

9 3/8" LINER TEST CALCULATIONS

Size	Wt/ft	Grade	Conn	Burst
9.375	39.0	HCQ-125	SLF	9870
16	97.0	Q-125	SLSF	8733
70% Internal Yield of 9.375" Casing =				6909
70% Internal Yield of 16" Casing =				6113.1
<u>Considering Internal Yield Test @ Mudline</u>				
Top of casing TVD=				3,592
Test mud weight=				16.00
Pore pressure=				8.60
Differential pressure= (16 - 8.6) * 0.052 * 3592=				1382
Test pressure= 6113.1 - 1382=				4731
<u>Considering Internal Yield Test @ Shoe</u>				
Btm of casing TVD=				24,670
Test mud weight=				16.00
Pore pressure=				15.90
Differential pressure= (16 - 15.9) * 0.052 * 24670=				128
Test pressure= 6909 - 128=				6781
<u>However, Considering the MAWP surface:</u>				
MAWPsurf + 500 psi= 9519 + 500 =				10019 psi
9.375 Liner top test= (16.2 - 16) * .052 * 21725 + 500=				726 psi
<u>Therefore:</u>				
Plan test pressure is lesser of the above=				726
9.375 Shoe Test pressure= (16.8 - 16) * .052 * 24670 + 200=				1226
<u>Future Liner pressure tests</u>				
Test 7 5/8" SETto	1200	psi for 30 min. with	16.3	ppg mud
Equates to 9.375 liner test to	1585	psi for 30 min. with	16.0	ppg mud
<u>Therefore:</u>				
Test casing to be greater than minimum test pressure or shoe or future liner top testing				
Plan test pressure =				1585 psi
Test casing to	1600	psi for 30 min. with	16.0	ppg mud

- Notes:** 1. Casing test pressures are based on the lower of MAWP + 500 psi,
70% internal casing yield less differential of test mud weight and
pore pressure behind casing, or liner top plus 500 psi.
Test pressure will be **200 psi greater than shoe test**
2. Actual test pressure will be calculated based on actual mud weight

9 3/8" Liner

7.625" SET LINER TEST CALCULATIONS

<u>Size</u>	<u>Wt/ft</u>	<u>Grade</u>	<u>Conn</u>	<u>Burst</u>
7.625	29.7	EX-80	XPC	6130
16	97.0	Q-125	SLSF	7860

70% Internal Yield of 7.625" Casing = 4291

70% Internal Yield of 16" Casing = 5502

Considering Internal Yield Test @ Mudline

Top of casing TVD= 3592

Test mud weight= 16.3

Pore pressure= 8.6

Differential pressure= $(16.3 - 8.6) * 0.052 * 3592 =$ 1438

Test pressure= $4291 - 1438 =$ 4064

Considering Internal Yield Test @ Shoe

Btm of casing TVD= 26995

Test mud weight= 16.3

Pore pressure= 16.3

Differential pressure= $(16.3 - 16.3) * 0.052 * 26995 =$ 0

Test pressure= $4291 - 0 =$ 4291

However, Considering the MAWP surface:

MAWPsurf + 500 psi= $9860 + 500 \text{ psi} =$ 10360

Liner top test= $(16.8 - 16.3) * 0.052 * 24370 + 500 =$ 1134

Therefore:

Plan test pressure is lesser of the above= 1134

Shoe Test pressure= $(17 - 16.3) * 0.052 * 26995 + 200 \text{ psi} =$ 1183

Test casing to be greater than minimum test pressure or shoe or future liner top testing

Plan test pressure = 1183

Test casing to	1200	for 30 min. with	16.3	ppg mud
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- Notes:
1. Casing test pressures are based on the lower of MAWP + 500 psi, or 70% internal yield less differential of test mud weight and pore pressure behind casing, or liner top plus 500 psi.
 2. Actual test pressure will be calculated based on actual mud weight

7.625" SETLiner