Submit 3 Copies to Appropriate District Office

APPROVED BY ---

CONDITIONS OF AFFROVAL, IF ANY:

State of New Mexico Energ, ...linerals and Natural Resources Department

Form C-103

Revised 1-1-89

DISTRICT I P.O. Box 1980, Hobbs, NM 88240	OIL CONSERVAT	TION DIVISION	WELL API NO.
DISTRICT II	P.O. Box Santa Fe, New Mex		30-005-21136  5. Indicate Type of Lease
P.O. Drawer DD, Artesia, NM 88210			STATE XX FEE
DISTRICT III 1000 Rio Brazos Rd., Aziec, NM 87410			6. State Oil & Gas Lease No.
SUNDRY NOT	ICES AND REPORTS ON	WELLS	
( DO NOT USE THIS FORM FOR PRODIFFERENT RESE	OPOSALS TO DRILL OR TO DEI RVOIR. USE "APPLICATION FO :-101) FOR SUCH PROPOSALS.	EPEN OR PLUG BACK TO A PR PERMIT"	7. Lease Name or Unit Agreement Name
1. Type of Well: OIL XX GAS WELL XX WELL	OTHER		STATE 28
2. Name of Operator APACHE CORPORATION			8. Well No. 01
3. Address of Operator			9. Pool name or Wildcat
2000 POST OAK BLVD.	SUITE 100, HOUSTON,	TEXAS 77056-4400	WILDCAT
Unit Letter P 33	O Feet From The SOUTH	Line and330	Feet From The EAST Line
28	Township 8s	Range 32e	NMPM CHAVES County
Section	10. Elevation (Show w	nether DF, RKB, RT, GR, etc.)	
(/////////////////////////////////////	Appropriate Box to India	356 GR	Report or Other Data
NOTICE OF IN		SUI	BSEQUENT REPORT OF:
	PLUG AND ABANDON	REMEDIAL WORK	ALTERING CASING
PERFORM REMEDIAL WORK	CHANGE PLANS	COMMENCE DRILLIN	
TEMPORARILY ABANDON	OFFICE F DATE	CASING TEST AND	
PULL OR ALTER CASING		OTHER:	
OTHER:			
EMENT COMPANY - BJ/WESTE AT 3,470 ULE 107 OPTION TWO "B" SLURRY #1 per SK OF	2.0 1b,K-55,LT+C CASERN PLACEMENT PUMPDON  2,370 cu.ft., 1,000  CELLO-SEAL. MIXED  ELURRY 12hr = 340, 24  2283.8 cu.ft., 215  ELURRY 12hr = 900, 24  DEGREES, FORMATION TO  AM ON 04-25-95, DRI  R 14 HOURS PRIOR TO  5 AT 04:45 AM FOR 30	SING TO 3,540',CEMIN PLUG METHOD. TO Sks 50/50 POZ BANTO 11.9 1b/gal. YII 4hr = 500, 72hr = 8ks CLASS C, MIXED 4hr = 1600, 72hr = EMPERATURE = 78 DEGLIED OUT AT 05:15 AND MINUTES AT 1,100 PS MINUTES AT 1,100	P OF CEMENT TAGGED WITH DRILL PIPE SE C + 10% GEL + 5% SALT + 0.25 18 ELD = 2.37 cu.ft./sk. 725. TO 14.8 1b/gal, YIELD = 1.32 cuft 2800. GREES. AM ON 04-26-95. i RIG MUD PUMP TEST.
I hereby certify that the information above is	ANY	DRILLING ENG	INEERING TECH. DATE 04-27-95
TYPE OR FRINT NAME DOUGLAS H.			(713) 296-6528 TELEPTIONE NO.
(This space for State Use) ORIGINA	AL SIGNED BY JERRY SEXTO	)N	MAY 04 1935
U	ISTRICT   SUPERVISOR	TITLE	DATE



