

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

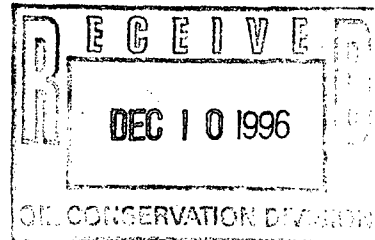
Check One Only for [B] or [C]

[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 further verify that all applicable API Numbers are included. 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.

Paul C. Thompson
Print or Type Name

Paul C. Thompson
Signature

President
Title

12/2/96
Date

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 ☐

EXISTING WELLBORE

YES ☐ NO ☐

APPLICATION FOR DOWNHOLE COMMINGLING

Operator Thompson Engineering & Production Corp. Address 7415 E. Main Farmington, New Mexico 87402Lease Federal 11 Well No. #3 Unit Ltr. I Sec. 11 Twp. 28N Rge. 13W County San Juan

Spacing Unit Lease Types: (check 1 or more)

OGRID NO. 037581 Property Code 18115 API NO. 30-045-23291 Federal X 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	71629 Basin Fruitland Coal		W. Kutz Pictured Cliffs 79680
2. Top and Bottom of Pay Section (Perforations)	1609 - 1628		1641 -1645
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Pumping		Pumping
5. Bottomhole Pressure	a. (Current) 175	a.	a. 180
Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated Or Measured Original	b. (Original) 175	b.	b. N/A
6. Oil Gravity (° API) or Gas BTU Content			
7. Producing or Shut-In?	Producing		Shut In
Production Marginal? (yes or no)	Yes		Yes
* If Shut-In, give date 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: Rates:	Date: Rates:	Date: 9/96 Rates: 92 MCF/D 17 BWPD
* If Producing, give date and oil/gas/water rates of recent test (within 60 days)	Date: 11/96 Rates: 30 MCF/D 20 BWPD	Date: Rates:	Date: Rates:
8. Fixed Percentage Allocation Formula - % for each zone	Oil: % Gas: 39.1 %	Oil: % Gas: %	Oil: % Gas: 60.9 %

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. 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 Paul C. Thompson TITLE President DATE 12/2/96TYPE OR PRINT NAME Paul C. Thompson TELEPHONE NO. (505) 327-4892

District I
PO Box 1900, Hobbs, NM 88241-1900
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-102
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-23291		Pool Code 79680	Pool Name West Kutz Pictured Cliffs
Property Code 18115	Property Name Federal 11		Well Number 3
OGRID No. 037581	Operator Name Thompson Engr. & Prod. Corp.		Elevation 5896

10 Surface Location

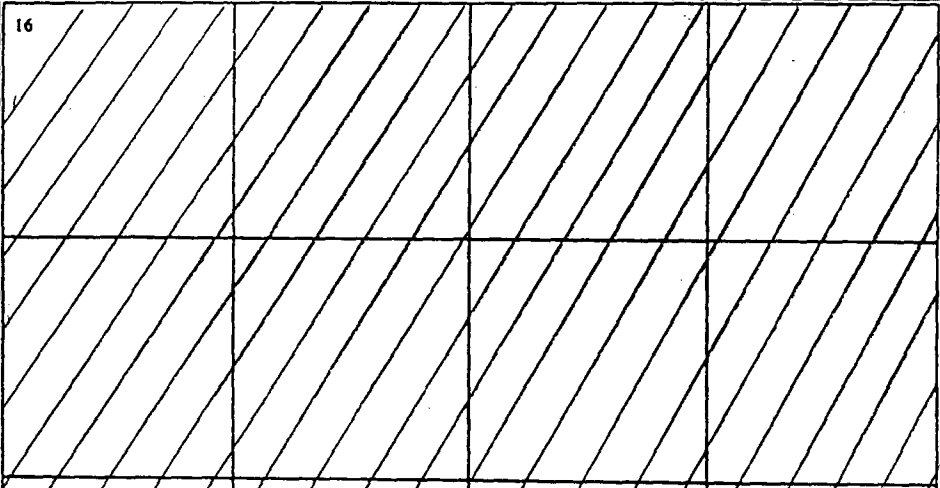
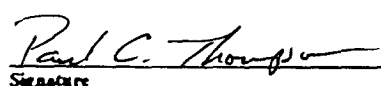
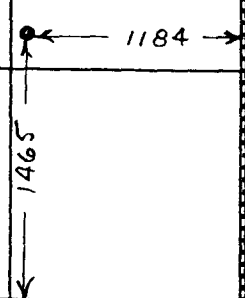
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	11	28N	13W		1465	FSL	1184	FEL	San Juan

