

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 1893

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-8429

Form C-107-A
New 3-12-96

APPROVAL PROCESS:
☒ Administrative ☐ Hearing
EXISTING WELLBORE
☒ YES ☐ NO

APPLICATION FOR DOWNHOLE COMMINGLING

Conoco Inc.

10 Desta Dr. Ste 100W, Midland, Tx. 79705-4500

Operator

Address

AXI Apache N

12

Section 11, T-25-N, R-4-W, C

Rio Arriba, NM

Lease

Well No

Unit/Ltr Sec Twp Rge

County

OGRID NO. 005073 Property Code 003136 API NO. 30-039-21436

Spacing Unit Lease Types (check 1 or more)
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, So. 72439		Blanco Mesaverde 72319
2. TOP and Bottom of Pay Section (Perforations)	3908-3914'		6012-6084'
3. Type of production (Oil or Gas)	Gas		Gas
4. Method of Production (Flowing or Artificial Lift)	Flowing		Flowing
5. Bottomhole Pressure	a (Current)		
Oil Zones - Artificial Lift: Estimated Current	303		575
Gas & Oil - Flowing: Measured Current	b (Original)		
All Gas Zones: Estimated Or Measured Original	1175		1315
6. Oil Gravity (*API) or Gas BT Content	1209		1279
7. Producing or Shut-In?	Producing		Producing
Production Marginal? (yes or no)	Yes		Yes
• If Shut-In give date and oil/gas/water rates of last production	Date Rates	Date Rates	Date Rates
Note: For new zones with no production history applicant shall be required to attach production estimates and supporting data.			
• If Producing, date and oil/gas/water rates of recent test (within 60 days)	Date Rates 4/99 24 MCFD, 0 BOPD, 0 BOWD	Date Rates	Date Rates 4/99 47 MCFD, 3 BOPD, 6 BOWD
8. Fixed Percentage Allocation Formula - % for each zone	Oil 3 % Gas 37 %	Oil % Gas %	Oil 97 % Gas 63 %

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 others ☒ 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

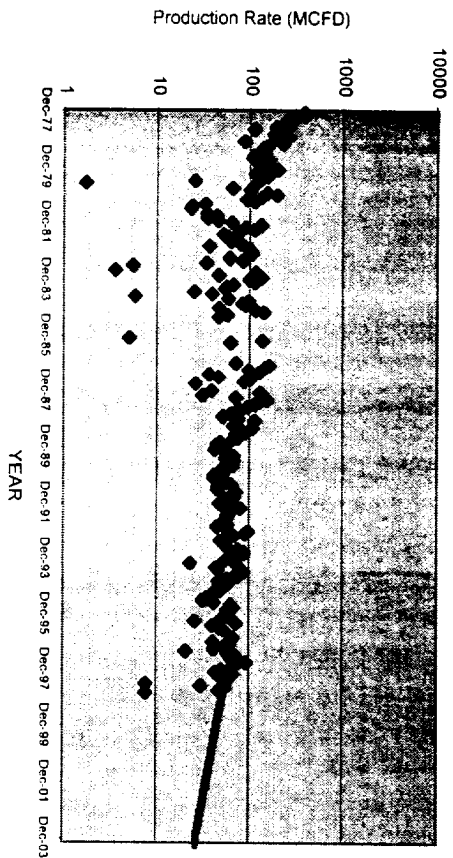
- C-102 for each zone to be commingled showing its spacing unit and acreage dedication.
- Production curve for each zone for at least one year. (If not available, attach explanation.)
- For zones with no production history, estimated production rates and supporting data.
- Data to support allocation 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.

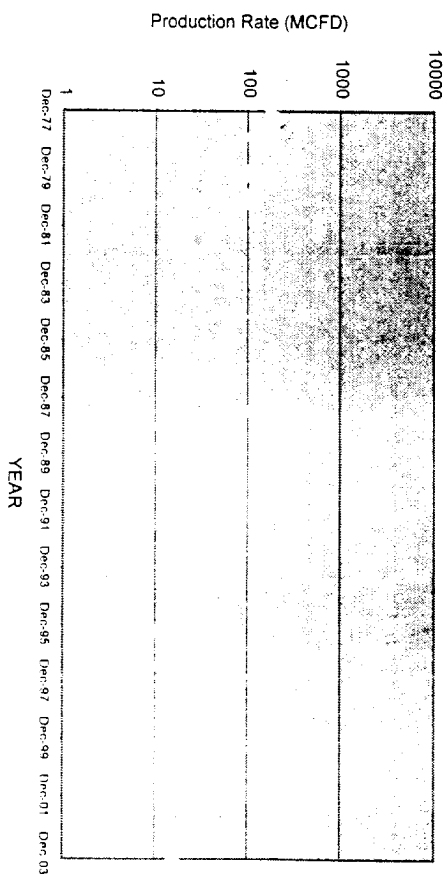
SIGNATURE Kay Maddox TITLE Regulatory Agent DATE June 2, 1999

