

## CASING STRING DESIGN

**DEPTH:** 3600'  
**TYPE:** Production  
**SIZE:** 4-1/2"  
**MUD WEIGHT:** 10.0

<i>Description</i>	<i>Interval</i>	<i>Length Per Section</i>	<i>Weight Per Section</i>	<i>Cumm. Weight</i>	<i>Min. Strength</i>	<i>Tens. S.F.</i>			
10.5#,LT&C,K-55	0-3600'	3600'	37,800#	37,800#	146K	3.86			
<i>Collapse Force</i>	<i>Resist</i>	<i>S.F.</i>	<i>Burst Force</i>	<i>Resist.</i>	<i>S.F.</i>	<i>Minimum Torque</i>	<i>Optimum Torque</i>	<i>Maximum Torque</i>	
1872	4010	2.14	1740	4790	2.75	1100	1460	1825	

### Procedure:

Make up and run 4 1/2" casing as per the following:

- A. Clean exposed threads on the guide shoe, first joint of 4 1/2" casing, float collar, and second joint of casing. Apply Thread Lock to these connections prior to make-up.
- B. The bottom assembly of the casing assembly must be made up as follows with the first listed being the first in the hole:

**Note: Seal Lube will be applied to all connections not receiving Thread Lock.**

1. Guide shoe
  2. First joint of 4 1/2" casing
  3. Float collar
  4. 4 1/2" casing back to setting depth of 2950' (140' below the salt).
  5. Combination Tool (DV Tool with External Casing Packer)
  6. 4-1/2" casing back to surface.
- C. Install centralizers as follows on the 4-1/2" casing:
1. 10' above the guide shoe by means of a stop collar.
  2. Around the first coupling above the float collar.
  3. Every third coupling back to the combination tool.
  4. Around the coupling immediately below the combination tool.
  5. Around the coupling immediately above the combination tool.
  6. Every third coupling back to surface.