

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 1883

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

APPLICATION FOR DOWNHOLE COMMINGLING

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

APPROVAL PROCESS:

☒ Administrative ☐ Hearing

EXISTING WELLBORE

☒ YES ☐ NO

Conoco Inc.

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

Operator

Address

AXI Apache K

#5A

Section 10, T-26-N, R-5-W, P

Rio Arriba, NM

Lease

Well No

Unit Ctr Sec Twp Rge

County

OGRID NO. 005073

Property Code

003133

API NO.

30-039-21506

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)	3540-3556'		5204-5740'
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	330		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	1215		1297
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 should 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 1/99 29 MCFD, 0 BOPD, 0 BOWD	Date Rates	Date Rates 1/99 66 MCFD, 0 BOPD, 0 BOWD
8. Fixed Percentage Allocation Formula - % of each zone	Oil % Gas % 10 % 24 %	Oil % Gas %	Oil % Gas % 90 % 76 %

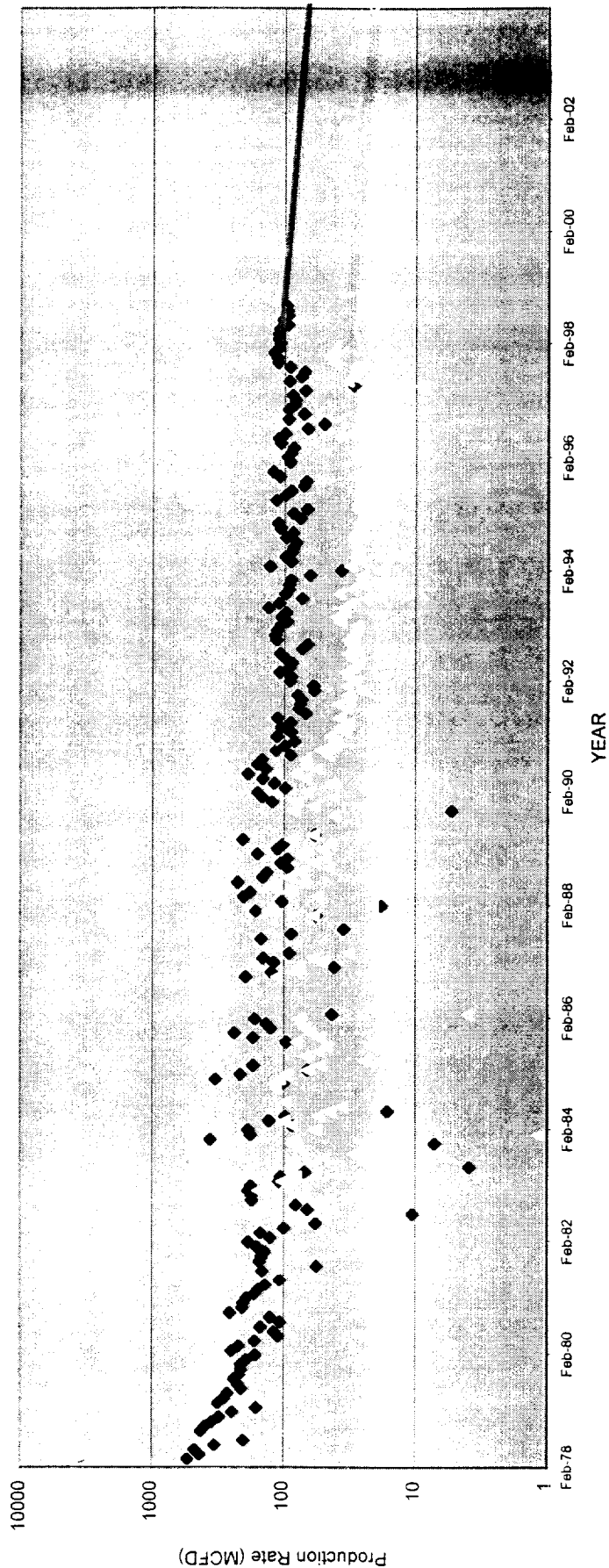
9. If allocation formula is based upon something other than current or past production, or is based upon some other method, submit attachments with supporting data and/or explaining method and providing rate projections or other required data.
10. Are all working, overriding, and royalty interests identical 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. 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 Kay Maddox TITLE Regulatory Agent DATE June 2, 1999

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

AXI APACHE K 5A - MV / PC DHC
26N-5W-10P, Rio Arriba County, New Mexico



◆ MV - Actual ■ MV - Forecast PC - Actual × PC - Forecast

MESAVERDE

Historical Data:	1st Prod - Apr-78	Projected Data:
Oil Cum:	5,254 Mbo	1/99 Qi: 100.0 Mcfd
Gas Cum:	846.4 MMcf	Decline Rate: 8.0 %
Oil Yield:	0.00621 Bbl/Mcf	

