ຼ Fo m 3160-3 (July 1992) D	UNITED STAT			(Other Instructions of reverse side)		F - OG - IG FORM APPROVED OMB NO. 1004-0136 Expires: February 28, 1995 5. LEASE DESIGNATION AND SERIAL NO. NMLC-031741(A)
APPLI	CATION FOR PERMI	TO DRI	LL OR I	DEEPEN		6IF INDIAN, ALLOTTEE OR TRIBE NAME
la type of work]			7. UNIT AGREEMENT NAME
b. TYPE OF WELL OIL GAS WELL WELL	L OTHER		SINGLE ZONE	MULTIPLE ZONE	X	8. FARM OR LEASE NAME, WELL NO. 24426 Hawk A #20 9. API WELL NO.
2. NAME OF OPERATOR	ache Corporation (CO14	63 Bond) (0873 00	GRID		30-025-39021
3. ADDRESS AND TELEPH Adache: 6120 S. Yale Av 4. LOCATION OF WELL (R	ONE NO. Agent: 705 W Mescalero Rc c. #1500. Tulsa. OK 74136. 918-49 coport location clearly and in accorda FNL, 1370' FEL, Unit G (SW	I., Roswell, NM 1-4801 (Terry C nce with any Sta 1/4NE ¹ /4)	88201 505- <u>iilbert)</u> S ate requ		Agent o Rd.	SEC., T., R., M., OR BLK.
14. DISTANCE IN MILES A	ND DIRECTION FROM NEAREST TOWN	OR POST OFFICI	E*			12. COUNTY FOR PARISH 13.STATE
±3.5 miles North	hwest of Eunice, NM					Lea NM
15. DISTANCE FROM PRO LOCATION TO NEARE PROPERTY OR LEASE (Also to nearest drlg, 18. DISTANCE FROM PRO	ST 1130' LINE, FT. . unit line, if any)	· · · · · · · · · · · · · · · · · · ·	560	ACRES IN LEASE		ADDITION CONTREMENTATION OF CONTREMENTATION OF CABLE TOOLS
	RILLING, COMPLETED 771'		4,400			Rotary
ware and the second	whether DF, RT, GR, etc.)		I		22	2. APPROX. DATE WORK WILL START * ASAP
23.	PROPOS	ED CASING A	ND CEMEN	TING PROGRAM	Witt	ness Surface Casing
SIZE OF HOLE	GRADE, SIZE OF CASING	WEIGHT PE		SETTING DEPTH		QUANTITY OF CEMENT
	<u> </u>	See Ex	hibit	A		
				-		
See attached Ex Exhibit A: Drill Exhibit B: H ₂ s I Exhibit C: Surfa IN ABOVE SPACE DESCRIBI or deepen directionally, gi 24.	hibit Afor complete Dril ing Program Exhi Plan Exhi ace Use Plan Exhi PROPOSED PROGRAM: If proposal i ve pertinent data on subsurface locat	pletion - 2 ling Progra <u>l</u> bit D: Surv bit E: Loc: bit F: Exis s to deepen, giv ions and measu	8 days am Exhibits vey Plat ation Pla ting Wel c data on pro	E: ut E: Il Plat sent productive zone a vertical depths. Give b	khibi and prop plowout	t G Kig Layout t H BOP Layout posed new productive zone Ik proposal is to drill preventer program, if any.
PERMIT NO.			A	PPROVAL DATE		
conduct operations there CONDITIONS OF APPROV APPROVED BY S/TO Title 18 U.S.C. Section 1	on. AL, IF ANY My J. Herrell 001, makes it a crime for any pers	TITLE *See Instru son knowingly	LD M Ictions On and willfully	ANAGER Reverse Side A to make to any dep	the sul	bject lease which would entitle the applicant to DATE JUL 1 3 2006 ROVAL FOR 1 States are taken
nomous or naudulent Sta	tements or representations as to	any matter wit		APPRON	al R L St	Subject to Equirements and Tpulations

.

