

## **INTER-OFFICE MEMO**

DATE: November 14, 2000

TO: Mike Cavanaugh  $W^{\mathcal{M}}$ 

FROM: Mark McClelland MGM

RE: <u>D&E: State A No. 6</u>

Hobbs (Drinkard) Field NW4 NE4, Sec. 32, T18S, R38E, Lea County, NM

Attached for your review and approval is the drilling and completion AFE for the State A No. 6. The risked ROR for this project is 18% with an AFIT PV(12) of \$84M and a PVR of 1.13. Risked net reserves are 116 MBOE resulting in a \$5.48/BOE finding cost. Apache owns a 100% WI, 87.5% NRI in the State A lease. Total well cost is \$638M.

The State A lease is productive from the Grayburg/San Andres, Blinebry (upper and lower) and Drinkard. Of the five wells drilled on the 80 acre lease, three have been unitized into the North Hobbs Grayburg/San Andres waterflood. Of the two remaining wells, the State A No. 4 is temporarily abandoned in the Paddock (6.8 MBO, high water cut) and upper Blinebry (309 MBO). The State A No. 5 is a dual completion producing from the Drinkard and lower Blinebry with squeezed upper Blinebry perfs (305 MBO). It is proposed to drill the No. 6 to develop Drinkard and lower (Blinebry) reserves on the west half of the 80 acre State A lease. A cooperative leaseline injection project is planned to waterflood the upper Blinebry.

Drinkard production from the State A No. 5 totals 44 MBO x 3310 MMCF, with a current flowing rate of 1 BOPD x 156 MCFD. Lower Blinebry production in the No. 5 totals 9 MBO x 1359 MMCF, with a current pumping rate of 3 BOPD x 185 MCFD. Decline rates are essentially flat.

Project economics are based on a Drinkard completion (only) with initial rates of 5 BOPD x 500 MCFD. Oil is forecasted to decline to 2.5 BOPD in 6 months, with an ultimate recovery of 7.5 MBO. Gas is forecasted to decline to 250 MCFD in 6 months, with an ultimate recovery of 750 MMCF. Additional targets in the lower Blinebry and Tubb give the proposed No. 6 substantial upside.

MGM

<u>Distribution:</u> Complete package: Kate Humphrey, Mark McClelland, Lela Cooper

Memo only: Mario Moreno, Doug O'Neil, Dwayne Schultz, John Polasek, Glenn Otness, Janet Romano, John Hale (Midland), Dennis Bickford

AFE's: Vicki Springsteen, Cheryl Stout



# DRILLING AFE

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PROPERTY NO.	31210301		ITS	AFE NO.	W01-0038
COUNTY/STATE	Lea/New Mexico	DISTRICT	Southern	DATE	11/02/2000
EASE NAME	State "A"		6	FIELD	Hobbs Drinkard
PROSPECT/LEASE #		LEG/ ZIP (	AL / Sec. 3	2, T-185-R-38E	
OPERATOR	Apache Corporation	APA	CHÉ WI		
OBJECTIVE Drink	ard	<u>k</u> -			
FOCUS AREA		API	£		
ESTIMATED PROJECT	START DATE	<u>L</u>	ESTIMATED PROJECT O	COMPLETION DATE	
DESCRIPTION	rill Straight hole to 7150'	1			
	FNL X 1980' FEL				·····