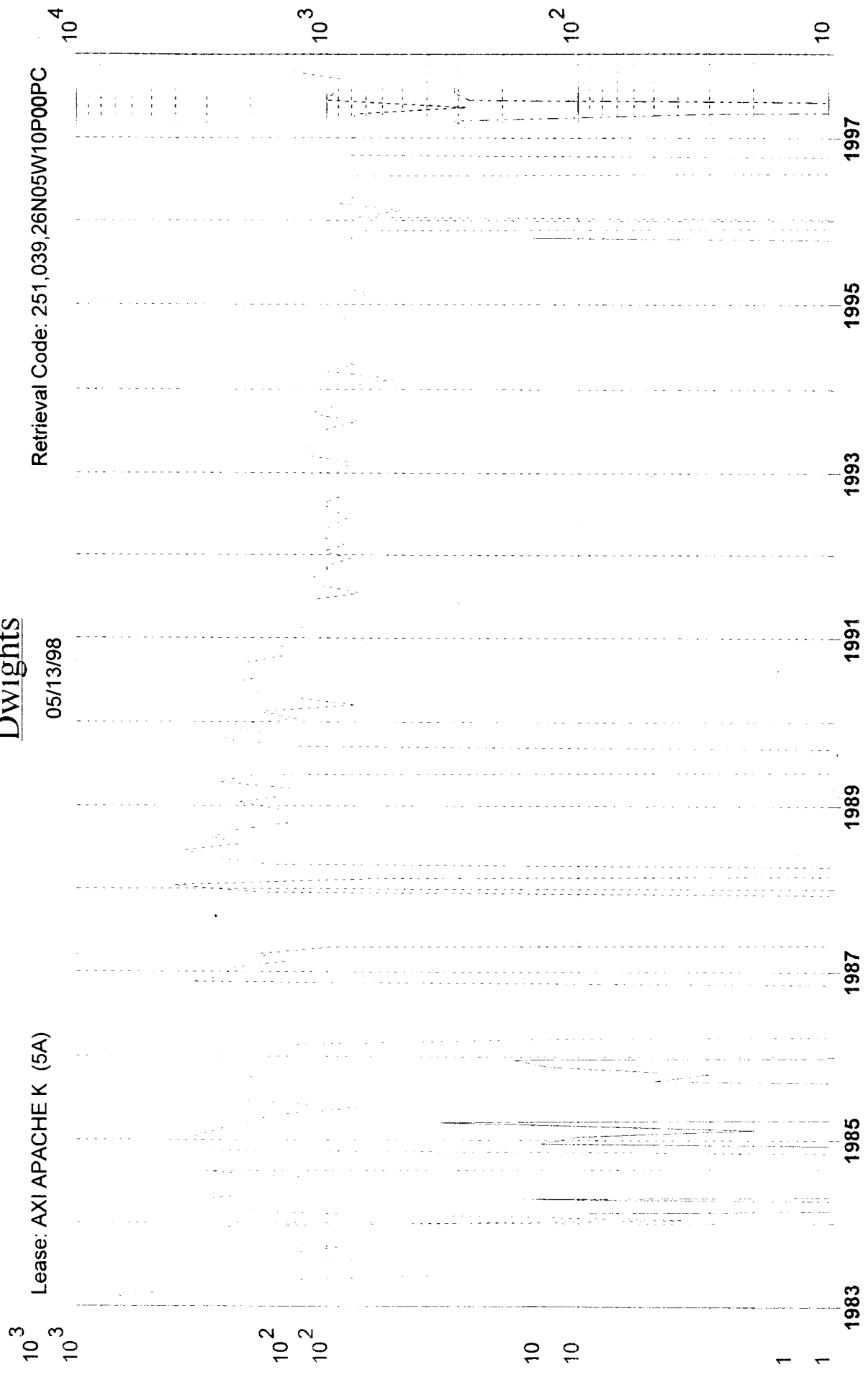
PICTURED CLIFFS

Historical Data:	1st Prod - Jan-83	Projected Data:
Oil Cum:	0.17 Mbo	1/99 Qi: 31.7 Mcfd
Gas Cum:	240.77 MMcf	Decline Rate: 8.0 %
Oil Yield:	0.00070 Bbl/Mcf	

Fixed Commingle Allocation Factors:

	GAS	OIL
Mesaverde	76%	90%
Pictured Cliffs	24%	10%

Dwights



Lease: AXI APACHE K (5A)

Retrieval Code: 251,039,26N05W10P00PC

05/13/98

Oil (bbl/mo)

