

DATE IN 2/24/97	SUSPENSE 3/17/97	ENGINEER BS	LOGGED KV	TYPE DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
- Engineering Bureau -

1511

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]

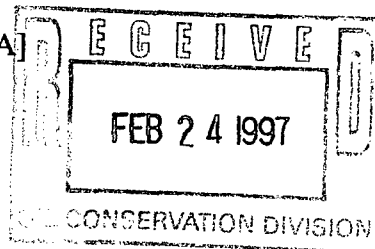
[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[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

2-20-97

Date

BURLINGTON RESOURCES

SAN JUAN DIVISION

February 20, 1997

SENT FEDERAL EXPRESS

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

Re: Helms Federal #1A
790'FNL, 1850'FWL Section 22, T-30-N, R-10-W, San Juan County, NM
API #30-045-22169

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 87505-6429

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
Helms Federal 1A C 22-30-10
Lease Well No. Unit Ltr. - Sec - Twp - Rge County
Spacing Unit Lease Types: (check 1 or more)
OGRID NO. 14538 Property Code 7108 API NO. 30-045-22169 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)	2976-2997'		4621-5300'
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. 438 psi (see attachment)	a.	a. 461 psi (see attachment)
	(Original) b. 631 psi (see attachment)	b.	b. 958 psi (see attachment)
6. Oil Gravity (°API) or Gas BTU Content	BTU 1161		BTU 1222
7. Producing or Shut-In?	producing		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 * If Producing, give data and oil/gas/water water of recent test (within 60 days)	Date: n/a Rates:	Date: Rates:	Date: n/a Rates:
	Date: 12-96 Rates: 31 mcf/d; 0 bopd	Date: Rates:	Date: 12-96 Rates: 57 mcf/d; 0.3 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 ☐ 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 Mary Ellen Lutey TITLE Production Engineer DATE 2/17/97
TYPE OR PRINT NAME Mary Ellen Lutey TELEPHONE NO. (505) 326-9700

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACERAGE DEDICATION PLAT

All distances must be from the outer boundaries of the Section

Operator SOUTHERN UNION PRODUCTION CO.			Lease HELMS FEDERAL		Well No. 1-A
Unit Letter G	Section 22	Township 30 NORTH	Range 10 WEST	County SAN JUAN	
Actual Footage Location of Well 790 feet from the NORTH line and 1850 feet from the WEST line					
Ground Level Elev. 6339	Producing Formation MESAVERDE		Pool BLANCO	Dedicated Acreage 323.84 Acres	

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- If more than one lease or 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 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.

Original Signed

Rudy D. Motto

Name

Rudy D. Motto

Position

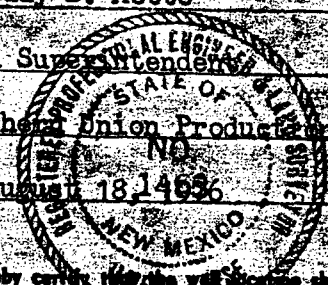
Area Superintendent

Company

Southern Union Production

Date

August 18, 1976



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.

13 August, 1976

Date Surveyed

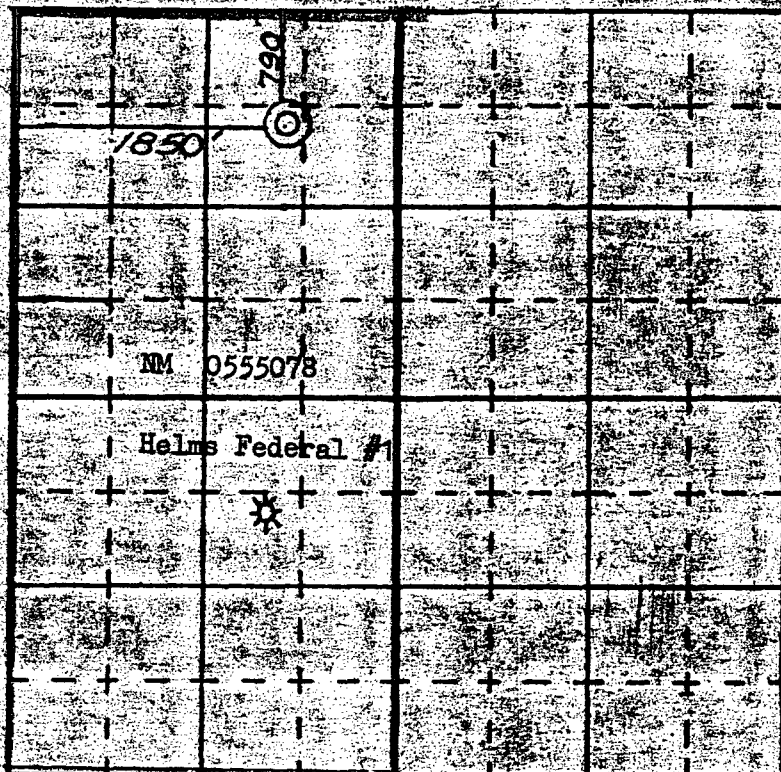
James P. Leone
Registered Professional Engineer

