

DOCUMENT INFO

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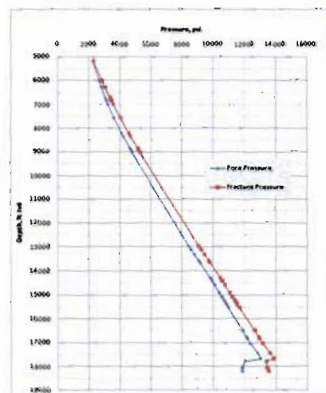
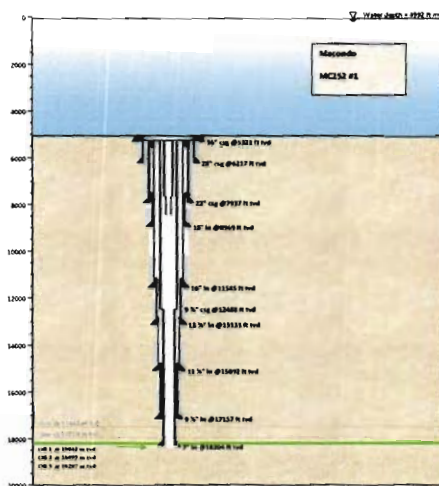



MC 252 # 1 Blowout Diagnostics Dynamic Kill Evaluations Kill Planning

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

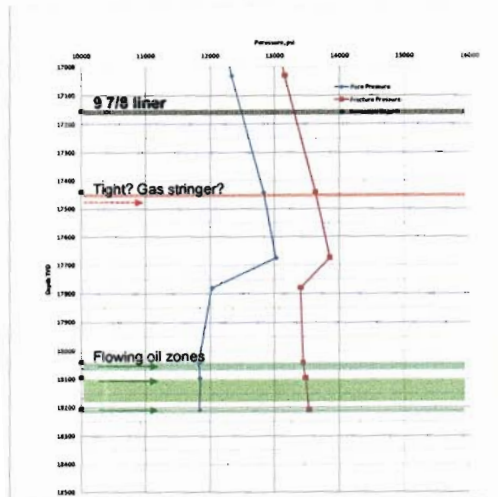
 add energy

Well Schematic and Pore Pressure



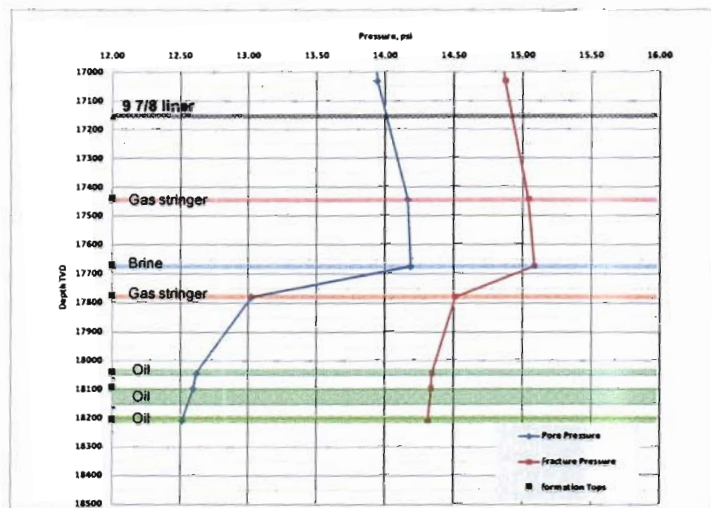
 add energy

Pore pressure and fracture pressure



add energy

Pore pressure and fracture pressure, EMW



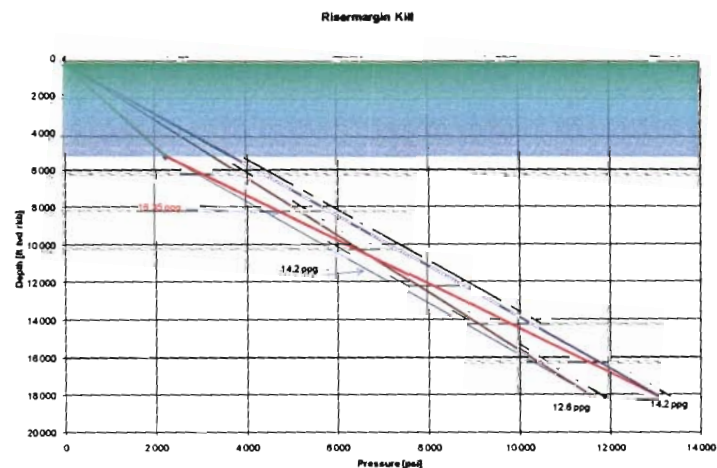
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Shut-in calculations

