

DATE IN	8/25/99	SUSPENSE	9/14/99	ENGINEER	DC	LOGGED	KV	TYPE	DHC
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

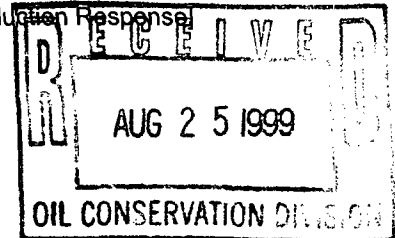
ADMINISTRATIVE APPLICATION COVERSHEET

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]

2461



[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 if 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.

Lee R. White

Print or Type Name

Lee R. White
 Signature

8/23/99

Engineering Manager

Title

8/23/99

Date

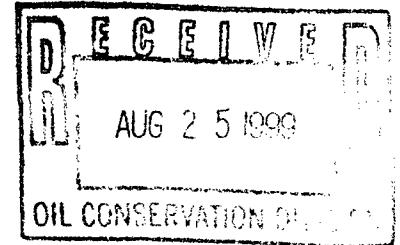


2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

(713) 296-6000

August 23, 1999

Attn: David Catanach
State of New Mexico – Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505



Re: Application to Downhole Commingle
Hawk B-1 No. 7
Blinbry Oil and Gas Pool (06660)
Tubb Oil & Gas Pool (86440)
Drinkard Pool (19190)
Lea County, New Mexico

Apache Corporation would like to request administrative approval to downhole commingle the referenced pools in the Hawk B-1 No. 7 well.

To support this request we submit the following:

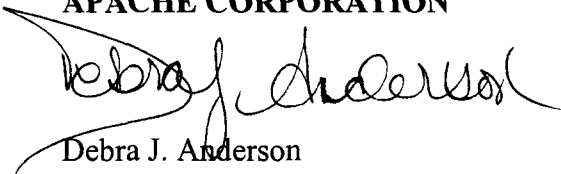
- 1) New Mexico – OCD Form C-107A
- 2) New Mexico – OCD Form C-102 for Blinbry Oil and Gas Pool
- 3) New Mexico – OCD Form C-102 for Tubb Oil & Gas Pool
- 4) New Mexico – OCD Form C-102 for Drinkard Pool
- 5) Production curves for the referenced well in each pool (Blinbry and Tubb pools prior to abandoning) as well as a current production curve for the Harry Leonard No. 4, an offset well, in the Tubb pool

- 6) Explanation of method for determining Allocation formula
- 7) Copy of letter sent (by Certified Mail) to Offset operators within one-half mile of the Hawk B-1 No. 7
- 8) Map of location with one-half mile radius marked
- 9) Well Bore Diagrams of current completion and proposed completion

If you have any questions or require additional information regarding this application, please contact me at 713-296-6338. Thank you.

Sincerely,

APACHE CORPORATION



Debra J. Anderson
Sr. Engineering Technician

Attachments

cc: New Mexico Oil Conservation Division
District I
1625 N. French Drive
Hobbs, New Mexico 88240

Bureau of Land Management
2909 West 2nd Street
Roswell, New Mexico 88201-2019

DISTRICT I

1625 N. French Drive, Hobbs, NM 88240

DISTRICT II

P.O. Drawer DD, Artesia, NM 88210

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
2040 S. Pacheco
Santa Fe, New Mexico 87505-6429

Form C-107A
New 3-12-96

APPROVAL PROCESS:

☒ Administrative☒ Hearing

EXISTING WELLBORE

☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

Apache Corporation

2000 Post Oak Blvd., Suite 400-Rm 365A, Houston, Texas 77056-4400

Operator

Address

Hawk B-1

7

P / 9 / T-21S / R-37E

Lea

Lease

Well No.

Unit Ltr.-Sec-Twp-Rgn

County

Spacing Unit Lease Types: (one or more)

☒ Federal☐ State☐ Fee

OGRID NO. 000873 Property Code 24427 API No. 30-025-06439

The following facts are submitted in support of downhole commingling:	Upper Zone	Intermediate Zones	Lower Zone
1. Pool Name and Pool Code	Blinebry (06660)	Tubb (86440)	Drinkard (19190)
2. Top and Bottom of Pay Section (Perforations)	5634 - 5846	6104 - 6338	
3. Type of production (Oil or Gas)	Oil	Gas	Oil
4. Method of Production (Flowing or Artificial Lift)	Artificial Lift	Artificial Lift	Artificial Lift
5. Bottomhole Pressure Oil Zones - Artificial Lift: Estimated Current Gas & Oil - Flowing: Measured Current All Gas Zones: Estimated or Measured Original	a. (Current) 600 b. (Original)	a. 2180 b.	a. 600 b.
6. Oil Gravity (*API) or Gas BTU Content	41	1330	38
7. Producing or Shut-In?	Shut-In	Shut-In	Producing
Production Marginal? (Yes or No) * 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 * If Producing, give date and oil/gas/water rates of recent test (within 80 days)	Date: 9/29/93 Rates: 2 x 90 x 1	Date: 9/29/93 Rates: 0 x 0 x 0	Date: 7/2/99 Rates: 3 x 101 x 3
8. Fixed Percentage Allocation Formula - % for each zone	Oil: 77% Gas: 55%	Oil: 0% Gas: 22%	Oil: 23% Gas: 23%