and/or Land Surveyor

James P. Leone

1463

Certificate No.



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

All distances must be from the outer boundaries of the Section

Operator SOUTHERN UNION PRODUCTION CO.		Lease HELMS FEDERAL		Well No. 1-A
Unit Letter C	Section 22	Township 30 NORTH	Range 10 WEST	County SAN JUAN
Actual Footage Location of Well: 790 feet from the NORTH line and 1850 feet from the WEST line				
Ground Level Elev. 6339	Producing Formation PICTURED CLIFFS		Pool AZTEC BLANCO	Dedicated Acreage: 160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure 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 communization, unitization, force-pooling, etc?

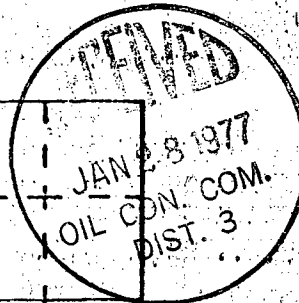
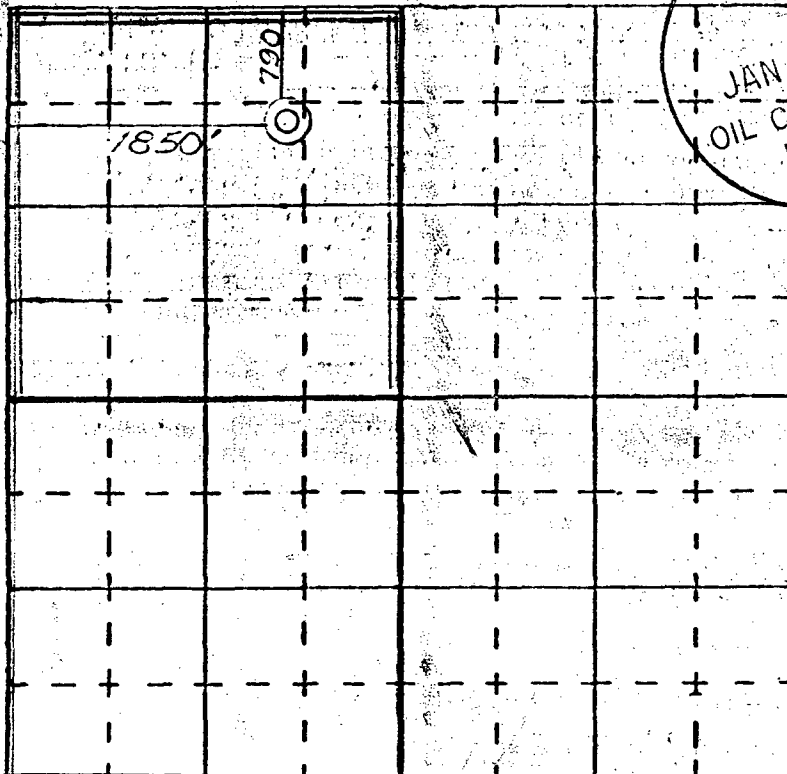
() Yes (X) No If answer is "yes," type of consolidation _____

