

By DRC.

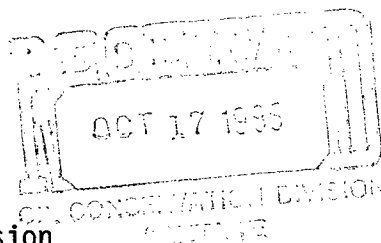


Amoco Production Company

Petroleum Center Building
501 Airport Drive
Farmington, New Mexico 87401
505-325-8841

R. J. Broussard
District Manager

October 14, 1985



New Mexico Oil Conservation Division
Attn: David Catanach
P. O. Box 2088
Santa Fe, NM 87501

File: DDL-1197-400.1

Gentlemen:

Commingling Application
Abrams L No. 1
Section 26, T29N, R10W
San Juan County, New Mexico

Amoco Production Company requests approval to commingle production from the Armenta Gallup and Blanco Mesaverde horizons in the subject well. Commingling is requested for these reasons:

- 1) Pumping the Gallup horizon below a packer is not feasible.
- 2) Producing rates from the Gallup are marginally economical.
- 3) If commingled, the strong Mesaverde will help produce remaining Gallup reserves.

The working interest and royalty of both zones are the same and bottom hole pressure of the Gallup is within 50 percent of the bottom hole pressure of the Mesaverde. Formation fluids are compatible.

In view of Rule 303C, we have attached 2 copies of the following:

1. Acreage Plat indicating ownership of offset leases
2. Well Completion Reports
3. Bottom hole pressures
4. Recommended Allocation Formula
5. Copy of notification to offset operations
6. Form C-116

Since this well has never produced, we are unable to supply production decline curves.

Page 2
File: DDL-1197-400.1
October 14, 1985

If you have any questions concerning this application, please contact the engineer in charge, Dana Delventhal.

Thank you for your earliest attention to this application.

Yours very truly,

A handwritten signature in black ink, appearing to read "R. J. Brussa". The signature is fluid and cursive, with a large, stylized "Q" at the end.

MEM/ct

Attachments

cc: NMOCD - Aztec, NM

AM6



Amoco Production Company

Petroleum Center Building
501 Airport Drive
Farmington, New Mexico 87401
505-325-8841

R. J. Broussard
District Manager

October 2, 1985

El Paso Natural Gas Company
P. O. Box 990
Farmington, NM 87499

Southern Union Exploration
P. O. Box 2179
Farmington, NM 87499

File: DDL-1136-400.1

Gentlemen:

Commingling Application
Abrams L No. 1
Sec. 26M, T29N, R10W
San Juan County, New Mexico

Amoco Production Company has applied for approval to commingle the Gallup and Mesaverde horizons in the subject well. If you have any objections, you have 20 days to notify the New Mexico Oil Conservation Division. If you do not respond within 20 days, your approval will be assumed.

Sincerely,

R. J. Broussard
RLB

DLD/ct

AM5

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator		Pool		County									
Amoco Production Co.		Armenta Gallup/Blanco Mesaverde		San Juan									
Address		TYPE OF TEST - (X)		Completion ☐ Special ☒									
501 Airport Drive, Farmington, N M 87401		SCHEDULED ☐											
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL.
		U	S	T						R	WATER BBLs.	GRAV. OIL	
Abrams L	#1	M	26	29	10								
Armenta Gallup						7/19/83	29/64	85	24	1	4	65	16,250
Blanco Mesaverde						9/11/84	24/64	375	24	102	2	548	274,000

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

No well will be assigned an allowable greater than the amount of oil produced on the official test.
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.


(Signature)

Adm. Supervisor

(Title)

October 3, 1985

(Date)

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO

P. O. BOX 2088

ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

Form C-107
Revised 10-1

All distances must be from the outer boundaries of the Section.