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 be undamaged, will any cross-flow 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 communized 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(C) Exceptions:

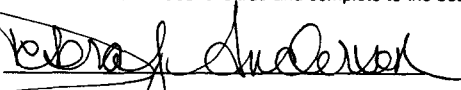
Order No.s

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



TITLE

Sr. Engineering Technician

DATE

8/23/99

TYPE OR PRINT NAME

Debra J. Anderson

TELEPHONE NO.

713-296-6338

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

2040 S. Pacheco
Santa Fe, New Mexico 87505

District I
1625 N. French Drive, Hobbs, NM 88240

District II
P O Drawer DD, Artesia, NM 88210

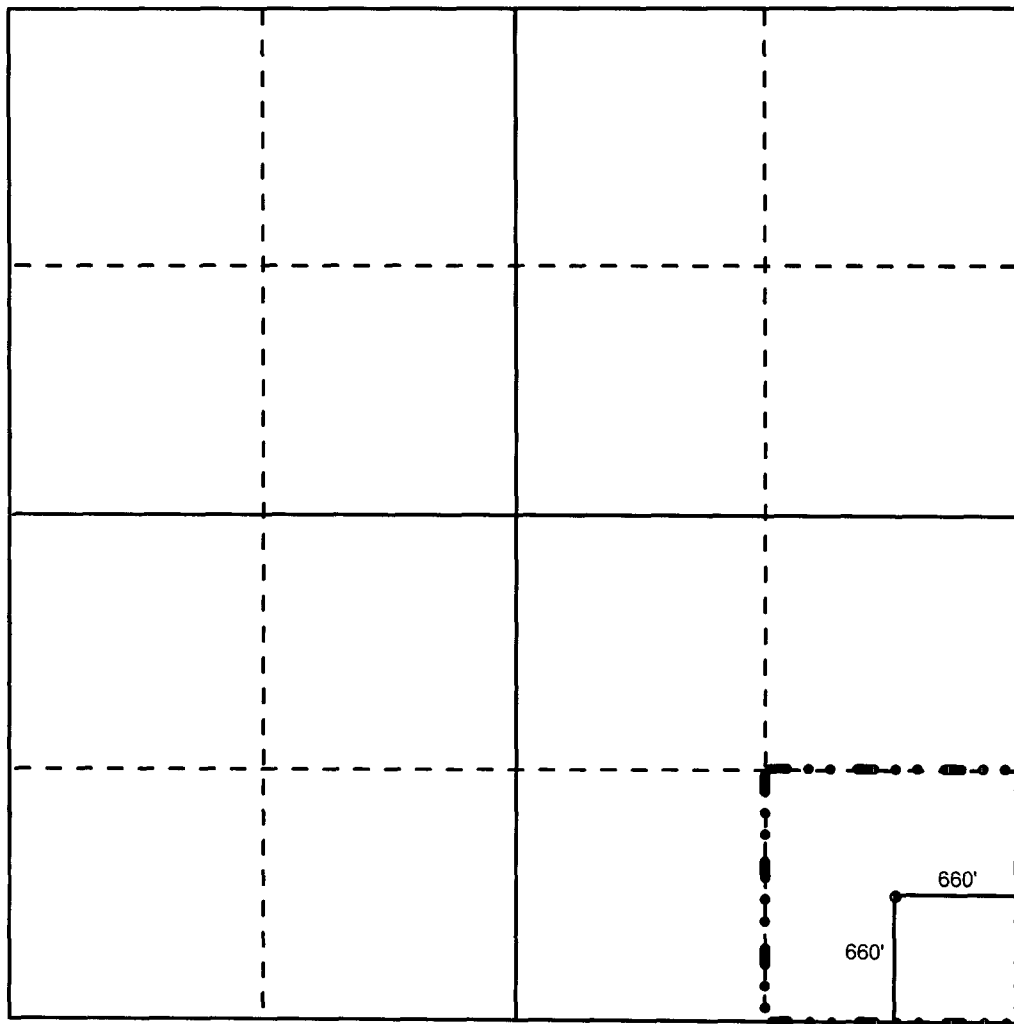
District III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

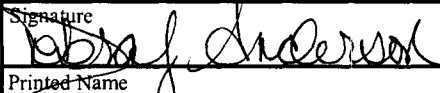
Operator Apache Corporation			Lease Hawk B-1		Well No. 7
Unit Letter P	Section 9	Township 21S	Range 37E	NMPM	County Lea
Actual Footage Location of Well: 660 feet from the South line and 660 feet from the East line					
Ground Level Elev. 3471		Producing Formation Blinebry		Pool Blinebry Oil and Gas (06660)	
Dedicated Acreage:					40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure 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 interest 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 description 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 interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature 
Printed Name **Debra J. Anderson**
Position **Sr. Engineering Technician**
Company **Apache Corporation**
Date **08/20/99**

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 knowledge and belief.

