

### 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=	16.10
Pore pressure=	8.60
Differential pressure= (16.1 - 8.6) * 0.052 * 3592=	1401
Test pressure= 6113.1 - 1401=	4712

#### Considering Internal Yield Test @ Shoe

Btm of casing TVD=	24,853
Test mud weight=	16.10
Pore pressure=	16.10
Differential pressure= (16.1 - 16.1) * 0.052 * 24853=	0
Test pressure= 3220 - 0=	3220

#### However, Considering the MAWP surface:

MAWPsurf + 500 psi=	9519 + 500 =	10019	psi
SET Liner top test=( 16.5 - 16.1)*.052*22350+500=		965	psi

#### Therefore:

Plan test pressure is lesser of the above=	965
--	-----

SET Shoe Test pressure=( 16.8 - 16.1)*.052*24853+200=	1105
---	------

#### 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	1441	psi for 30 min. with	16.1	ppg mud

#### Therefore:

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

Plan test pressure =	1441	psi
----------------------	------	-----

Test casing to	1500	psi for 30 min. with	16.1	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

Size	Wt/ft	Grade	Conn	Burst
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=  $9860 + 500 \text{ psi} =$  10360

Liner top test=  $(16.5 - 16.3) * 0.052 * 22250 + 500 =$  731

#### Therefore:

Plan test pressure is lesser of the above= 731

Shoe Test pressure=  $(17 - 16.3) * 0.052 * 27000 + 200 \text{ psi} =$  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
----------------	------	------------------	------	---------

- 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***