..

			2	State o	of New	Mexico		Exhibi	t D-1
DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 66240 DISTRICT II	D	OU	-			nources Department	(ON Submit		orm C-102 NE 10, 2003
1301 W. GRAND AVENUE, ARTESIA, NH BI	8210		1220 S	OUTH	ST. F	RANCIS DR.		State Lease	- 4 Copies - 3 Copies
DISTRICT III 1000 Rie Brazos Rd., Aztec, NM	87410	:	Santa	Fe, No	ew Me	xico 87505			o copica
DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FE, N	M 87605	WELL LO	CATION	AND A	ACREA	GE DEDICATIO	ON PLAT	C AMENDE	D REPORT
API Number			Pool Code		F		Pool Name	1	
<u>30-025-</u> Property Code		<u> </u>	0601	Prop	erty Nam	enrose S	Kelly Ur	Ven Num	ber
24426	<u></u>				WK A			20	
0grid No. 0873			APA		ator Nam CORPO	RATION		Elevation 3522	
				Surfa	ce Loca	ition		" I	
UL or lot No. Section	Township	Range	Lot Idn	Feet fr	om the	North/South line	Feet from the	East/West line	County
G 8	21-S	37-Е	[15	10	NORTH	1370	EAST	LEA
(<u> </u>			·····			rent From Sur			
UL or lot No. Section	Township	Range	Lot Idn	Feet fr	om the	North/South line	Feet from the	East/West line	County
Dedicated Acres Joint or 40.00	r Infill C	Consolidation	Code 01	rder No.	1	V.S.L-538	56250>		
NO ALLOWABLE W						JNTIL ALL INTE APPROV' ~_BY		EEN CONSOLIDA	ATED
			1				OPERATO	OR CERTIFICAT	
			1					y certify the the in	
			1		.		11	n is true and compl vledge and belief.	ets to the
					151-		1 A	n	
			1	3523	3'	3515.9'	Bana	William	5
					0		Signature	William	5
				1	600 600	1	Printed Nam	ie	
				3529.		3517.5'	Title	of. Cler	<u>~</u>
				~	1997 - N. A. M.		$\frac{3}{Date}$	14/06	
				•	a hereita ta				
	<u> </u>		Junin					OR CERTIFICA	FION
		GEODETIC (NAD 2	COORDINA 27 NME	IES	1			y that the well loca vas plotted from fiel	
		Y=546	236.0 N					made by me or nd that the same i	
		X=855	5427.5 E				correct to t	he best of my beli	of.
		LAT.=32*2 LONG.=103			1		NOVE	MBER 30, 200)5
				· · · · · · · · · · · · · · · · · · ·	!		Date Survey	MBER 30, 200 Sea 57/DS	JR
			1				Professiona	MEL V	34
					I		hon A	GQ Oin	9/05
							1 Juny	05.11.1822	5
			1				Certificate i	No. RONALD . J. BID	SON 3239 12641
	L							CFESSIC UNIT	12041







SECTION 8, TOWNSHIP 21 SOUTH, RANGE 37 EAST,

Exhibit D-2



DISTRICT, I 1625 N. PRENCH DR., HORES, NM 88240

1301 W. GRAND AVENUE, ARTESIA, NM 88210

1000 Rio Brazos Rd., Aztec, NM 87410

ı

DISTRICT II

DISTRICT III

State of New Mexico

Energy, Minerals and Natural Resources Department

Exhibit D-3

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Form C-102 Revised JUNE 10, 2003 Submit to Appropriate District Office State Lease - 4 Copies Fee Lease - 3 Copies

DISTRICT IV 1220 B. ST. PRANCIS DR., SANTA PR., NH 87	WELL LOCATION AN	ND ACREAGE DEDICAT	ION PLAT	AMENDED REPORT
API Number	Pool Code		Pool Name	
Property Code	_	Property Name HAWK A	·	Well Number 20
OGRID No.	АРАСН	Operator Name IE CORPORATION		Elevation 3522'
	St	urface Location		
UL or lot No. Section Tor	vnship Range Lot Idn Fe	eet from the North/South line	Feet from the	Bast/West line County