Date Surveyed _____
Signature & Seal of Professional Surveyor _____
Certificate No. _____

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

District I
1625 N. French Drive, Hobbs, NM 88240

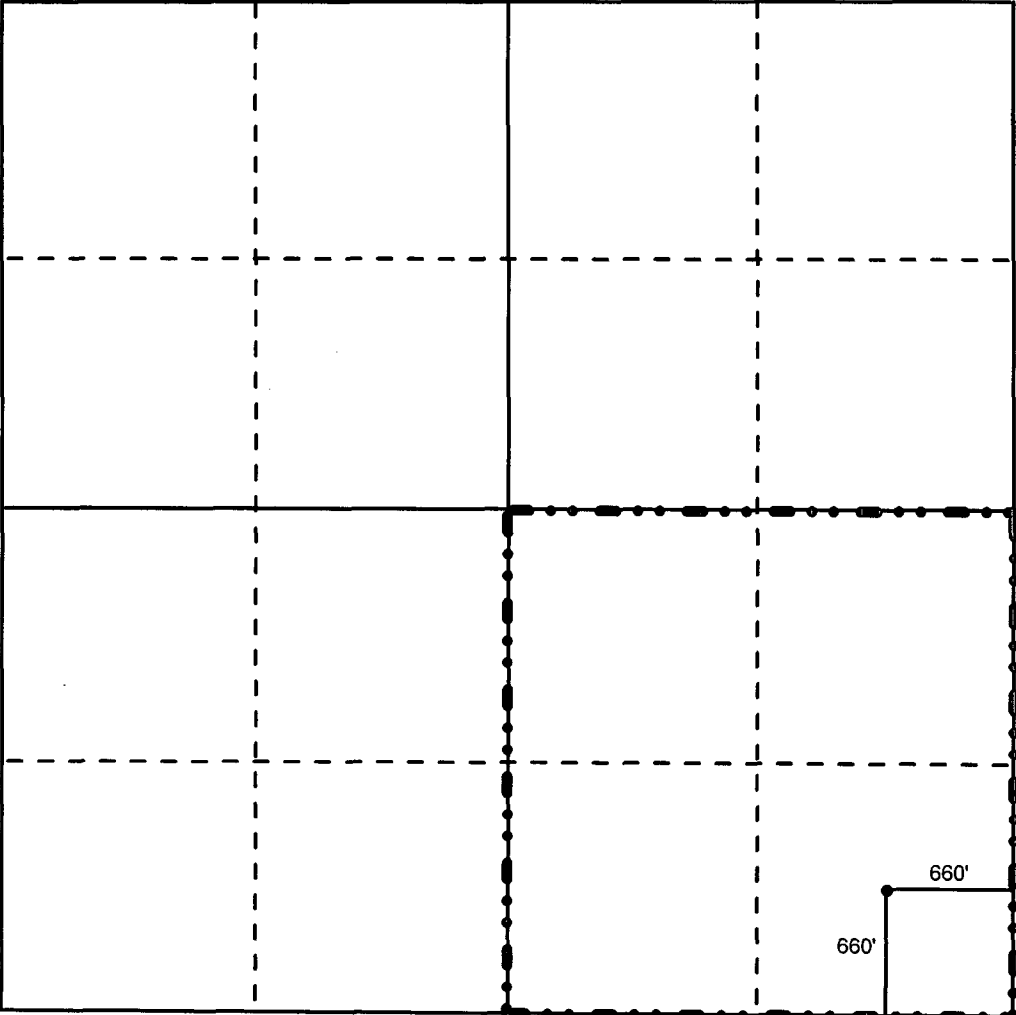
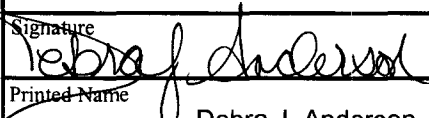
2040 S. Pacheco
Santa Fe, New Mexico 87505

District II
P O Drawer DD, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Apache Corporation		Lease Hawk B-1		Well No. 7
Unit Letter P	Section 9	Township 21S	Range 37E NMPM	County Lea
Actual Footage Location of Well: 660 feet from the South line and 660 feet from the East line				
Ground Level Elev. 3471	Producing Formation Tubb	Pool Tubb Oil & Gas (86440)		Dedicated Acreage: 160 Acres
<p>1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.</p> <p>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).</p> <p>3. If more than one lease of different ownership is dedicated to the well, have the interest of all owners been consolidated by communitization, unitization, force pooling, etc.? <input type="checkbox"/> Yes <input type="checkbox"/> No If answer is "yes" type of consolidation _____</p> <p>If answer is "no" list the owners and tract description which have actually been consolidated. (Use reverse side of this form if necessary). _____</p> <p>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 interest, has been approved by the Division.</p>				
			OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</i>	
			Signature 	
			Printed Name Debra J. Anderson	
			Position Sr. Engineering Technician	
			Company Apache Corporation	
			Date 08/20/99	
			SURVEYOR CERTIFICATION <i>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.</i>	
			Date Surveyed	
			Signature & Seal of Professional Surveyor	
			Certificate No.	