ACCT	DESCRIPTION	BUDGET	SUPPLEMENT	TOTAL WELL COST
70002	AIR TRANSPORTATION	0		0
70003	BITS, COREHEADS AND REAMERS	20,000		20,000
70004	CASING CREWS	4,400		4,400
70005	CATERING AND GROCERIES	0	1	0
70006	CEMENT AND CEMENTING SERVICES (INCL. LC PLUG)	24.500		24,500
70009	COMPANY LABOR	0		0
70011	COMPANY SUPERVISION	1,200		1,200
70012	COMPANY VEHICLE EXPENSE	900		900
70019	CONTRACT DRILLING - DAYWORK/TURNKEY Days 22 @ 6,000	132,000		132,000
70020	CONTRACT DRILLING - FOOTAGE Feet @	0	0	0
70017	CONTRACT LABOR	3,000		3,000
70021	CONTRACT SUPERVISION	12,000		12,000
70022	DIRECTIONAL TOOLS	0		0
70025	DRILLING FLUIDS	12,000		12,000
65506	DRILLING OVERHEAD	0		0
70059	DRY HOLE PLUGGING	0		0
70031	EQUIPMENT RENTAL	6,000		6,000
70033	FILTRATION	0		0
70035	FORMATION TESTING	0		0
70037	FUEL AND POWER	D		0
70039	GEOLOGICAL AND ENGINEERING	0		0
70045	INSURANCE	0		0
70046	LAND AND SITE RECLAMATION	6,000		6,000
70047	LEGAL AND CURATIVE	1,000		1,000
70049	LOGGING	11,500		11.500
70050	MARINE TRANSPORTATION	0		0
70054	OTHER INTANGIBLE	3,000		3,000
70064		15,000		15,000
70065	ROADS AND SITE PREPARATION	15,000		15,000
70089	SNUBBING/COIL TUBING UNIT	0		0
70073	TAX ON EQUIPMENT	0		0
70074	TRUCKING AND HAULING	3,500		3,500
70076	TUBULAR INSPECTIONS	2,200		2,200
70077	WATER	20,000		20,000
70078	WELLSITE LOSS AND DAMAGES	6,000		6,000
	SUB-TOTAL INTANGIBLE DEVELOPMENT COSTS	299,200	a	299,200

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PROP	ERTY:

State "A"

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DRILLING - TANGIBLE MATERIAL COSTS

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ACCT			DESCRIPT	ON		BUDGET	SUPPLEMENT	TOTAL WELL COST		
71006	CONDUCTOR CSG	Size	16"	Feet	40	@	62.50	2,500		2,500
71019	INTERMEDIATE CSG	Size	8 5/8"	Feet	3800	@	8.65	32,870		32,870
71024	LINER HANGERS							0		(
71025	LINERS - DRILLING OF	RODUC	TION	Feet	00	@	0.00	0		
71050	SURFACE CSG	Size	13 3/8	Feet	380	@	19.40	7,372		7,372
71056	WELLHEAD ASSEMBL	.Y			3,000		3,000			
	SUB-TOTAL TANGIBLI	E MATERI	AL COSTS		45,742	0	45,742			
	SUB-TOTAL INTANGIE	LE COST	S (PAGE 1)					299,200	0	299,200
	GRAND TOTAL				344,942	0	344,942			
	LESS OUTSIDE INTERESTS							0	0	(
	TOTAL NET COSTS							344,942	0	344,942

	1	<i>.</i>
PREPARED BY	Dennis Bickford	
APPROVED BY	W.M. Cavanaugh	- 11/14/00 DATE
APPROVED BY	Dwayne Schultz	DATE
APPROVED BY		DATE
APPROVED BY		DATE

	GROSS ORIGINAL AFE AMOUNT	344,942
81	APACHE ORIGINAL NET AFE AMOUNT	344,942
C.	NET ASSET TRANSFERS	
	TOTAL ORIGINAL NET AFE (LINE B PLUS LINE C)	344,942
E. (	GROSS SUPPLEMENTS	0
- E	APACHE TOTAL NET AFE AMOUNT	344,942
	IN BUDGET	NOT IN BUDGET

COMPANY	WORKING INTEREST	APPROVED BY	DATE

COMMENTS:



70073

70074

70075

70076

70077

70078

TAX ON EQUIPMENT

TRUCKING AND HAULING

TUBULAR INSPECTIONS

WATER

TUBING CONVEY PERFORATING

WELLSITE LOSS AND DAMAGES

SUB-TOTAL INTANGIBLE DEVELOPMENT COSTS

# COMPLETION AFE

PROPERTY NO	31210301		EMS	ITS	А	FE NO.	W01-0038	-C
COUNTY/STATE	Lea/New Mexico	DISTRICT	S	outhern		DATE	11/02/00	
LEASE NAME	State "A"	WELL NO.	e		FIELD		Hobbs Drinkard	
PROSPECT/LE/	ASE #		LEGAL / ZIP CODE	Sec. 32, 1	-18S-R-	38E		
OPERATOR	Apache Corporation		APACHE WI	100	000000	/0		
OBJECTIVE	Drinkard							
FOCUS AREA			API #					
ESTIMATED PR	OJECT START DATE		ESTIMATED	PROJECT COM	PLETION	DATE		
DESCRIPTION	Drill Straight hole to 7150'		l,		<u></u>	···,	<del></del>	
	660' FNL X 1980' FEL							
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ACCT	DESCRIPTION	BUDGET	SUPPLEMENT	TOTAL WELL COST
70002		0		(
70003	BITS, COREHEADS AND REAMERS	0		
70004	CASING CREWS INCL CD MACHINE	3,800		3,800
70005	CATERING AND GROCERIES	0		(
70006	CEMENT AND CEMENTING SERVICES	10,500		10,500
70009	COMPANY LABOR	0		
70011	COMPANY SUPERVISION	5,000		5,000
70012	COMPANY VEHICLE EXPENSE	500		500
70019	CONTRACT DRILLING - DAYWORK/TURNKEY	10,500		10,500
70020	CONTRACT DRILLING - FOOTAGE	0		0
70017	CONTRACT LABOR	7,500		7,500
70021	CONTRACT SUPERVISION	0		C
0022	DIRECTIONAL TOOLS	0		0
70025		0		
35506	DRILLING OVERHEAD	0		C
70059	DRY HOLE PLUGGING	0		
70031	EQUIPMENT RENTAL	4,500		4,500
70033	FILTRATION	0		
70034	FORMATION STIMULATION	91,000		91,000
70035	FORMATION TESTING	3,500		3,500
70037	FUEL AND POWER	0		0
70039	GEOLOGICAL AND ENGINEERING	0		0
70040	GRAVEL PACK SERVICES	0		c
70045	INSURANCE	0		0
70046	LAND AND SITE RECLAMATION	0		0
0047	LEGAL AND CURATIVE	0		0
0049	LOGGING	4,500		4,500
0050	MARINE TRANSPORTATION	0		0
0054	OTHER INTANGIBLE	2,500		2,500
0064		0		0
0065	ROADS AND SITE PREPARATION	0		0
/0069	SNUBBING/COIL TUBING UNIT	0		0

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3,500

8,000

155,300

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3,500

8,000

155,300

PROPERTY:

PROPERTY: State "A"

\_\_\_\_\_ AFE #: \_\_\_\_\_ Wu \_\_038

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COMPLETION - TANGIBLE MATERIAL COSTS

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ACCT	DESCRIPTION				BUDGET		SUPPLEMENT	TOTAL WELL COST
71024	LINER HANGERS					0		0
71025	LINERS - DRILLING	OR PRODUC	TION			0		0
71032	OTHER SUBSURFA							5,000
71040	PROD. CSG	Size	5 1/2 Feet	7150@	6.25	44,688		44,688
71048	SUCKER RODS					10,000		10,000
71053	TUBING					16,800		16,800
71056	WELLHEAD ASSE	MBLY				2,050		2,050
	SUB-TOTAL TANG		AL COSTS			78,538	0	78,538
	SUB-TOTAL INTAN	GIBLE COSTS	(PAGE 1)			155,300	0	155,300
	GRAND TOTAL					233,838	0	
	LESS OUTSIDE INT	ERESTS				233,838	0	233,838
	TOTAL NET COST					233,838	0	233,838

PREPARED BY	Bryan Chambless	DATE	A.	GROSS ORIGINAL		233,836
APPROVED BY	W.M. Cavanaugh	11/14/00 DATE	В.	APACHE ORIGINAL NET AFE AMOUNT		233,838
APPROVED BY	J Dwayne Schultz	DATE	C.	NET ASSET TRANSFERS		
APPROVED BY		DATE	D,	TOTAL ORIGINAL NET AFE (LINE B PLUS LINE C)		233,838
APPROVED BY		DATE	E.	GROSS SUPPLEMENTS		0
	• <u> </u>		F.	APACHE TOTAL NET AFE AMOUNT		233,838
			h	IN BUDGET	NOT IN	BUDGET

COMPANY	WORKING	APPROVED BY	DATE

COMMENTS:	······································	
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COMMENTS:

PROPERTY NO	31210301	X	EMS TIS	AFE NO.	W01-0038 -E
COUNTY/STAT	Lea/New Mexico	DISTRICT	Southern	DATE	11/02/00
LEASE NAME	State "A"	WELL NO.	6	FIELD	Hobbs Drinkard
PROSPECTILE	ASE #	<b>J</b>	LEGAL / Sec. 32, 1 ZIP CODE Sec. 32, 1	-18S-R-38E	EXPLORATION
OPERATOR	Apache Corporation		APACHE WI 100	.000000%	
OBJECTIVE	Drinkard				
FOCUS AREA	· · · · · · · · · · · · · · · · · · ·		API#		
ESTIMATED PF	OJECT START DATE		ESTIMATED PROJECT CON	PLETION DATE	<u></u>
DESCRIPTION	Drill Straight hole to 7150'				<u> </u>
	660' FNL X 1980' FEL				