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

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

Mosaverto

Pictured Cliffs

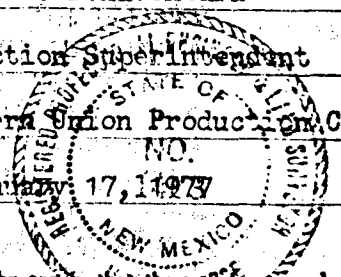


CERTIFICATION

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

Original Signed by
James N. Bonaventura

Name _____
James N. Bonaventura
 Position _____
Production Superintendent
 Company _____
Southern Union Production Co.
 Date _____
January 17, 1977



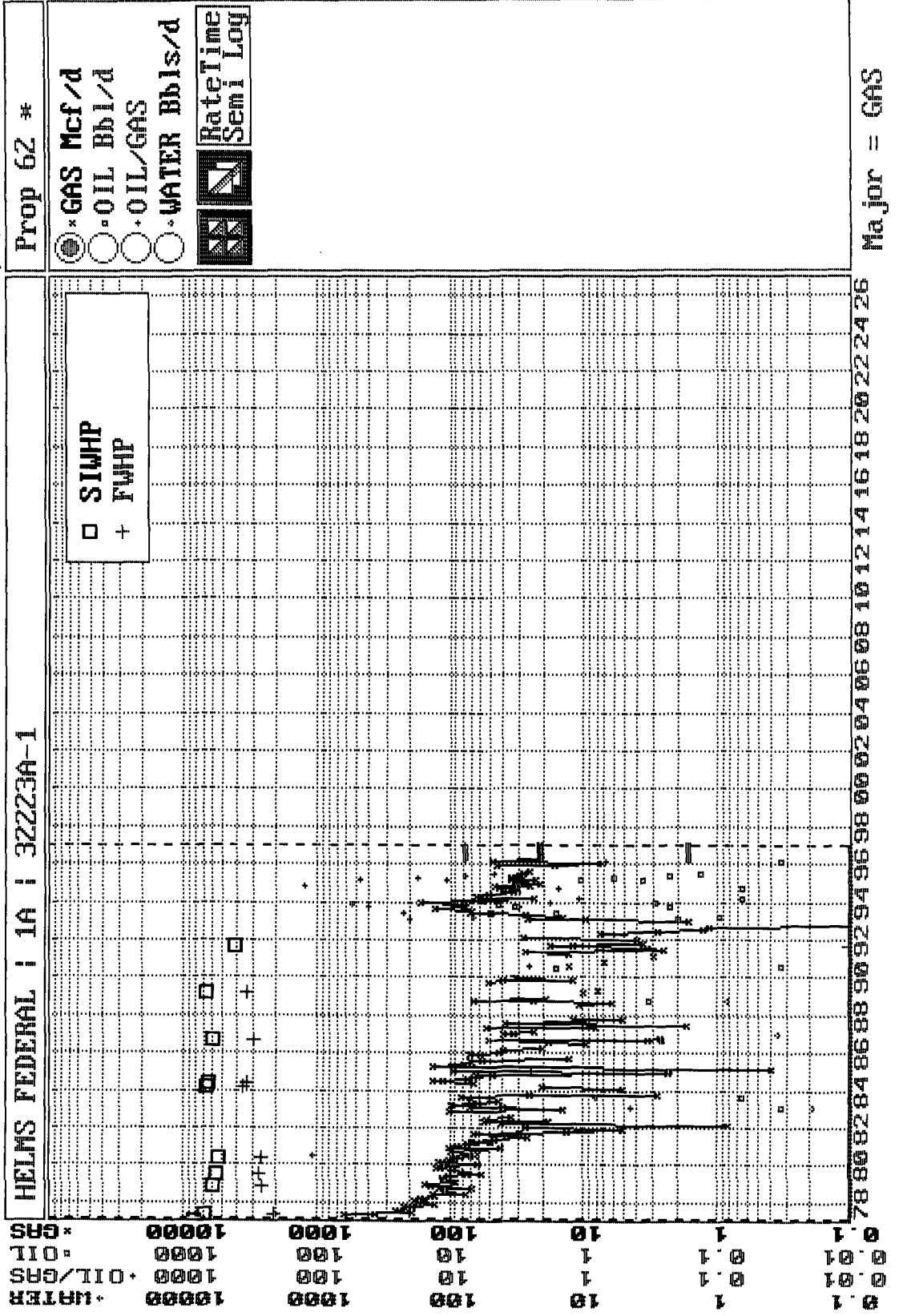
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