1	UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	Bast/West line	County	ł
	G	8	21–S	37-E		1510	NORTH	1370	EAST	LEA	

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
Dedicated Acres	Joint or	infill Co	nsolidation (Code Or	ier No.		<u></u>	<u> </u>	

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	HAWK A #9	HAWK A #12	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and betief.
			05.11.1822 Certificate No. RONALD J. EIDSON 3239 GARY EIDSON 12841

VICINITY MAP

	r r	- T				<u> </u>				و نواری است.			
	20 2	1	22	23		88 19 24	20	21	- 55	23	24 80 68 24 80 88 24 88	19 20)
MAI	29 23 DDOX		27 <u>HILL</u>	26	25	30	29	28	27	26	25	30 e	8 30 E
	1	α Σ 33	34	25 411	36 (31	32	33	34	35	36	31 3	5
eur -	<u>ST, 175</u> 4	αο 15 3 CURR E36	2 Y	1	6	5	4	3	(i) (i) (i) 2	8 1 25 1	6	5	4
ο゚Ι	ר אנרג גורג	NTF ¹⁰	CR "	HAW	ка,#. ,		• 9 DE		10 11	12	7	8	9
GULF	E31 16 ST. 176	00 15 5 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	14 CE MUNICIPAL EATION AREA	13 13	Pr 18	17 E36	10KNEK	15		13 TY private	RD	PRIVATE RD	2
20	21	57.8	23	24 24	5 19	20			E38 23	24	R 37 E R 38 E I I I I I I I I I I I I I I I I I I I	20	80 81 21
9	LEA C 28	D EUNICE 27	AP 26 CDYDT		57.30	29	z 28 [E33	INERTAL	51. 18 52	PRIVATE RD	29	28
82	33	34	35	36 55	31	зг ТЕХ	E23		34 -> -> ST. 2	234	³¹ ST	32 234	33
5	4	3	2	1	6	5	4 EGIDN	3	2	ARD	6	5	4
8	9	10	11 DELAW	12 ARE BASI	7	8	۳ ۲ ۱	10	87.18	1 E17 DRINKARD	7	8	9
F	16	15	14	E21 13	18	E	7 16	15	1	13	8 38 E 8 38 E 8 28	17	16 64
20	sı.	- 22	23	24. 0	R 37 E	9 20	2	1	22 23	. 24	19	20	85 8 33

the second second

SEC. 8 TWP. 21-S RGE. 37-E

та н 1

÷

٢

. . . .

SURVEY	N.M.P.M.
COUNTY	LEA
DESCRIPTION	1510' FNL & 1370' FEL
ELEVATION	
OPERATOR	APACHE CORPORATION
LEASE	HAWK A



SCALE: 1'' = 2 MILES

Exhibit G CapStar Drilling, Inc. LOCATION SPECIFICATIONS AND RIG LAYOUT FOR EARTH PITS





Location Specs

Exhibit H





EXHIBIT "A" Hawk A # 20 **DRILLING PROGRAM**

The geological surface formation is recent Permian with quaternary alluvium and other surficial deposits. I. II.

Estimated Tops of Geological Markers:

FORMATION	<u>DEPTH</u>
Quaternary alluvials	Surface
Rustler	1321'
Seven Rivers	2932'
Queen	3485'
Grayburg	3755'
San Andres	4050'
TD	4400'

III.

Estimated depths at which water, oil, gas, or other mineral-bearing formations are expected to be encountered: OLDOTANOS

SUBSTANCE	DEPTH
Oil	Grayburg@3755'
	San Andres@4050'
Gas	None anticipated

None anticipated

All fresh water and prospectively valuable minerals (as described by BLM) encountered during drilling will be recorded by depth and adequately protected. All oil and gas shows within zones of correlative rights will be tested to determine commercial potential.