TYPE OR PRINT NAME Kay Maddox TELEPHONE NO. (915) 686-5798

AXI APACHE N 12 - MV / PC DHC
25N-4W-11C, Rio Arriba County, New Mexico



AXI APACHE N 12 - MV / PC DHC
25N-4W-11C, Rio Arriba County, New Mexico



MESAVERDE

Historical Data:	1st Prod - Dec-77	Projected Data:
Oil Cum:	3.847 Mbo	1/99 Qi: 49.9 Mcfd
Gas Cum:	565.4 MMcf	Decline Rate: 13.0 %
Oil Yield:	0.00680 Bbl/Mcf	

PICTURED CLIFFS

Historical Data:	1st Prod - Dec-77	Projected Data:
Oil Cum:	0.06 Mbo	1/99 Qi: 28.9 Mcfd
Gas Cum:	341.14 MMcf	Decline Rate: 13.0 %
Oil Yield:	0.00018 Bbl/Mcf	

Fixed Commingle Allocation Factors:

	GAS	OIL
Mesaverde	63%	97%
Pictured Cliffs	37%	3%

10⁴
10³

Lease: AXI APACHE N (12)

Dwights
05/13/98

Retrieval Code: 251,039,25N04W11C00PC

10⁴

10³
10²

10³

10²
10

10²

10
1

10

Oil (bbl/mo)

County: RIO ARRIBA, NM

F.P. Date: 12/77

Gas (mcf/mo)

Water (bbl/mo)

Field: BLANCO SOUTH (PICTURE CLIF

Oil Cum: 62 bbl

Reservoir: PICTURE CLIFFS

Gas Cum: 330.8 mmcf

Operator: CONOCO INC

Location: 11C 25N 4W

1977 1979 1981 1983 1985 1987 1989 1991 1993 1995 1997

10³
10³
10³

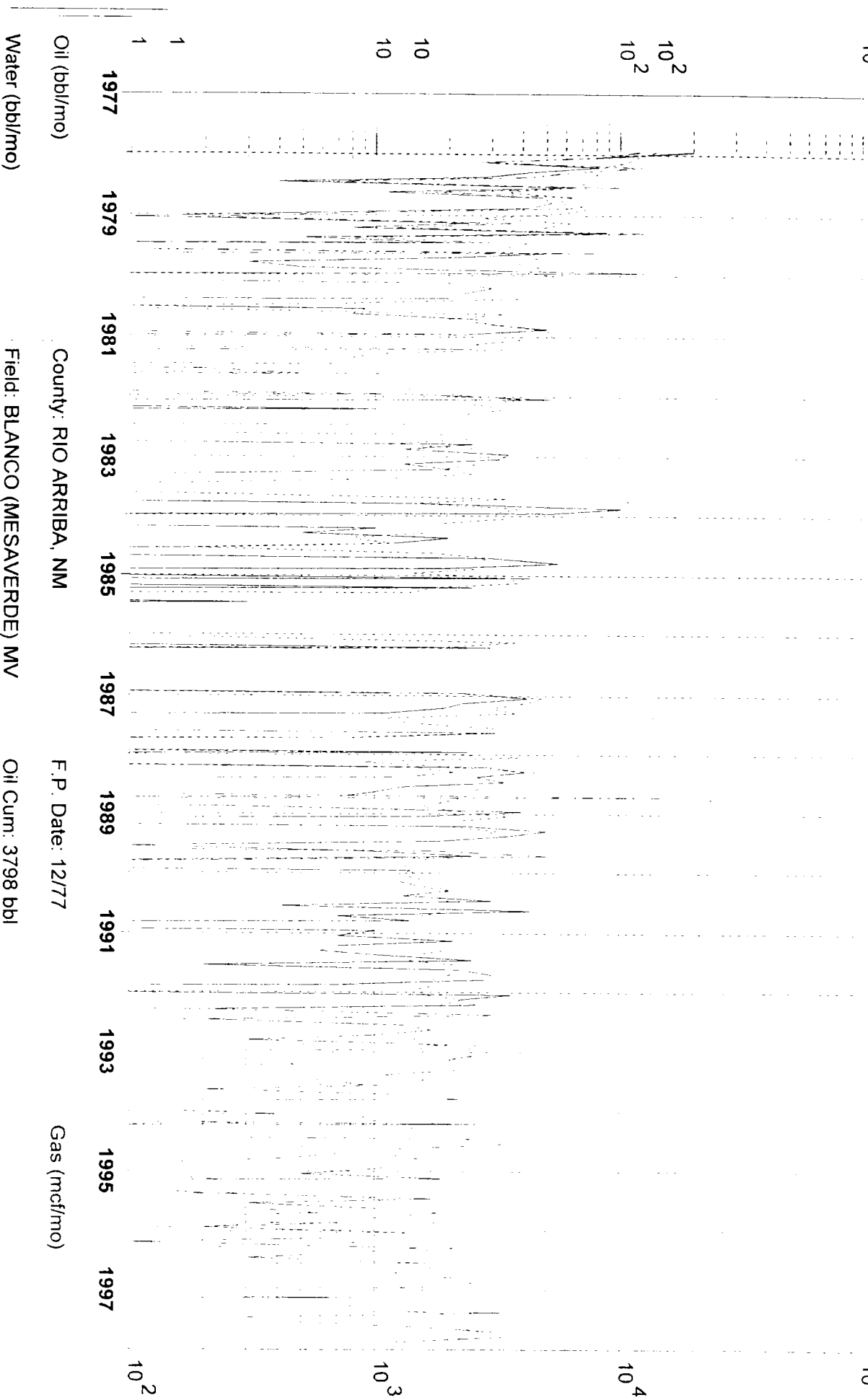
Lease: AXI APACHE N (12)