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 Dedication Acres 137.78	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					17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature Paul C. Thompson Printed Name President Title 12/2/1996 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.  Date of Survey Signature and Seal of Professional Surveyor Certificate Number	

District I
PO Box 1904, Hobbs, NM 88241-1904
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Bravo 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-102
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-045-23291		Pool Code	Pool Name Basin Fruitland Coal	
Property Code 18115	Property Name Federal 11			Well Number 3
OGRID No. 037581	Operator Name Thompson Engr. & Prod. Corp.			Elevation 5896

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
I	11	28N	13W		1465	FSL	1184	FEL	San Juan

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
Dedication Acres 275.36		Joint or Infill		Consolidation Code		Order No.			

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					17 OPERATOR CERTIFICATION	
					I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. <u>Paul C. Thompson</u> Signature Paul C. Thompson Printed Name President Title 12/2/1996 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. Date of Survey Signature and Seal of Professional Surveyor: Certificate Number						

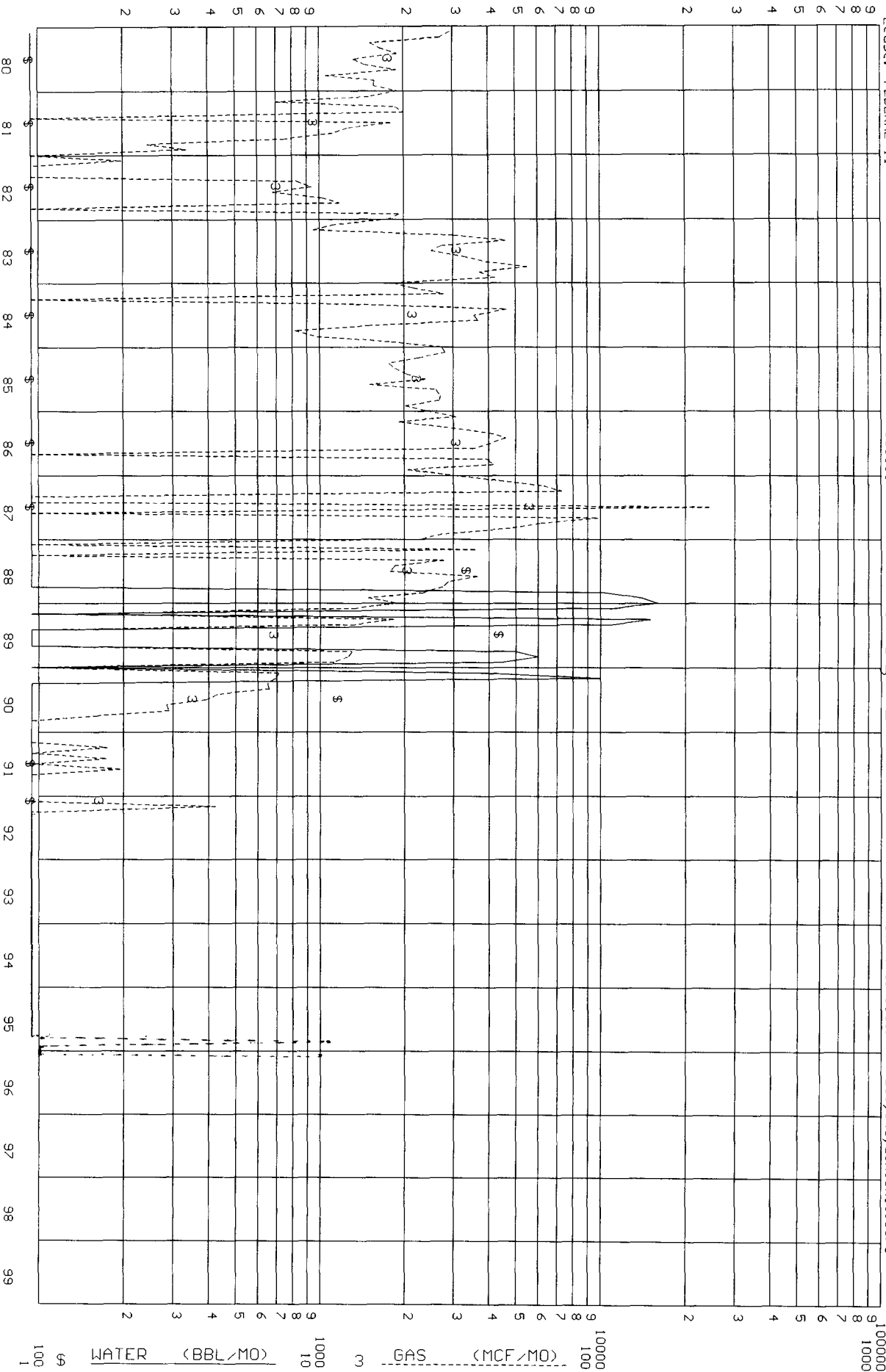
Lease: FEDERAL 11

000003

Dwights

Retrieval Code:

251,045,28N13411100PC



County: SAN JUAN
Field: KUTZ WEST (PICTURED CLIFFS) PC
Reservoir: PICTURED CLIFFS
Operator: ABBOTT RALPH G
Oil Cum: 0
Gas Cum: 276083
Location: 111 28N 134

F.P. Date 01-80

Date: 11-26-96

Federal 11 #3
Commingling Application

Allocation Formula

The West Kutz Pictured Cliffs was completed by the previous operator, Ralph Abbott, on May 15, 1979. Due to water production and pump problems the Pictured Cliffs was produced erratically until Thompson purchased the well in January 1996. The decline curve is attached.

The Fruitland Coal has only recently been completed and there is insufficient data to determine a stabilized flow rate or decline curve.

Since both zones appear to only be capable of marginal production, Thompson Engineering proposes to downhole commingle the production.

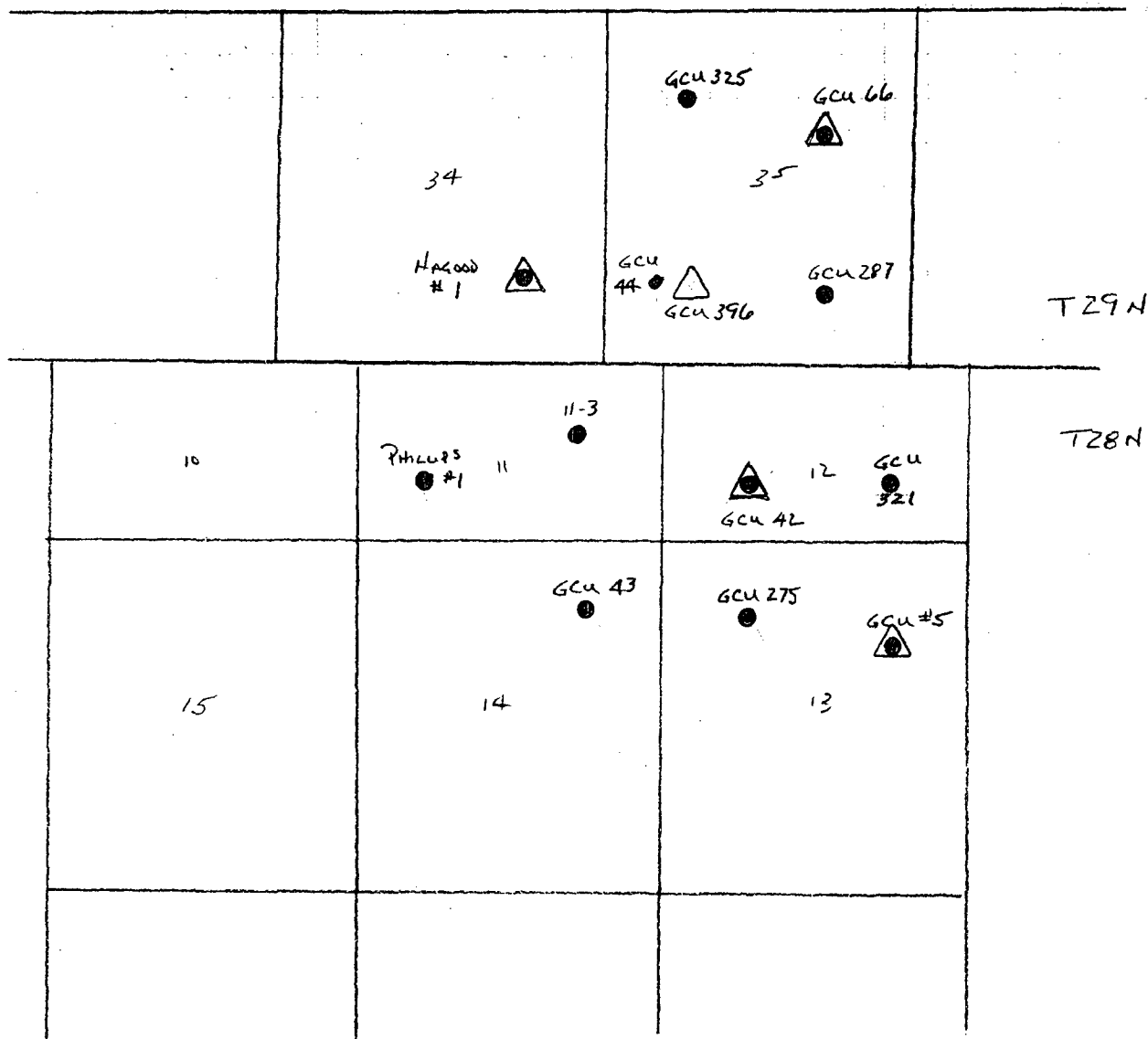
Both zones have very similar bottom hole pressures (approximately 180 psig from the Pictured Cliffs and 175 psig from the Fruitland Coal) so cross flow will not be a factor. Both zones produce the same amount of water. Copies of water analysis are attached. Neither zone is fluid sensitive and the fluids from the two zones are compatible.