# CASING AND CEMENTING REPORT

er's tot	al depth <u>3540</u> Elec	etric log to	Hole sizeا	<u>l</u> in., wit	h in. ra	less threads	3968.77'
ing at v	vell: No. of joints	96 Amount, measure	ed overall	IN SAME	ORDER AS	RUN INTO	WELL
	LOG OF CASI	NG STRING, EACH ITEM BI em — Make — Description	Wt /FL	Grade	Threads	Cond'n.	Made-up Length
Pieces							1.55
		LYNCH FLOAT SHOE					42.45
!	JOINT 8%	CASING	32*	K-55	LTEC		
	878" DAVIS -	LYNCH FLOAT COLLAR					1.30
		<del></del>	32.*	K-55	LTEC		3504.4
85	JOINTS B-18	CASING					
			1			1	
			_		-		
					(balow)	datum To	3549.72
asing l entrali	eft out of string: No.	hrs. Top of casing string of full joints Amount, r Make DAVIS - LYNCH	neasured overa	all <u>425</u>	. 20 Amou	int, less threa	ids
asing l entrali	eft out of string: No.  zers: No8	of full joints 10 Amount, r Make DAVIS - LYNCH  658 - 2500	neasured overa	ns placed	.20 Amou 3525 -	unt, less threa	32 <b>6</b> 2 - 3115
asing I entrali 295	eft out of string: No.  zers: No8  o 2825 2	of full joints 10 Amount of Make DAYIS - LYNCH 1658 - 2500 Service Co. used 3/West	neasured overa  Bowl Dept  TERN No	hs placed	3525 -	. 3452 -	32.62 - 3115 - Blender? No
entrali 29.5 CEMEN	eft out of string: No.  zers: No8  o 28252  NTING REPORT _ S	of full joints 10 Amount, r  Make DAVIS - LYNCH  CSB - 2500  Service Co. used BJ/West	neasured overa  Bowi Dept  TERN No  Minutes circula	ns placed  o. of pump  ted 4	3525 trucks  5 War	s casing botto	3262 - 3115 - Blender? No
asing I entrali 29.5 EMEN	eft out of string: No.  zers: No8  o 28252  NTING REPORT _ S	of full joints 10 Amount, r  Make DAVIS - LYNCH  CSB - 2500  Service Co. used BJ/West	neasured overa  Bowi Dept  TERN No  Minutes circula	ns placed  o. of pump  ted 4	3525 trucks  5 War	s casing botto	3262 - 3115 - Blender? No
entrali 295 CEMEN	eft out of string: No.  zers: No8  o 2825 2  NTING REPORT _ S  circulation establish	of full joints 10 Amount, r  Make DAYIS - LYNCH  CSB - 2500  Service Co. used BJ/WEST  ned? YES  CEMENT MIXED	Bowi Dept  TERN No  Minutes circula  Total Sacks	ns placed  o. of pump  ted 4	. 20 Amou 3525	s casing botto	3262 - 3115 -  Blender? No  med up? YES  e (cu. ft.) 2653
entrali 295 CEMEN Good C	eft out of string: No.  zers: No8  o28252  NTING REPORT S  circulation establish i plug used? N	Make DAYIS - LYNCH  Make DAYIS - LYNCH  Gervice Co. used BJ/WEST  med? YES  CEMENT MIXED  Required: To mix 57	BOW Dept  TERN No  Minutes circula  Total Sacks  To start top p	hs placed  o. of pump  ited	.20 Amou 3525	s casing botto slurry volume.	32.62 - 3115 -  Blender? No  med up? YES  e (cu. ft.) 2653  ug down 30
entralicentralicentralicentralicentes Seminoscientes Seminosciente	eft out of string: No.  zers: No8  o 28252  NTING REPORT S  circulation establish i plug used? N  everse side) Minutes  3494	Make DAVIS - LYNCH  Make DAVIS - LYNCH  Gervice Co. used BJ/WEST  med? YES  CEMENT MIXED  required: To mix 57  PRESSURES: Late pumpin	Personal Repet Personal Rept Personal Repet Persona	ns placed  o. of pump  ited 4  1215  blug  Final	.20 Amou 3525 - trucks 5 War Total 2	s casing botto slurry volume. To pump plu	32.62 - 3115 -  Blender?No  omed up?YES  e (cu. ft.)2653  ug down30  ire off toO
entrali 295 CEMEN Good C Bottom (see re	eft out of string: No.  zers: No8  o 28252  NTING REPORT S  circulation establish i plug used? N  everse side) Minutes  3494	of full joints 10 Amount, r  Make DAYIS - LYNCH  CSB - 2500  Service Co. used BJ/WEST  ned? YES  CEMENT MIXED	Personal Repet Personal Rept Personal Repet Persona	ns placed  o. of pump  ited 4  1215  blug  Final	.20 Amou 3525 - trucks 5 War Total 2	s casing botto slurry volume. To pump plu	3262 - 3115 -  Blender?No  omed up?YES  e (cu. ft.)2653  ug down30  ire off toO