05/13/98

Retrieval Code: 251,039,25N04W11C00MV

10⁵

Dwights



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

All distances must be from the outer boundaries of the Section

Operator CONTINENTAL OIL COMPANY		Lease AXI APACHE "N"		Well No 12
Unit Letter C	Section 11	Township 25 NORTH	Range 4 WEST	County RIO ARriba
Actual Footage Location of Well: 1190 feet from the NORTH line and 1850 feet from the WEST line. Ground Level Elev. 7383 Producing Formation Mesa Verde Pool Blanco Mesa Verde Dedicated Acreage: 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 _____

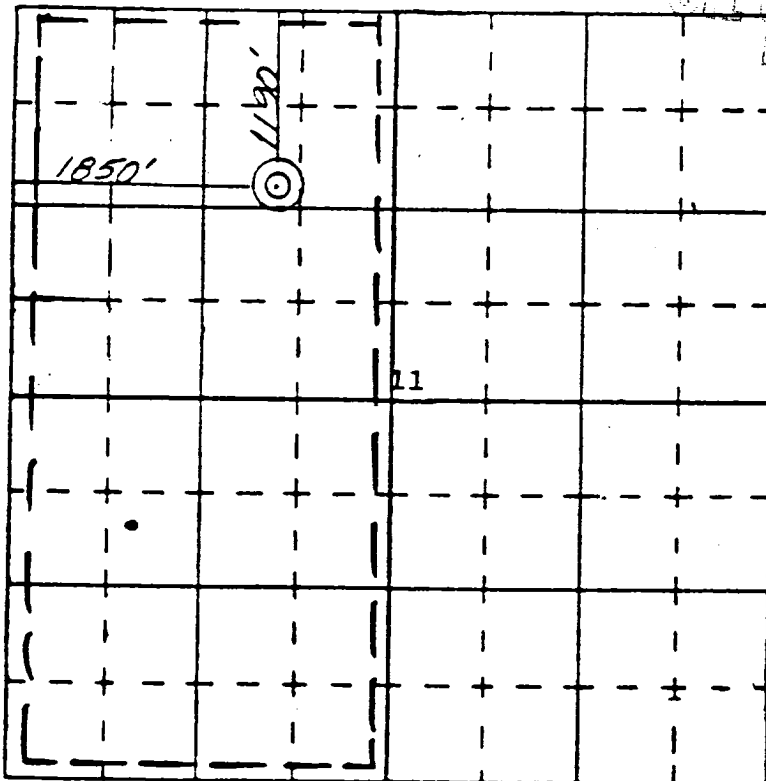
If answer is "no," list the owners and tract descriptions which have actually consolidated. (Use reverse side of this form if necessary.) _____

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

JUN - 4 1977

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



Name Wm. A. Butterfield
 Position ADMIN. SUPV.
 Company Continental Oil Co.
 Date 3-16-77

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 17 February 1977
James P. Leese
 Registered Professional Engineer
 and/or Land Surveyor **James P. Leese**

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 CONTINENTAL OIL COMPANY			Lease AXI APACHE "N"		Well No. 12
Unit Letter C	Section 11	Township 25 NORTH	Range 4 WEST	County RIO ARriba	
Actual Footage Location of Well 1190 feet from the NORTH line and 1850 feet from the WEST line					
Ground Level Elev. 7383		Producing Formation Pictured Cliffs South Blanco		Dedicated Acreage 160	

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 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.