Since neither zone has enough data to prepare a reliable production forecast, Thompson Engineering proposes to allocate the production based on a ratio of the expected reserves. Average cumulative production from Pictured Cliffs wells in this area is 706,160 Mcf of gas while Fruitland Coal wells average 454,079 Mcf. **The proposed allocation is therefore 60.9% to the Pictured Cliffs and 39.1% to the Fruitland Coal.**

**OFFSETS TO FEDERAL 11 #3
SECTION 11, T28N R13W**

WELL NAME	CUMULATIVE PRODUCTION MCF
PICTURED CLIFFS WELLS	
Gallegos Canyon Unit #287	119,645
Gallegos Canyon Unit #44	895,532
Gallegos Canyon Unit #66	828,168
Gallegos Canyon Unit #275	605,463
Gallegos Canyon Unit #5	1,939,508
Gallegos Canyon Unit #43	358,228
Gallegos Canyon Unit #321	241,415
Gallegos Canyon Unit #42	1,167,923
Phillips #1	341,815
Hagood #1	563,903
	=====
AVERAGE	706,160
% of TOTAL PC PLUS FTC	60.9
 FRUITLAND COAL WELLS	
Gallegos Canyon Unit #396	489,563
Gallegos Canyon Unit #5	722,304
Gallegos Canyon Unit #42	143,492
Gallegos Canyon Unit #66	460,957
	=====
AVERAGE	454,079
% of TOTAL PC PLUS FTC	39.1

R 13 W



THOMPSON ENGINEERING
FEDERAL 11 #3 OFFSETS

● PICTURED CLIFFS
△ FRUITLAND COAL

THOMPSON ENGINEERING & PRODUCTION CORP.

Federal 11 #3

1465' FSL & 1184' FEL

Sec. 11, T28N, R13W

San Juan County, New Mexico

The following offset property owners have received written notice of the proposed comingling application.

AMOCO PRODUCTION COMPANY
San Juan Operations Center
200 Amoco Court
Farmington, New Mexico 87401

BURLINGTON OIL
3535 E. 30th Street
Farmington, New Mexico

I certify that this letter has been mailed to the above property owner.


Paul C. Thompson

San Juan County)
) ss
State of New Mexico)

The following instrument was acknowledged before me this 6th day of December 1996 by Paul C. Thompson.