Gas (mcf/mo)

Water (bbl/mo)

County: RIO ARRIBA, NM

F.P. Date: 01/83

Field: BLANCO SOUTH (PICTURE CLIF

Oil Cum: 168 bbl

Reservoir: PICTURE CLIFFS

Gas Cum: 229.0 mmcf

Operator: CONOCO INC

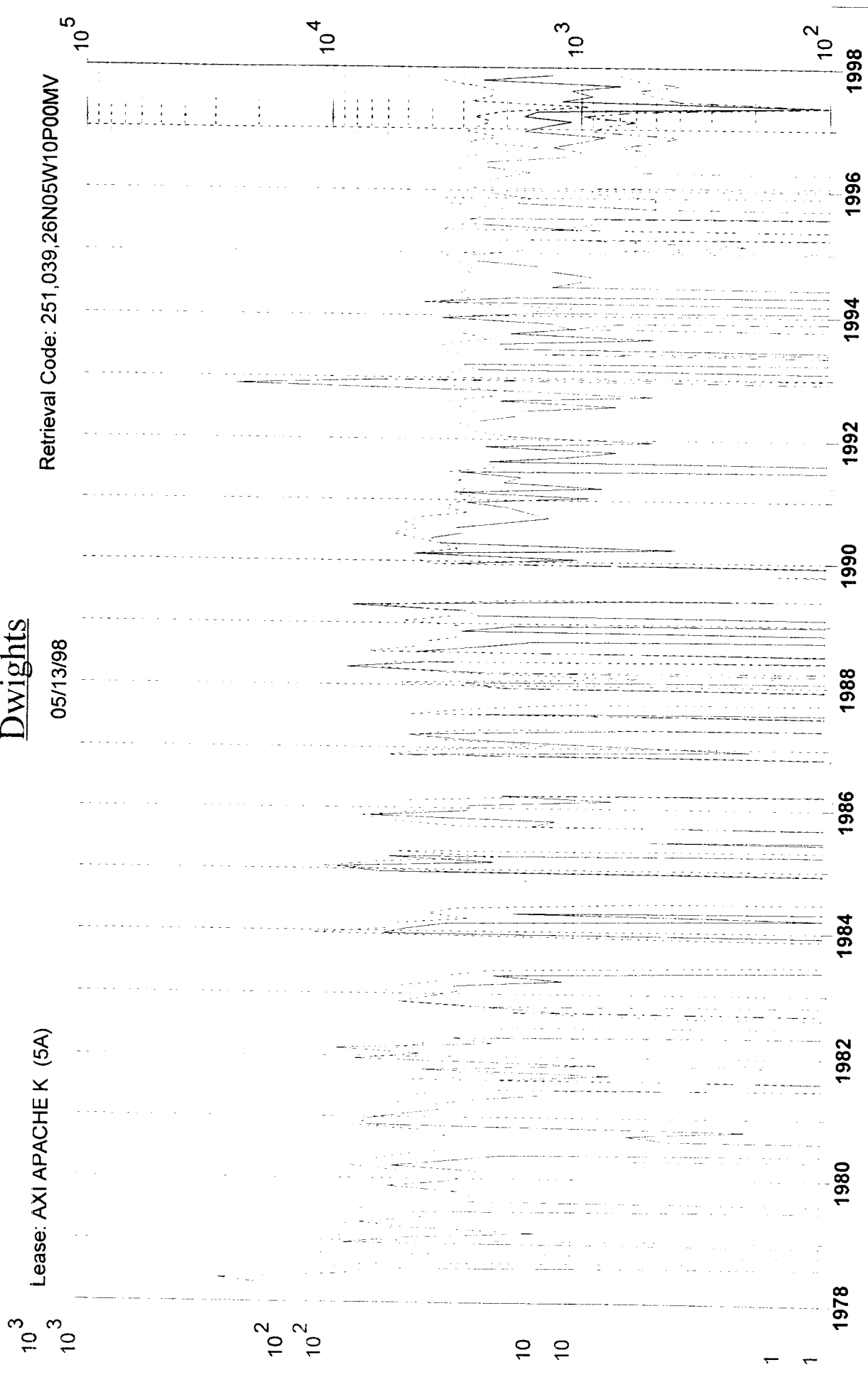
Location: 10P 26N 5W

Dwights

Lease: AXI APACHE K (5A)

Retrieval Code: 251,039,26N05W10P00MV

05/13/98



Oil (bbl/mo)

Gas (mcf/mo)

Water (bbl/mo)

County: RIO ARRIBA, NM	F.P. Date: 04/78
Field: BLANCO (MESAVERDE) MV	Oil Cum: 5186 bbl
Reservoir: MESAVERDE	Gas Cum: 811.5 mmcf
Operator: CONOCO INC	Location: 10P 26N 5W