13 August, 1976
 Date Surveyed

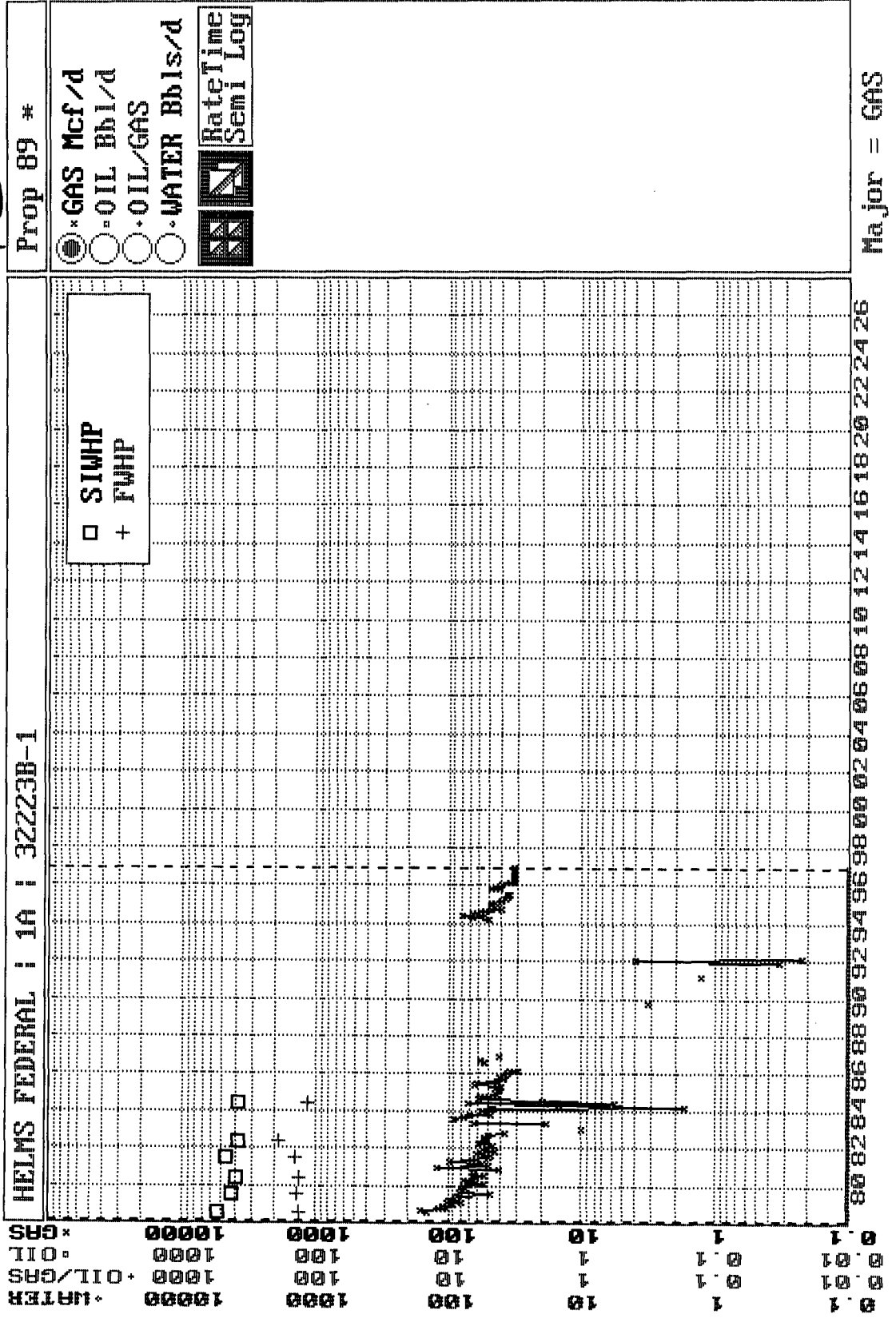
James P. Leese
 Registered Professional Engineer
 and/or Land Surveyor
James P. Leese