IV. A. Proposed Casing Program:

Fresh Water

		···				
	<u>CASING</u>		<u>WEIGHT</u>			ESTIMATED TOC -
<u>HOLE</u>	SIZE		<u>PER</u>		<u>SACKS</u>	<u>REMARKS</u>
<u>SIZE</u>	OD / ID	<u>GRADE</u>	<u>FOOT</u>	DEPTH	<u>CEMENT</u>	
12 1/4"	8 5/8"	J55 STC	24#	400'	400	TOC - Surface
	8.097"					8.9 ppg Water-based
Witne	ss Surface (Casing				Mud;
		9				89 ° F Est. Static Temp;
						83 ° F Est. Circ. Temp.
7 7/8"	5 1/2"	J55 LTC	17#	4,400'	850	TOC – Surface
	4. 892"					Float Collar set @
						4355"/ 10.10 ppg
						Brine Mud;
						123 ° F Est. Static
						Temp;
						104 ° F Est. Circ. Temp.

B. Proposed Cement Program:

A AND AND A AND	LEAD	SLURRY		TAIL	SLURRY		DISPLACEMENT
<u>CASING</u> 8 5/8"	400 sacks 35:65	Poz:Class C	NO	NE			24 bbls Fresh Water @
	Cement $+ 2\%$ by						8.33 ppg
	Chloride $+ 0.25$						ciec Fr8
	Flake + 0.003 g	ps FP-6L + 6%					
	bwoc Bentonite						
	536 Vol. Cu Ft	-					
	1.94 \	ol. Factor					
	Slurry Weight (ppg) 14.8					
	Slurry Yield (cf	,					
	Amount of Mix	·•••• /					
		ed Pumping Ti					
<u>_</u>	<u>70 BC (</u>	<u>(HH:MM)-4:00</u>	2				
				-	Calculations:		
360		0.4127 cf/ft		100% exc			148.57 cf
40 f		x 0.8214 cf/		0% exces			32.8 cf
40 f	t x	0.3576 cf/ft		0% exce	ss =		14.3 cf (inside pipe)
		TOTAL SL	URRY VC	DLUME	=		195.67 cf
~					=		34.8 bbls
Spacer	20.0 bbls Wa	ater @ 8.33 ppg	5				
CASING	LEAD	SLURRY		TAIL	SLURRY		DISPLACEMENT
<u>Unionito</u>					<u>MORAL</u>		
5 ½"	450 sacks (50:5	0) Poz (Fly As	,	sacks (50:5)) Poz (Fly		100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen	0) Poz (Fly As t + 5% bwow	Ash)	sacks (50:5) Class C Co)) Poz (Fly ement + 5% b		
	450 sacks (50:5 Class C Cemen Sodium Chlorid	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s	Ash) ack Sodi	sacks (50:5) Class C Co)) Poz (Fly		100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chloric Cello Flake + 0	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L	Ash) ack Sodi	sacks (50:5) Class C Co um Chlorid	0) Poz (Fly ement + 5% b e +0.003 gps		100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite	Ash) ack Sodi	sacks (50:59 Class C Co um Chlorid 540 V)) Poz (Fly ement + 5% b e +0.003 gps ol. Cu Ft		100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143	60) Poz (Fly As t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft	Ash) ack Sodi L + 6L	sacks (50:50):Class C Ce um Chlorid 540 V 1.84 V)) Poz (Fly ement + 5% b e +0.003 gps ol. Cu Ft ol. Factor		100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Cu Ft	Ash) ack Sodi + 6L Slur	sacks (50:59 Class C Co um Chlorid 540 V 1.84 V ry Weight (D) Poz (Fly ement + 5% b e +0.003 gps ol. Cu Ft ol. Factor opg) 14.2 		100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8	Ash) ack Sodi + 6L Slur Slur	sacks (50:50 Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf	 D) Poz (Fly ement + 5% b) e +0.003 gps ol. Cu Ft ol. Factor opg) 14.2 /sack) 1.35 	FP-	100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Yield (c	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54	Ash) ack Sodi 2 + 6L Slun Slun Amo	sacks (50:50):Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix	D) Poz (Fly ement + 5% b e +0.003 gps ol. Cu Ft ol. Factor opg) 14.2 (sack) 1.35 Water (gps) 6	FP-	100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Yield (c Amount of Mix	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54	Ash) ack Sodi 2 + 6L Slur