

DOCUMENT INFO

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DOCUMENT INFO

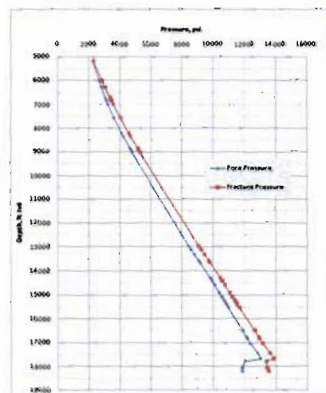
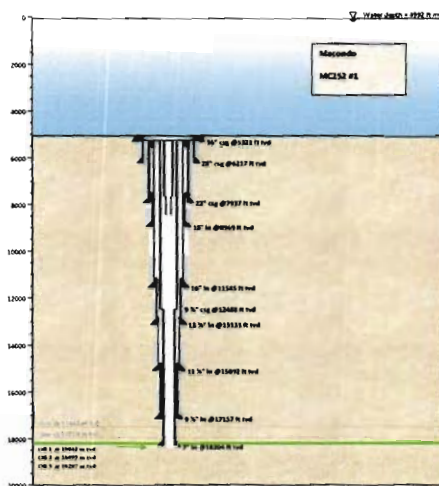



MC 252 # 1 Blowout Diagnostics Dynamic Kill Evaluations Kill Planning

Preliminary Results
Dr. Ole B. Rygg
add wellflow as
11 July 2011

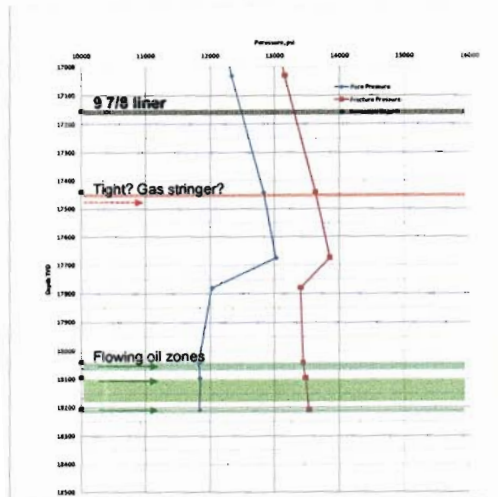
 add energy

Well Schematic and Pore Pressure



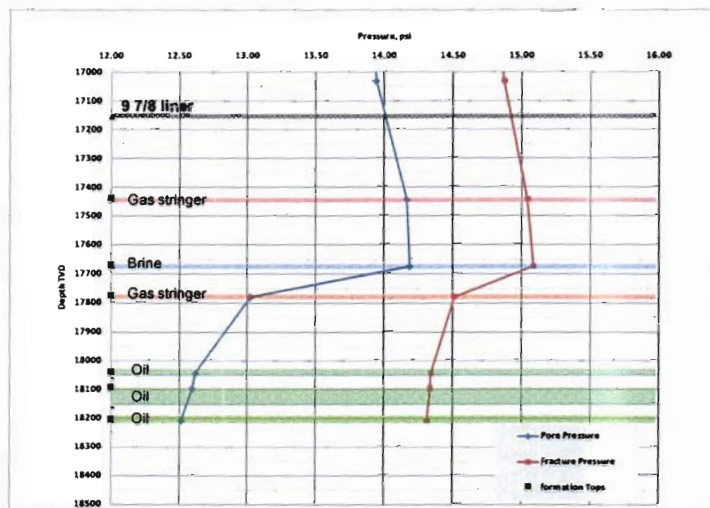
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Pore pressure and fracture pressure



add energy

Pore pressure and fracture pressure, EMW



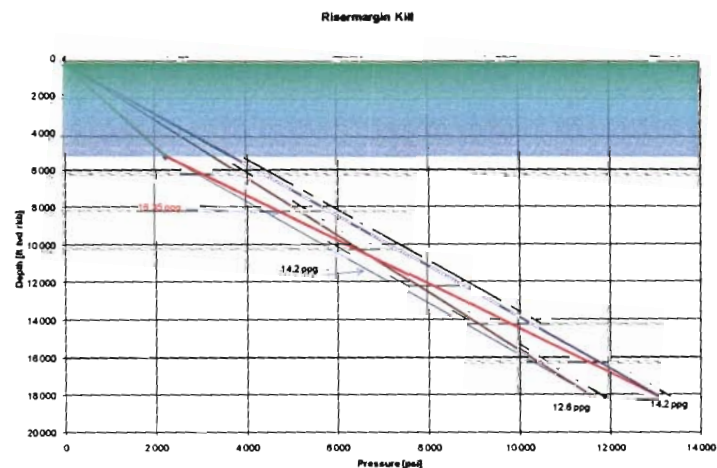
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Shut-in calculations