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 "K"		Well No. 5-A
Unit Letter P	Section 10	Township 26 NORTH	Range 5 WEST	County RIO ARriba	
Actual Footage Location of Well: 1050 feet from the SOUTH line and 930 feet from the EAST line					
Ground Level Elev. 6892	Producing Formation MESA VERDE		Pool BLANCO	Dedicated Acreage: 3.70	

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 _____

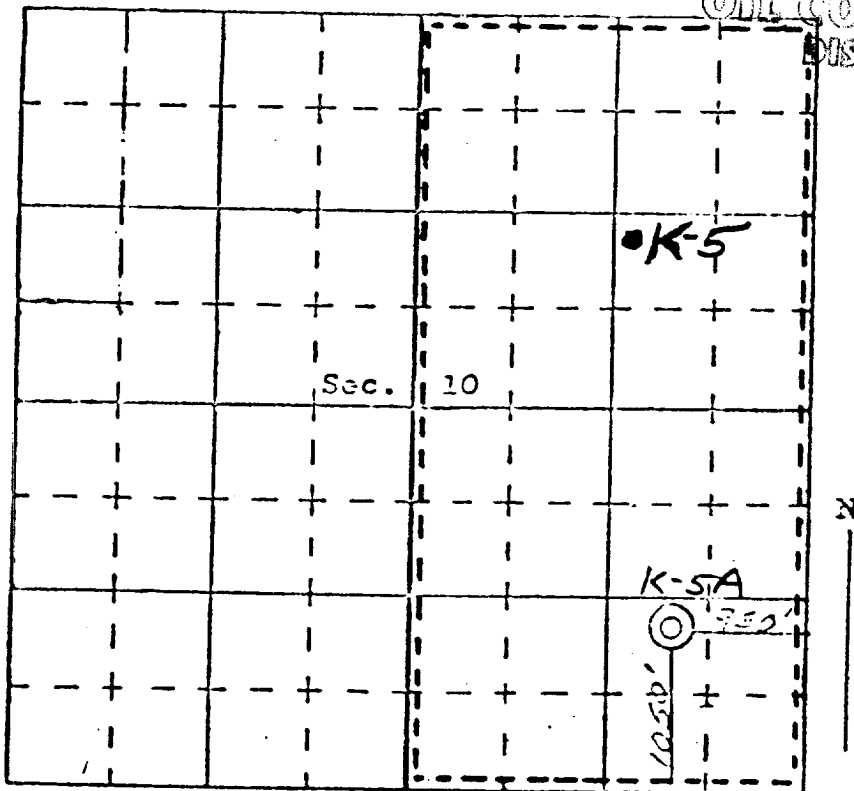
If answer is "no," list the owners and tract descriptions which have actually consolidated. (Use reverse side of this Form if necessary.) _____

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

RECEIVED
 JUN - 4 1999
 OIL CON. DIV.
 DIST. 3

CERTIFICATION

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



Name Wm. A. Thuterteld
 Position ADMIN. SUPERV.
 Company CONTINENTAL OIL CO
 Date 3-11-77
 NO. 1463

I hereby certify that the plat shown on this plat was plotted by the use 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.

2 February, 1977

Date Surveyed

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

James P. Leese

1463

Certificate No.

NEW MEXICO OIL CONSERVATION COMMISSION WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-
Effective 1-1-6

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

Operator Conoco Inc.			Lease AXI Apache "K"			Well No. 5-A		
Unit Letter P	Section 10	Township 26 North	Range 5 West	County Rio Arriba				
Actual Footage Location of Well: 1050 feet from the South line and 930 feet from the East line								
Ground Level Elev. 6892'	Producing Formation Pictured Cliffs		Pool 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 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.

RECEIVED

SEP 27 1982

U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

ACCEPTED FOR RECORD

SEP 28 1982

FARMINGTON DISTRICT

BY AK

OPERATOR

CERTIFICATION

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

Name

Position

Company

Date

9-24-82

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

2-2-77

Registered Professional Engineer and/or Land Surveyor

Certificate No.