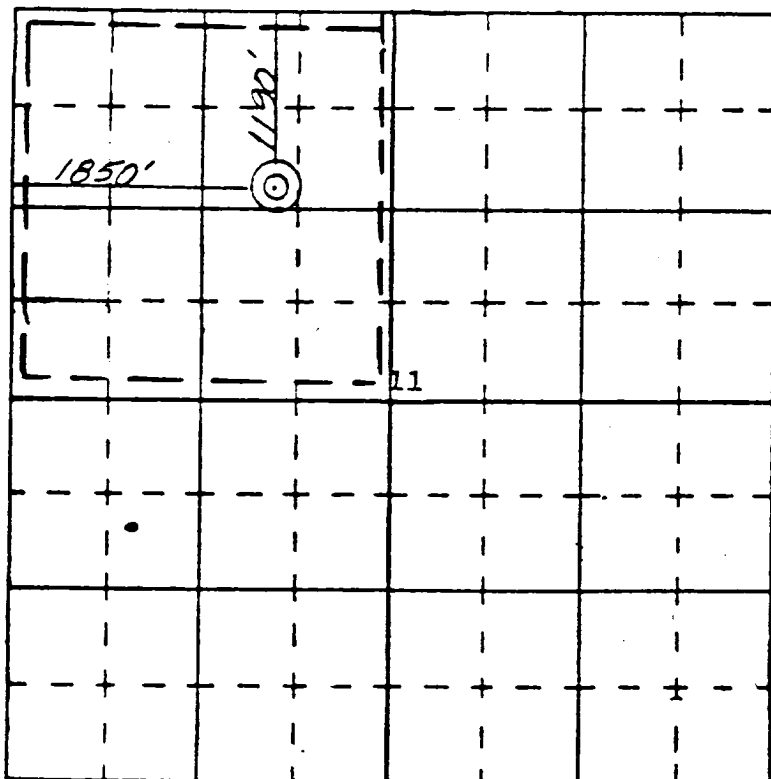
CERTIFICATION

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

Name Wm. A. Butterfield
 Position ADMIN. SUPERV.
 Company Continental Oil Co.
 Date 3-16-77

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 17 February 1977
James P. Leese
 Registered Professional Engineer
 and/or Land Surveyor **James P. Leese**



1463
Certificate No. _____

June 2, 1999

AXI Apache N # 12
Section 11, T-25-N, R-4-W, C
API # 30-039-21436
Rio Arriba, NM

RE: Application to Downhole Commingle (C107A)

Offset Operators:

M&W Petroleum Corp.
200 Post Oak Blvd. STE 100
Houston, TX 77056-4400

Burlington Resources
PO Box 4289
Farmington, NM 87499

Chace Oil Co.
5577 S. Lewis
Tulsa, OK 74105

Robert L. Bayless
PO Box 168
Farmington, NM 87499

A copy of the C-107A Application has been sent to the above listed parties.

AXI Apache N12

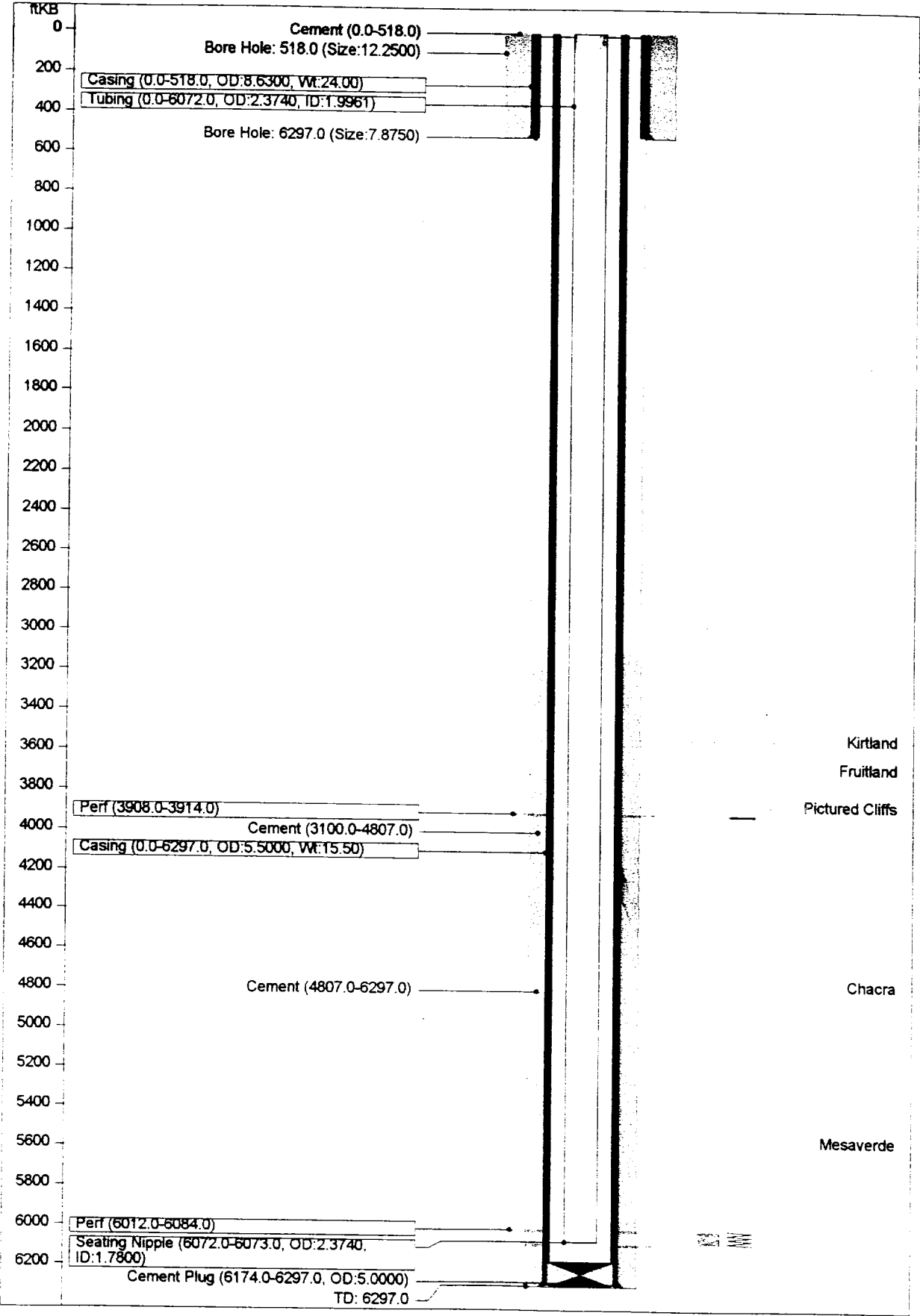
Economic/Rate Justification for Down Hole Commingling