Notary Public

My Commission Expires:

July 31, 1997



WALSH

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping

7415 East Main
Farmington, New Mexico 87402
(505) 327-4892

CERTIFIED- RETURN RECEIPT

November 26, 1996

Mr. James Strickler
Burlington Oil
3535 E. 30th Street
Farmington, NM 87401

Re: Application for Downhole Commingling
Thompson Engineering
Federal 11 #3
1465' FSL, 1184' FEL, Section 11, T28N R13W
San Juan County, New Mexico
Basin Fruitland Coal and
West Kutz Pictured Cliffs

Dear Mr. Strickler,

Enclosed you will find a copy of the above referred to application that has been submitted to the New Mexico Oil Conservation Division for administrative approval.

If you desire to submit remarks concerning the application, please send them to Mr. William J. LeMay, Director, New Mexico Oil Conservation Division, Santa Fe, New Mexico. A copy of any remarks to the undersigned would be appreciated.

Thank you for your consideration in this matter and if you have any questions, please do not hesitate to call upon me.

Sincerely,

Paul C. Thompson
President, Thompson Engineering

**WALSH**

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping7415 East Main
Farmington, New Mexico 87402
(505) 327-4892CERTIFIED- RETURN RECEIPT

November 26, 1996

Land Manager
AMOCO Production Company
200 AMOCO Court
Farmington, NM 87401Re: Application for Downhole Commingling
Thompson Engineering
Federal 11 #3
1465' FSL, 1184' FEL, Section 11, T28N R13W
San Juan County, New Mexico
Basin Fruitland Coal and
West Kutz Pictured Cliffs

Dear Land Manager,

Enclosed you will find a copy of the above referred to application that has been submitted to the New Mexico Oil Conservation Division for administrative approval.

If you desire to submit remarks concerning the application, please send them to Mr. William J. LeMay, Director, New Mexico Oil Conservation Division, Santa Fe, New Mexico. A copy of any remarks to the undersigned would be appreciated.

Thank you for your consideration in this matter and if you have any questions, please do not hesitate to call upon me.

Sincerely,

Paul C. Thompson
President, Thompson Engineering

THOMPSON ENGINEERING & PRODUCTION CORP.

Federal 11 #3

1465' FSL & 1184' FEL

Sec. 11, T28N, R13W

San Juan County, New Mexico

The following working interest, royalty and overriding royalty owners have received written notice of the proposed comingling application.

U.S. GOVERNMENT
c/o BUREAU OF LAND MANAGEMENT
1235 La Plata Highway
Farmington, New Mexico 87401

MERRION OIL & GAS COMPANY
610 Reilly Avenue
Farmington, New Mexico 87401

COLEMAN OIL & GAS COMPANY
708 S. Tucker
Farmington, New Mexico 87401

GEORGE E. COLEMAN
708 S. Tucker
Farmington, New Mexico

I certify that this letter has been mailed to the above property owners.


Paul C. Thompson

San Juan County)
) ss
State of New Mexico)

The following instrument was acknowledged before me on this 6th
day of December 1996 by Paul C. Thompson.


Notary Public

My Commission Expires:

July 31, 1997

**Federal 11 #3
Commingling Application**

Working, Overriding, and Royalty Interests

Pictured Cliffs

Owner	Working Interest	Net Revenue Interest
U.S Government		0.125
Coleman Oil and Gas	0.90	0.747
Paul Thompson	0.10	0.083
Merrion Oil and Gas		0.010
George E. Coleman		0.350
	-----	-----
	1.00	1.000

Fruitland Coal

Owner	Working Interest	Net Revenue Interest
U.S Government		0.12500
Coleman Oil and Gas	0.90	0.74324
Paul Thompson	0.10	0.08258
Merrion Oil and Gas		0.01418
George E. Coleman		0.35000
	-----	-----
	1.00	1.00000

**WALSH**

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping7415 East Main
Farmington, New Mexico 87402
(505) 327-4892CERTIFIED- RETURN RECEIPT

December 2, 1996

Mr. T. Greg Merrion
Merrion Oil and Gas
610 Reilly Avenue
Farmington, NM 87401

Re: Application for Downhole Commingling
Thompson Engineering
Federal 11 #3
1465' FSL, 1184' FEL, Section 11, T28N R13W
San Juan County, New Mexico
Basin Fruitland Coal and
West Kutz Pictured Cliffs

Dear Mr. Merrion,

As an overriding royalty owner of this well you are being notified of the above referred to application that has been submitted to the New Mexico Oil Conservation Division for administrative approval.