- Wellhead pressure with oil in wellbore at the time of shut-in
 - Initial shut-in 8300 psi
- If contribution from gas stringer
 - Initial shut-in +/-8400 psi
 - Additional pressure from gas stringer will bleed off into open oil formations below 9 7/8
 - *Without bleed off: 9400 psi*

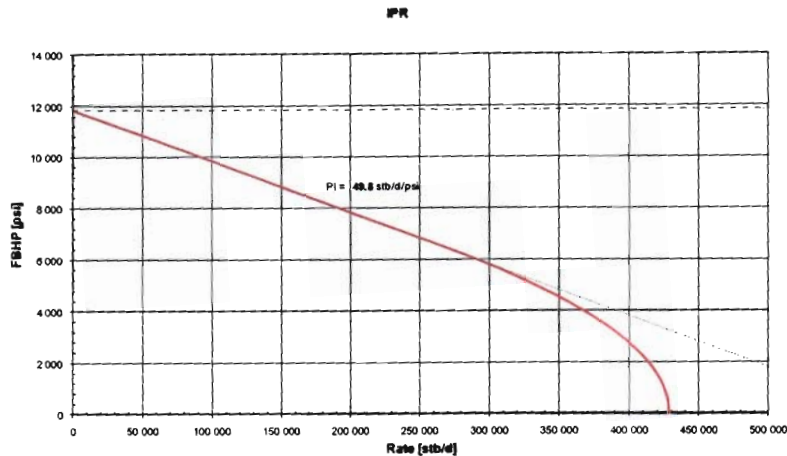
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Riser Margin – required static kill mud density



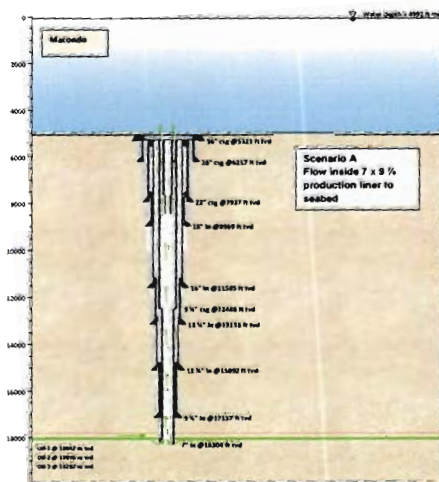
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Oil Inflow – 300 mD and 86 ft NP



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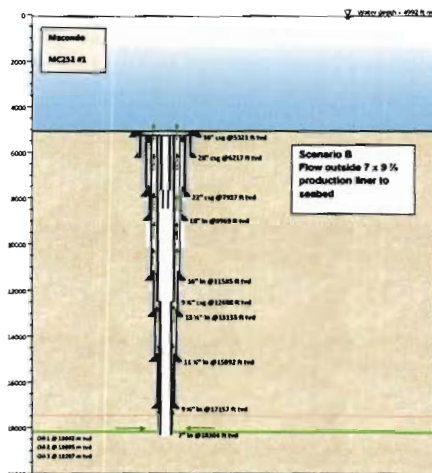
Scenario A – Flow inside 7 inch liner



- Oil Rate
 - 63 000 bopd (2244 psi)
(No restrictions)
 - 55 000 bopd (3800 psi)
(Restricted/Measured)
- Dynamic relief well kill.
Intersection below 9 7/8
shoe
 - 12 ppg mud: 38 bpm
 - 13 ppg mud: 33 bpm
 - 14.5 ppg mud: 27 bpm

add energy

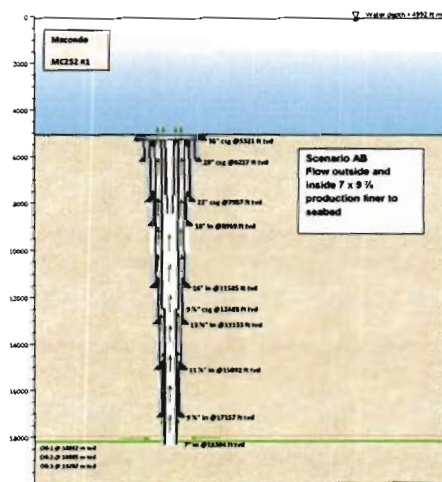
Scenario B – Flow outside 7 inch liner



add energy

- Oil Rate
 - 43 000 bopd (2244 psi) (No restrictions)
 - 37 000 bopd (3800 psi) (Restricted/Measured)
- Dynamic relief well kill. Intersection below 9 7/8 shoe
 - 12 ppg mud: 27 bpm
 - 13 ppg mud: 24 bpm
 - 14.5 ppg mud: 21 bpm

Scenario AB – Flow inside and outside 7 inch



add energy

- Oil Rate
 - 87 000 bopd (2244 psi) (No restrictions)
 - 74 000 bopd (3800 psi) (Restricted/Measured)
- Dynamic relief well kill. Intersection below 9 7/8 shoe
 - 13 ppg mud: 58 bpm
 - 14.5 ppg mud: 48 bpm