Submit to Appropriate
District Office
State Lease - 4 copies
Fee Lease - 3 copies

State of New Mexico
Energy, Minerals and Natural Resources Department

Form C-102
Revised 1-1-89

OIL CONSERVATION DIVISION

District I
1625 N. French Drive, Hobbs, NM 88240

2040 S. Pacheco
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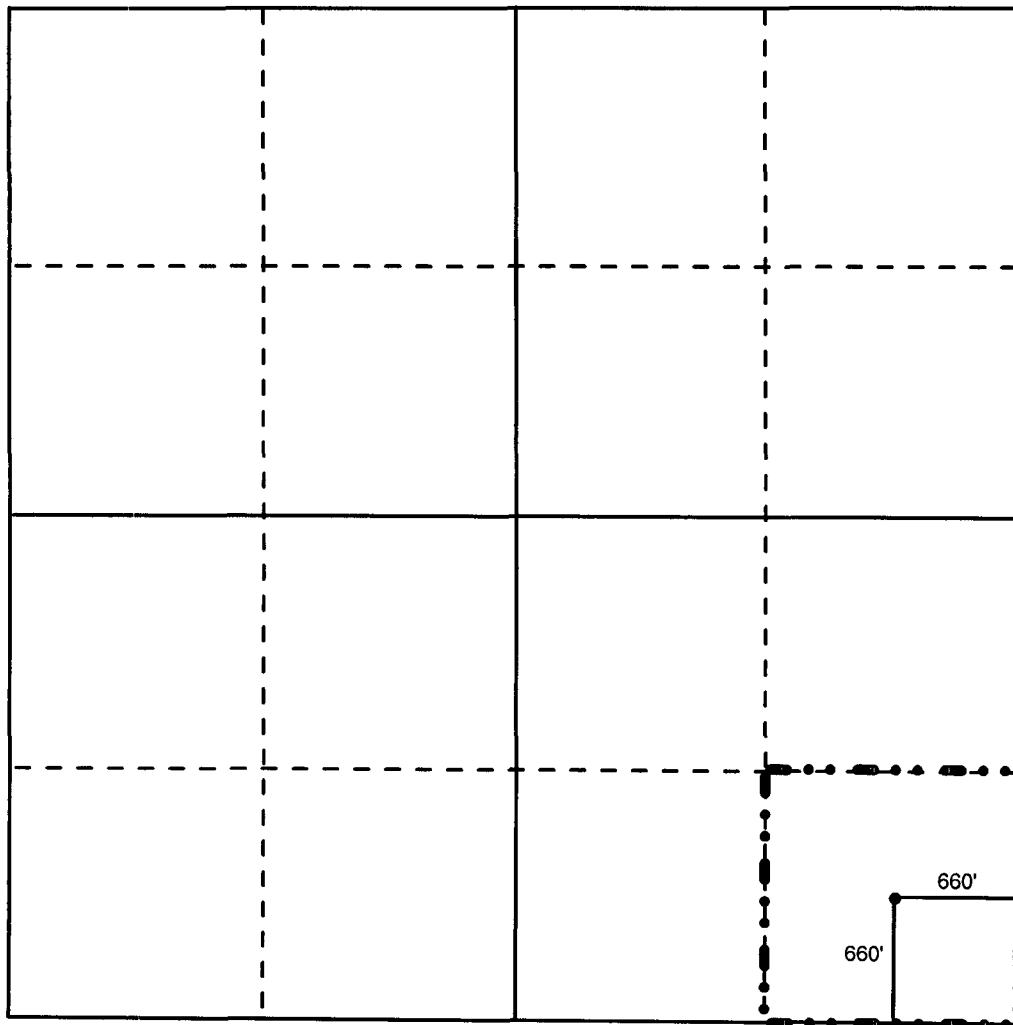
District III
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator Apache Corporation			Lease Hawk B-1		Well No. 7
Unit Letter P	Section 9	Township 21S	Range 37E	NMPM	County Lea
Actual Footage Location of Well: 660 feet from the South line and 660 feet from the East line					
Ground Level Elev. 3471		Producing Formation Drinkard		Pool Drinkard (19190)	
					Dedicated Acreage: 40 Acres

- Outline the acreage dedicated to the subject well by colored pencil or hachure 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 of different ownership is dedicated to the well, have the interest 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 description 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 interest, has been approved by the Division.



OPERATOR CERTIFICATION

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

Signature

Printed Name

Debra J. Anderson

Position

Sr. Engineering Technician

Company

Apache Corporation

Date

08/20/99

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 knowledge and belief.

Date Surveyed

Signature & Seal of
Professional Surveyor

Certificate No.



