

9-13-90 7" casing at 2940'; open hole 2940-3137'.

Washing on fill from 3073-3115'.

Work past junk from 3102-3112', junk moving up and down hole with drill string. Work down to 3121', cannot get deeper. Returns moderate 1/8" and less coal in black water; water is mud-cut also.

Try to work past junk at 3121' with 1 MM air and 2 BPM water; hole falls in. Returns very heavy 1/4" and less coal in black water. Shut down air, raise water rate to 5 BPM, circulate at 3121', bit on junk at 3121'.

Try to work past junk with 2 MM air and 5 BPM water, hole fell in. Pull up to 3090', circulate on fill with 5 BPM water to 3121'. Returns 1/4" and smaller coal in black water.

POOH with 6-1/4" bit, bit 1/4" out of gauge.

Change out 6-1/4" bit for 6-1/4" mill, hole unloading 1-1/2" to 1" coal in black water, hole bridging off, pump 150 Bbl water down hole.

TIH with 6-1/4" OD mill, bit sub, string float, one 4-3/4" drill collar, N nipple (1.875" ID), nine 4-3/4" drill collars, F nipple, and 3-1/2" drill pipe. Tag fill at 3075'.

Mill on fill from 3073-3115' with 5 BPM water. Well surges coal slugs, pull up to 3075'', tried various combinations of air and water to clean hole. Well making 1-1/2" to 1" coal in black water. Stuck several times.

9-14-90 7" casing at 2940'; open hole 2940-3137'.

Milling on fill at 3110'.

Mill on fill from 3075-3105' with 1 MM air and 3 BPM water. At 3090' and below hole makes too much coal to unload, hole gets tight. Shut off air, clean out to 3105' with 5 BPM water. Returns very heavy 1/4" coal and fines in black to gray water.

Mill on fill from 3075-3115' with 2 MM air and 2 BPM water. Hole tight with torque and drag from 3090' and below. Pipe stuck at 3098' - shut off air, work pipe free. Returns heavy 1/4" and less coal (98%) in gray to black water - mud-cut.

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9-14-90 Mill on fill from 3075-3102' with 5 BPM water. Hole stable then started making heavy 1/2" coal in black water. Hole got tight, lay down 1 jt drill pipe.

Mill on fill from 3075-3101', tight hole with high torque and drag. Returns moderate to heavy 1/2" and less coal with powder in black mud-cut water.

Pull 5 jts drill pipe to 2971', wash and ream to 3063' with 4 MM air and 5 BPM water. Hole gets very tight at 3063', 20-30,000# drag. Shut off air, mill from 3063-3103' with 5 BPM water. Returns heavy to moderate 1/4" and smaller coal in gray to black water.

Mill on fill from 3103-3110' with 3 MM air and 2 BPM water. Returns light 1/4" and smaller coal in gray water.

9-15-90 7" casing at 2940'; open hole 2940-3137'.

Cleaning out from 3109-3121'.

Mill on fill at 3110-3121', top of junk appears to be at 3121', hole tight with high torque. Close one blooie line, hole loaded up, open second blooie line, lay down 1 jt 3-1/2" drill pipe. Clean out from 3093-3121' several times. Returns moderate 1/4" and less coal in black water.

Clean out fill 3093-3121' with 4 MM air and 2 BPM water with 5 Bbl water sweeps every 1/2 hr. Returns light 1/16" and coal fines in black water; on sweeps moderate to heavy returns in black water. Clean out to top of fish, hole tight with high torque, 10-15,000# drag. Work pipe and clean out fill.

Clean out from 3109-3121' with 4 MM air and 2 BPM water with 5 Bbl water sweeps every 1/2 hr. Upper hole stable above 3109', 20-25,000# drag below 3109'. Returns light 1/8" coal in gray water.

9-16-90 Milling on junk at 3125'.

Clean out from 3109-3121' with 4 MM air and 1-1/2 BPM water with 5 Bbl water sweeps every 1/2 hr. Cleaning out to 3121', junk falls around drill collars, have high torque and drag. Returns light coal fines in clear water; on sweeps 1/8" coal in black water.