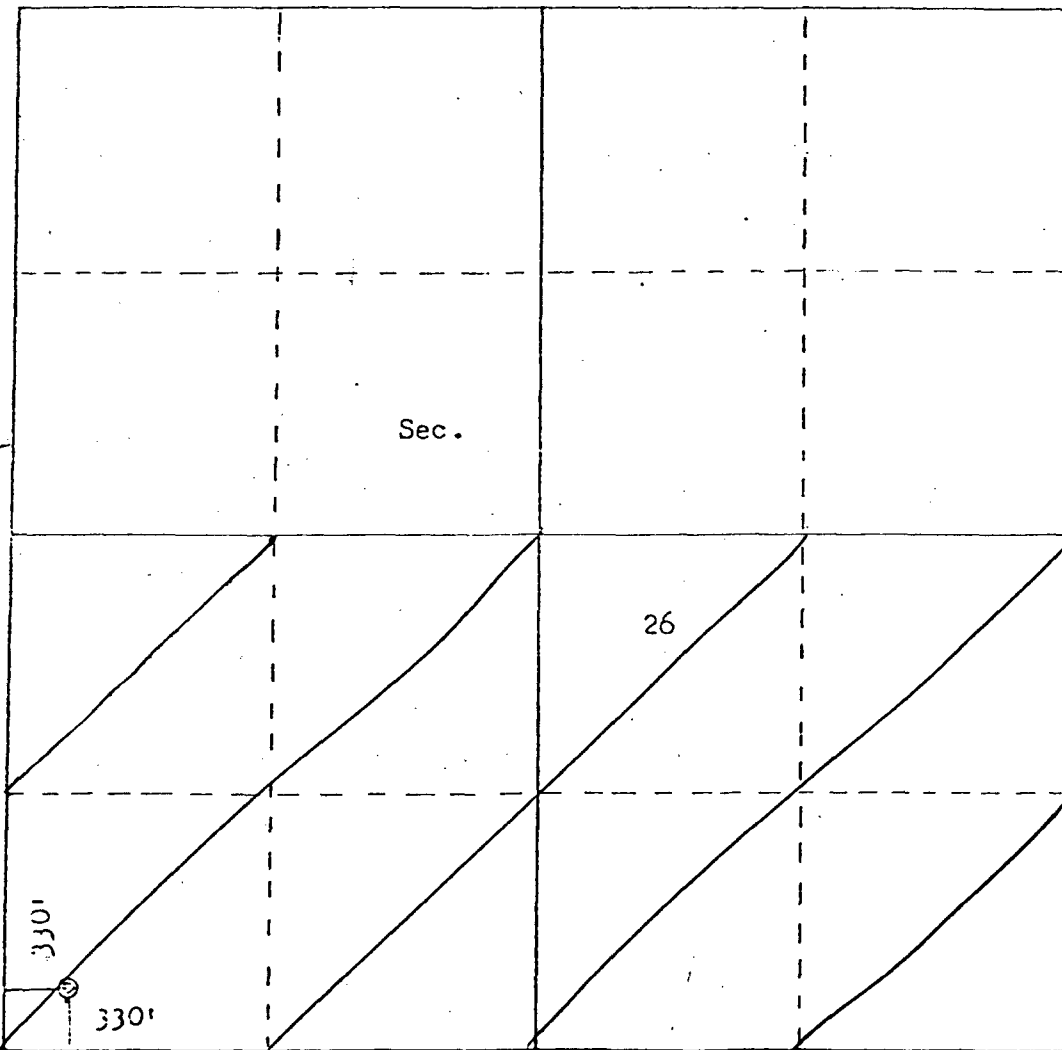
Operator AMOCO PRODUCTION COMPANY			Lease ABRAMS "L"		Well No. 1
Unit Letter M	Section 26	Township 29N	Range 10W	County San Juan	
Actual Footage Location of Well:					
330 feet from the South line and		330 feet from the West line			
Ground Level Elev: 5543	Producing Formation Gallup	Pool Armenta Gallup + Blanco MV		Dedicated Acreage: 40/320 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 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 been 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.

Name

Dale H. Shoemaker

Position

District Engineer

Company

Amoco Production Company

Date

April 14, 1983

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.

Date Surveyed

April 5, 1983

Registered Professional Engineer and Land Surveyor

Fred B. Kerr Jr.

Certificate No.

1950

Scale: 1"=1000'

KB 5556'
GL 5543'

11 3/4" 42# H-40 CSA
317' X 576 C.F. CMT

MESAVERDE PERFS:
3428'-3992'
4075'-4474'

2 3/8" TBG @ 4464'

GALLUP PERFS:
5336'-5400'
5426'-5489'
5490'-5546'

BP @ 4550'

TD 5940'
PBD 5804'

5 1/2" 15.5# K-55 CSA
5940' X 2708 C. F. CMT

Amoco Production Company

ABRAMS L #1

SCALE:

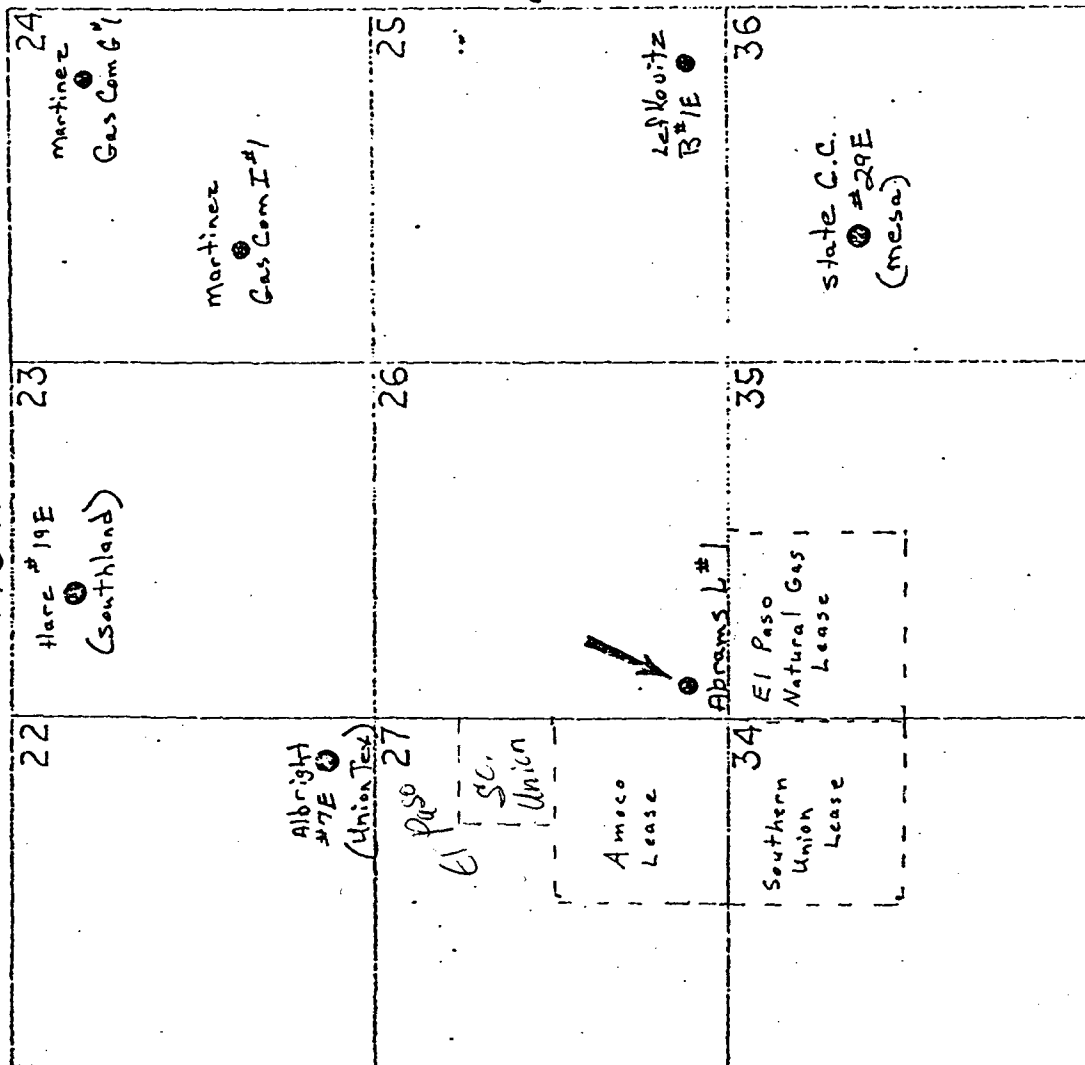
DRG.
NO.

Proposed Allocation Formula

	<u>Gas</u>	<u>Oil</u>
Armenta Gallup	65 MCFD	4 BOPD
Blanco Mesaverde	<u>548 MCFD</u>	<u>2 BOPD</u>
	<u>613 MCFD</u>	<u>6 BOPD</u>

	<u>Gas</u>	<u>Oil</u>
Armenta Gallup	11%	67%
Blanco Mesaverde	<u>89%</u>	<u>33%</u>
	<u>100%</u>	<u>100%</u>

RIOW



T 29 N

- PROPOSED DRILLING LOCATION
- AMOCO OPERATED
- OUTSIDE OPERATED

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LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Form C-105
 Revised 1-1-83

5a. Indicate Type of Lease
 State ☐ Fee ☒
 5. State Oil & Gas Lease No.

