

BHP PETROLEUM (AMERICAS) INC.  
STATE of NEW MEXICO #2  
790'FNL & 1780'FEL  
Section 16 T29N R12W  
SAN JUAN COUNTY, NEW MEXICO

TEN POINT PROGRAM

1. Surface Formation: NACIMIENTO

2. &

3. Estimated Formation Tops:

<u>Formation</u>	<u>Top</u>	<u>Expected Production</u>
Nacimiento	Surface	
Ojo Alamo	226'	
Kirtland	549'	
Fruitland	1549'	
Basal Fruitland Coal	1774'	GAS
Pictured Cliffs	1809'	GAS
TOTAL DEPTH	2009'	

4. Casing and Cementing Program: A string of 7" 20# K-55 ST&C casing will be set at +/-130 in an 8 3/4" hole and cemented to the surface in a single stage with 35 sx of Class "B" cement (yield=1.18 cf/sk) containing 3% CaCl<sub>2</sub> and 1/4 lb/sk celloflake. Slurry volume assumes 100% excess over calculated hole volume. If the cement job does not circulate to surface, cement will be topped off using 1" pipe down the 8-3/4" by 7" annulus. Centralizers will be run on the bottom two joints as long as boulders were not encountered while drilling the surface hole. If boulders are encountered while drilling the surface hole, no centralizers will be run. Minimum clearance between couplings and hole is 1.094". Prior to drilling out the shoe, casing and BOPE will be tested to a minimum of 2000 psig. Safety factors utilized in the design of this casing string were: burst=1.1; collapse=1.125; and tension=1.8 or 100,000 lb overpull, whichever is greater.

A production string of 4-1/2", 10.5# K-55 ST&C casing will be run from the surface to total depth in a 6-1/4" hole. This string will be cemented to the surface with a minimum of 200 sx of 50-50 pozmix containing 2% gel, 10% salt and 1/4 lb/sk celloflake (yield=1.26 cf/sk) followed by 50 sx of Class "B" cement containing fluid loss additive (yield=1.18 cf/sk). Slurry volume assumes a 50% excess over calculate hole volume. Cement volume is subject to change after review and recalculation of hole volume from the open hole calipers. If the primary cement job does not circulate to surface, the cement will be topped of using 1" pipe down the 6-1/4" by 4 1/2" annulus. Centralizers will be spaced such that a minimum of two are located above and two are located below the Basal Fruitland Coal; and, a minimum of one centralizer will be run just below the base and another into the base of the Ojo Alamo. Minimum clearance between couplings and hole is 1.25"