

District I  
P.O. Box 1980, Hobbs, NM 88241-1980  
District II  
811 South First Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION  
2040 South Pacheco  
Santa Fe, NM 87505

Form C-101  
Revised October 18, 1994  
Instructions on back  
Submit to Appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1 Operator Name and Address Apache Corporation 2000 Post Oak Blvd. Ste. 100 Houston, Texas 77056-4400		2 OGRID Number 00873
4 Property Code		3 API Number 30-025-06691
5 Property Name D. C. Hardy		6 Well No. 4

7 Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West Line	County
O	20	21S	37E	510'		SOUTH	1980'	EAST	LEA

8 Proposed 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
9 Proposed Pool 1 DRINKARD					10 Proposed Pool 2 BLINEBRY & for Tubb				

11 Work Type Code P & A	12 Well Type Code O	13 Cable/Rotary R	14 Lease Type Code FEE	15 Ground Level Elevation 3485' GL
16 Multiple N	17 Proposed Depth 5800' -6482'	18 formation DRINKARD	19 Contractor BJ SERVICES	20 Spud Date 9/21/98

21 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17-1/2"	13-3/8	40.5#	177'	150	SURFACE
10-5/8"	8-5/8"	32#	2915'	1000	SURFACE
7-7/8"	5-1/2"	15.5# & 17#	6570'	300	2828'

22 Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Proposal to Plugback to Blinebry and Tubb and add additional perms to Drinkard zone. SEE ATTACHMENT.

PLUGBACK

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

Signature: Frances M. Byers 9-1-98  
Printed Name: Frances M. Byers  
Title: Sr. Engineering Tech 713-296-6400

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Expiration Date:

WCH

**D. C. HARDY #4**  
**Lea Co., New Mexico**

**WELLBORE DATA:**

PRODUCTION CASING – 5-1/2" 15.5-17# J-55 set @ 6570', cmt'd W/ 300sx,

**Drinkard Perfs PROPOSED 6348-54', 6416-26', 6430-40', 6466-82', 2 JSPF,**

**(Total 88 holes)**

**Tubb Perfs PROPOSED 6162-80', 6260-78', 2 JSPF, (Total 74 holes)**

Current Drinkard Perfs 6353', 6432', 6438', 6468', 6478', 2 JSPF

Drinkard Open Hole 6570-6670'

TUBING - 2-3/8" 4.7# J-55 8rd EUE

**Current Test:** 5 BO 15 BW 60 MCFD

**DRINKARD/TUBB WORKOVER PROCEDURE**

1. Rig up completion unit. POH with rods and pump. NU BOP. Release TAC & tally tubing out of hole.
2. Make bit trip and clean out to PBTD. Spot double-inhibited acid/xylene mixture 6670-6300' and POH.
3. RU Wireline. Install packoff & perforate Drinkard 6348-54', 6416-26', 6430-40', 6466-82', 2 JSPF, (Total 88 holes) from Dresser Atlas Gamma Ray Neutron 11/22/77. Perforate Tubb 6162-80, 6260-78', 2 JSPF, (total 7 holes)
4. UNLOAD AND TALLY 2-7/8" WORKSTRING. RIH with tailpipe, Lok-Set packer, SN, on workstring to PBTD. Set packer @ 6300'.
5. Petroplex acidize Drinkard OH 6570-6670' with 3000 gals in 3 stages with 750# rock salt in gelled saturated brine between stages. Overflush perfs 20 bbls with 2% KCL water. Swab back load to clean up open hole section. Release packer and POH.
6. RIH with RBP, Packer, SN on workstring and set RBP at 6530' and test. Reset packer @ 6450'.
7. Petroplex acidize Drinkard perfs 6466-82' with 1000 gals using 60 ball sealers spaced throughout. Overflush perfs 20 bbls with 2% KCL water.
8. Release packer, latch RBP and set RBP at 6455' & test. Set packer @ 6380'.
9. Acidize Drinkard perfs 6416-6440' with 2000 gals 15% HCL at 4-6 BPM using 75 ball sealers for diversion. Overflush perfs 20 bbls w/ 2% KCL water.
10. Release packer, Latch RBP and reset at 6400' and test. Set packer @ 6320'.