1a. TYPE OF WELL

b. TYPE OF COMPLETION

OIL WELL ☒

GAS WELL ☐

DRY ☐

OTHER ☐

NEW WELL ☒

WORK OVER ☐

DEEPEN ☐

PLUG BACK ☐

DIFF. RESVR. ☐

OTHER ☐

2. Name of Operator

Amoco Production Company

3. Address of Operator

501 Airport Drive, Farmington, New Mexico 87401

4. Location of Well

UNIT LETTER M LOCATED 330 FEET FROM THE West LINE AND 330 FEET FROM

THE south LINE OF SEC. 26 TWP. 29N RGE. 10W NMPM

7. Unit Agreement Name

8. Farm or Lease Name

Abrams "L"

9. Well No.

1

10. Field and Pool, or Wildcat

Armenta Gallup

12. County

San Juan

15. Date Spudded

5-23-83

16. Date T.D. Reached

5-29-83

17. Date Compl. (Ready to Prod.)

7-17-83

18. Elevations (DF, RKB, RT, GR, etc.)

5556' KB

19. Elev. Casinghead

5543' GL

20. Total Depth

5940'

21. Plug Back T.D.

5804'

22. If Multiple Compl., How Many

23. Intervals Drilled By

Rotary Tools

Cable Tools

0-TD

24. Producing Interval(s), of this completion - Top, Bottom, Name

5426' - 5546' Gallup

25. Was Directional Survey Made

Yes

26. Type Electric and Other Logs Run

DIL-SP-GR, FDC-CNL-Cal-GR Radioactive Tracer

27. Was Well Cored

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11-3/4"	42# H40	317'	14-3/4"	576 cu. ft. Class B w/2% CA	12. Circ. to
5-1/2"	15.5# K55	5940'	7-7/8"	1) 739 cu. ft. Class B 50:50 POZ	2) 161
				cu. ft. Class B 65:35 POZ.	Tailed in bot
				177 cu. ft. Class B neat and	circ. to sur

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-7/8"	5576'	

31. Perforation Record (Interval, size and number)

5426'-5489', 5490'-5546' with 1 jspr for a total of 119 holes, .44" in diameter.

5336'-5400' w/ 55 PF Total 64 holes .44" dia.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
5426'-5546'	70% N2 foam 20# gelled water
	2% KCl, .5 millicuries
	radioactive sand/ 1000# and
	46725# 20-40 sand.

33. PRODUCTION

Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)					Well Status (Prod. or Shut-in)	
7-17-83		Pumping					SI	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio	
7-18-83	24	28/64	→	4.2	64.7	1.4	15405	
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Comp.)		
85 psig		→	4.2	64.7	.4	41		

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

To be sold.

Test Witnessed By

35. List of Attachments

I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

Original Signed By

SIGNED D.D. Lawson

TITLE Dist. Adm. Supervisor

DATE 9/28/83

This form is to be filled with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filled in quintuplicate except on state land, where six copies are required. See Rule 1165.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

Northwestern New Mexico

T. Anhy _____	T. Canyon _____	T. Ojo Alamo <u>543</u>	T. Penn. "B" _____
T. Salt _____	T. Strawn _____	T. Kirtland-Fruitland <u>1385</u>	T. Penn. "C" _____
B. Salt _____	T. Atoka _____	T. Pictured Cliffs <u>1830</u>	T. Penn. "D" _____
T. Yates _____	T. Miss _____	T. Cliff House <u>3410</u>	T. Leadville _____
T. 7 Rivers _____	T. Devonian _____	T. Menefee <u>3508</u>	T. Madison _____
T. Queen _____	T. Silurian _____	T. Point Lookout <u>4136</u>	T. Elbert _____
T. Grayburg _____	T. Montoya _____	T. Mancos <u>4500</u>	T. McCracken _____
T. San Andres _____	T. Simpson _____	T. Gallup <u>5338</u>	T. Ignacio Qtzite _____
T. Glorieta _____	T. McKee _____	Base Greenhorn _____	T. Granite _____
T. Paddock _____	T. Ellenburger _____	T. Dakota _____	T. _____
T. Blinbry _____	T. Gr. Wash _____	T. Morrison _____	T. _____
T. Tubb _____	T. Granite _____	T. Todilto _____	T. _____
T. Drinkard _____	T. Delaware Sand _____	T. Entrada _____	T. _____
T. Abo _____	T. Bone Springs _____	T. Wingate _____	T. _____
T. Wolfcamp _____	T. _____	T. Chinle _____	T. _____
T. Penn. _____	T. _____	T. Permian _____	T. _____
T. Cisco (Bough C) _____	T. _____	T. Penn. "A" _____	T. _____