Approval is requested to down hole commingle the existing zones in the subject well. The AXI Apache N12 has 5 1/2" production casing. It is dually completed using a 1.66" tubing string for the Picture Cliffs and a 2.375" tubing string for the Mesa Verde. Both zones produce some liquids and are producing well below the minimum critical rate required to unload liquids from the well bore. Although the Mesa Verde is being plunger lifted at this time, the Picture Cliffs zone is not and plunger lifting the Picture Cliffs using the existing 1.66" tubing is impractical. To optimize production it is recommended to pull the existing equipment from the well, and produce both zones using plunger lift in a single 2 3/8" tubing string. The expected production increase is estimated at 30 MCFD.

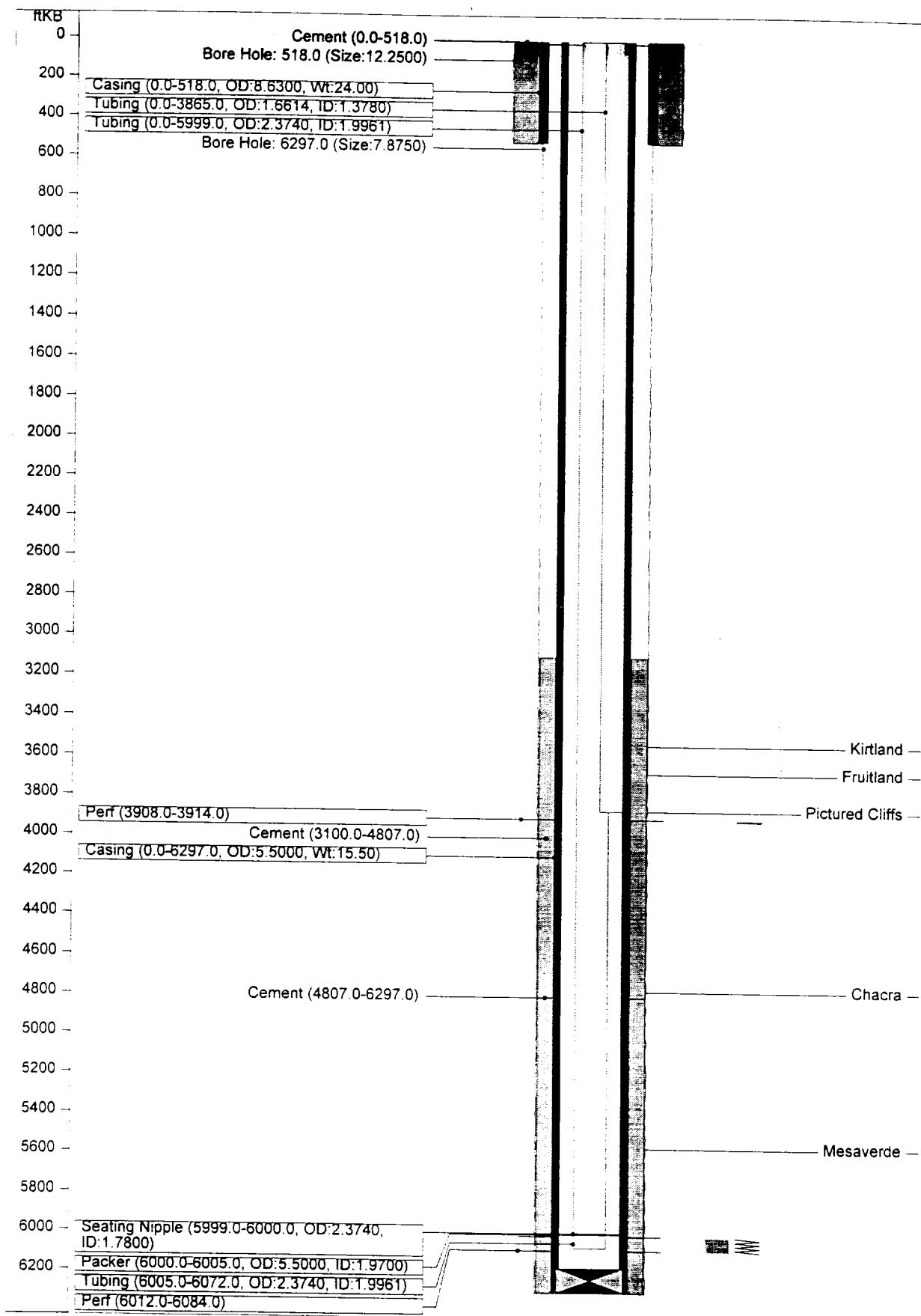
The single larger tubing string will not only allow for more efficient plunger operation, but will eliminate the cost to install a second plunger lift system and save approximately \$2000 per year in plunger lift operating expenses.