11. Petroplex acidize Drinkard perms 6348-54' with 700 gals using 25 ball sealers spaced throughout. Overflush perms 20 bbls with 2% KCL water.
12. Release packer and latch RBP and reset packer @ 6320'.
13. Swab back load to evaluate fluid entry rate and content.
14. Release Packer & reset RBP at 6320' and test. Spot acid 6278-6110' and reset packer at 6200'.
15. Acidize Tubb perms 6260-78' with 2000 gals 15% HCL at 4-6 BPM using 65 ball sealers for diversion. Overflush perms 20 bbls w/ 2% KCL water.
16. Release packer, Latch RBP and reset at 6220' and test. Set packer @ 6120'.
17. Acidize Tubb perms 6260-78' with 2000 gals 15% HCL at 4-6 BPM using 65 ball sealers for diversion. Overflush perms 20 bbls w/ 2% KCL water.
18. Release packer, latch RBP and reset packer at 6120'. Swab back load water, evaluate fluid cut and entry rate.
19. Release packer, latch RBP and POH. Redress packer and RBP. RIH with SN, packer and RBP. Set RBP at 6320' and test to 3000 PSI. Set packer @ 5800' and prepare to frac.
20. Frac Tubb Perfs 6162-6278' per the attached recommendation at 15-20 BPM not to exceed 6000 PSI (Anticipated treating pressure 5200 PSI). Flush to top perf with slick KCL water.
21. Swab back to cleanup gel and sand. Latch RBP and POH if downhole commingling permit is approved, otherwise place Tubb on pump at 6000'.
22. POH laying down workstring.
23. RIH with 30'x 2-1/2" mother hubbard mud anchor configuration, SN, and TAC on 2-3/8" tubing. Set SN 150' above top frac'ed perf, set TAC @5400'+/- and nipple up tubinghead.
24. Place well on rod pump (with 1.5" pump X 25' gas anchor) unless swab rates indicate the need for additional lift. Report tests, fluid levels, etc.

Steve W. Manley 9/2/98



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

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 1980, 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

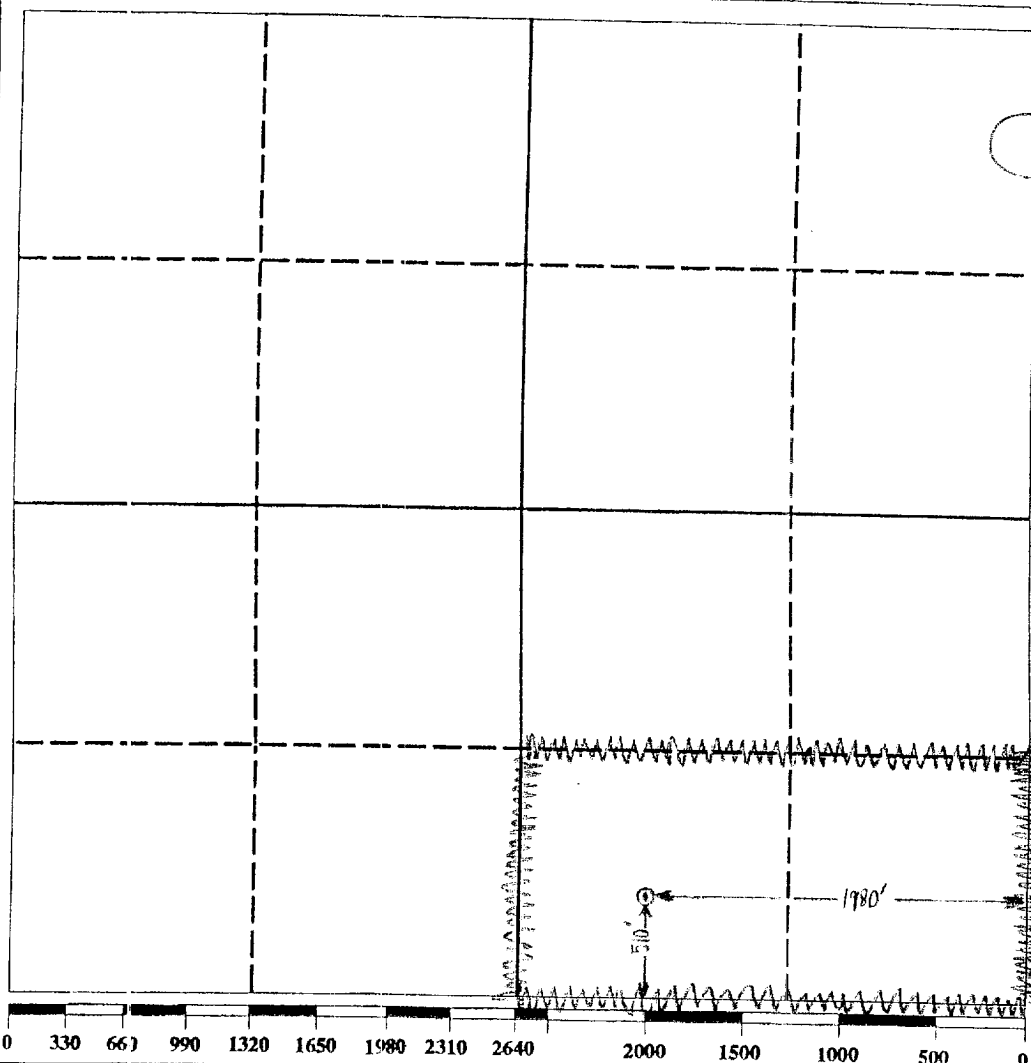
All Distances must be from the outer boundaries of the section