OIL OR GAS SANDS OR ZONES

No. 1, from _____ to _____

No. 2, from _____ to _____

No. 3, from _____ to _____

No. 4, from _____ to _____

No. 5, from _____ to _____

No. 6, from _____ to _____

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from _____ to _____ feet.

No. 2, from _____ to _____ feet.

No. 3, from _____ to _____ feet.

No. 4, from _____ to _____ feet.

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
543	820	277	Ojo Alamo				
1385	1830	445	Fruitland				
1830	1925	95	Pictured Cliffs				
2465	3250	785	Chacra				
3410	3508	98	Cliffhouse				
3508	4136	628	Menefee				
4136	4500	364	Point Lookout				
5338	-		Gallup				

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LAND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

Form C-105
Revised 10-64

10. TYPE OF WELL

OIL WELL ☐ GAS WELL ☒ DRY ☐ OTHER ☐
b. TYPE OF COMPLETION
NEW WELL ☐ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☒

2. Name of Operator

Amoco Production Company

3. Address of Operator

501 Airport Drive, Farmington, NM 87401

4. Location of Well

UNIT LETTER M LOCATED 330 FEET FROM THE West LINE AND 330 FEET FROM

THE South LINE OF SEC. 26 TWP. 29N RGE. 10W NMPM

San Juan

15. Date Spudded

5/23/83

16. Date T.D. Reached

5/29/83

17. Date Compl. (Ready to Prod.)

8/28/84

18. Elevations (DF, RKB, KT, GR, etc.)

5556' KB

19. Elev. Casinghead

5543' GR

20. Total Depth

5940'

21. Plug Back T.D.

OK 5804'

22. If Multiple Compl., How Many

2

23. Intervals Drilled By

O-TD

Rotary Tools

Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name

4474'-3428' Mesa Verde

25. Was Directional Survey Made

YES

26. Type Electric and Other Logs Run

DIL-SP-GR, FDC-CNL-Cal-GR Radioactive Tracer

27. Was Well Cored

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11-3/4"	42#, H-40	317'	14-3/4"	576 c.f. Class B w/2% CaCl ₂	2
5-1/2"	15.5 #, K-55	5940'	7-7/8"	1) 739 c.f. Class B 50:50 c.f. Class B 65:35 poz & in both 177 c.f. Class B neat	poz 2) 1615 tailed

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-3/8"	4464'	4550'
							(bridgeplug)

31. Perforation Record (Interval, size and number)

See attached sheet.

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
4474'-4075'	240,000 gal. 20# gelled water & 260,000# 10-20 sand
3428'-3992'	142,464 gal. 20# gelled water & 71,300# 10-20 sand.

33. PRODUCTION

Date First Production 9/25/84		Production Method (Flowing, gas lift, pumping - Size and type pump) Flowing				Well Status (Prod. or Shut-in) - Shut-in	
Date of Test 9/26/84	Hours Tested 3	Choke Size .75"	Prod'n. For Test Period →	Oil - Bbl. 492	Gas - MCF 3934	Water - Bbl.	Gas - Oil Ratio
Flow Tubing Press. 320 psig	Casing Pressure 602 psig	Calculated 24-Hour Rate →	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

To be sold

Test Witnessed By

J. Barnett

35. List of Attachments

None

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

Original Signed By

B. D. Shaw

SIGNED

TITLE Administrative Supervisor

DATE 9/28/84

RECEIVED
OCT 09 1984
OIL CON. DIV.
DIST. 3

This form is to be filed with the appropriate District Office of the Commission not later than 30 days after the completion of any newly-drilled or deepened well. It shall be accompanied by a copy of all electrical and radioactivity logs run on the well and a summary of all special tests conducted, including well clean outs. All log data reported shall be measured by the, in the case of the, newly drilled well, true vertical depth shall also be reported. For multiple completions, Form 96 shall be reported for each zone. The form is to be filed in quadruplicate except on state land where triplicates are required. See Rule 1165.