Production from these zones is established by ample production history. A production plot is attached showing best fit projections of future production for each zone. Form 107A shows the fixed percentage formula for allocation of production from each zone.

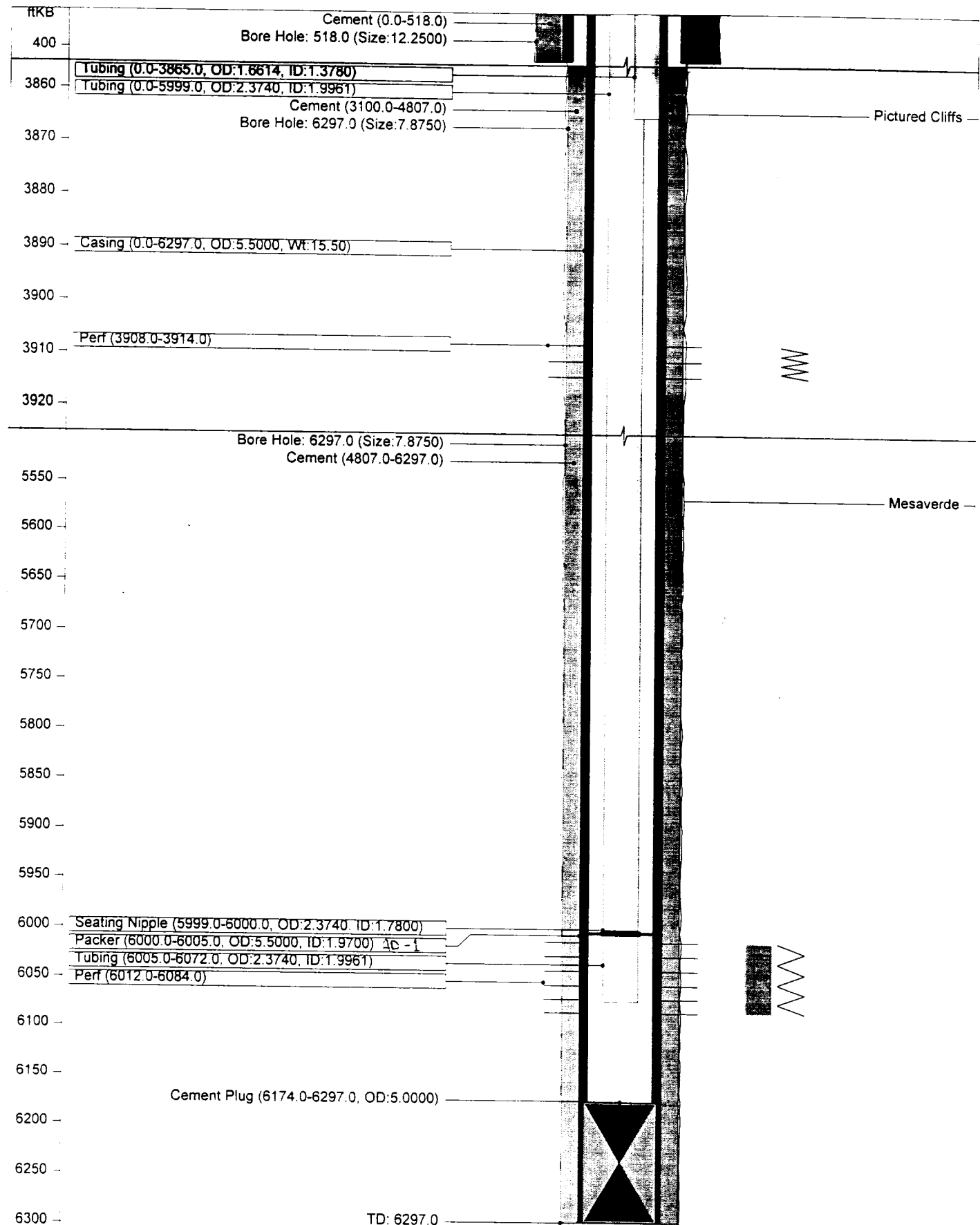
AXI APACHE N 12 (Post DHC Work)