If you desire to submit remarks concerning the application, please send them to Mr. William J. LeMay, Director, New Mexico Oil Conservation Division, Santa Fe, New Mexico. A copy of any remarks to the undersigned would be appreciated.

Please do not hesitate to call upon me if you have any questions.

Sincerely,

Paul C. Thompson
President, Thompson Engineering

**WALSH**

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping7415 East Main
Farmington, New Mexico 87402
(505) 327-4892CERTIFIED- RETURN RECEIPT

December 2, 1996

Mr. George E. Coleman
c/o Coleman Oil and Gas
P.O. Drawer 3337
Farmington, NM 87499

Re: Application for Downhole Commingling
Thompson Engineering
Federal 11 #3
1465' FSL, 1184' FEL, Section 11, T28N R13W
San Juan County, New Mexico
Basin Fruitland Coal and
West Kutz Pictured Cliffs

Dear Mr. Coleman,

As a working interest owner of this well you are being notified of the above referred to application that has been submitted to the New Mexico Oil Conservation Division for administrative approval.

If you desire to submit remarks concerning the application, please send them to Mr. William J. LeMay, Director, New Mexico Oil Conservation Division, Santa Fe, New Mexico. A copy of any remarks to the undersigned would be appreciated.

Please do not hesitate to call upon me if you have any questions.

Sincerely,

Paul C. Thompson
President, Thompson Engineering



WALSH

ENGINEERING & PRODUCTION CORP.

Petroleum Engineering Consulting
Lease Management
Contract Pumping

7415 East Main
Farmington, New Mexico 87402
(505) 327-4892

CERTIFIED- RETURN RECEIPT

December 2, 1996

Mr. George E. Coleman
Coleman Oil and Gas
P.O. Drawer 3337
Farmington, NM 87499

Re: Application for Downhole Commingling
Thompson Engineering
Federal 11 #3
1465' FSL, 1184' FEL, Section 11, T28N R13W
San Juan County, New Mexico
Basin Fruitland Coal and
West Kutz Pictured Cliffs

Dear Mr. Coleman,

As a working interest owner of this well you are being notified of the above referred to application that has been submitted to the New Mexico Oil Conservation Division for administrative approval.

If you desire to submit remarks concerning the application, please send them to Mr. William J. LeMay, Director, New Mexico Oil Conservation Division, Santa Fe, New Mexico. A copy of any remarks to the undersigned would be appreciated.

Please do not hesitate to call upon me if you have any questions.

Sincerely,

Paul C. Thompson
President, Thompson Engineering

BJ SERVICES COMPANY**WATER ANALYSIS #FW01W076****FARMINGTON LAB****GENERAL INFORMATION**

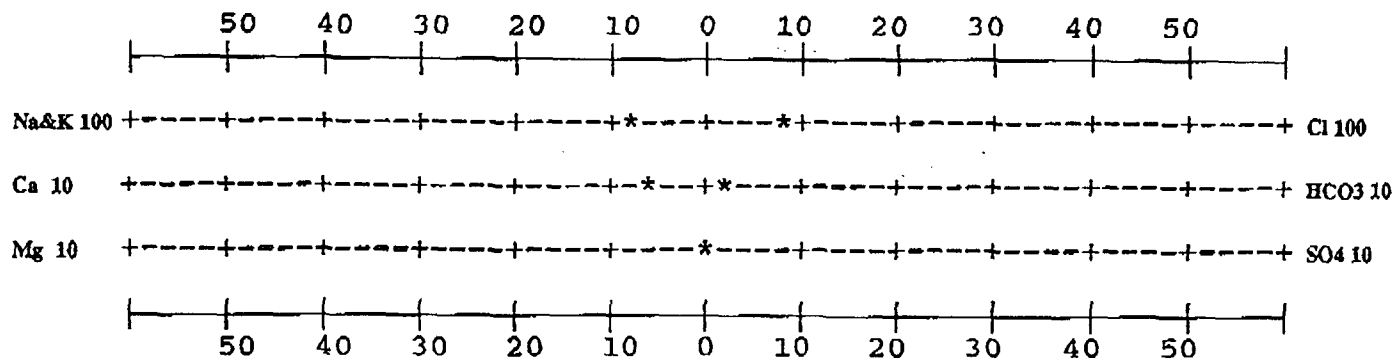
OPERATOR:	THOMPSON ENG.	DEPTH:	
WELL:	FEDERAL 11 #3	DATE SAMPLED:	12/02/96
FIELD:		DATE RECEIVED:	12/02/96
SUBMITTED BY:		COUNTY:	STATE:
WORKED BY	:MIKE KHACHATRIAN	FORMATION:	FRUITLAND COAL
PHONE NUMBER:			

