

9 5/8" SET" LINER TEST CALCULATIONS

Size	Wt/ft	Grade	Conn	Burst
9.625	36.0	EX-80	XPC	4600
16	97.0	Q-125	SLSF	8733

70% Internal Yield of 9.625" Casing =	3220
70% Internal Yield of 16" Casing =	6113.1

Considering Internal Yield Test @ Mudline

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

Considering Internal Yield Test @ Shoe

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= 3220 - 128=	3092

However, Considering the MAWP surface:

MAWPsurf + 500 psi=	9519 + 500 =	10019	psi
SET Liner top test=(16.4 - 16)*.052*22050+500=		959	psi

Therefore:

Plan test pressure is lesser of the above=	959
--	-----

SET Shoe Test pressure=(16.8 - 16)*.052*24670+200=	1226
---	------

Future Liner pressure tests

Test 9.375 liner to	1183	psi for 30 min. with	16.3	ppg mud
Equates to 9.625 liner test to	1568	psi for 30 min. with	16.0	ppg mud

Therefore:

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

Plan test pressure =	1568	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 5/8" SET Liner

9.375" LINER TEST CALCULATIONS

<u>Size</u>	<u>Wt/ft</u>	<u>Grade</u>	<u>Conn</u>	<u>Burst</u>
9.375	39.0	HCQ-125	SLF	9870
16	97.0	Q-125	SLSF	7860

70% Internal Yield of 9.375" Casing =	6909
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= 6909 - 1438=	4064

Considering Internal Yield Test @ Shoe

Btm of casing TVD=	27000
Test mud weight=	16.3
Pore pressure=	16.3
Differential pressure= (16.3 - 16.3) * 0.052 * 27000=	0
Test pressure= 6909 - 0=	6909

However, Considering the MAWP surface:

MAWPsurf + 500 psi= 9860 + 500 psi=	10360
Liner top test= (16.4 - 16.3)*.052*21950+500=	614

Therefore:

Plan test pressure is lesser of the above=	614
--	-----

Shoe Test pressure= (17 - 16.3)*.052*27000+200 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
----------------	------	------------------	------	---------

- 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

9.375" Liner