Drilling Plan - Sand Dunes Federal 28 #1

D. First and/or second intermediate casing point to TD (15,100'). Same as "C" above except equipment used will be rated to 10,000 psi with the exception of annular BOP (5000 psi). (See Exhibit "C", p. 3 & 4.)

4. Proposed Casing Program

Hole <u>Size</u>	Size of <u>Casing</u>	Weight & Grade	Setting <u>Depth</u>	Quantity of <u>Cement (sxs)</u>
NA 17-1/2 12-1/4 8-1/2	20 13-3/8 9-5/8 7	Conductor 48# H-40 40# K-55 29# P-110	60' 650' CIRCULATE 4300 CIRCULATE 12,000'	Cmt to surface 470 Lead, 200 Tail 1750 Lead, 360 Tail 760 (verified after logging, to circ. to approx. 8000'
6-1/8	4-1/2	13.5# S-95	11,600-15,100'	Volume determined after logging

5. Proposed Mud Program

<u>Depth Inte</u>	erval, ft	<u>Type Drilling Fluid</u>	Density	Water Loss
From	<u>To</u>		<u>(ppg)</u>	(cc)
0	650	Spud	8.4-9.0	No control
650	4,300	Brine water	10.0-10.2	No control
4,300	12,000	Fr wtr/cut brine	8.4-8.6	No control
12,000	15,100	Fr wtr & brine wtr	8.4-12.5	25-6

6. Auxiliary Equipment to be Used

- A. Kelly cock
- B. Full opening value on floor with DP connection for use when kelly is not in string.

7. Testing, Logging and Coring Program

A two-man mud logging unit will be used from 3900' to TD.

Testing: DST's are possible if shows are indicated in the following formations James Ranch Sd @ 13,400' Atoka Bk Ls @ 13,500' Poker Lake Sd @ 14,200' Paduca @ 14,500' Pure Gold @ 14,650' Teal @ 14,700'

Coring: None planned

Page 2