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**LAMPIRAN A**  
**KRONOLOGI PROBLEM LOSS CIRCULATION SAAT PEMBORAN**  
**SUMUR “X-017”**

**15 July 2006**

Cont'd drill formation from 5480 ft to 5533 ft. Change pump slip #1 and #2 .  
Repaired rubber seal possibly. Cont'd drill formation from 5533 ft to 5723 ft  
(circ. mud condition) . Cont'd drill formation from 5723 ft to 5901 ft, circ. w/ spm  
#1 while repaired spm# 2 (rubber insert valve). Cont'd drill formation from 5901  
ft to 5917 ft, circ. w/ spm #2 while repaired spm# 1 (string). Cont'd drill  
formation from 5917 ft to 5940 ft, circ. w/ spm #1 while repaired spm# 2 (rubber  
insert valve). Cont'd drill formation from 5940 ft to 5951 ft.

**16 July 2006**

Cont'd drill formation from 5951 ft to 6094 ft (5923 ft TVD), got Parsial loss at  
6090 ft. Observ. static loss 9.7 BPM. Spot #1 LCM 70 bbls, 40 ppb

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(fracseal+CaCO3 fine), still loss 2 BPM. Spot #2 LCM 50 bbls, 60 ppb (CaCO3  
med+CaCO3 coarse), still loss 1 BPM. Spot #3 LCM 60 bbls, 60 ppb  
(fracseal+CaCO3 coarse), got return 1.9 BPM. Circ. condition mud increase  
MW in up to 12.3 ppg, MW out 11.7 ppg. Observ static level, Still got return flow  
1 BPM, Circ through out BPM, not working. Cont'd Circ. condition mud increase  
MW in up to 12.5 ppg. Gas reading 600 - 700 USUnits, while repaired BPM  
(poor boy). POOH 1 stnd. Combat loss, spot LCM 70 bbls displace OBM 1150  
stks, spm 50, 930 Psi, no return. Cont'd circ. w/ water base mud 9.8 ppg, got  
return OBM 12.0 ppg after 2150 strks, spm 60, 700 Psi.

## LAMPIRAN B

### DATA PORE PRESSURE PADA TRAYEK 12 ¼"

#### 3. 12-1/4" HOLE SECTION FROM 4237 TO 6094 FT 9-5/8" CASING SHOE SET @ 6080 FT

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Lithology of this section was predominantly with Claystone with limestone and siltstone strike or layer. Dc exponent graphic has been plotted from 4237 ft MD to 6090 ft MD and got leaned to left side of normal trend and the estimated pore pressure is 11.5 ppg to 12.3 ppg Equivalent mud weight and Mud weight used while drilling was from 12.3 ppg at the beginning and 12.6 ppg to end of this section. From 6090 ft MD (5912 TVD) to 6094 ft MD the dc exponent graphic trend is lean to right side which pore pressure going down to 12.0 ppg Equivalent mud weight and it was indicated with loss circulation. The lithology of loss zone found was limestone. Loss circulation could overcome after recondition of Mud weight to 12.3+ ppg, gas reading had higher value than while drilling. Run 9- 5/8" Casing to 6080 ft (Casing shoe) and cement.