County: LEA

F.P. Date: N/A

Field: BLINEBRY (BLINEBRY) BL

Oil Cum: 15.01 mbbbl

Reservoir: BLINEBRY

Gas Cum: 372.1 mmcf

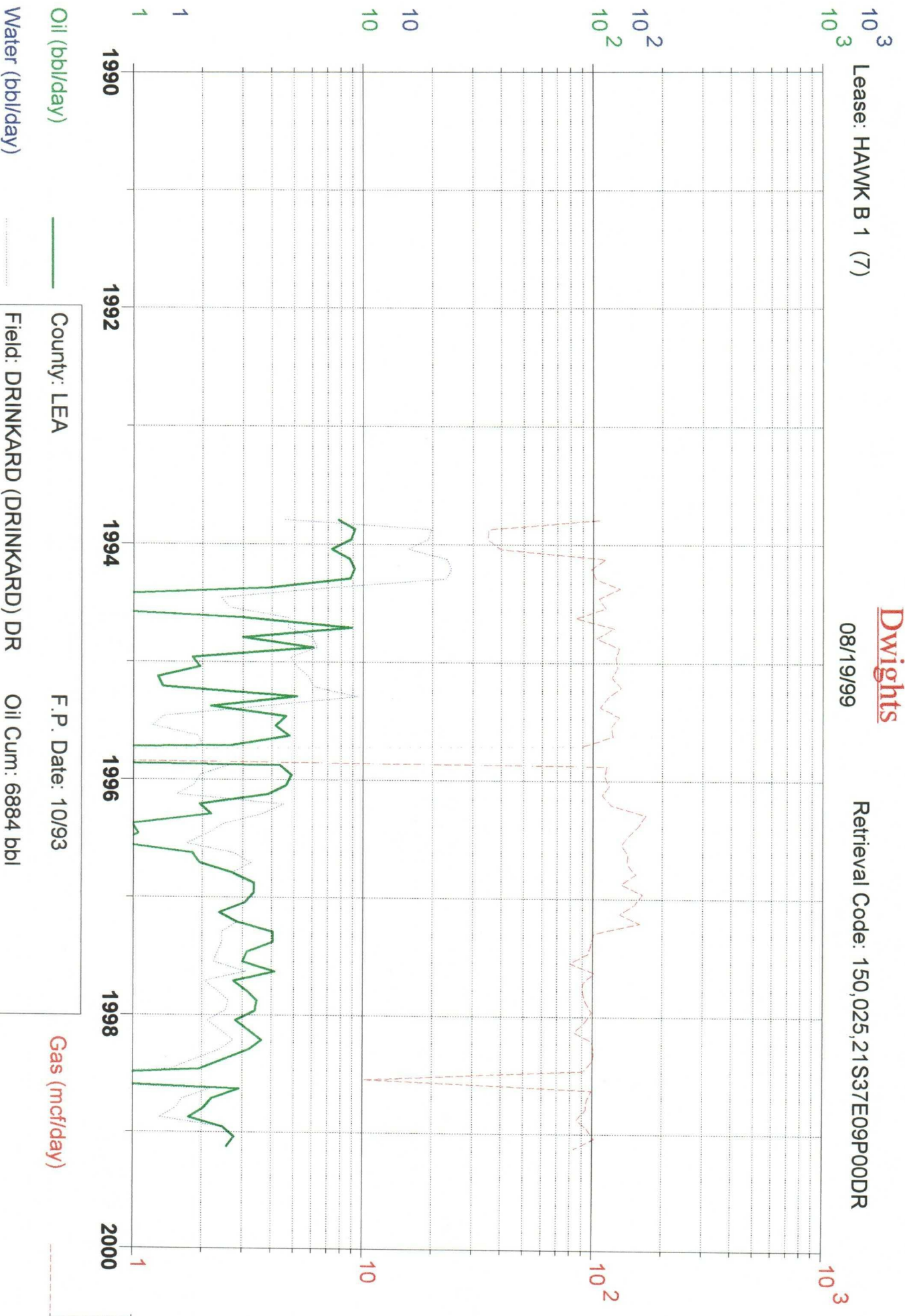
Operator: CONOCO INC

Location: 9P 21S 37E

Retrieval Code: 250,025,21S37E09P00TB



Lease: HAWK B 1 (7)