REMARKS (include volumes, types and before of placing various mixes) CEMENTED W/ 1000 SKS. 50/50 POZ W/10 TO GEL. + 570 SALT & 1/4 CELLO - SCAL MIXED To 11.9 YIELD 2.37 FOLLOWED BY 215 SKS. "C" NEAT. MIXED TO 14.8" YIELD 1.32 PLUG DOWN @ 3:45 A.M. 4-25-95 CIRCULATED APPROXIMATELY 200 SKS. TO PIT. CEMENT SLURRY TEMP. 96. ESTIMATED FORMATION TEMP. 90" ESTIMATED COMPRESSION STRENGHT. 12 HRS : 1750 24 HRS. \$ 2225 72 HRS. 2563 TESTED CASING TO 1100 FOR 30 MINS. 4:45 AIM. 4-26-95 Elevations Insert all information available as each string is set. 4378 KB 1 4377 D.F 80.900 S. (1907) | 24.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 | 5.1.5.5.900 \* 14' 13' 11" X 5.000" 4364 GI SUN WILLETTE THE WILL ST. T. THE THE YILL WELL

\*Measure and record KB to BHF after installing head.

Signed Max R. Hall



## THE WESTERN COMPANY

#### **APACHE CORPORATION**

STATE #28 SECTION 28, T8S & R32E CHAVES COUNTY, NM FUSSELMAN FORMATION

# PREPARED FOR MR. RICK DAAB

**SERVICE POINT** 

ARTESIA, NM (505) 746-3140

MARCH 23, 1995

MD030034

PREPARED BY

RANDALL EDGEMAN TECH. REP. MIDLAND

**SALES REPRESENTATIVE** 

DOUG RALEY HOUSTON SALES

# **THE WESTERN COMPANY CEMENTING RECOMMENDATION**

INTERMEDIATE CSG.

APACHE CORPORATION OPERATOR

WELL

STATE #28 SECTION 28, T8S & R32E CHAVES, NM LOCATION

COUNTY, STATE FORMATION FUSSELMAN

RANDALL EDGEMAN MARCH 23, 1995 PREPARED BY DATE

#### **ANNULAR GEOMETRIES**

ANNULAR I.D.	DEPTH
(IN)	(FT)
12.715 CASING	400
12 1/4 HOLE	3500

#### SUSPENDED PIPES

O.D.	I.D.	(FT)	(LB/FT)
85/8	8.097	3500	24.000

EST. STATIC TEMP. 105 DEG F EST. CIRC. TEMP. 93 DEG F

# **THE WESTERN COMPANY**

# **CEMENTING RECOMMENDATION** INTERMEDIATE CSG.

#### **VOLUME CALCULATIONS**

400 F	T X	0.4760	CU-FT/FT	WITH	0	*	EXCESS	=	190	CU-FT
		0.4127							2843	CU-FT
345 F	T X	0.4127	CU-FT/FT	WITH	100	B	EXCESS	=	285	CU-FT

TOTAL SLURRY VOLUME: 3318 CU-FT 591 BBLS

	VOLUME CU-FT	VOLUME FACTOR	AMOUNT AND TYPE OF CEMENT
1	3033	/ 2.37 =	1285 SACKS (50:50) POZ(BASE C) + 10.000 % GEL(BENTONITE) + 5.000 % SALT + 0.25 LB/SK CELLO-SEAL + 134.000 % WATER
2	285	/ 1.32 =	215 SACKS CLASS C + 56.000 % WATER