1463
 Certificate No.

MV



PC

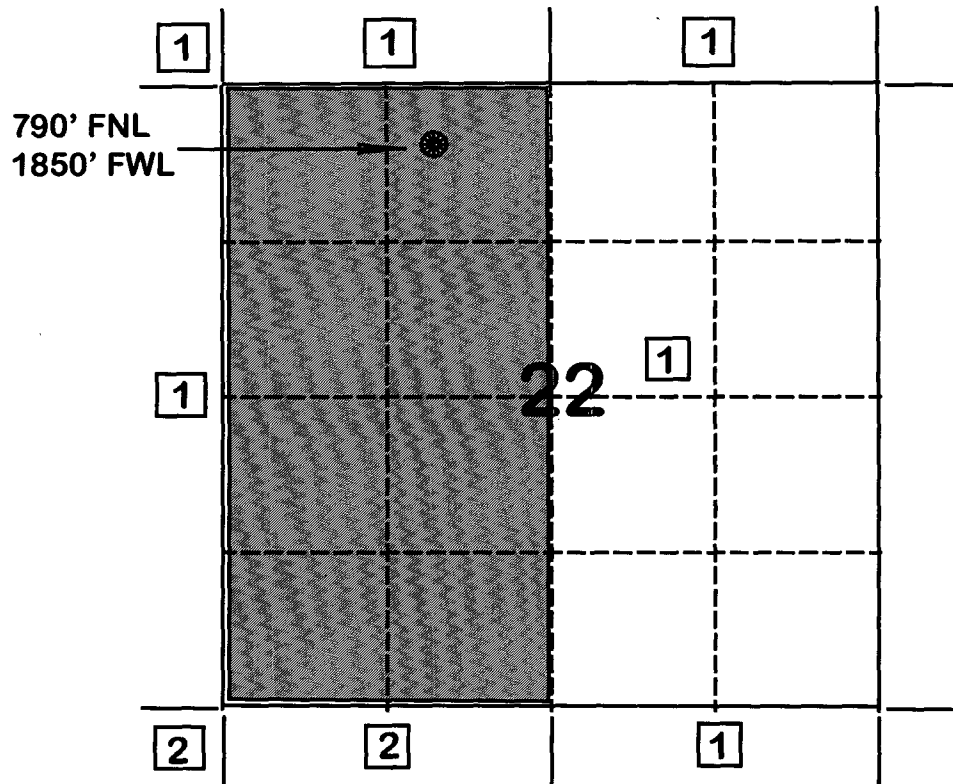


BURLINGTON RESOURCES OIL AND GAS COMPANY

**Helms Federal #1A
OFFSET OPERATOR \ OWNER PLAT**

Mesaverde (W/2)/Pictured Cliffs (NW/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 10.3/13/94

GAS GRAVITY	0.7
COND. OR MISC. (C/M)	C
%N2	0.45
%CO2	0.7
%H2S	0
DIAMETER (IN)	2.06
DEPTH (FT)	5426
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	403
BOTTOMHOLE PRESSURE (PSIA)	461.4

HELMS FEDERAL #1A MESAVERDE - (CURRENT)

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

VERSION 1.0 3/13/94

GAS GRAVITY	0.7
COND. OR MISC. (C/M)	C
%N2	0.45
%CO2	0.7
%H2S	0
DIAMETER (IN)	2.06
DEPTH (FT)	5426
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	150
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	828
BOTTOMHOLE PRESSURE (PSIA)	958.3

HELMS FEDERAL #1A MESAVERDE - (ORIGINAL)

Organize Data ScreenGraph Economics Report Plot Utility Quit
 Browsing: HELMS FEDERAL | 1A | 32223A-1 Property No.: 62
 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
01/05/77	0	828.0
04/21/77	11075	706.0
10/17/78	110481	612.0
07/16/79	139553	565.0
05/07/80	170400	538.0
02/13/84	228045	665.0
06/05/84	234103	653.0
08/21/86	270877	610.0
03/15/89	282132	673.0
09/17/91	297185	403.0

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 1.0 3/13/94

GAS GRAVITY	0.66
COND. OR MISC. (C/M)	C
%N2	0.21
%CO2	0.4
%H2S	0
DIAMETER (IN)	1.25
DEPTH (FT)	5426
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	110
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	384
BOTTOMHOLE PRESSURE (PSIA)	438.2