June 2, 1999

AXI Apache K # 5A
Section 10, T-26-N, R-5-W, P
API # 30-039-21506
Rio Arriba , NM

RE: Application to Downhole Commingle (C107A)

Offset Operators:

Amoco
PO Box 800
Denver, CO 80201

Burlington Resources
PO Box 4289
Farmington, NM 87499

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

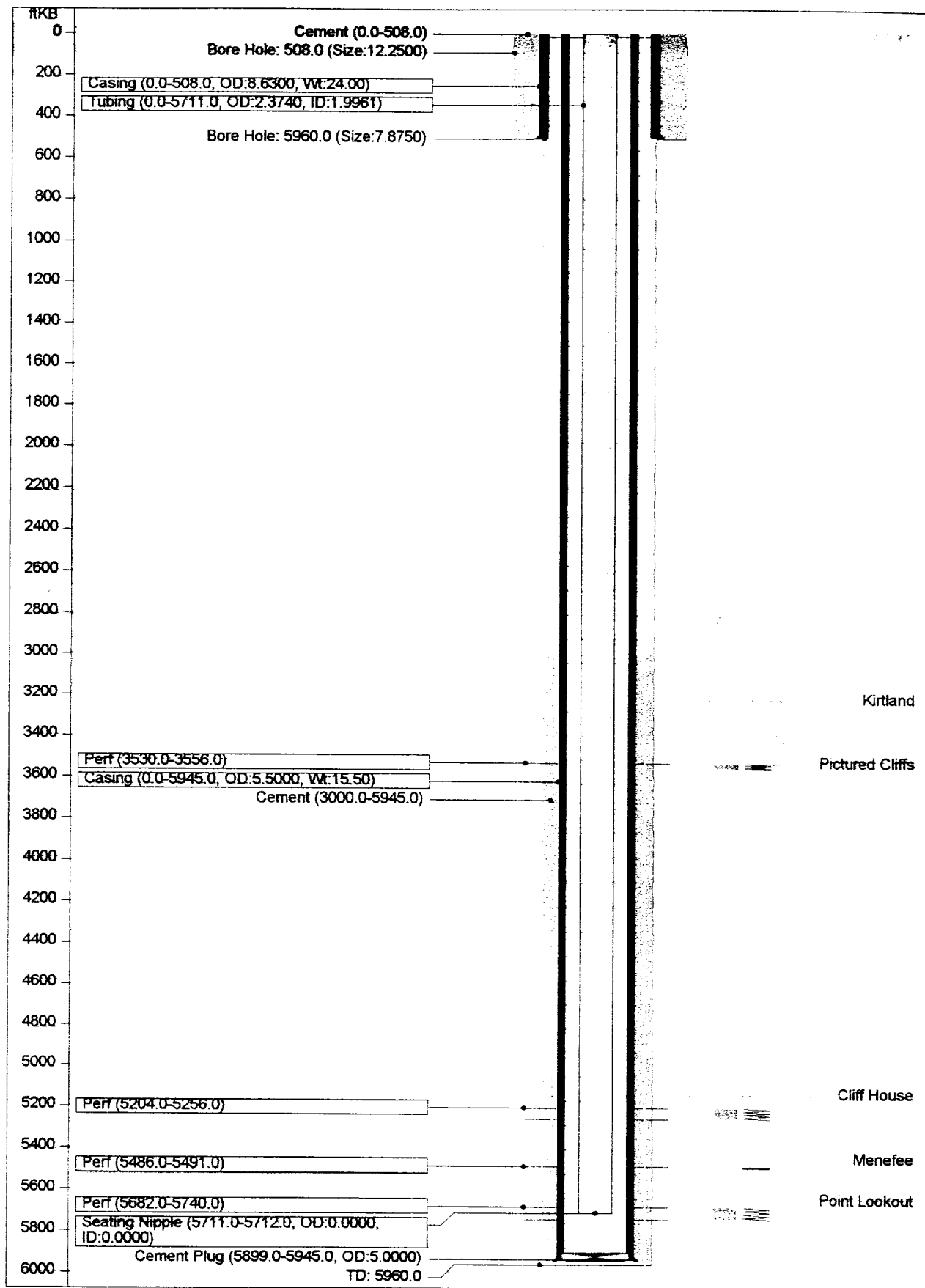
AXI Apache K 5A

Economic/Rate Justification for Down Hole Commingling

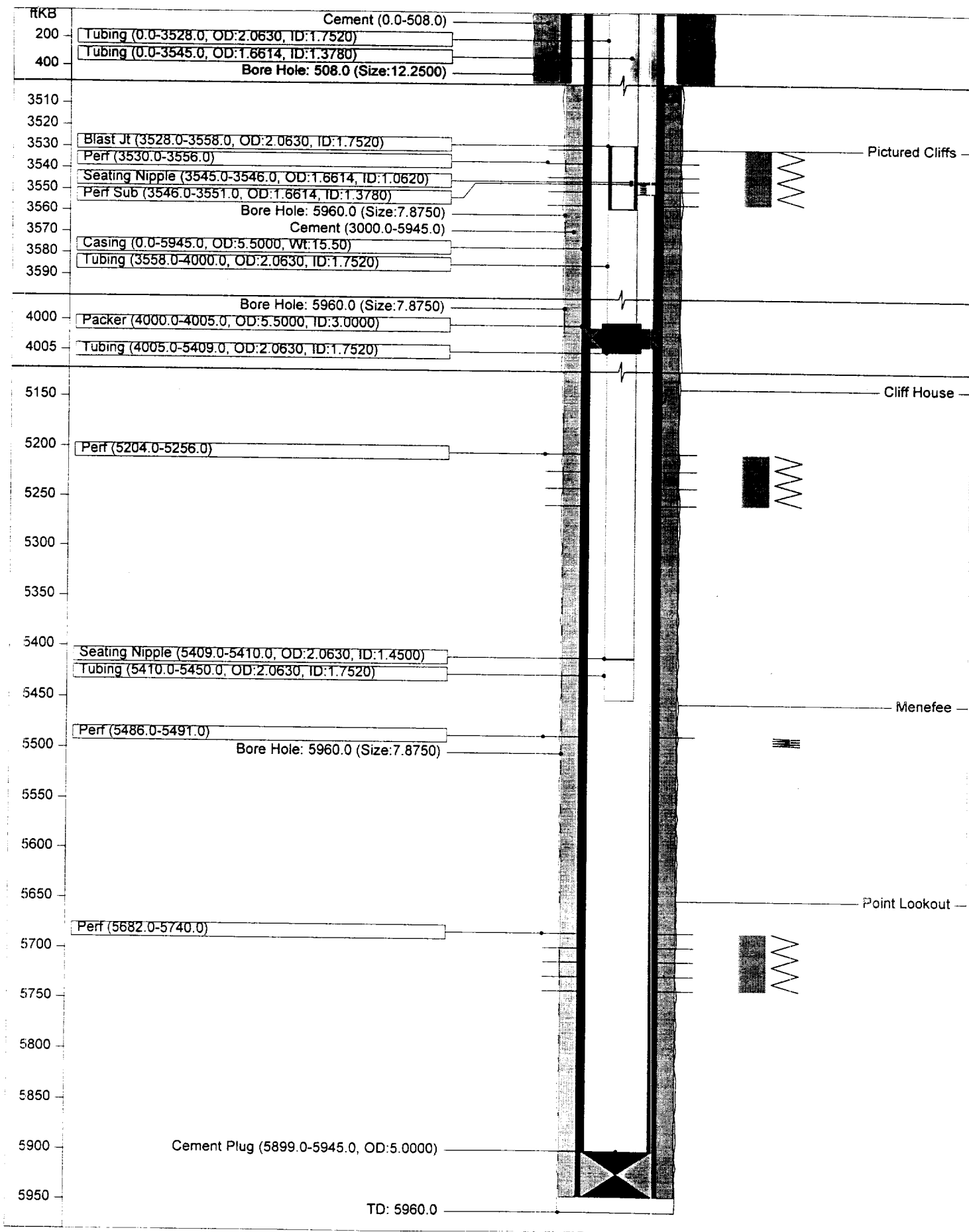
Approval is requested to down hole commingle the existing zones in the subject well. The AXI Apache K 5A has 5 1/2" production casing. It is dually completed using a 1.66" tubing string for the Picture Cliffs and a 2.063" tubing string for the Mesa Verde. Both zones produce some liquids and are producing well below the minimum critical rate required to unload liquids from the well bore. These low rates, along with the position of the tubing relative to the Mesa Verde perforations (340' above the bottom perms) allows liquids to accumulate in the wellbore, thereby preventing maximum production from this well. To optimize production it is recommended to pull the existing equipment from the well, and produce it using plunger lift in a single 2 3/8" tubing string. The expected production increase is estimated at 50 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 that 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 K 5A (LFW 9/16/97)



AXI APACHE K 5A (LFW 9/16/97)
AXI APACHE K 5A (LFW 9/16/97)