SAMPLE DESCRIPTION

SAMPLE FOR ANALYSIS

PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:	1.040	@ 64°F	PH:	6.80
RESISTIVITY (MEASURED):	0.100	ohms @ 64°F		
IRON (FE++) :	3	ppm	SULFATE:	5 ppm
CALCIUM:	1,174	ppm	TOTAL HARDNESS	3,194 ppm
MAGNESIUM:	63	ppm	BICARBONATE:	1,642 ppm
CHLORIDE:	30,169	ppm	SODIUM CHLORIDE(Calc)	49,628 ppm
SODIUM+POTASS:	18,714	ppm	TOT. DISSOLVED SOLIDS:	53,725 ppm
H2S: NO TRACE			POTASSIUM PPM:	75

REMARKS**STIFF TYPE PLOT (IN MEQ/L)**

ANALYST

MIKE KHACHATRIAN

RUTH "W" WALSH ENG.

505 327 4892

REPORT NO: CGME747 -01
Page No: 2

E L P A S O N A T U R A L G A S C O M P A N Y

Volume Calculation & Distribution Department
Monthly Volume and Analysis for December, 1995

Report Date: 12/03/96
Report Time: 12:18:24

Meter: 90624 - FEDERAL 11 #3 *PICTURED CLIFF*

Oper : 0523 - THOMPSON ENGINEERING & PROD

- *** No Reporting Party ***

Reporting party:

	Mole % / GPM								Spec Grav	GPM		
	CO2	H2S	N2	C1	C2	C3	IC4	NC4	ICS	NC5	CGP	BTU
Effective	0.640	0.000	0.390	93.480	4.800	0.420	0.080	0.090	0.030	0.020	0.050	1055
12/01/95	0.000	0.000	0.000	0.000	1.284	0.116	0.026	0.028	0.011	0.007	0.022	



1115 Farmington Avenue
Farmington, N.M. 87401
(505) 325-6622

Analysis No. TOG60004
Cust. No. 77000-10035

WELL/LEASE INFORMATION

Company : THOMPSON ENG & PROD
Well Name : FEDERAL 11 #3
County : SAN JUAN
State : NM
Location : 11-28N-13W
Fld/Formation : FRUITLAND COAL
Cust.Stn.No. :

Source :
Pressure : 55 PSIG
Sample Temp. : 47 DEG.F
Well Flowing : YES
Date Sampled : 11/29/96
Sampled By : PAUL THOMPSON
Foreman/Engr :

Remarks:

ANALYSIS

COMPONENT	MOLE %	GPM**	B.T.U.*	SP.GR.*
NITROGEN	2.466	0.0000	0.00	0.0239
CO2	0.606	0.0000	0.00	0.0092
METHANE	91.658	0.0000	927.85	0.5077
ETHANE	3.127	0.8365	55.46	0.0325
PROPANE	1.189	0.3277	29.99	0.0181
I-BUTANE	0.237	0.0775	7.72	0.0048
N-BUTANE	0.292	0.0921	9.55	0.0059
I-PENTANE	0.119	0.0435	4.77	0.0030
N-PENTANE	0.073	0.0264	2.93	0.0018
HEXANES	0.233	0.1016	11.98	0.0075
TOTAL	100.000	1.5053	1050.26	0.6144

* @ 14.730 PSIA DRY & UNCORRECTED FOR COMPRESSIBILITY

** @ 14.730 & 60 DEG. F

COMPRESSIBILITY FACTOR (1/Z) 1.0023
BTU/CU.FT. (DRY) CORRECTED FOR (1/Z) 1052.7
BTU/CU.FT. (WET) CORRECTED FOR (1/Z) 1034.4
REAL SPECIFIC GRAVITY 0.6156

ANALYSIS RUN AT 14.730 PSIA & 60 DEGREES F

CYLINDER # : 026
CYLINDER PRESSURE : 42 PSIG
DATE RUN : 12/02/96
ANALYSIS RUN BY : CHELLE DURBIN