County: LEA

F.P. Date: 10/93

Field: DRINKARD (DRINKARD) DR

Oil Cum: 6884 bbl

Reservoir: DRINKARD

Gas Cum: 211.3 mmcf

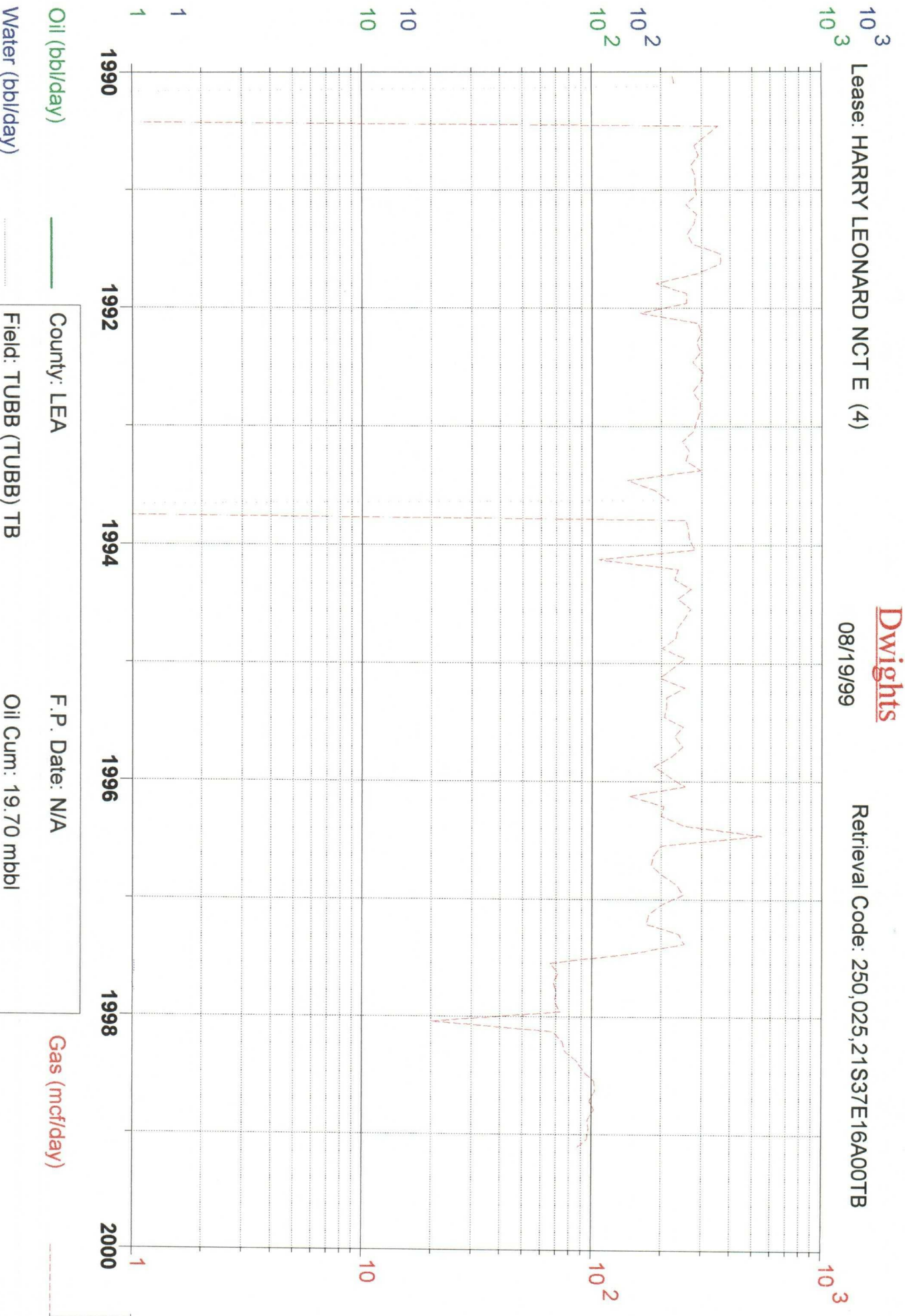
Operator: CONOCO INC

Location: 9P 21S 37E

Lease: HARRY LEONARD NCT E (4)

Dwights
08/19/99

Retrieval Code: 250,025,21S37E16A00TB



Oil (bbbl/day)

County: LEA

F.P. Date: N/A

Gas (mcf/day)

Water (bbbl/day)

Field: TUBB (TUBB) TB

Oil Cum: 19.70 mbbbl

Reservoir: TUBB

Gas Cum: 6080 mmcf

Operator: CHEVRON U S A INC

Location: 16A 21S 37E

Allocation Formula Explanation

Hawk B-1 No. 7

Blinebry Oil and Gas Pool (06660)

The Blinebry interval in the Hawk B-1 No. 7 well was abandoned in September 1993 making 2 BOPD x 90 MCFD. Apache Corporation proposes to re-perforate the Blinebry from 5634' - 5846'. Reserves for the Blinebry are estimated at 15 MBO x 410 MMCF with an estimated initial rate of 10 BOPD x 250 MCFD

Tubb Oil & Gas Pool (86440)

The Tubb interval (flowing) in the Hawk B-1 No. 7 well was abandoned in September 1993 making 0 BOPD x 0 MCFD after repeated communication problems with the Blinebry (oil) dual completion. The Tubb is currently producing in the south offset well, Chevron's Harry Leonard No. 4 ranging from 100 - 200 MCFD. Apache Corporation proposes to re-perforate the Tubb from 6104' - 6338'. Reserves for the Tubb are estimated at 0 MBO x 260 MMCF with an estimated initial rate of 0 MBO x 100 MCFD

Drinkard Pool (19190)

	Oil	Gas	Water
7/2/99	3	101	3

Allocation Formula

Blinebry*	Estimated	10	250	77% Oil	55% Gas
Tubb*	Estimated	0	100	0% Oil	22% Gas
Drinkard	Actual	3	101	23% Oil	23% Gas
Total		13	451	100% Oil	100% Gas

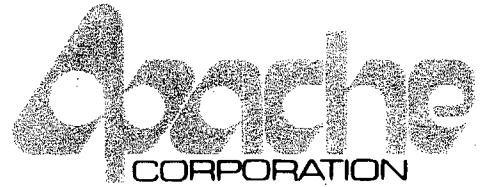
* These initial potential's are strictly estimates - each zone will be tested for actuals and the allocation formula will be adjusted if necessary.