EQU	IPMENT	- TAN	IGIBLE	MATER	IAL COS	TS

ACCT	DESCRIPTION	BUDGET	SUPPLEMENT	TOTAL WELL COST
71001		41,000		41,000
71005	COMPRESSOR STATIONS	0		
71008	DEHYDRATION / AMINE UNITS	0		0
71012	FLOW LINES TO BATTERY	3,100		3,100
71017	HIGH PRESSURE KNOCK-OUT	0		0
71007	ONSHORE PLATFORM	0		0
71033	OTHER SURFACE EQUIPMENT	8,000		000,8
71039	PRIME MOVER	2,500		2,500
71043	PUMPS	0		0
71045	SALES LINE	0		0
71046	SEPARATORS	4,600		4,600
71051	TANK BATTERY	0		0
71052	TREATORS	0		0
	SUB-TOTAL TANGIBLE MATERIAL COSTS	59,200	0	59,200
	GRAND TOTAL	59,200	0	59,200
	LESS OUTSIDE INTERESTS	0	0	0
	TOTAL NET COSTS	59,200	0	59,200

			I		IN BUDGET	NOT II	NBUDGET
					APACHE TOTAL NET AFE AMOUNT		59,200
APPROVED BY		DATE		E.	GROSS SUPPLEMENTS		0
APPROVED BY		DATE		D.	TOTAL ORIGINAL NET AFE (LINE B PLUS LINE C)		59,200
APPROVED BY	1	DATE		C.	NET ASSET TRANSFERS		
APPROVED BY	WMCavarand	-11/14/2 DATE	Ø	6.	APACHE ORIGINAL NET AFE AMOUNT		59,200
PREPARED BY	Bryen Chamblen	DATE		А.	GROSS ORIGINAL AFE AMOUNT		59,200

COMPANY	WORKING	APPROVED BY	DATE
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### DRILLING AND COMPLETION AF STIMATE OF COSTS AND AUTHORIZATION FOR L . . IRE

PROPERTY NO.	31210301	] [X	EMS TIS	AFE NO.	W01-0038
COUNTY/STATE	Lea/New Mexico	DISTRICT	Southern	DATE	11/02/00
LEASE NAME	State "A"	WELL NO.	6	FIELD	Hobbs Drinkard
PROSPECT/LEASE #			LEGAL / ZIP CODE Sec. 32,	T-18S-R-38E	EXPLORATION
OPERATOR	Apache Corporation		APACHE WI 10	0.000000%	
	kard				PUD
FOCUS AREA			API #		
ESTIMATED PROJEC	T START DATE		ESTIMATED PROJECT CO	MPLETION DATE	
DESCRIPTION	Drill Straight hole to 7150'				
660	FNL X 1980' FEL				