#### CEMENT PROPERTIES

	SLURRY NO.1	SLURRY NO.2
SLURRY WEIGHT (LB/GAL) SLURRY YIELD (CU-FT PER SACK) AMOUNT OF MIX WATER (GALS PER SACK) ESTIMATED PUMP TIME (HH:MM)	11.90 2.37 13.51 4:00	14.80 1.32 6.32 2:00

Apache Corp. Well: State # 28 Co: CHAUES N.M. compressive strengths Surface Cusing 2600 3700 1700 Inter string 725 500 340 Shurry 1 **38**00 900 1600 Slurry 2 long string 415 244 775 slurry 1 Skyl 2500 3000 3500 5/4-09 2 Shirry 1 700 30 O 500 stage 2 Shirry 2 2500 3000 3500

PERFO

OFFICE

## **PRODUCT DESCRIPTIONS**

#### CLASS C CEMENT (API) [Premium Plus Cement]

Intended for use from surface to 6000 Ft., and for conditions requiring high early strength and/or sulfate resistance.

#### **CALCIUM CHLORIDE (CaCI2)**

A powdered, flaked or pelletized material used to decrease thickening time and increase the rate of strength development.

#### **CELLO-SEAL**

Graded (3/8 to 3/4 inch) cellophane flakes used as a lost circulation material.

#### CF-14

A fluid loss control additive which provides excellent fluid loss control for primary and squeeze cementing operations from 80 to 260 Degrees Fahrenheit (BHCT). CF-14 is compatible with up 18% salt (Sodium Chloride), Potassium Chloride, Calcium Chloride, lignosulfonate retarders and TF-4.

#### CF-14A

Salt or KCl compatible fluid loss control additive for cement that may reduce or eliminate the need for a retarder.

#### CF-2

A high molecular weight polymer used to reduce fluid loss in low and medium density cement slurries and cement slurries containing salt. It can be used at temperatures up to 200 Degrees Fahrenheit (BHCT).

#### DIACEL® LWL

A high molecular weight polymer used to reduce fluid loss from cement slurries. In addition to excellent fluid loss control, LWL is an effective retarder up to 240 Degrees Fahrenheit (BHCT).

<sup>®</sup>Registered Trademark of Drilling Specialties Company.

#### **BENTONITE (GEL)**

Commonly called gel, it is a clay material used as a cement extender and to control excessive free water.

#### CLASS H CEMENT (API) [Premium Cement]

Class H cement is an API type, all purpose oil well cement which is used without modification in wells up to 8,000 Ft. It possesses a moderate sulfate resistance With the use of accelerators or retarders, it can be used in a wide range of well depths and temperatures.

### PRODUCT DESCRIPTIONS

#### POZ A (FLY ASH)

A synthetic pozzalon, (primarily Silicon Dioxide). When blended with cement, Poz A can be used to create lightweight cement slurries used as either a filler slurry or a sulfate resistant completion cement.

#### PACESETTER LITE PREMIUM [Class H (API) Cement Base]

A blend of Portland cement with Poz A at a ratio of 65:35, cement to Poz A. A small percentage of Bentonite is incorporated to help control free water. Depending on the density used, it can be a lightweight, economical filler slurry, or an intermediate density production cement. Pacesetter Lite slurries have good resistance to sulfate attack and also strength retrogression above 230 Degrees Fahrenheit (BHCT).

#### SODIUM CHLORIDE (NaCI)

Commonly called salt, is used to reduce damage caused by cement filtrate and to promote better bonding. At low concentration, less than 10% by weight of mixing water, it acts as an accelerator, while at concentrations greater than 15-18%, it will retard thickening time and strength development.

#### WMW-1

A water-base mud wash designed for use ahead of cement slurries to aid in mud and drilling debris removal and to prevent contamination of the cement slurry. It should be used only when water-base mud is used.

