

4. RIH with retrievable bridge plug and treating packer on 2-7/8" workstring. Set bridge plug above Blinbry perfs and pressure test casing to 500 psi to verify casing leak. Attempt to locate casing leak. Once found establish a rate and pressure into the leak.
5. FDM w/ retrievable bridge plug and RIH w/ CIBP after leak has been verified. Set CIBP below casing leak to keep cement off of perfs.
6. RIH w/ cement retainer. Set cmt retainer above the leak. Check the cement retainer for operational capability. After stinging back into the retainer, pressure up on the backside to ensure that there are no other casing leaks. Report all annular pressure readings on the morning report.
7. Depending on the rate and pressure established in step 5, RU cementers to squeeze casing leak. If rate and pressure are not significant, consider using Haliburton's Micro Matrix cement.

*** NOTE: The cementing procedure below may be modified as conditions indicate at the time of the squeeze. The formation where the leak is suspected may drink fluid if fraced. Be conscious of this fact when squeezing the leak. MORE IS NOT ALWAYS BETTER. If the formation is fraced a worse leak may result. For this reason, try to stay below frac pressure. Frac pressure is unknown, but may be estimated using a frac gradient of 0.8 psi/ft.

Cement:

Volume of Cement 100 (sacks)
 Cement Class* APICLSC API CLASS C
 Avg Cementing Pressure ** (psi)
 Avg Cementing Rate ** (bpm)
 Service Company* DOWEL DOWELL-SCHLUM
 Temp pkr or Retainer Depth ** (ft)
 Type of Job* BLK SQZ BLOCK SQUEEZE

 ORDER 200 SACKS OF CLASS C CEMENT

- a) Pump 10 bbls of 6% CaCl₂.
- b) Pump 5 bbls of fresh water.
- c) Pump 100 sacks of Class C cement.
- d) Pump displacement volume of fresh water.

* The hydrostatic pressure caused by the cement in a full column of tubing is well above frac pressure. Therefore, it is important that once the cement reaches the retainer, pumping rates and surface treating pressures are kept to a minimum. Low pumping rates will also aid in the dehydration process, once the cement has contacted the calcium chloride water.

* Obtain a running squeeze initially. Once a squeeze pressure of 2000 psi is obtained, shut down for 10 minutes and re-squeeze to