	INTANGIBLE DEVELOPMENT COSTS						
ACCT	DESCRIPTION	BUDGET	SUPPLEMENT	TOTAL WELL COST			
70002	AIR TRANSPORTATION	0	0				
70003	BITS, COREHEADS AND REAMERS	20,000	0	20,000			
70004	CASING CREWS	8,200	0	8,200			
70005	CATERING AND GROCERIES	0	0	0			
70006	CEMENT AND CEMENTING SERVICES	35,000	0	35,000			
70009	COMPANY LABOR	0	0	0			
70011	COMPANY SUPERVISION	6,200	0	6,200			
70012	COMPANY VEHICLE EXPENSE	1,400	0	1,400			
70019	CONTRACT DRILLING - DAYWORK/TURNKEY	142,500	0	142,500			
70020	CONTRACT DRILLING - FOOTAGE	0	0	0			
70017	CONTRACT LABOR	10,500	0	10,500			
70021	CONTRACT SUPERVISION	12,000	0	12,000			
70022	DIRECTIONAL TOOLS	0	0	0			
70025		12,000	0	12,000			
65506	DRILLING OVERHEAD	0	0	0			
70059	DRY HOLE PLUGGING	0	0	0			
70031	EQUIPMENT RENTAL	10,500	0	10,500			
70033	FILTRATION	0	0	0			
70034	FORMATION STIMULATION	91,000	0	91,000			
70035	FORMATION TESTING	3,500	0	3,500			
70037	FUEL AND POWER	0	0	0			
70039	GEOLOGICAL AND ENGINEERING	0	0	0			
70040	GRAVEL PACK SERVICES	0	0	0			
70045	INSURANCE	0	0	0			
70046	LAND AND SITE RECLAMATION	6,000	0	6,000			
70047	LEGAL AND CURATIVE	1,000	0	1,000			
70049	LOGGING	16,000	0	16,000			
70050		0	0	0			
70054	OTHER INTANGIBLE	5,500	0	5,500			
70064	RIG MOBILIZATION	15,000	0	15,000			
70065	ROADS AND SITE PREPARATION	15,000	0	15,000			
70069	SNUBBING/COIL TUBING UNIT	0	D	0			
70073	TAX ON EQUIPMENT	0	0	0			
70074		7,000	0	7,000			
70075		0	0	0			
70076	TUBULAR INSPECTIONS	2,200	0	2,200			
70077	WATER	28,000	0	28,000			
70078	WELLSITE LOSS AND DAMAGES	6,000	0	6,000			
	SUB-TOTAL INTANGIBLE DEVELOPMENT COSTS	454,500	0	454,500			

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TANGIBLE MATERIAL COSTS

ACCT	DESCRIPTION	BUDGET	SUPPLEMENT	TOTAL WELL COST
71001		41,000	o	41,000
71005	COMPRESSOR STATIONS	0	0	0
71006	CONDUCTOR CASING	2,500	0	2,500
71008	DEHYDRATION / AMINE UNITS	0	0	0
71012	FLOW LINES TO BATTERY	3,100	0	3,100
71017	HIGH PRESSURE KNOCK-OUT	0	0	0
71019	INTERMEDIATE CASING	32,870	0	32,870
71024	LINER HANGERS	0	0	0
71025	LINERS - DRILLING OR PRODUCTION	0	0	0
71007	ONSHORE PLATFORM	0	0	0
71032	OTHER SUBSURFACE EQUIPMENT	5,000	0	5,000
71033	OTHER SURFACE EQUIPMENT	8,000	0	8,000
71039	PRIME MOVER	2,500	0	2,500
71040	PRODUCTION CASING	44,688	0	44,688
71043	PUMPS	0	0	0
71045	SALES LINE	0	0	0
71046	SEPARATORS	4,600	0	4,600
71048	SUCKER RODS	10,000	0	10,000
71050	SURFACE CASING	7,372	0	7,372
71051	TANK BATTERY	0	0	0
71052	TREATORS	0	0	0
71053	TUBING	16,800	0	18,800
71056	WELLHEAD ASSEMBLY	5,050	0	5,050
	SUB-TOTAL TANGIBLE MATERIAL COSTS	183,480	0	183,480
	SUB-TOTAL INTANGIBLE COSTS (PAGE 1)	454,500	0	454,500
	GRAND TOTAL	637,980	0	637,980
	LESS OUTSIDE INTERESTS	0	0	0
	TOTAL NET COSTS	637,980		637,980

PREPARED BY APPROVED BY APPROVED BY APPROVED BY

APPROVED BY

Dennis Bickford (1/SG) Dennis Bickford DATE W.M. Cavanaugh DATE Dwayne Schultz DATE DATE DATE