AXI APACHE N 12 (LFW 9/30/97)



AXI APACHE N 12 (LFW 9/30/97)



AXI APACHE N 12 (LFW 9/30/97)

AXI APACHE N 12 (LFW 9/30/97)

API Code	300392143600	Field Code	676398740
TD	6297.0 ftKB	Basin	SAN JUAN BASIN
PBTD	6174.0 ftKB	Basin Code	580
State	New Mexico	Permit	13-Jun-77
County	RIO ARRIBA	Spud	26-Jun-77
District	San Juan O.U.	Finish Drl	05-Jul-77
Permit No.		Completion	29-Aug-77
TD Measured	6297 ftKB	Abandon	
Reservoir	Mesaverde/Pictured Cliffs		
Field	BLANCO MV/ BLANCO SOUTH PC		
Location			
Meridian	NM	Top Latitude	36.41786
Township	25N	Top Longitude	107.224
Range	4W	Top NS Distance	1190.0 ft N
Section	11	Top EW Distance	1850.0 ft W
Quarter	NE NW	Bottom Latitude	0
		Bottom Longitude	0
		Btm NS Distance	0.0 ft
		Btm EW Distance	0.0 ft
Elevations			
KB	7395.0 ft	Cas Flng	0.0 ft
Grd	7383.0 ft	Tub Head	0.0 ft
KB-Grd	12.0 ft		

Bore Hole Data

	Depth (ftKB)	Size (in)
	518.0	12.2500
	6297.0	7.8750

Casing String - Surface Casing

Item (in)	Btm (ftKB)	Jnts	ID	Wt	Grd	Thd	Comments
8.6300 in Casing	518.0	12	8.1000	24.00	K-55	ST&C	

Casing String - Production Casing

Item (in)	Btm (ftKB)	Jnts	ID	Wt	Grd	Thd	Comments
5.5000 in Casing	6297.0	186	4.9500	15.50	J-55	ST&C	

Casing Cement

Casing String	Top (ftKB)	Amount (sx)	Comments
Surface Casing	0.0	320	Cement circ
Production Casing	3100.0	370	TOC by est. Pump thru DV @ 4807"
Production Casing	4807.0	405	TOC by est. 1st stg: Open and circ thru DV @ 4807" for 4 hrs

Other (plugs, equip., etc.) - Plug Backs

Date	Item	Int (ftKB)	Comments
14-Jul-77	Cement Plug	6174.0 - 6297.0	

Perforations

Date	Int	Shots (/ft)	Type	Comments
15-Jul-77	6012.0 - 6084.0	1.0		@ 6012-24', 6042-54', 6068-84'. (40 shots) In 100 G 7 1/2% HCL NEFE
13-Aug-77	3908.0 - 3914.0	1.0		6 shots. In 100 G 7 1/2% HCL NEFE

Stimulations & Treatments

Date	Type	Zone	Int	Fluid	Comments
15-Jul-77	Acid Squeeze	MV (PLO)	6012.0 - 6084.0	7 1/2% HCL	BD w/ 1,500 G + 52 BS. AIR= 8 bpm @ 3100#
16-Jul-77	Fracture	MV (PLO)	6012.0 - 6084.0	Water	Frac w/ 43,050 G Treated water + 117,500# 20/40 sd. AIR= 33 bpm @ 200# ISIP Vacuum
14-Aug-77	Fracture	Pictured Cliffs	3908.0 - 3914.0	70 Q Foam	Frac w/ 38,850 G + 52,500# 20/40 sd. AIR= 25 bpm @ 2550#. (amount of N2 used N/A) ISIP N/A

Tubing String - Tubing (PC)

Item (in)	Top (ftKB)	Len (ft)	Jnts	ID (in)	Wt	Grd	Thd	Comments
1.6614 in Tubing	0.0	3865.0	122	1.3780	2.33	IJ	10rd	Land @ 3865' w/ Pin Collar on bottom.

