

A. P. D. (cont.)
Thirteen Point Surface Use Plan
Indian Hills Unit #25

13-3/8" Conventional centralizers , Bottom 3-joints and every 4th joint to surface.

9-5/8" Conventional centralizers middle of 1st joint, then every joint to 7500', and 1 cent. Every 4th joint thereafter to 1100'.

Mud Program									
---DEPTH---				WEIGHT		WL			
FROM	TO	MUD TYPE	(PPG)	VIS	CC	ADDITIVES		VISUAL	MONTR.
0	1200'	fresh water	8.3	28	N/A	Gel, Lime		Reserve	
1200'	5000'	fresh	8.5	28-32	N/C	Gel, caustic, H ₂ S Scavenger		Reserve	
5000'	7000'	fresh	8.9	32-36	N/C	Gel, caustic, H ₂ S Scavenger		Reserve	
7000'	8200'	fresh	8.9	32-36	<20	Gel, caustic, H ₂ S Scavenger		Steel Pits	

Sufficient quantities of additives will be on location to maintain above mud properties for any anticipated well conditions.

6. Logging, Testing & Coring Programs:

LOG/TEST/CORE/MUDLOG/OTHER	--INTERVAL--		REMARKS
	FROM	TO	
DLL/MSFL/GR/CNL/LDT/CAL	TD	5000'	
LDT/CNL/GR/CAL	TD	surf casing	
MUD LOGGER	6000'	TD	ROP, Lithology, Gas Analysis, Chromatograph
NO CORES OR DST'S			

7. Abnormal Pressures, Temperatures or Potential Hazards:

None anticipated. Possible H₂S in Cisco & Upper Penn. See H₂S Drilling Operations Plan.

8. Other Information:

Anticipated Starting Date: As soon as possible.

Duration of Well: drilling - 18 days, completion - 10 days.