

## IW 13b-23-65 Well History

September 14, 2004 – Move rig to Mist yard.

September 15, 2004 – Taylor crane moved and unloaded at location. Rig components moved from Bark N All yard to location. Spotting and rigging up rig. Encountered a water sand at 25' while drilling r/m/c holes.

September 16, 2004 – Finish spotting rig on location. String derrick lines. Rig in desander pump/start rigging in water/air/fuel lines. Stand up derrick at 1700 hr. Secure rig and location – shut down for the night.

September 17, 2004 - Rigging in rig and equipment to drill/pick up kelly. Spot and rig in mud cleaning equipment. Unload 10 joints of surface casing. Unload wellheads and general rigging up. Secure rig and equipment shut down for weekend.

September 20, 2004 – Start up operations. Weld on conductor barrel and flow line. Fill mud tanks with water, rig in mud cleaning equipment, run and flush lines and pump lines. Kelly bar pin end defective. General rig up. Shut down for evening.

September 21, 2004 – Trade out kelly bars/unload directional tools/clean tools and lease. Pick up mud motor/cross over subs/flush and test run motor. Spud well – Drill 8.75" hole, directional drill kick off point at 180 ft. Directionally drill to 452 ft K.B. Repair shale shaker. Trip out of hole stand directional equipment in derrick. Lay down mud motor. Make up 8.75" by 12 ¼" hole opener.

September 22, 2004 – Open 8.75" directional surface hole to 12.25". Circulate hole clean. Trip out. Lay down 12.25" hole opener. Pick-up 17.5" hole opener. Open 12.25" hole to 17.5". Repair shale shaker. Ream out hole to 260 ft KB. m.w = 8.5, visc = 37.

September 23, 2004 – Open 12.5" hole to 17.5". Finish reaming at 2000 HR. Circulate hole clean. Trip out with 17.5" opener. Had to pull 60,000 lbs to pull opener through table throat. Two hours spent trying to get opener back through rotary table F. Pick up at 17.5" bit. Trip in hole. Wipe hole and circulate hole clean. Trip out of hole. Lay down bit and subs. Rig up to run surface casing. Run 10 joints – 13.3/8" surface casing. mw = 9.2, visc = 40.

September 24, 2004 – Circulate surface casing on bottom. Condition hole. Cement casing with 310 sacks cement. Casing landed at 442 feet K.B. 10 barrels clean cement returns to surface. W.O.C. 8 hrs. Cut off conductor barrel/weld on casing bowl. Tested weld cavity to 750 psi for 15 minutes. Held OK. Nipple up BOPE. mw = 9.0, visc = 40.

September 25, 2004 – Nipple up BOPE/Rig in flare stack and lines. Test BOPE equipment as per DOGAMI request. Witnesses by Bob Brinkman. Change out kelly bar, make up 12.25" bit. Trip in hole and drill out cement, float and shoe. Clean out hole to 452 ft. Trip out 12.25" bit and lay down same/pick up directional tools. Trip in hole with 8.75" bit and directional tools. Drill ahead building angle. mw = 9.0, visc = 40.

September 26, 2004 – Drill ahead as per directional program. Repair shale shaker. Building hole angle to 55 degrees. Azimuth 144 degrees. Hole good – no problems. mw = 9.2, visc = 48.

September 27, 2004 – Drilling 8.75" hole as per directional program. Repair break out cathead. Dump and clean sand trap, full of cement and large cuttings. Dummy trip to surface casing. Shut down and repair broken suction valve. Trip in hole to drill ahead. Drill to 1800 ft – circulate sample. Drill to 1892 ft – circulate sample. mw = 9.2, visc = 43.

September 28, 2004 - Drill to T.D. At 2234 ft. MD. Circulate and condition mud and well bore to log. Dummy trip 25 stands. Circulate hole clean. Trip out to log. Lay down directional tools. Rig in Halliburton wireline services. Log well as per program logs run HRID – BCSD – NGRT – FIAC – SDLT – DSNT – NGRT – EMIT – NGRT. mw = 9.4, visc = 44.