Tubing String - Tubing (MV)

Item (in)	Top (ftKB)	Len (ft)	Jnts	ID (in)	Wt	Grd	Thd	Comments
2.3740 in Tubing	0.0	5999.0	186	1.9961	4.70	J-55	8rd EUE	
2.3740 in Seating Nipple	5999.0	1.0		1.7800	0.00		8rd EUE	
5.5000 in Packer	6000.0	5.0		1.9700	0.00		8rd EUE	Model AD-1
2.3740 in Tubing	6005.0	67.0	2	1.9961	4.70	J-55	8rd EUE	Land @ 6072'

Formation/Horizon Tops

Top (ftKB)	Formation
3536.0	Kirtland
3677.0	Fruitland

AXI APACHE N 12 (LFW 9/30/97)

Formation/Horizon Tops (cont)

Top (ftKB)	Formation
3864.0	Pictured Cliffs
4774.0	Chacra
5566.0	Mesaverde

Logs Run

Date	Type	Int	Company	Comments
05-Jul-77	IND	512.0 - 6280.0	Schlumberger	
05-Jul-77	DEN/NEU	3500.0 - 6278.0	Schlumberger	
14-Jul-77	GR-C	5800.0 - 6174.0	Blue Jet	

General Notes

Date	Note
05-Aug-77	Initial Potential: Mesaverde: F 2344 MCFGPD on 3/4 ck; Pictured Cliffs: F 1171 MCFGPD on
29-Aug-77	Initial Potential: Pictured Cliffs: F 1171 MCFD AOF TP 760# CP 760#

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE

(See other in-
structions on
reverse side)Form approved,
Budget Bureau No. 42-R355.6.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG*

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____		5. LEASE DESIGNATION AND SERIAL NO. Contract No. 121	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. CENVR. ☐ Other _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME Ticariilla Apache	
2. NAME OF OPERATOR Continental Oil Company		7. UNIT AGREEMENT NAME	
3. ADDRESS OF OPERATOR Box 460, Hobbs, N.M., 88240.		8. FARM OR LEASE NAME AXI Apache N	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1190' FNL & 1850' FNL OF SEC. 11 At top prod. interval reported below Same At total depth Same		9. WELL NO. 12	
14. PERMIT NO.		10. FIELD AND POOL OR WILDCAT S. Blanco Pictured Cliffs	
DATE ISSUED		11. SEC. T. R. M. OR BLOCK AND SURVEY OR AREA Sec. 11, T. 25N, R. 4W	
15. DATE DRILLED 6-26-77		12. COUNTY OR PARISH Rio Arriba	
16. DATE T.D. REACHED 7-4-77		13. STATE N.M.	
17. DATE COMPL. (Ready to prod.)		18. ELEVATIONS (OF RKS. RT. CR. ETC.)* 7383 GR	
19. TOTAL DEPTH, MD & TVD 6297'		20. SLEV. CASINGHEAD	
21. PLUG. BACK T.D., MD & TVD 6174'		22. IF MULTIPLE COMPL., HOW MANY* 2	
23. INTERVALS DRILLED BY Rotary		24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 3908'-3914' South Blanco Pictured Cliffs	
25. WAS DIRECTIONAL SURVEY MADE yes		26. TYPE ELECTRIC AND OTHER LOGS RUN SPIES GR CAL FDC	
27. WAS WELL CORED No.		28. CASING RECORD (Report all strings set in well)	
29. LINER RECORD		30. TUBING RECORD	
31. PERFORATION RECORD (Interval, size and number) 3908'-3914' w/1 JSPF South Blanco Pictured Cliffs		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) 3908-3914 AMOUNT AND KIND OF MATERIAL USED 52.500 # Sand + 925 Bbls Foam	
33. PRODUCTION		34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)	
DATE FIRST PRODUCTION 8-12-77		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing	
WELL STATUS (Producing or shut-in) Shut-in Pending Pipeline Conn.		35. LIST OF ATTACHMENTS	
DATE OF TEST 8-29-77		HOURS TESTED 24	
CHOKE SIZE 3/4"		PROD'N. FOR TEST PERIOD 1171	
OIL—BSL.		GAS—MCF.	
WATER—BSL.		GAS-OIL RATIO	
FLOW. TUBING PRESS.		CASING PRESSURE	
CALCULATED 24-HOUR RATE		OIL—BSL.	
GAS—MCF.		WATER—BSL.	
OIL GRAVITY-API (CORR.)		TEST WITNESSED BY D.L. Moore	
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available facts		CONFIDENTIAL SUBJECT TO ORDER OF THE U.S. DISTRICT COURT	
SIGNED W. D. Tuttle		TITLE ADMIN. SURV.	
DATE 9-2-77		DATE 9-2-77	

* (See Instructions and Spaces for Additional Data on Reverse Side)

0220021