Slur Amo Amo	sacks (50:56):Class C Ce um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix	 i) Poz (Fly ement + 5% b' e +0.003 gps ol. Cu Ft ol. Factor opg) 14.2 /sack) 1.35 Water (gps) 6 Fluid(gps) 6.3 	FP- 5.34; 34;	100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Yield (c Amount of Mix 14.72;	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 & Water (gps)	Ash) ack Sodi 2 + 6L Slur Slur Amo Estir	sacks (50:56):Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix mated Pumj	 b) Poz (Fly ement + 5% b) e +0.003 gps cl. Cu Ft cl. Factor cpg) 14.2 /sack) 1.35 Water (gps) 6.5 Fluid(gps) 6.5 bing Time - 76 	FP- 5.34; 34;	100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Yield (c Amount of Miz 14.72; Amount of Miz	60) Poz (Fly As t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 & Water (gps) A Fluid (gps) 14	Ash) ack Sodi + 6L Slum Slum Amo Estin	sacks (50:56):Class C Ce um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix	 b) Poz (Fly ement + 5% b) e +0.003 gps cl. Cu Ft cl. Factor cpg) 14.2 /sack) 1.35 Water (gps) 6.5 Fluid(gps) 6.5 bing Time - 76 	FP- 5.34; 34;	100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Weight Slurry Yield (c Amount of Mix 14.72; Amount of Mix Estimated Pum	60) Poz (Fly As t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 k Water (gps) 14 oping Time - 70	Ash) ack Sodi + 6L Slum Slum Amo Estin	sacks (50:56):Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix mated Pumj	 b) Poz (Fly ement + 5% b) e +0.003 gps cl. Cu Ft cl. Factor cpg) 14.2 /sack) 1.35 Water (gps) 6.5 Fluid(gps) 6.5 bing Time - 76 	FP- 5.34; 34;	100 bbls 2% Kcl Water
	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Yield (c Amount of Miz 14.72; Amount of Miz	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 & Water (gps) & Fluid (gps) 14 uping Time - 70 IM)-4:00;	Ash) ack Sodi + 6L Slum Slum Amo Estin .72	sacks (50:50 Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix mated Pumj (HH:MM)-	 b) Poz (Fly ement + 5% b) e +0.003 gps c) Cu Ft c) Cu Ft c) Factor c) 14.2 f/sack) 1.35 Water (gps) 6 Fluid(gps) 6.5 bing Time - 76 c) 0; 	FP- 5.34; 34;	100 bbls 2% Kcl Water
5 1⁄2"	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Weight Slurry Yield (c Amount of Min 14.72; Amount of Min <u>Estimated Pum</u> <u>BC (HH:M</u>	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 K Water (gps) K Fluid (gps) 14 uping Time - 70 IM)-4:00;	Ash) ack Sodi + 6L Slur Slur Amo Estin .72 5 <u>1/2" Casin</u>	sacks (50:56):Class C Ce um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf ount of Mix ount of Mix mated Pump (HH:MM)-: g: Volume)) Poz (Fly ement + 5% b e +0.003 gps ol. Cu Ft ol. Factor opg) 14.2 /sack) 1.35 Water (gps) 6 Fluid(gps) 6. bing Time - 7 3:00; Calculations:	FP- 5.34; 34;) BC	100 bbls 2% Kcl Water @ 8.43 ppg
5 1⁄2"	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Weight Slurry Yield (c Amount of Mix 14.72; Amount of Mix <u>Estimated Pum</u> <u>BC (HH:M</u>	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 K Water (gps) K Fluid (gps) 14 pping Time - 70 IM)-4:00; X 0.1	Ash) ack Sodi + 6L Slur Slur Amo Estin .72 5 <u>1/2" Casin</u> 926 cf/ft	sacks (50:56):Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf ount of Mix ount of Mix mated Pump (HH:MM)-: <u>g: Volume</u> with	 b) Poz (Fly ement + 5% b) e +0.003 gps c) Cu Ft c) Factor opg) 14.2 (sack) 1.35 Water (gps) 6 Fluid(gps) 6 bing Time - 76 3:00; 	FP- 5.34; 34; 0 BC	100 bbls 2% Kcl Water @ 8.43 ppg 77.04 cf