Operator APACHE CORPORATION			Lease D. C. HARDY		Well No. 4
Unit Letter 0	Section 20	Township 21S	Range 37E	County LEA	
Actual Footage Location of Well: 510' feet from the SOUTH line and 1980' feet from the EAST line					
Ground level Elev. 3485'	Producing Formation BLINEBRY		Pool BLINEBRY OIL & GAS	Dedicated Acreage: 80 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 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 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 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

FRANCES BYERS  
Printed Name  
SR. ENGINEERING TECH

Position  
APACHE CORPORATION

Company  
414-99

Date

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.

Well: **D. C. HARDY #4**  
Lea Co., N. Mex  
Field: **Drinkard**  
Location: **510' FSL & 1980' FEL**  
Sec. 20, Blk.T21S, R37E  
GL/KDB: **3485', 9' KDB**  
API #: **30-025-06691**

13-3/8" csg. @ 177' cmt'd w/ 150 sxs circ.

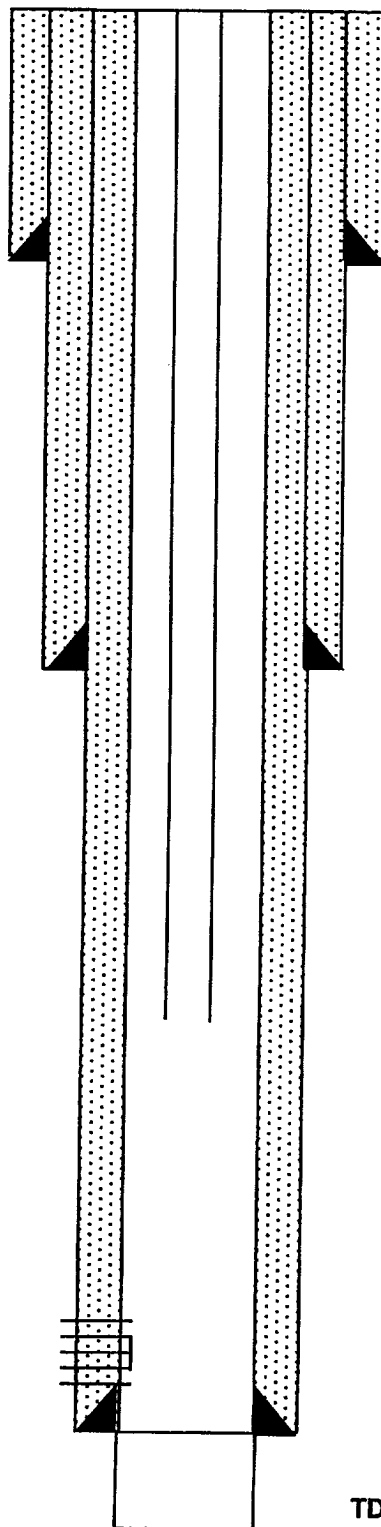
8-5/8" csg. @ 2915' cmt'd w/ 1000 sxs

TOC ' BY CBL

Drinkard Perfs 6353, 6432, 38, 68, 6478'

5-1/2" 15.5-17# set @ 6570', cmt'd. W/ 300 sx

DRINKARD 6570-6670'



11/17/47 Completede Drinkard Open Hole'  
6570-6670', Acid w/ 1000 gals  
IPF: 278 BO

02/29/55 Fraced w/ 10M gal & 10 M#  
PBWO: 29 x 0x177  
PAWO: 47 x 3 x 87

11/21/77 Ran CBL & CNL, Shot Drinkard  
6353, 6432, 38, 68, 78, (2 JSPF) 10 holes  
Acid w/ 3000 gals & Fraced w/ 49,500 gals  
& 30,000# in 3 stages  
PBWO PBWO

5/81 Acid OH w/ 2500 gals Xylene/ Acid  
Treated Perfs w/ 1500 gals Xylene/ Acid  
PBWO: 18 x 6 x 175 PAWO: 2 x 3 x 310

