

Casing Program: (Continued)

(D) Protection Casing: (Continued)

No. Jts.	Description	Thds Off Length	From	To
---	Rotary correction	27	0	27
7	9 5/8" OD 40#/ft N-80 buttress	263	27	290
88	9 5/8" OD 40#/ft N-80 LT&C	3510	290	3800
---	Halliburton DV tool	3	3800	3803
30	9 5/8" OD 40#/ft N-80 LT&C	1190	3803	4993
38	9 5/8" OD 43.5#/ft N-80 LT&C	1507	4993	6500
---	Halliburton DV tool	3	6500	6503
5	9 5/8" OD 43.5#/ft N-80 LT&C	193	6503	6696
107	9 5/8" OD 43.5#/ft S-95 LT&C	4260	6696	10956
---	Halliburton float collar	2	10956	10958
1	9 5/8" OD 43.5#/ft S-95 LT&C	40	10958	10998
---	Halliburton float shoe	2	10998	11000

All 9 5/8" OD casing is to be inspected using a combination mechanical-optical and magnetic particle inspection-full length.

The bottom three joints are to be sealed with HOWCO-weld, welded and sand blasted to remove mill scale and lacquer. One positive type centralizer is to be installed on each of the bottom three joints. Modified thread lubricant is to be used on the casing threads.

Prior to running the 9 5/8" OD casing, a caliper survey is to be made to determine the actual cement volumes required. Cementing will be done in three stages as follows:

First Stage: Estimated 660 sacks "Halliburton light" with 0.4% HR-4 (mixed at 12.3 PPG, yield factor 1.91 CF/sack, 10.7 gallons water per sack) followed by 500 sacks class "H" with 0.75% CFR-2 and 3# KCl per sack (mixed at 15.7 PPG, yield factor 1.23 CF/sack, 5.6 gallons water per sack). WOC 12 hours.

Second Stage: Estimated 730 sacks "Halliburton light" with 5# gilsonite and 1/4# Flocele per sack (mixed at 12.3 PPG, yield factor 1.92 CF/sack, 10.2 gallons water per sack) followed by 100 sacks class "H" (mixed at 15.6 PPG, yield factor 1.18 CF/sack, 5.2 gallons water per sack). WOC 12 hours.

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