5 ½" 40 26	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Yield (c Amount of Miz 14.72; Amount of Miz <u>Estimated Pum</u> <u>BC (HH:M</u>	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 x Water (gps) x Fluid (gps) 14 pping Time - 70 IM)-4:00; x 0.1 x 0.1	Ash) ack Sodi 2+ 6L Slurn Slurn Amo Estin .72 5 <u>1/2" Casin</u> 926 cf/ft 733 cf/ft	sacks (50:50):Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix punt of Mix mated Pump (HH:MM)-: <u>g: Volume</u> with with	 b) Poz (Fly ement + 5% b) e +0.003 gps c) Cu Ft c) Factor c) 14.2 (sack) 1.35 Water (gps) 6 Fluid(gps) 6 foing Time - 76 c) 2 c) 3 c) 2 c) 4 <lic) 4<="" li=""> c) 4 <lic) 4<="" li=""> <lic) 4<="" li=""> <</lic)></lic)></lic)>	FP- 5.34; 34; 0 BC = =	100 bbls 2% Kcl Water @ 8.43 ppg 77.04 cf 1189 cf
5 ½" 40 26	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Weight Slurry Yield (c Amount of Miz 14.72; Amount of Miz <u>Estimated Pum</u> <u>BC (HH:M</u>	50) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 k Water (gps) k Fluid (gps) 14 uping Time - 70 IM)-4:00; x 0.1 x 0.1 x 0.1	Ash) ack Sodi 2+ 6L Slum Slum Amo Estin .72 5 1/2" Casin 926 cf/ft 733 cf/ft	sacks (50:56):Class C Ce um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix punt of Mix mated Pump (HH:MM)-: <u>g: Volume</u> with with	 b) Poz (Fly ement + 5% b) e +0.003 gps ol. Cu Ft ol. Factor ppg) 14.2 /sack) 1.35 Water (gps) 6 Fluid(gps) 6. bing Time - 7 8:00; Calculations: 0% excess 59% excess 85% excess 	FP- 5.34; 34;) BC = =	100 bbls 2% Kcl Water @ 8.43 ppg 77.04 cf 1189 cf 433.0 cf
5 ½" 40 26	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Yield (c Amount of Miz 14.72; Amount of Miz <u>Estimated Pum</u> <u>BC (HH:M</u>	60) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 x Water (gps) x Fluid (gps) 14 toping Time - 70 IM)-4:00; x 0.1 x 0.1 x 0.1 x 0.1 x 0.1	Ash) ack Sodi + 6L Slurn Slurn Amo Estin .72 5 <u>1/2" Casin</u> 926 cf/ft 733 cf/ft 305 cf/ft	sacks (50:56 Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix mated Pump (HH:MM)- g: Volume with with with with with	 b) Poz (Fly ement + 5% b) e +0.003 gps c) Cu Ft c) Factor opg) 14.2 (sack) 1.35 Water (gps) 6 Fluid(gps) 6 foing Time - 76 c) calculations: 0% excess 59% excess 59% excess 0% excess 0% excess 	FP- 5.34; 34; 0 BC = =	100 bbls 2% Kcl Water @ 8.43 ppg 77.04 cf 1189 cf 433.0 cf 5.2 cf(inside pipe)
5 ½" 40 26	450 sacks (50:5 Class C Cemen Sodium Chlorid Cello Flake + 0 10% bwoc Ben 1,143 2.66 V Slurry Weight Slurry Weight Slurry Yield (c Amount of Miz 14.72; Amount of Miz <u>Estimated Pum</u> <u>BC (HH:M</u>	50) Poz (Fly Asl t + 5% bwow de + 0.125 lbs/s 0.003 gps FP-6L tonite Vol. Cu Ft Vol. Factor (ppg) 11.8 f/sack) 2.54 k Water (gps) k Fluid (gps) 14 uping Time - 70 IM)-4:00; x 0.1 x 0.1 x 0.1	Ash) ack Sodi + 6L Slurn Slurn Amo Estin .72 5 <u>1/2" Casin</u> 926 cf/ft 733 cf/ft 305 cf/ft	sacks (50:56 Class C Co um Chlorid 540 V 1.84 V ry Weight (ry Yield (cf punt of Mix punt of Mix mated Pump (HH:MM)- g: Volume with with with with with	 b) Poz (Fly ement + 5% b) e +0.003 gps ol. Cu Ft ol. Factor ppg) 14.2 /sack) 1.35 Water (gps) 6 Fluid(gps) 6. bing Time - 7 8:00; Calculations: 0% excess 59% excess 85% excess 	FP- 5.34; 34;) BC = =	100 bbls 2% Kcl Water @ 8.43 ppg 77.04 cf 1189 cf 433.0 cf