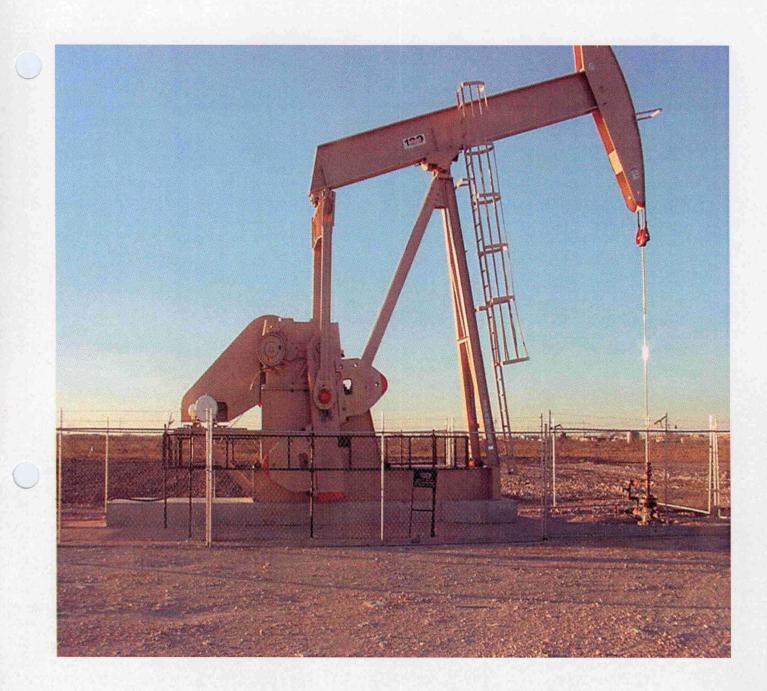
	IN BUDGET	NOT IN BUDGET
F.	APACHE TOTAL NET AFE AMOUNT	637,980
E.	GROSS SUPPLEMENTS	0
D,	TOTAL ORIGINAL NET AFE (LINE B PLUS LINE C)	637,980
C.	NET ASSET TRANSFERS	
В.	APACHE ORIGINAL NET AFE AMOUNT	637,980
Α.	GROSS ORIGINAL AFE AMOUNT	637,980

COMPANY	WORKING INTEREST	APPROVED BY	DATE

COMMENTS:

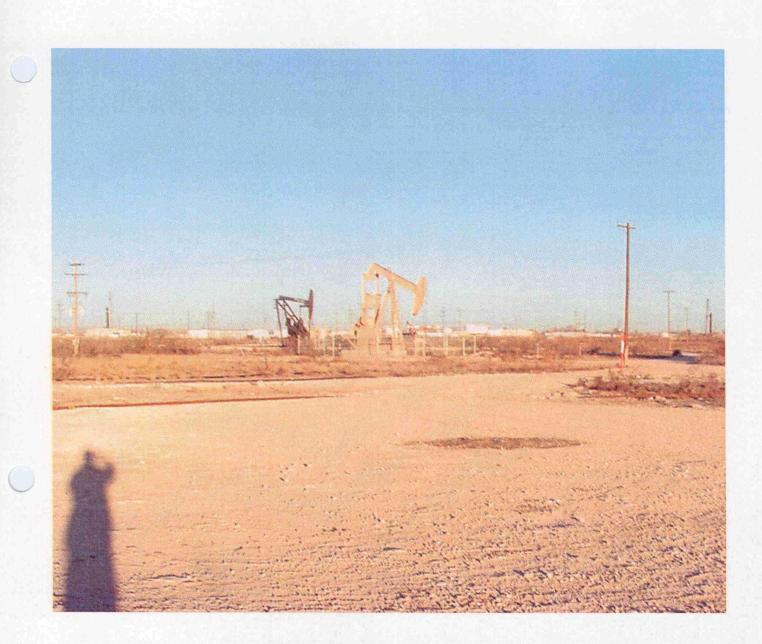


This is a picture of the well sign for the Apache State A #6 showing the location of the well.

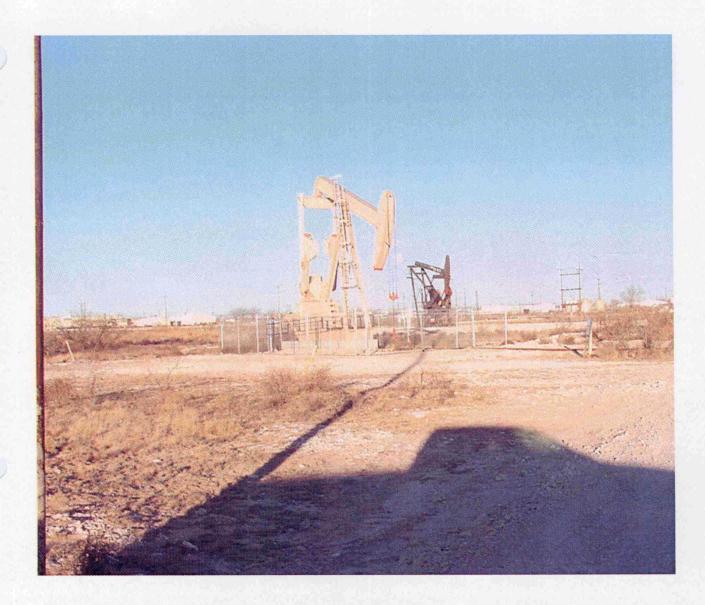


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This a picture of the pumping unit on the State A # 6 looking from north to south.