HELMS FEDERAL #1A PICTURED CLIFFS - (CURRENT)

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

VERSION 10.3/13/94

GAS GRAVITY	0.66
COND. OR MISC. (C/M)	C
%N2	0.21
%CO2	0.4
%H2S	0
DIAMETER (IN)	1.25
DEPTH (FT)	5426
SURFACE TEMPERATURE (DEG F)	60
BOTTOMHOLE TEMPERATURE (DEG F)	110
FLOWRATE (MCFPD)	0
SURFACE PRESSURE (PSIA)	551
BOTTOMHOLE PRESSURE (PSIA)	631.4

HELMS FEDERAL #1A PICTURED CLIFFS - (ORIGINAL)

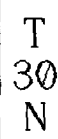
PC

Organize Data ScreenGraph Economics Report Plot Utility Quit
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 Item: 2/3/33 Name: DATE Type: Date Len: 8/27/203

--DATE--	---CUM GAS--	M SIWHP
	Mcf	Psi
07/05/78	4425	551.0
07/16/79	39815	421.0
05/07/80	61825	392.0
06/10/81	83991	472.0
05/13/82	101745	380.0
06/05/84	129833	384.0

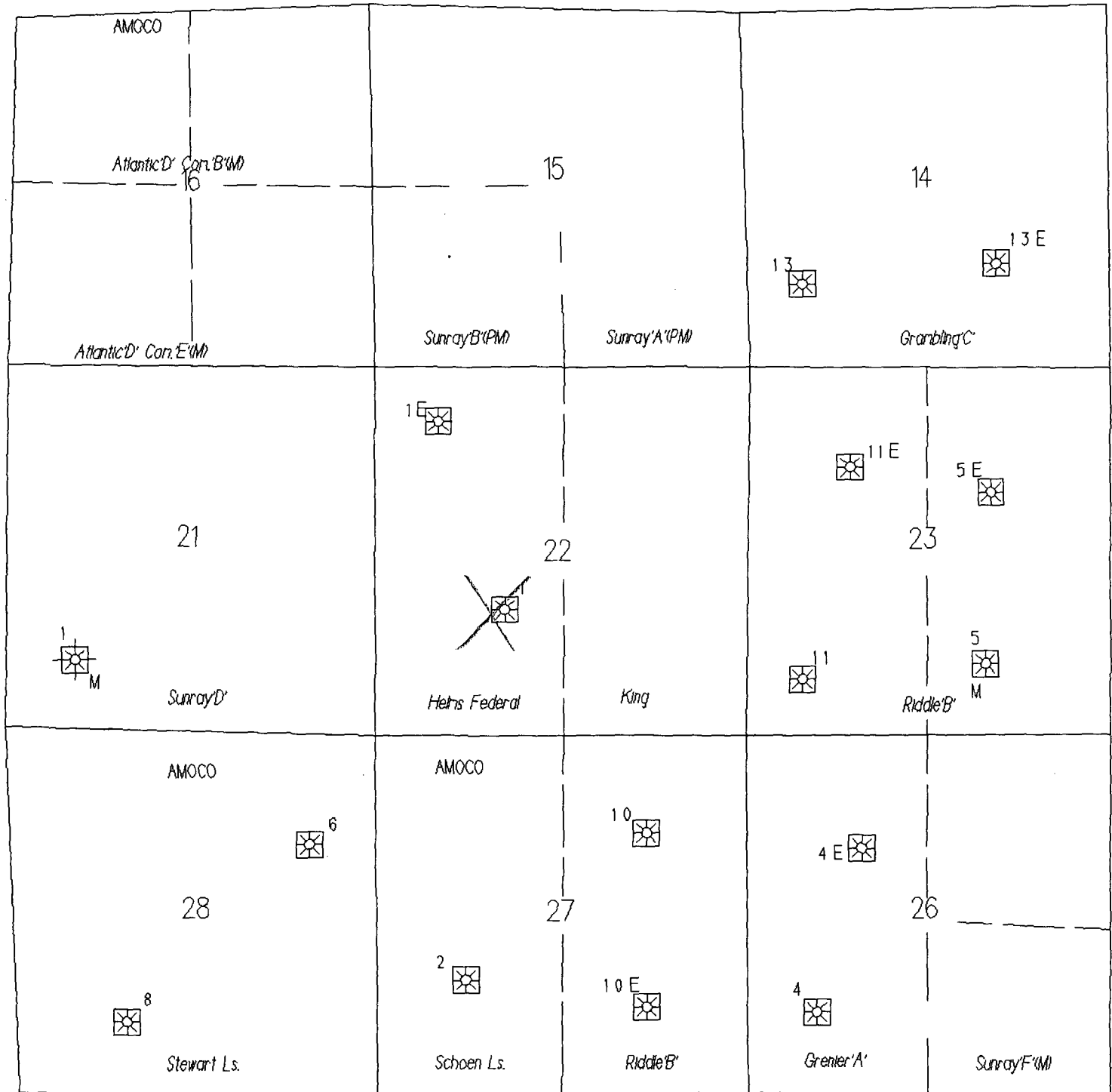
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 F2=Jump F4=NxtPro F6=NxtTbl F8=Print F10=Exit Shift+<- ->=Fast Tbl R & L