September 29, 2004 – Logging well bore with Halliburton services. Tear out loggers. Trip in hole with clean out bit 8.75", clean out well bore. Trip out to pick up 2 7/8" cement stinger to plug back hole to 2010 feet M.D. Trip in hole with 27/8" stinger on drill pipe, circulate hole clean. Rig in Taylor cementers and spot 70 sacks cement plug (construction cement type 111 mixed at 14.6lb/gal) from 2222 ft to 2000 ft. Trip out of hole with stinger, set up brakes. Lay down stinger – pick up 12.25" hole opener. Trip in hole with 12.25" hole opener – start reaming hole at 452 ft. M.D. mw = 9.6, visc = 41.

September 30, 2004 – Opening 8.75" hole to 12.25". Mud weight to 10lbs./gal. Dump 150 barrels mud and rebuild mud system. Open hole to 12.25". Plugged jets in hole opener at 902 ft. Trip out and clean out hole opener. Trip in to 902 ft. and hole is tight.

Open hole to 1104 ft., hole tight, work hole and condition mud and hole/mixing gel to increase yield point. mw = 9.6, visc = 41.

October 1, 2004 – Open hole to 12.25" from 1104 ft to 1190 ft. Plugged hole opener, trip out. Trip in hole tight. Ream tight spots at 902 ft. Ream out hole to 1414 ft. Hole opener balled up – trip out with hole opener. Ream out hole to 1872 ft. Circulate and condition mud and hole. mw = 9.1, visc = 41.

October 2, 2004 – Hole opened to 1872 ft. Trip out with hole opener, hole was very tight and had to pump out several singles. 24 hrs spent tripping, reaming and circulating hole. Raised mud viscosity to 100 and raised mud weight to 9.6 lbs. Made three complete wiper trips to the surface casing – reamed all tight spots. mw = 9.1, visc = 41.

October 3, 2004 – Continue to clean out 12.25" hole. Prepare to run casing. Trip out to run casing. Hole good, no tight spots. Rig up to run intermediate casing. Ran in 40 joints 9 5/8" casing. mw = 9.6, visc = 100.

October 4, 2004 – Running 9 5/8" casing. Joint #41 tight, had to circulate it in. Circulate and work casing for one hour/circulating pressure at 800 psi. Ran two more joints casing – joint #43 was tight. Rigged up to circulate casing. Broke circulation easily – circulate casing for 10 minutes. Casing packed off while circulating/attempt to free casing and regain circulation. Work casing up the hole/lay down two joints. Unable to regain circulation. Work stuck casing/pump out 7 joints casing, unable to regain circ. Now having to pull 300,000 to move casing. Casing now completely stuck. Rig down casing tong tools – wait on wireline truck. mw = 9.6, visc = 100.

October 5, 2004 – Wait on Baker Atlas cased hole truck to arrive from California. Work casing without pumping. Attempt to work casing loose. mw = 9.6, visc = 100.

October 6, 2004 – Wait on Baker Atlas to arrive. Work casing – casing still stuck – no movement. mw = 9.6, visc = 100.

October 7, 2004 – Wait on Baker Atlas wireline unit. Baker on location at 0900 hr. Oct 7 2004. Run in hole with gauge ring and junk catcher. Shear off safely on ECP and recover same in junk catcher/run in hole with stuck pipe log. Have free pipe from surface to 1403 ft. M.D. Pipe 100% stuck from 1403 to 1428 ft. M.D. Run free point log to confirm stuck pipe log. Rig in Halliburton and set ECP at 1416 ft to 1406 ft. M.D. with 2800 psi/release pressure on casing. Float did not hold. Monitor flow back. Recover 18 barrels fluid. Plug has moved up hole 234 ft. Nipple down BOPE and set casing slips. Casing now landed at 1428 ft. M.D. mw = 9.6, visc = 100.