All slurries will be tested prior to loading to confirm thickening times and a lab report furnished to Apache. Fluid loss will be tested and reported on slurries with fluid loss additives. Lab test report will be furnished prior to pumping cement.

·····

V. A. Proposed Mud Program

<u>DEPTH</u> 0 400'	MUD PROPERTIES Weight: 8.6 – 9.2 ppg Viscosity: 34 – 36 sec/qt pH: NC Filtrate: NC	<u>REMARKS</u> Spud with a Conventional New Gel/Lime "Spud mud". Use NewGel and native solids to maintain a sufficient viscosity to keep the hole clean. Mix Paper one-two sacks every 100 feet drilled to minimize wall cake build up on water sands and to control seepage loss. At TD of interval, mix in pre-mix pit, 100 barrels of system fluid, NewGel viscosity of 60 sec/100cc, add 0.25 ppb of Super Sweep.
400' – 3900'	pH: NC Filtrate: NC Filtrate: NC	Drill out from under the surface casing with Brine Water. Paper should be added at 2 bags after every 100' drilled to control seepage losses. Mix one gallon of New-55 at flowline every 250 feet drilled to promote solids settling. Sweep hole with 3-ppb of Super Sweep every 500 feet.
3900' – TD	Weight: 10.0 – 10.4 ppg Viscosity: 34 – 36 sec/qt pH: 9-10 Filtrate: 15-20 cm/30 min	From 3,900' to Total Depth, it is recommended the system be restricted to the working pits. Adjust and maintain pH with Caustic Soda. Treat system with Newcide to prevent dacterial degradation of organic materials. Mix Starch (yellow) to control API filtrate at <15cc-20cc.

VI. Proposed Control Equipment:

Will install on the 8 5/8" surface casing a 9" x 3000 psi WP Double Ram BOP and will test before drilling out of surface casing. As expected pressures will not exceed 2000 psi, we request a waiver of the remote control requirement on the accumulator of the 3M BOP and a variance to run a 2M BOP, if available. See Exhibit "H" for BOP layout.

VII. <u>Auxiliary Equipment:</u>

9" x 3000 psi double BOP/blind & pipe ram (2M BOP if available)
41/2" x 3000 psi Kelly valve
9" x 3000 psi mud cross - H₂S detector on production hole
Gate-type safety valve 3" choke line from BOP to manifold
2" adjustable chokes - 3" blowdown line

VIII A. <u>Testing Program</u>: None planned

B. Logging Program: The following logs may be run:

CNL, LDT, GR, CAL, DLL, MSFL, NGT, Sonic from TD-1300'

- CNL, GR from TD-Surface
- C. Coring Program: None planned
- D. Mudlogging Program: None planned
- IX. No abnormal pressures or temperatures are anticipated. In the event abnormal pressures are encountered, however, the proposed mud program will be modified to increase the mud-weight. The estimated maximum bottom hole pressure is 1500 psi.