- 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*

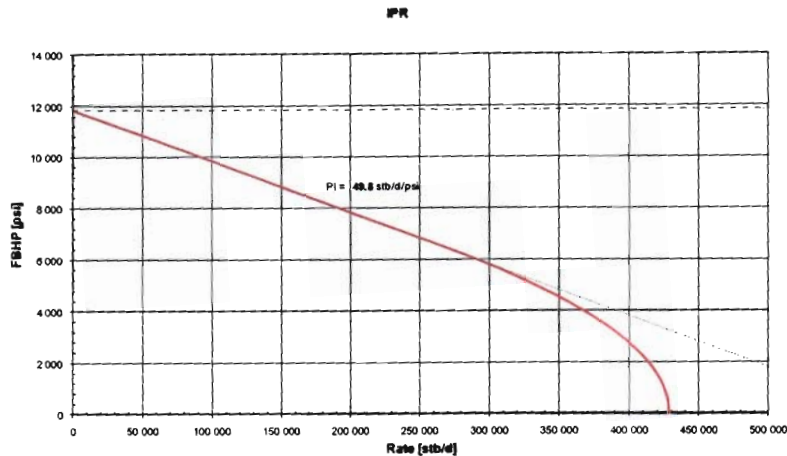
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Riser Margin – required static kill mud density



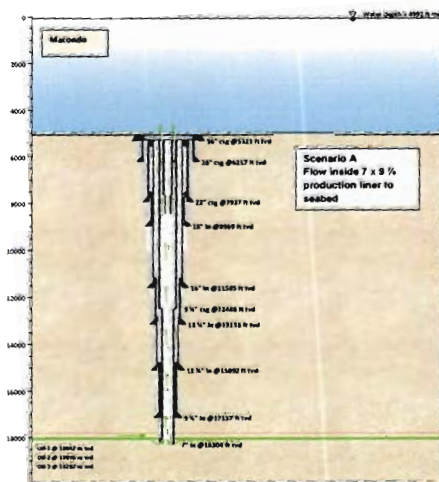
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Oil Inflow – 300 mD and 86 ft NP



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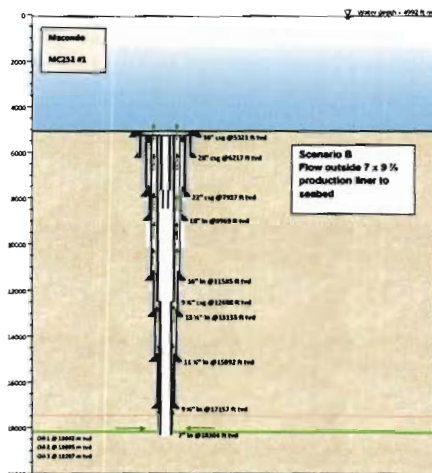
Scenario A – Flow inside 7 inch liner



- 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

æ add energy

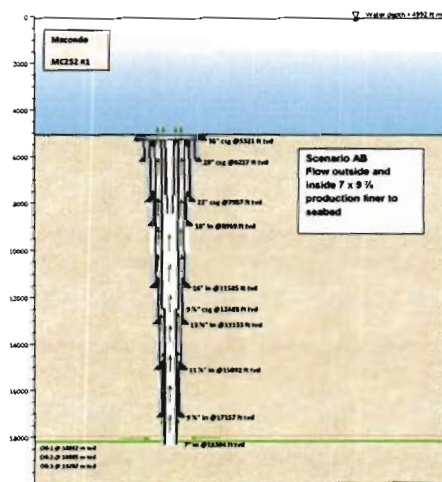
Scenario B – Flow outside 7 inch liner



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