October 8, 2004 – Nipple up BOPE and pressure test casing seals and ring connections. Trip in hole with open ended drill string and push wiper plug back down to bottom. Perforate casing at 1356 ft. M.D. with 12, 1/2" holes. Break circulation behind casing easily and circulate casing. Rig in Halliburton cementers and cement casing with 365 sacks cement. Cement in place at 0120 hr. Oct. 9, 2004. Had 10 barrels clean cement to surface. Left 5 barrels clean cement in casing. Shut in casing and let cement set. Had 260 psi casing to annulus differential pressure. Casing landed at 1428 ft. M.D. and cemented in place. ECP is set. mw = 9.6, visc = 100.

October 9, 2004 – Wait on intermediate casing cement to set. Holding 260 psi on casing to balance annulus. Shut down rig and operations at 1300 hr. Oct. 9, 2004. Waiting on 7 5/8" casing and equipment needed to continue operations. Secured rig and equipment. Left two crew members per 12 hour shift to watch rig and equipment. mw = 9.6, visc = 100.

October 10, 2004 – Rig shut down – waiting on 7 5/8" equipment. mw = 9.6, visc = 100.

October 11, 2004 – Rig shut down – waiting on 7 5/8" equipment. mw = 9.6, visc = 100.

October 12, 2004 – Rig shut down – waiting on 7 5/8" equipment. mw = 9.6, visc = 100.

October 13, 2004 – Rig back in operation at 1200 hr. Oct. 13, 2004. Cleaned out sand trap. Trip in hole with 8.75" bit. Tagged cement in 9 5/8" casing at 1274 FMD. Circulate and condition hole and mud. Drill out cement from 1278 feet MD. Good hard cement. Tag shoe at 1428 feet MD. Drill out float plate and shoe. Circulate hole clean. Trip in hole to top off sand at 1872 ft. Sand section is bridged off. Did not clean out bridge. Circulate and condition hole and mud at top of sand 1872 ft. Recovered only a small amount off drill cuttings. Trip out to pick up 8" by 12.25" under reamer. Trip in hole to 1000 ft. with under reamer. mw = 9.6, visc = 100.

October 14, 2004 – Finish tripping in hole with 12.25" under reamer. Stop at 1430 ft. Open under reamer and check against 9 5/8" casing. Under ream from 9 5/8" casing shoe to 1874 ft. Circulate hole clean and condition mud. Pull under reamer into casing

(pulled 8 stands pipe). Monitor well bore and wait on 7 5/8" pipe. mw = 8.6, visc = 40.

October 15, 2004 – Waiting on casing. Trip in hole from casing shoe to 1872 ft. and circulate. Circulate and condition mud. Trip out 8 stands. Raise mud weight to 8.8 lb/gal. Wait at shoe for three hours. Trip in btm. Circulate bottoms up. Raise mud weight to 8.9 lb/gal. Trip out 8 stands. Waiting on 7 5/8" casing. Unload casing and equipment. Trip back to btm. Circ. btms up. 700 units gas on btms. up. Circulate and raise mud weight to 9.0+ lb/gal. Trip out of hole to run casing. Lay down 12.25" under reamer. Rig up to and run 7 5/8". 26.40# K-55 LT/C RING. 3 8RD casing. mw = 8.6, visc = 37.

October 16, 2004 – Finish in hole with 7 5/8" casing and hanging tools. Circulate hole clean. Very little gas on btms up. Land casing at 1872 ft. and hang off casing. Top of casing at 1290 ft. Trip out of hole with drill string and Baker hanger tools. Wait on cement to set. Oct. 17, 2004 – Run in hole with drill string and 8 3/4" bit. Tag cement top at 1216 ft. M.D. Circulate and condition cement - cut mud. Circulate and wait on cement to set. mw = 8.6, visc = 37.