· ·

HYDROGEN SULFIDE DRILLING OPERATIONS PLAN

No H_2S is anticipated.

.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico **Energy Minerals and Natural Resources**

Oil Conservation Division 1220 South St. Francis Dr. Santa Fe, NM 87505

For drilling and production facilities, submit to appropriate NMOCD District Office. For downstream facilities, submit to Santa Fe office

Pit or Below-Grade Tank Registration or Closure

Is pit or below-grade tank covered by a "general plan"? Yes 🗌 No 🕅 Type of action: Registration of a pit or below-grade tank 🖾 Closure of a pit or below-grade tank 🔲

Operator: Apache Corporation (0873) Telephone:	(918)-491-4801e-mail address:terry.gilb	ert@apachecorp.com			
Address: 6120 S. Yale Ave., #1500, Tulsa, OK 74136					
Facility or well name: <u>Hawk A # 20</u> API #: <u>30</u>	<u>-025 · 38021</u> U/L or Qtr/Qtr_G	Sec8T21SR37E			
County: Lea Latitude	32° 29' 47.16" N Longitude 103° 10' 4	9.99" W NAD: 1927 🔀 1983 🗔			
Surface Owner: Federal 🗍 State 🗍 Private 🖾 Indian 🗍					
<u>Pit</u>	Below-grade tank				
Type: Drilling 🛛 Production 🗋 Disposal 🗍	Volume:bbl Type of fluid:				
Workover 🔲 Emergency 🔲	Construction material:				
Lined 🔲 Unlined 🗌	Double-walled, with leak detection? Yes 🔲 If not, explain why not.				
Liner type: Synthetic 🗌 Thicknessmil Clay 🗌					
Pit Volumebbl					
Depth to ground water (vertical distance from bottom of pit to seasonal	Less than 50 feet	(20 points)			
high water elevation of ground water.)	50 feet or more, but less than 100 feet	(10 points)			
	100 feet or more	(0 points)			
Wellhead protection area: (Less than 200 feet from a private domestic	Yes	(20 points)			
water source, or less than 1000 feet from all other water sources.)	No	(0 points)			
	Less than 200 feet	(20 points)			
Distance to surface water: (horizontal distance to all wetlands, playas,		(20 points)			
irrigation canals, ditches, and perennial and ephemeral watercourses.)	200 feet or more, but less than 1000 feet	(10 points)			
	1000 feet or more	(0 points)			
	Ranking Score (Total Points)	10 points			

If this is a pit closure: (1) Attach a diagram of the facility showing the pit's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if your are burying in place) onsite 🔲 offsite 🔲 If offsite, name of facility____ _. (3) Attach a general description of remedial action taken including remediation start date and end date. (4) Groundwater encountered: No 🗖 Yes 🗖 If yes, show depth below ground surface____ _ft. and attach sample results.

(5) Attach soil sample results and a diagram of sample locations and excavations. Additional Comments: UTILIZING CLOSED LOOP SYSTEM CONSISTING OF STEEL PITS AND COMPLETE HAUL OFF OF The HOUTS AND SOLIDS 2 Ŷ 1017 MOK N G cO S

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that the above-described pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines 🛛, a general permit 🔲, or an (attached) alternative OCD-approved plan d'

Date: 6-14-06 /eau Printed Name/Title

Your certification and NMOCD approval of this application/closure does not relie the operator of liability should the contents of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature

Approval:	• • • •	361	
Printed Name/Title	PETRALEUR	Signature	Date:
	ENGINEER		1111 2 4 2006

Form C-144 June 1, 2004