API Code	300392150600	Field Code	676380663	
TD	5960.0 ftKB	Basin	SAN JUAN BASIN	
PBTD	5899.0 ftKB	Basin Code	580	
State	New Mexico	Permit	20-Sep-77	
County	RIO ARRIBA	Spud	07-Jul-77	
District	San Juan O.U.	Finish Drl	17-Jul-77	
Permit No.		Completion	19-Aug-77	
TD Measured	5960 ftKB	Abandon		
Reservoir	Mesaverde/Pictured Cliffs			
Field	BLANCO MV/PC			
Location				
Meridian	NM	Top Latitude	36.49709	
Twnship	26N	Top Longitude	107.3401	
Range	5W	Top NS Distance	1050.0 ft S	
Section	10	Top EW Distance	930.0 ft E	
Quarter	SE SE	Bottom Latitude	0	
		Bottom Longitude	0	
		Btm NS Distance	0.0 ft	
		Btm EW Distance	0.0 ft	
Elevations				
KB	6904.0 ft	Cas Fing	0.0 ft	
Grd	6892.0 ft	Tub Head	0.0 ft	
KB-Grd	12.0 ft			
Bore Hole Data				
	Depth (ftKB)		Size (in)	
	508.0		12.2500	
	5960.0		7.8750	
Casing String - Surface Casing				
Item (in)	Btm (ftKB)	Jnts	ID Wt Grd Thd Comments	
8.6300 in Casing	508.0	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	5945.0	149	4.9500 15.50 K-55 LT&C	
Casing Cement				
Casing String	Top (ftKB)	Amount (sx)	Comments	
Surface Casing	0.0	250	Cement circ	
Production Casing	3000.0	735	DV @ 4496. 1st st: 355 sxs, circ. 2nd stg: 380 sxs. TOC by Est.	
Other (plugs, equip., etc.) - Plug Backs				
Date	Item	Int (ftKB)	Comments	
28-Jul-77	Cement Plug	5899.0 - 5945.0		
Perforations				
Date	Int	Shots (ft)	Type Comments	
29-Jul-77	5682.0 - 5740.0	2.0	@ 5682' (1 SPF). @ 5686', 90', 5732', 36', 5740'. (2 SPF - 10 shots). All in 250 G 7 1/2% HCL NEFE	
30-Jul-77	5486.0 - 5491.0	2.0	@ 5486', 88', 91', 5494'. (8 shots) In 250 G 7 1/2% HCL NEFE	
01-Aug-77	5204.0 - 5256.0	1.0	@ 5204', 16', 22', 26', 30', 48', 52', 5256'. (8 shots) In 250 G 7 1/2% HCL NEFE	
13-Aug-82	3530.0 - 3556.0	1.0	@ 3530', 32', 34', 36', 42', 44', 46', 48', 50', 52', 54', 3556'. (12 shots) In 100 G 7 1/2% HCL NEFE	
Stimulations & Treatments				
Date	Type	Zone	Int Fluid Comments	
29-Jul-77	Fracture	MV (PLO)	5682.0 - 5740.0 Water	Frac w/ 24,150 G treat water + 59,500# 20/40 sd. AIR= 25 bpm @ 1000#. ISIP 300#
29-Jul-77	Acid Squeeze	MV (PLO)	5682.0 - 5740.0 7 1/2% HCL	Acid w/ 1500 G + 15 BS. AIR= 6 bpm @ 1800#. did not ball off.
30-Jul-77	Fracture	MV (MEN)	5486.0 - 5494.0 Water	Frac w/ 15,000 G treat water + 32,000# 20/40 sd. AIR= 25 bpm @ 2800#. ISIP 1300#
01-Aug-77	Fracture	MV (CH)	5204.0 - 5256.0 Water	Frac w/ 23,650 G treat water + 59,500# 20/40 sd. AIR= 25 bpm @ 1000#. ISIP 775#
01-Aug-77	Acid Squeeze	MV (CH)	5204.0 - 5256.0 7 1/2% HCL	Acid w/ 1500 G + 12 BS. AIR= 8 bpm @ 3000#. ball off @ 3000#.
13-Aug-82	Fracture	Pictured Cliffs	3530.0 - 3556.0 70 Q FOAM	Frac w/ 15,792 G 2% KCL + 69,720# 10/20 sd. (used 521,568 SCF N2). AIR= 25 bpm @ 1750#. ISIP 1450#
13-Aug-82	Acid Squeeze	Pictured Cliffs	3530.0 - 3556.0 7 1/2% HCL	BD w/ 1500 G + 18 BS. AIR= 4.8 bpm @ 1500#. 100% ball off.
Tubing String - Tubing (PC)				
Item (in)	Top (ftKB)	Len (ft)	Jnts ID Wt Grd Thd Comments	
1.6614 in Tubing	0.0	3545.0	104 1.3780 2.33 IJ 10rd	
1.6614 in Seating Nipple	3545.0	1.0	1.0620 0.00 IJ 10rd	With pump out plug.