October 17, 2004 – Wait on cement to set to 1200 hr. Trip in hole with 8 3/4" bit. Tag cement at 1216 ft. M.D. Drill out cement to top of 7 5/8" casing at 1269 ft. M.D. Circulate hole clean. Trip out of hole lay down 30 joints H.W.D.P. Pick up 25 joints 3.5" drill pipe. Run in hole with a 6 3/4" bit/25 joints 3.5" pipe x.o. and drill pipe. Clean out top off liner from 1270 ft to 1341 ft. Circulate and condition cement – cut mud. Trip in hole to 1790 ft. M.D. Tag wiper plugs. Drill out wiper plugs and landing plate/cement/insert float and cement to 1860 FMD. Circulate and condition cement cut mud. Wait on cased hole loggers. Will run CBL and casing inspection log. mw = 8.6, visc = 37.

October 18, 2004 – Wiper trip through 7 5/8" casing after drilling out cement/landing plate and insert float. Circulate hole clean. Trip out to run casing inspection logs. Rig in Halliburton and run casing inspection logs. Trip in hole with 6.75" bit to 1860 ft. Drill cement and float shoe at 1872 ft. Clean out from 1872 to 2016 ft. M.D. Tag solid cement at 2016 ft. Circulate hole clean. Trip out 3 stands. Pull bit back into 7 5/8" casing. Transfer drilling mud to storage tanks and clean mud tanks to mix drill fluid. mw = 8.6, visc = 37.

October 19, 2004 – Clean mud tanks. Flush mud lines and equipment. Mix salt base drill in fluid. Fluid properties weight 9.0 lb/gal WL 10 cc PH 7 Viscosity 34 sec/gt. Trip in hole to 2010 ft. M.D. Displace drilling mud from hole with the drill in mud. Trip out of hole to pick up the under reamer. Trip in hole with under reamer. Scratch tight spot in 7 5/8" casing from 1626 ft. to 1668 ft. M.D. Under ream C/W sand from base of 7 5/8" casing to 2010 ft. M.D. Circulate hole clean. Trip under reamer back into casing at 1872 ft. M.D. Tight at shoe. Work reamer through shoe several times – all ok. mw = 9.0, visc = 48.

October 20, 2004 – Monitor hole fluid level with 13" under reamer in casing. Trip back to 2010 ft with under reamer. Check for fill (no fill found), trip back to casing shoe. Transfer drill in fluid to storage tank. Clean mud pits. Mix and filter 9.0 lb/gal salt water. Displace well bore with clean filtered salt water. Trip out of hole with under reamer. Rig up power tongs. Make up 5.5" liner screen and running tools. Trip in hole with 5.5" screen to 2010 ft. M.D. Note: Ran a 18 foot mud anchor below screen. Reverse circulate hole and liner screen with clean filtered 9.0 lb/gal salt water. Spot breaker across sand zone. Trip out of hole. Stand back 4.5" pipe. Lay down all 3.5" drill pipe. Pick up Baker SC-1 packer, seal bore extension and 7 5/8" seal element. mw = 9.0, visc = 34.

October 21, 2004 – Trip in hole with 9 5/8" SC-1 packer and seal bore extension dressed with 7 5/8" x 9 5/8" liner top seal. Set SC-1 packer at 1258.93 ft MD. Trip out of hole using Baker running tools. Lay down drill pipe. Break down kelly. Rig in casing tong. Unload 7" casing and strap same. Run in hole with 7" tubing string with baker seal extension and annular relief valve. Space out 7" tubing string. Install hanger with back pressure valve in place. Check space out. Test seals – all ok. Pull seals out of packer. Close annular preventer and circulate well bore to fresh water. Land tubing in seal. Land hanger and lock down. Nipple up BOPE. Install wellhead. Drain and clean mud tanks. Well has pressure under back pressure valve. Rig up to remove back pressure valve. mw = 9.0, visc = 34.

October 22, 2004 – Release rig October 22, 2004 at 1200: HR.