6/17/81 Placed well on Rod Pump

7/96 Treated with 500 gals Toluene

TD @ 6670'

SWM  
8/31/98

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Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

OIL CONSERVATION DIVISION

P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 198C, Hobbs, NM 88240

DISTRICT II  
P.O. Drawer 1D, Artesia, NM 88210

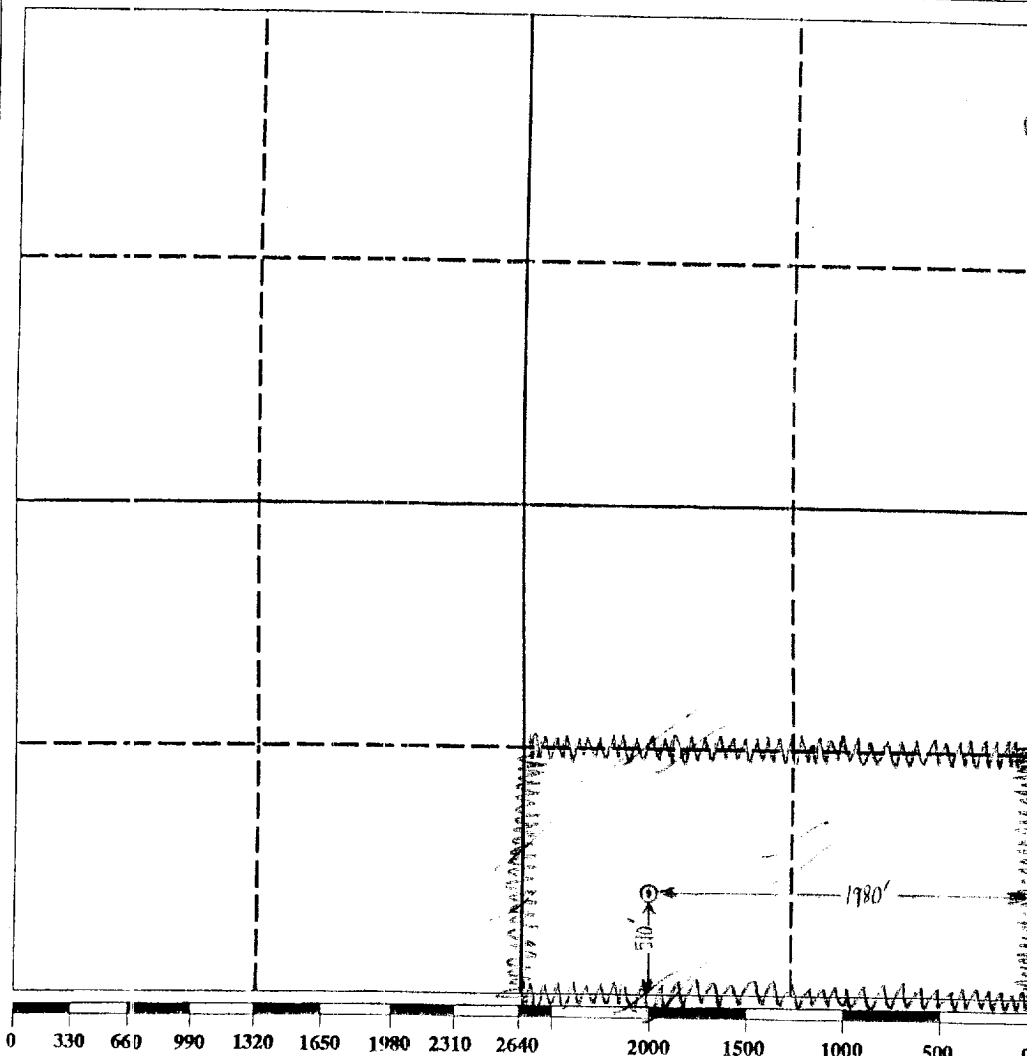
DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

All Distances must be from the outer boundaries of the section

Operator APACHE CORPORATION			Lease D. C. HARDY		Well No. 4
Unit Letter 0	Section 20	Township 21S	Range 37E	County LEA	
Actual Footage: Location of Well: 510' feet from the SOUTH line and 1980' feet from the EAST line					
Ground level Elev. 3485'		Producing Formation TUBB		Pool TUBB OIL & GAS	
					Dedicated Acreage: 4.280 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 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 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 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

FRANCES BYERS

Printed Name

SR. ENGINEERING TECH

Position

APACHE CORPORATION

Company

414-99

Date

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  
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State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised 1-1-89