**Hawk B-1 No. 7 Downhole Commingle Application
Offset Operators**

Chevron USA Inc
P O Box 1150
Midland, Texas 79702
Certified Rcpt # Z 116 149 303

Exxon Co USA
P O Box 4707
Houston, Texas 77210-4707
Certified Rcpt # Z 116 149 304

Texaco E&P Inc
205 E. Bender Blvd.
Hobbs, New Mexico 88240
Certified Rcpt # Z 116 149 305



2000 POST OAK BOULEVARD / SUITE 100 / HOUSTON, TEXAS 77056-4400

[713] 296-6000

August 23, 1999

Offset Operators

Re: Application to Downhole Commingle
Hawk B-1 No. 7
Blinebry Oil and Gas Pool (06660)
Tubb Oil & Gas Pool (86440)
Drinkard Pool (19190)

Attached please find a copy of an Application to Downhole Commingle the referenced pools in the Hawk B-1 No. 7 well that Apache Corporation has filed with the New Mexico Oil Conservation Division. If you have an objection to this application, you must notify the OCD in writing within 20 days from the date of this letter.

Sincerely,

APACHE CORPORATION

A handwritten signature in black ink, appearing to read "Debra J. Anderson", written over a horizontal line.

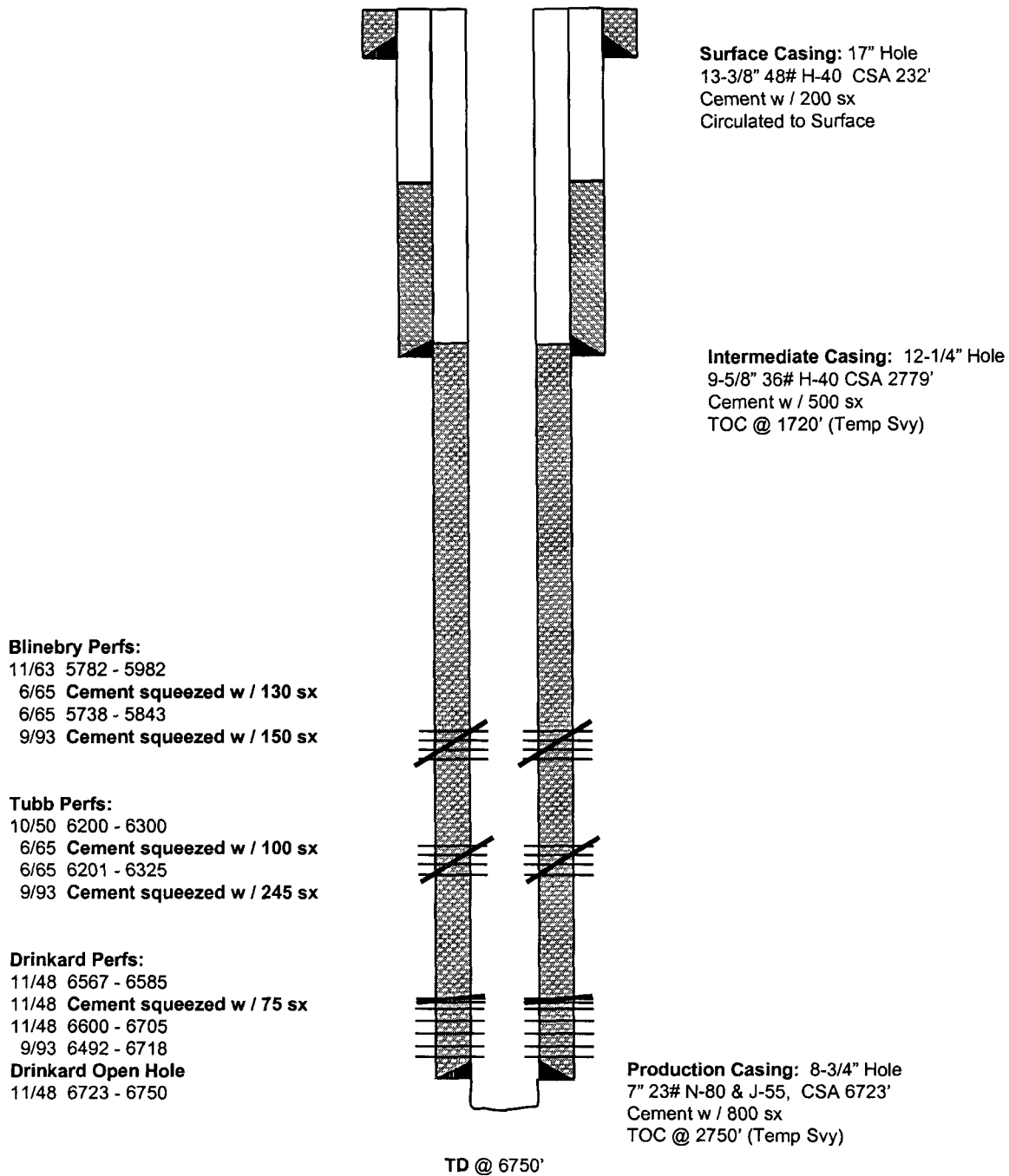
Debra J. Anderson
Sr. Engineering Technician

