

EAST SHUGART UNIT #44
DRILLING PROGRAM
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4. Casing Program:

<u>Hole Size</u>	<u>Interval</u>	<u>Casing OD</u>	<u>Weight, Grade, Type</u>
17 1/2"	0' - 40'	14"	Conductor, 0.30" wall
12 1/4"	0' - 950'	8 5/8"	24#, WC, ST&C, new R-3
7 7/8"	0' - TD (4500'±)	5 1/2"	15.5#, J-55, ST&C, new R-3

Cementing Program:

14" Conductor Casing:	Cemented with ready-mix to surface.
8 5/8" Surface Casing:	Cemented to surface with 280 sks LITE (35% Poz: 65% Class C) + 6% gel + 2% CaCl ₂ + 1/4 lb/sk cellophane flakes 200 sks Class C + 2% CaCl ₂ + 1/4 lb/sk cellophane flakes.
5-1/2" Production:	Cemented to surface with 550 sks LITE (35% Poz: 65% Class C) + 6% gel + 1/4 lb/sk cellophane flakes 500 sks Class C + 4% gel + 1/4 lb/sk cellophane flakes.

The above cement volumes could be revised pending the caliper measurement from the open hole logs. The top of cement is designed to reach surface.

5. Minimum Specifications for Pressure Control:

The blowout preventor equipment (BOP) shown in Exhibit #1 will consist of a (3M system) double ram type (3000 psi WP) preventor and a bag-type (Hydril) preventor (3000 psi WP). Both units will be hydraulically operated and the ram type preventor will be equipped with blind rams on top and 4-1/2" drill pipe rams on bottom. Both BOP's will be installed on the 8 5/8" surface casing and utilized continuously until total depth is reached. As per BLM Drilling Operations Order #2, prior to drilling out the 8-5/8" casing shoe, the BOP's and Hydril will be function tested.