HELMS FEDERAL #1
SECTION 33, T30N, R10W
BLANCO MESAVARDE



R-10-W

HELMS FEDERAL #1 SECTION 22, T30N, R10W BASIN DAKOTA



T
30
N

R-10-W

FARMINGTON 1996 MONTHLY PRODUCTION FOR 32223A
 HELMS FEDERAL 1A
 BLANCO MESAVERDE (PRORATED GAS FIELD MESAVERDE ZONE

PHS030M1

			DAYS =====		OIL =====		=====		GAS =====					
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F	31	02			01	225	31	1200	15.025			
2	2	F	29	02	1		01	1459	29	1200	15.025			
3	2	F	31	02	4		01	2061	31	1200	15.025			
4	2	F	30	02			01	1704	30	1200	15.025			
5	2	F	30	02	1		01	1747	30	1200	15.025			
6	2	F	27	02	2		01	1441	27	1200	15.025			
7	2	F	31	02	7		01	1389	31	1199	15.025			
8	2	F	31	02			01	1803	31	1199	15.025			
9	2	F	19	02			01	1120	19	1205	15.025			
10	2	F	28	02			01	1161	28	1205	15.025			
11	2	F	30	02			01	1460	30	1205	15.025			
12	2	F	31	02	0.38000	10	01	57 mcf 1759	31	1205	15.025			

PF6 - RETURNS TO ANNUAL DISPLAY
 PF10 - HELP INFORMATION

PF3 - TRANSFER TO UPDATE
 PF9 - DISPLAY MONTHLY INJECTION
 PRS 02/05/97

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

B MY JOB

NUM LU #11

FARMINGTON 1996 MONTHLY PRODUCTION FOR 32223B
 HELMS FEDERAL 1A
 AZTEC PICTURED CLIFFS (GAS) FIELD PICTURED CLIFFS ZONE

PHS030M1

			DAYS =====		OIL =====		=====		GAS =====					
MO	T	S	ON	PC	PROD	GRV	PC	PROD	ON	BTU	PRESS	WATER	PROD	C
1	2	F					01	1232	31	1140	15.025			
2	2	F					01	1062	29	1140	15.025			
3	2	F					01	1111	31	1140	15.025			
4	2	F					01	1004	30	1140	15.025			
5	2	F					01	996	31	1140	15.025			
6	2	F					01	957	18	1140	15.025			
7	2	F					01	1048	31	1140	15.025			
8	2	F					01	1106	31	1140	15.025			
9	2	F					01	810	18	1140	15.025			
10	2	F					01	1067	31	1139	15.025			
11	2	F					01	987	30	1156	15.025			
12	2	F					01	31 mcf 975	31	1156	15.025			

PF6 - RETURNS TO ANNUAL DISPLAY
 PF10 - HELP INFORMATION

PF3 - TRANSFER TO UPDATE
 PF9 - DISPLAY MONTHLY INJECTION
 PRS 02/05/97

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

B MY JOB

NUM LU #11