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P.O. Box 2088  
Santa Fe, New Mexico 87504-2088

DISTRICT I  
P.O. Box 1980 Hobbs, NM 88240

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1000 Rio Brazos Rd., Aztec, NM 87410

WELL LOCATION AND ACREAGE DEDICATION PLAT

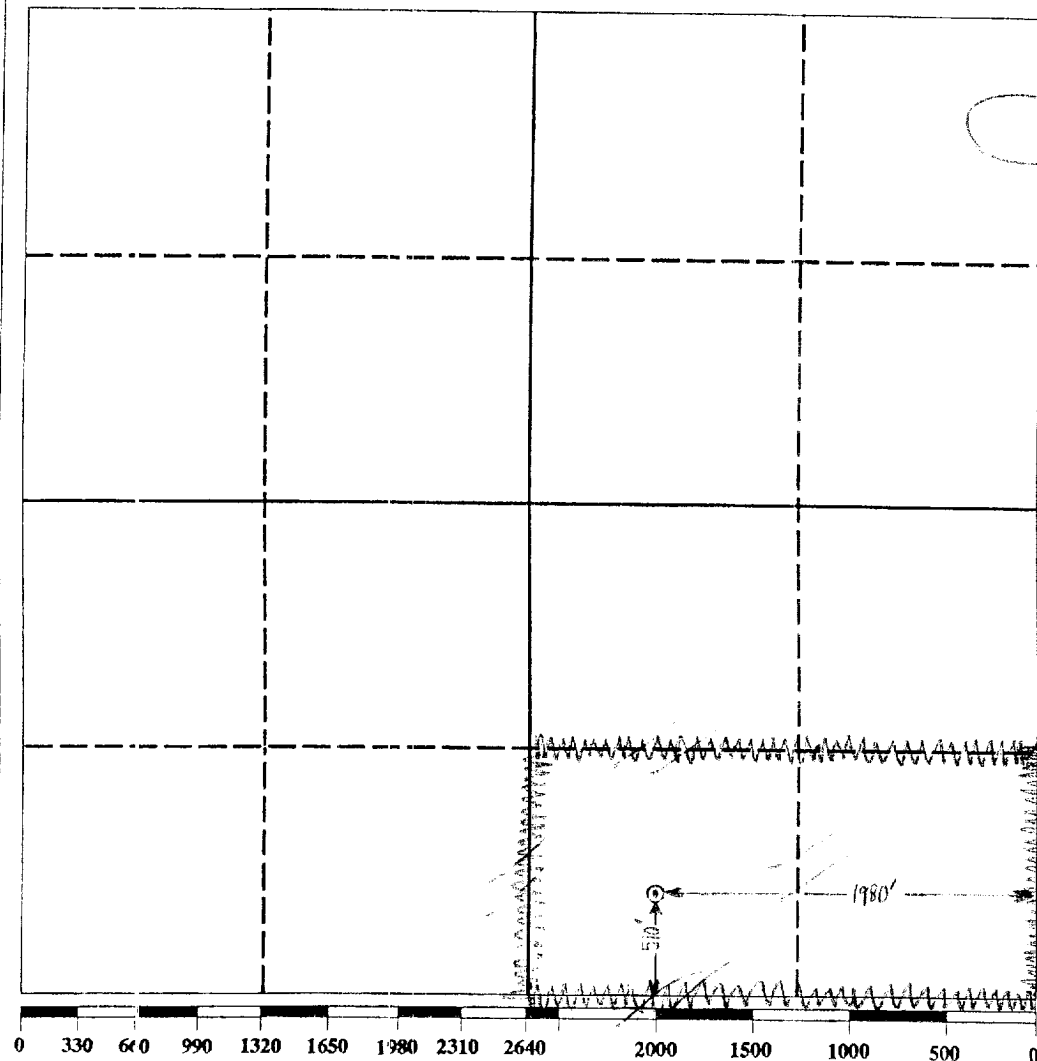
All Distances must be from the outer boundaries of the section

Operator APACHE CORPORATION			Lease D. C. HARDY		Well No. 4
Unit Letter 0	Section 20	Township 21S	Range 37E	County LEA	

Actual Footage Location of Well:

510' feet from the SOUTH line and 1980' feet from the EAST line			
Ground level Elev. 3485'	Producing Formation DRINKARD	Pool DRINKARD	Dedicated Acreage: 4.80 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
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OPERATOR CERTIFICATION

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

Signature *Frances Byers*

Printed Name  
FRANCES BYERS

Position  
SR. ENGINEERING TECH

Company  
APACHE CORPORATION

Date  
4-14-99

Date

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.