prod: 2	County Name: SAN JUAN	
Ident: 31N12W02O00MV	Reservoir Name: MESAVERDE	
District: 4	Operator Name: MERIDIAN OIL INC	
Location: 20 31N 12W	Field Name: BLANCO (MESAVERDE)	
Retrieval code: 251,045,31N12W02O00MV	Well: 000001	Total Depth: 7490
Gas Gath: SUG	Status: ACT	Upper Perf: 5052
API No: 1101200	Comp Date: 195305	Lower Perf: 5174

[illegible]

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----- DWIGHTS TEST DATA REPORT ----- ROW 9 OF 15
COMMAND ===>                                SCROLL ===> PAGE
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State: 30                      Lease Name: PATTERSON A COM
Prod: 2                        County Name: SAN JUAN
Ident: 31N12W02O00MV          Reservoir Name: MESAVERDE
District: 4                    Operator Name: MERIDIAN OIL INC
Location: 20 31N 12W          Field Name: BLANCO (MESAVERDE)
Retrieval code: 251,045,31N12W02O00MV  Well: 000001      Total Depth: 7490
Gas Gath: SUG                  Status: ACT              Upper Perf: 5052
API No: 1101200               Comp Date: 195305      Lower Perf: 5174

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Date	Cum to Test	WHSIP	BHP	P/Z	BDWtr	BDCnd	WHFlw	Poten	MC	Pt	Z	FAO
19800916	4,104,236	460	521	553	0	0	81	277	C	2	42.000	
19820523	4,236,641	452	512	543	0	0	390	216	C	2	43.000	
19840822	4,362,518	434	491	520	0	0	379	260	C	2	45.000	
19860819	4,487,890	428	484	512	0	0	372	122	C	2	46.000	
19890903	4,572,640	461	522	554	0	0	291	191	C	2	42.000	
19910528	4,636,372	412	466	492	0	0	348	111	C	2	48.000	
19930504	4,709,569	397	449	473	0	0	320	121	C	2	0.956	
***** BOTTOM OF DATA *****												
F1=HELP	F2=SPLIT	F3=END	F4=RETURN			F5=RFIND		F6=RCHANGE				
F7=UP	F8=DOWN	F9=SWAP	F10=LEFT			F11=RIGHT		F12=RETRIEVE				
B MY JOB			LU #11									

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

VERSION 1.0 3/13/94

GAS GRAVITY	<u>0.69</u>
COND. OR MISC. (C/M)	<u>C</u>
%N2	<u>0.23</u>
%CO2	<u>2.21</u>
%H2S	<u>0</u>
DIAMETER (IN)	<u>2.5</u>
DEPTH (FT)	<u>7427</u>
SURFACE TEMPERATURE (DEG F)	<u>60</u>
BOTTOMHOLE TEMPERATURE (DEG F)	<u>200</u>
FLOWRATE (MCFPD)	<u>0</u>
SURFACE PRESSURE (PSIA)	<u>559</u>
BOTTOMHOLE PRESSURE (PSIA)	<u>667.6</u>

PATTERSON A COM #1 DAKOTA - (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	0.23
%CO2	2.21
%H2S	0
DIAMETER (IN)	2.5
DEPTH (FT)	7427
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	200
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	1588
BOTTOMHOLE PRESSURE (PSIA)	1942.0

PATTERSON A COM #1 DAKOTA - (CURRENT)

State: 30 Lease Name: PATTERSON A COM
 Prod: 2 County Name: SAN JUAN
 Ident: 31N12W02O00DK Reservoir Name: DAKOTA
 District: 4 Operator Name: MERIDIAN OIL INC
 Location: 20 31N 12W Field Name: BASIN (DAKOTA)
 Retrieval code: 251,045,31N12W02O00DK Well: 000001 Total Depth: 7490
 Gas Gath: SUG Status: ACT Upper Perf: 7295
 API No: 1101200 Comp Date: 196908 Lower Perf: 7427

Date	Cum to Test	WHSIP	BHP	P/Z	BDWtr	BDCnd	WHFlw	Poten	MC	Pt	Z	FA
19690812	0	1588	1920	2174	0	0	0	3694	C	2	83.00	
19700612	207,797	1137	1364	1507	0	0	555	959	C	2	5.00	
19710618	455,751	1038	1243	1364	0	0	558	859	C	2	11.00	
19720516	642,591	980	1172	1281	0	0	590	1037	C	2	15.00	
19730802	932,345	914	1091	1187	0	0	388	552	C	2	19.00	
19750418	1,313,107	825	983	1060	0	0	366	654	C	2	27.00	
19770517	1,752,924	656	778	828	0	0	351	543	C	2	40.00	
19790502	2,087,515	682	810	864	0	0	406	461	C	2	38.00	
F1=HELP	F2=SPLIT	F3=END	F4=RETURN	F5=RFIND	F6=RCHANGE							
F7=UP	F8=DOWN	F9=SWAP	F10=LEFT	F11=RIGHT	F12=RETRIEVE							

B MY JOB LU #11

State: 30 Lease Name: PATTERSON A COM
 Prod: 2 County Name: SAN JUAN
 Ident: 31N12W02O00DK Reservoir Name: DAKOTA
 District: 4 Operator Name: MERIDIAN OIL INC
 Location: 20 31N 12W Field Name: BASIN (DAKOTA)
 Retrieval code: 251,045,31N12W02O00DK Well: 000001 Total Depth: 7490
 Gas Gath: SUG Status: ACT Upper Perf: 7295
 API No: 1101200 Comp Date: 196908 Lower Perf: 7427

