

fill the 5-1/2 casing with cement from 8542' to 8329'. This requires 25 sacks. Be sure the 2-7/8" X 5-1/2" annulus is open before pumping cement.

Plug Set:

---- Depth ----			Tagged
Top'	Bottom'	Type Plug*	(yes/no)
<u>8329</u>	<u>8542</u>	<u>CEMENT</u>	<u>NO</u>

Cement:

Volume of Cement 25 (sacks)
Cement Class* APICLSH API CLASS H
temp pkr or Retainer Depth ---- (ft)
Type of Job* P&A P&A

8. Pull up in casing to 8329' and and reverse circulate to clear tubing. Circulate 9.5 ppg mud laden fluid to surface. POH w/ workstring.
9. RU perforators and perforate 5-1/2" casing at 4949'.

Perforate:

Phasing <u>90 degrees</u>				
top of	Bottom of		Shots	
Interval	Interval	Spacing	per ft	Total
<u>4949</u>	<u>4950</u>	<u>1</u>	<u>4</u>	<u>8</u>

10. POH w/ perf gun. RIH with 1 jnt of tbg, shut pipe rams and pump down the 5-1/2" casing to establish an injection rate into the perforations.
11. After establishing injection rate into perfs, RIH w/ workstring to to 4949' and pump the following balanced plug to fill the 5-1/2 X 7-7/8" annulus and the 5-1/2" casing with cement from 4950' to 4800'. This requires 50 sacks, assuming a 70% efficiency in the annulus. Be sure the 5-1/2" X 9-5/8" annulus is open before pumping cement.

Plug Set:

---- Depth ----			Tagged
Top'	Bottom'	Type Plug*	(yes/no)
<u>4800</u>	<u>4950</u>	<u>CEMENT</u>	<u>NO</u>

Cement:

Volume of Cement 50 (sacks)
Cement Class* APICLSC API CLASS C
temp pkr or Retainer Depth ---- (ft)