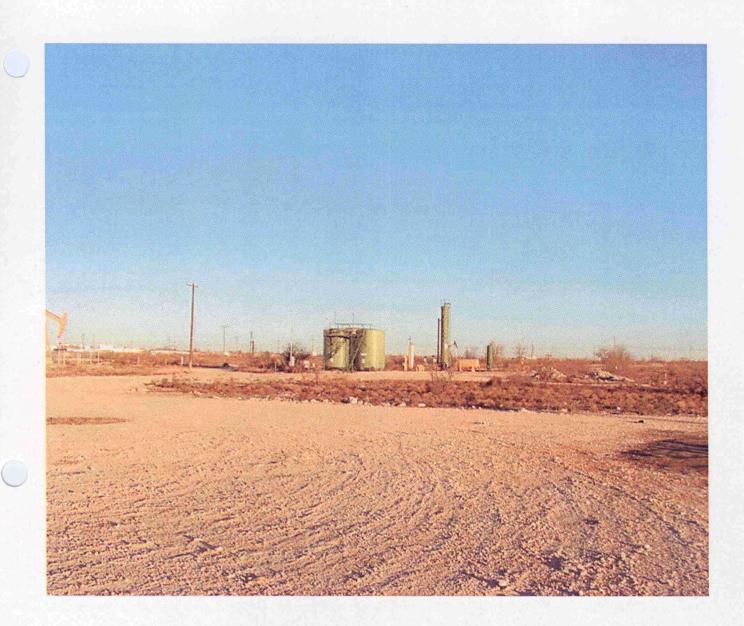


This is a picture of the Apache owned State A # 4 (tan unit) along with the Oxy owned North Hobbs Unit # 32-313 pumping unit both of these wells are just to the west and north of the State A tank Btry.

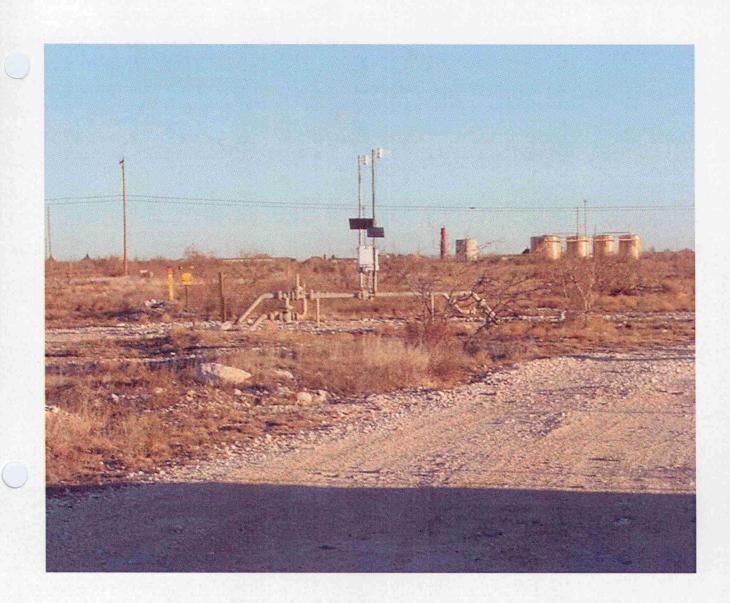


This picture was a little closer look at the Apache #4 well and the OXY # 32-313 well that are located on the west side of the tank Btry.

We have to remember that the reason they could not drill the State A # 6 at 660 from north line and 1980 from the east line is because the State A tank Btry. is located exactly at that spot.



This is a picture of the State A tank Btry. that is located 660' FNL- 1980 FEL. The picture was taken as I stood next to the wellhead of the State A # 6. I was looking back toward the north when I took the picture. The State A # 6 is located 990' FNL and 1817' FEL.



This picture shows some of the meter runs and gas pipelines in the area just on the north side of the State A tank Btry



This is a picture of the large Playa lakebed that is on the east side of State A tank Btry. It is about 300 feet away from the tank Btry



Another look at the lakebed that is just on the east side of the State A Btry explaining why they did not move to the east to drill the well.