

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #24

Test Frequency

1. When installed.
2. Anytime a pressure seal is broken (test confined only to affected equipment).
3. At least every 20 days.
4. Blind and pipe rams shall be activated each trip but not more than once/day.

4. Casing and Cement Program:

---DEPTH---		SECTION	HOLE	CSG	WT.		THREADS	NEW
FROM	TO	LENGTH	SIZE	SIZE	PPF	GRADE	COUPLINGS	USED
0	1200'	1200'	17.50"	13-3/8"	54.50#	K-55	8rd, STC	New
0	5500'	5500'	12.25"	9-5/8"	40#	K-55	8rd, LT&C	New
5500'	8800'	3300'	12.25"	9-5/8"	43.5	L-80	8rd, LT&C	New

Casing String	DV Depth	Stg.	Lead Tail	Amt SXS	Type Cement	Yield CF/SX	Wt. PPG.	TOC	Additives
13-3/8"			L	100	"C"	7.15	9.5		Dia Seal
13-3/8"			L	100	Thixset	1.52	14.0		Thixset
13-3/8"			L	750	Lite	2.02	12.4	surface	2% cac12,Flocele
13-3/8"			T	300	PremPlus	1.34	14.8		2% CACL2
9-5/8"	6400'	1	L	350	" "	2.18	9.2	6400'	N2
9-5/8"		1	T	700	" "	1.44	13.0	7000'	N2
9-5/8"		2	L	1360	Interfill "C"	2.47	11.9	surface	Flocele
9-5/8"		2	T	200	PremPlus	1.32	14.8	62	Neat

Each stage will be preceded by an appropriate mud flush. Actual production hole volumes will be based on the caliper volume plus 25% excess.

Centralizer Program:

9 5/8" Conventional centralizers. Bottom 3 joints and every fourth joint to surface.