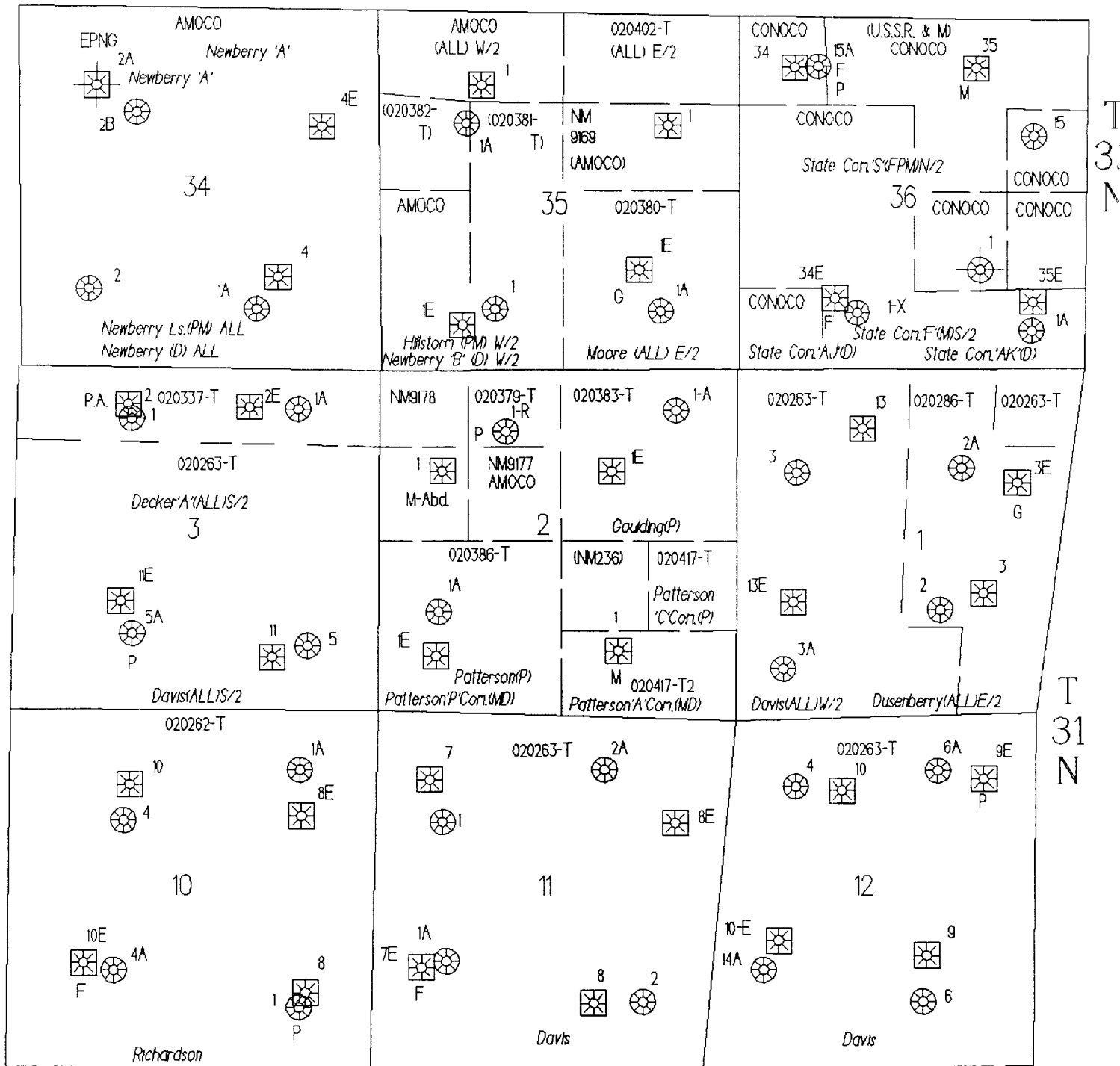
Date	Cum to Test	WHSIP	BHP	P/Z	BDWtr	BDCnd	WHFlw	Poten	MC	Pt	Z	FA
19790502	2,087,515	682	810	864	0	0	406	461	C	2	38.00	
19810330	2,371,761	450	531	554	0	0	401	424	C	2	58.00	
19830608	2,575,518	502	594	623	0	0	373	384	C	2	53.00	
19850612	2,697,983	649	770	818	0	0	426	152	C	2	41.00	
19881115	2,842,893	642	762	810	0	0	366	105	C	2	41.00	
19901002	2,910,444	585	693	733	0	0	308	146	C	2	46.00	
19920602	2,976,202	559	662	698	0	0	330	191	C	2	48.00	

***** BOTTOM OF DATA *****

F1=HELP F2=SPLIT F3=END F4=RETURN F5=RFIND F6=RCHANGE
 F7=UP F8=DOWN F9=SWAP F10=LEFT F11=RIGHT F12=RETRIEVE

B MY JOB LU #11

PATTERSON A COM #1
SECTION 2, T31N, R12W
BLANCO MESAVERDE/BASIN DAKOTA



PRODUCTION ALLOCATION FORMULA METHOD

Patterson A Com #1
(Mesaverde/Dakota) Commingle
Unit O, 2-T31N-R12W
San Juan County, New Mexico

Allocation Formula Method:

Current Production from Mesaverde formation = 100 MCFD

Current Production from Dakota formation = 70 MCFD

$$\frac{[(MV \& DK) 170 \text{ MCFD} - (MV) 100 \text{ MCFD}]}{(MV \& DK) 170 \text{ MCFD}} = (DK) \% \quad \underline{\text{Dakota 41\%}}$$

$$\frac{[(MV \& DK) 170 \text{ MCFD} - (DK) 70 \text{ MCFD}]}{(MV \& DK) 170 \text{ MCFD}} = (MV) \% \quad \underline{\text{Mesaverde 59\%}}$$