Southeastern New Mexico

T. Anhy _____	T. Canyon _____
T. Salt _____	T. Strawn _____
B. Salt _____	T. Atoka _____
T. Yates _____	T. Miss _____
T. 7 Rivers _____	T. Devonian _____
T. Queen _____	T. Silurian _____
T. Grayburg _____	T. Montoya _____
T. San Andres _____	T. Simpson _____
T. Glorieta _____	T. McKee _____
T. Paddock _____	T. Ellenburger _____
T. Blinbry _____	T. Gr. Wash _____
T. Tubb _____	T. Granite _____
T. Drinkard _____	T. Delaware Sand _____
T. Abo _____	T. Bone Springs _____
T. Wolfcamp _____	T. _____
T. Penn. _____	T. _____
T. Cisco (Bough C) _____	T. _____

Northwestern New Mexico

T. Ojo Alamo _____	543	T. Penn. "B" _____
T. Kirtland-Fruitland _____	1385	T. Penn. "C" _____
T. Pictured Cliffs _____	1830	T. Penn. "D" _____
T. Cliff House _____	3410	T. Leadville _____
T. Menefee _____	3508	T. Madison _____
T. Point Lookout _____	4136	T. Elbert _____
T. Mancos _____	4500	T. McCracken _____
T. Gallup _____	5338	T. Ignacio Qizte _____
Base Greenhorn _____		T. Granite _____
T. Dakota _____		T. _____
T. Morrison _____		T. _____
T. Todilto _____		T. _____
T. Entrada _____		T. _____
T. Wingate _____		T. _____
T. Chinle _____		T. _____
T. Permian _____		T. _____
T. Penn. "A" _____		T. _____

No. 1, from _____ to _____

No. 2, from _____ to _____

No. 3, from _____ to _____

No. 4, from _____ to _____

No. 5, from _____ to _____

No. 6, from _____ to _____

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.

No. 2, from to feet.

No. 3, from to feet.

No. 4, from to feet.

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation

PERFORATION RECORD

4084'-4075', 4122'-4106', 4194'-4146', 4229'-4211', 4258'-4234', 4280'-4275',
4308'-4295', 4346'-4341', 4374'-4360', 4397'-4389', 4429'-4421', 4456'-4445',
4474'-4466', 3434'-3428', 3508'-3480', 3536'-3529', 3565'-3552', 3589'-3583',
3612'-3601', 3620'-3617', 3677'-3673', 3693'-3686', 3753'-3748', 3770'-3765',
3801'-3798', 3812'-3803', 3829'-3823', 3863'-3855', 3879'-3874', 3903'-3899',
3931'-3911', 3956'-3947', 3992'-3986', 2 jspf, .45", total of 704 holes.

BOTTOM HOLE PRESSURE DATA

WELL NAME Abrams GC L #1 DATE 7/16/84

FIELD Armenta Gallup

SHUT-IN TUBING _____ SHUT-IN CASING _____

TYPE OF INSTRUMENT USED Amerada RPG-3

PRESSURE RANGE OF ELEMENT 0-4,025 PSI

DATE ELEMENT CALIBRATED _____

BHP 688 PSI

SI DATE 7/20/83

COMMENTS Pressure measurement for commingling application.

[illegible]

BOTTOM HOLE PRESSURE DATA

WELL NAME Abrams GC L #1

DATE 9-27-84

FIELD Blanco Mesaverde

SHUT-IN TUBING 716 PSI

SHUT-IN CASING 1046 PSI

TYPE OF INSTRUMENT USED Amerada RPG-3

PRESSURE RANGE OF ELEMENT 0-3000 PSI

DATE ELEMENT CALIBRATED 9-26-84

BHP 1214 PSI

SI DATE 9-26-84

COMMENTS Pressure measurement for commingling application.

[illegible]



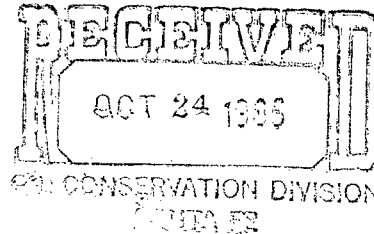
STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE Oct. 22, 1985

RE: Proposed MC _____
Proposed DHC ✓ _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____



Gentlemen:

I have examined the application dated October 16, 1985
for the Omow Abrams L #1 M-26-29A-10W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours truly,

Frank D. Day