TODD "23" FEDERAL #5 DRILLING PROGRAM PAGE 3

> the 13-3/8" surface casing and utilized continuously until total depth is reached. All BOP's and associated equipment will be tested to 1400 psi before drilling out the 13-3/8" casing shoe (70% of 54# K-55 casing). Prior to drilling out the 8-5/8" casing shoe, the BOP's and Hydril will be function tested as per BLM Drilling Operations Order #2.

> Pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These functional tests will be documented on the daily drillers log. A 2" kill line and 3" choke line will be incorporated in the drilling spool below the ram-type BOP. Other accessory BOP equipment will include a kelly cock, floor safety valve, choke lines and choke manifold having 3000 psi WP rating.

6. <u>Types and Characteristics of the Proposed Mud System</u>:

The well will be drilled to total depth using brine, cut brine and polymer mud systems. Depths of systems are as follows:

Depth	Type	Weight (ppg)	Viscosity _(1/sec)_	Waterloss _(cc)
0-850'	Fresh Water	8.8	34-36	No Control
850-4400'	Brine Water	10.0	28	No Control
4400-TD	Fresh Water Polymer	5 8.8	32-36	10-20

The necessary mud products for weight addition and fluid loss control will be on location at all times.

7. Auxiliary Well Control and Monitoring Equipment:

A. A kelly cock will be in the drill string at all times.

- B. A full opening drill pipe stabbing valve having the appropriate connections will be on the rig floor at all times.
- C. Hydrogen Sulfide detection equipment will be in operation after drilling out the 13-3/8" casing shoe to the 8-5/8" casing is cemented. Breathing equipment will be on location upon drilling the 13-3/8" shoe until total depth is reached.

n lette state se Neteoret processe Letter

dis 13-3,00 surpade dasing and utilized demonstry 1 the total costs is reached: All EGP's and associated equipment will be restain to 1400 med before drilling out the filesed out tota 1000 of 54# K-55 desing). Fring to detiller tot sole costs casting store, the 202 s and Sydric well becommented solet as per 304 Brilling Openstone Order 40.

>>person will be operated and constand each 24 hour person and over time tag drill pipe is out of the nois. There functions are walk be dofumented or the laily dualieus log. A 1 over itres tot 3 choke line will be incorporated in the two walks open below the ram-type BOP. Other processory 341 approximated will include a helly cock, floor safety value, and a subnois randfold having 3000 out VP rating.

and polymer must be descent of the use of the second beating of the second barries of the second barries of the second barries and second barries of the s

		an a			
Marriel, C. C. Maria, Sar L. C. Marian, J	and a second	n and in the second sec		/~ **** *****	· · · · · · · · · · · · · · · · · · ·
· · · · · · · · · · · · · · · · · · ·		• •	TOCAN de	÷135	·····································
and a second	30	0.11			10028-928
· -		1 Sec. 1	Lemyles total de	979	TT - Turre

ine geogaany rud process in a gha miditaan and fauna 1 an ranaraa will ah ah ba ta baarian ah aa baxee.

- and the second ville in the difference will be a second the second second second second second second second se
- 2. A fril creating intil pips scaping valve having the appropriate counsections will se on the ray floor at all trates
- C. Nodrogen Sulfide detection eminment will be in operation alter diffidity putche libers? Jeaning ande to the 6-500° or stok is demended. Rosering ende to the 6-500° occupient will be available on 10-1/0° ande until total deputch is reached.