AXI APACHE K 5A (LFW 9/16/97)

Tubing String - Tubing (PC) (con't)								
Item (in)	Top (ftKB)	Len (ft)	Jnts	ID (in)	Wt	Grd	Thd	Comments
1.6614 in Perf Sub	3546.0	5.0		1.3780	2.33	IJ	10rd	Land @ 3551'
Tubing String - Tubing (MV)								
Item (in)	Top (ftKB)	Len (ft)	Jnts	ID (in)	Wt	Grd	Thd	Comments
2.0630 in Tubing	0.0	3528.0	107	1.7520	3.25	IJ	10rd	
2.0630 in Blast Jt	3528.0	30.0		1.7520	0.00	IJ	10rd	
2.0630 in Tubing	3558.0	442.0	11	1.7520	3.25	IJ	10rd	
5.5000 in Packer	4000.0	5.0		3.0000	0.00	IJ	10rd	Baker Model SB-1 Perm
2.0630 in Tubing	4005.0	1404.0	41	1.7520	3.25	IJ	10rd	
2.0630 in Seating Nipple	5409.0	1.0		1.4500	0.00	IJ	10rd	Model "F" with pump out check
2.0630 in Tubing	5410.0	40.0	1	1.7520	3.25	IJ	10rd	Land @ 5450'
Completions & Workovers								
Date	Reason for Workover	Reason for Failure	Summary					
12-Aug-82	DHC MV/PC	Add Perforations	DHC MV/PC - POOH w/ prod tbg, RIH and tag Fill @ 5724' (175' Fill), C/O to 5899', Run logs, Perf amd Stim PC, C/O w/ N2 to PBTD. RIH w/ tbg, complete as Dual String MV/PC.					
Formation/Horizon Tops								
Top (ftKB)	Formation							
3220.0	Kirtland							
3530.0	Pictured Cliffs							
5140.0	Cliff House							
5454.0	Menefee							
5650.0	Point Lookout							
Logs Run								
Date	Type	Int	Company		Comments			
16-Jul-77	IND	495.0 - 5953.0	Schlumberger					
16-Jul-77	DEN/NEU	390.0 - 5955.0	Schlumberger					
28-Jul-77	GR-C	400.0 - 5904.0	Welex					
General Notes								
Date	Note							
19-Aug-77	Initial Potential: F 2709 MCFGPD on 3/4 in ck							

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other in-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

b. TYPE OF COMPLETION:

NEW WELL ☐ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other Dual

2. NAME OF OPERATOR

CONOCO INC.

3. ADDRESS OF OPERATOR

P. O. Box 460, Hobbs, N.M. 88240

4. LOCATION OF WELL (Report location clearly and in accordance with applicable requirements)

At surface 1050' FSL & 930' FEL

At top prod. interval reported below ☒At total depth ☒14. PERMIT NO. U. S. GEOLOGICAL SURVEY
FARMINGTON, N. M.

15. DATE SPUDDED 7-7-77	16. DATE T.D. REACHED 7-14-77	17. DATE COMPL. (Ready to prod.) 8-15-82	18. ELEVATIONS (DF, RSB, RT, GR, ETC.) 6892' GR	19. ELEV. CASING HEAD NA
20. TOTAL DEPTH, MD & TVD 5960'	21. PLUG, BACK T.D., MD & TVD 5876'	22. IF MULTIPLE COMPL., HOW MANY? 2	23. INTERVALS DRILLED BY ROTARY TOOLS All	23. WAS DIRECTIONAL SURVEY MADE NONE Yes
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 3530'-3556' Pictured Cliffs				27. WAS WELL CORED No
26. TYPE ELECTRIC AND OTHER LOGS RUN GR CAL CNL FDC				

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
		NO	change		

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
		NONE			NO	change	4000'

31. PERFORATION RECORD (Interval, size and number) 3530', 32', 34', 36', 42', 44', 46', 48', 50' 54', 3556' w/ 155PF.				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
				DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
				3530'-3556'	3666' 12" w/ 155PF-HCL Frac w/ 70 quality foam pump 3766' of 2% KCL water, 69,220 # 10/20 sd

33. PRODUCTION							
DATE FIRST PRODUCTION 8-23-82		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flowing				WELL STATUS (Producing or shut-in) Producing	
DATE OF TEST 8-23-82	HOURS TESTED 24	CHOKE SIZE NA	PROD'N. FOR TEST PERIOD →	OIL—BBL. —	GAS—MCF. 2233	WATER—BBL. —	GAS-OIL RATIO —
FLOW. TUBING PRESS. NA	CASING PRESSURE NA	CALCULATED 24-HOUR RATE →	OIL—BBL. —	GAS—MCF. 2233	WATER—BBL. —	OIL GRAVITY-API (CORR.) —	

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) Sold	TEST WITNESSED BY G. Flowers
--	---------------------------------

35. LIST OF ATTACHMENTS

A detailed Sundry Notice will follow

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED W. A. V. [Signature] TITLE Administrative Supervisor

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

OPERATED

SEP 27 1982
DATE 9-21-82
FARMINGTON DISTRICT
BY ETK

File