Attachment

cc: New Mexico – Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Well: Hawk B-1 # 7
Field: Drinkard
Location: 660' FSL, 660' FEL
Unit P, Section 9, Township 21S, Range 37E
API#: 30-025-06439

Current Status: Active Oil



Well: Hawk B-1 # 7
Field: Drinkard
Location: 660' FSL, 660' FEL
Unit P, Section 9, Township 21S, Range 37E
API#: 30-025-06439

Proposed Status: Active Oil
Downhole Commingle from
Blinebry Oil and Gas Pool
Tubb Oil & Gas Pool
Drinkard Pool

Blinebry Perfs:

11/63 5782 - 5982
6/65 Cement squeezed w / 130 sx
6/65 5738 - 5843
9/93 Cement squeezed w / 150 sx

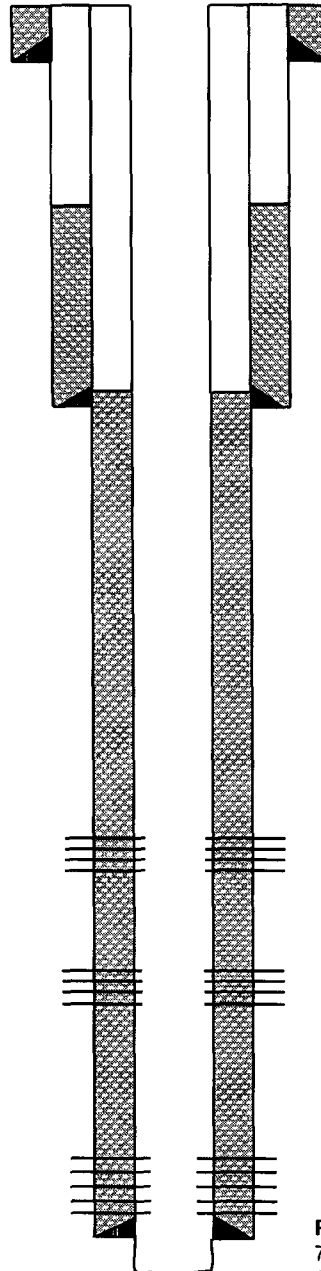
Tubb Perfs:

10/50 6200 - 6300
6/65 Cement squeezed w / 100 sx
6/65 6201 - 6325
9/93 Cement squeezed w / 245 sx

Drinkard Perfs:

11/48 6567 - 6585
11/48 Cement squeezed w / 75 sx
11/48 6600 - 6705
9/93 6492 - 6718

Drinkard Open Hole
11/48 6723 - 6750



Surface Casing: 17" Hole
13-3/8" 48# H-40 CSA 232'
Cement w / 200 sx
Circulated to Surface

Intermediate Casing: 12-1/4" Hole
9-5/8" 36# H-40 CSA 2779'
Cement w / 500 sx
TOC @ 1720' (Temp Svy)

Proposed Completion:
Perf Blinebry @ 5634 - 5846

Perf Tubb @ 6104 - 6338

Downhole Commingle Blinebry,
Tubb & Drinkard Pools

Production Casing: 8-3/4" Hole
7" 23# N-80 & J-55, CSA 6723'
Cement w / 800 sx
TOC @ 2750' (Temp Svy)

TD @ 6750'

[illegible]

APACHE CORPORATION
Hawk B-1 No. 7 - Downhole Commingle
SEC.9 / T-21S / R-37E
LEA COUNTY, NEW MEXICO

9/14/99



STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

9/9/99

GOVERNOR

POST OFFICE BOX 1980
HOBBS, NEW MEXICO 88241-1980
(505) 393-6161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:
MC _____
DHC X _____
NSL _____
NSP _____
SWD _____
WFX _____
PMX _____

Gentlemen:

I have examined the application for the:

<u>Apache Corp</u>	<u>Hawk B 1</u>	<u># 7-P - 9-215-37e</u>
Operator	Lease & Well No. Unit	S-T-R

and my recommendations are as follows:

OK-

Yours very truly,

Chris Williams
Chris Williams
Supervisor, District 1

/ed