

NMOC

CONOCO INC.
SUTER 1X
API # 30-045-11445
SEC. 13 - T32N - R11W UNIT LETTER "G"
1637' FSL - 1650' FEL
ATTACHMENT FOR BLM 3160-5

09/24/97 MIRU. RU blue jet & RIH w/ 7" CIBP. CIBP hung up @ 4311'. POOH w/ same & RD blue jet. PU 7" csg scraper & 2-7/8", N-80, Interlock, EUE, 6.5 ppf workstring and RIH to 4590'. Circulate. POOH.

RIH & set w/ 7" CIBP @ 4450'. PT casing to 1000 psi, OK. RIH & perf @ 3115' w/ 4 jspf. POOH & RD blue jet. RIH w/ 7" pkr & set @ 2961'. Attempt to establish circ. Down tbg (70 bbls. 1% KCl FW), no circ. Attempt to establish circ. Down csg-csg annulus (70 bbls 1% KCl FW), no circ. Attempt to establish circ. down tbg, no circ. Top off tbg-csg annulus w/ 10 bbls 1% KCl FW.

Released treating pkr, POOH & LD same. PU model K-1 cmt retainer, RIH and set @ 3021'. Load backside & pressure up w/ 500 psi (10 bbls H₂O). Wait on BJ Hughes ¾ hr. RU BJ & pressure test lines to 1200 psi. Pump 18 bbls 1% KCl H₂O and establish injection rate @ 2 BPM-200 psi max.

Pump 15 bbls 1% KCl H₂O and establish injection rate @ 1BPM-500 psi max. Mix & pump 200 sx, 15.6 ppg Class B w/ ¼ #/sx Cello Flake & 2.5 #/sx Gilsonite (IPP: 500 psi @ 1.5 BPM). Pressure increased to 1000 psi after pumping 42.7 bbls cement (21.4 bbls or 100 sx into formation). Final squeeze pressure 1000 Retainer and POOH w/ 1 stand to 2992'. Reverse circ. tbg clean (17bbls. Cmt). POOH & LD cmt retainer stinger. Est. TOC @ 2992'.

PU 6-¼" bit, 6 - 3-½" DC and RIH on 2-7/8" workstring. Tagged cmt @ 2992'. Drill hard cmt to retainer @ 3021'. Drill on retainer to 3024'. Retainer breaking up and rolling under bit. POOH w/ bit.

RIH w/ 6 ¼" mill, BS, 6 - 3-½" DC, X/O & 2-7/8" tbg. Mill up junk cmt retainer & cmt f/ 3024' to 3029'. circ. well clean. POOH. Pick up 6-¼" cement bit and RIH. DO cmt from 3029' to 3115'. RIH to 3131'. Circ. well clean. PT squeezed perfs @ 3115'. Perfs taking fluid @ 500 psi @ ½ BPM. Final pressure of 500 psi bled to 0 psi in 2 min. Perform same test, had same results.

RIH w/ 6-¼" cmt bit & 7" scraper to CIBP @ 4446' KB (4450' WL). Circ. Clean. POOH. RU blue jet and run CBL-CCL log f/4450' to 2400'. Good bond f/4450'-3830', fair to good bond f/3170'-3020' and no bond from 3020'-2400'. RD blue jet. Top off csg w/ H₂O (pipe displacement). Attempt to pressure test csg to 500 psi. Pressure bled off from 500 psi to 0 psi in 2 min. RIH w/ OE 2-7/8" tbg to 3112' KB. RU BJ. Held pre-ops/safety meeting. Pressure test lines to 2000 psi. Pumped 2 bbls H₂O and established PI rate of .4 BPM @ 500 psi. Mix & pump 8.6 bbls. Class B, 15.6 ppg, 1.2 cf/sx smt (42 sx). Displace w/ 16 bbls H₂O. RD tbg valve. POOH to 2858' w/ 4 stands tbg. Reverse tbg clean (½ bbls cmt returned). RU to tbg & close pipe rams. Hesitate squeeze, initial pressure 500 psi after .4 bbls pumped bled back to 300 psi. Increase pressure in stages to a final pressure of 1000 psi (total of 1bbls/5 sx squeezed to formation). Estimated cmt plug in csg from 3115' to 2892'. Close well in w/ 1000 psi while BJ cleaned up. RD BJ.

10/01/97 Pressure up on well w/ 500 & 1000 psi f/5 min each. Held like a rock. Release pressure & POOH w/ OE tbg. RIH w/ 6-¼" cmt bladed bit & 6 ea 3-½" DC. DO cmt from 2913' to 3115'. RIH to 3242'. Reverse circ well clean. Pressure test csg to 500, 750 and 1000 psi for 5 min ea. in stages. OK. POOH RIH w/ 7" csg scraper to 4446' (CIBP). Reverse circ well clean. Pressure test csg to 500 psi and 1000 psi for 5 min ea. OK. POOH, LD 2-7/8" tbg. RIH w/ DC & stood back tbg. POOH, LD same. ND BOP. NU tree (ready for ERC to change out THS). RD released rig.