

LOG OF WELL

0'	to	2'	Topsoil	
2'	to	35'	Yellow clay	
35'	to	62'	Sand (brown) water	
62'	to	119'	Blue clay	
119'	to	230'	Sand (fine) water	bedrock top?
230'	to	238'	Sand (coarse) muddy with water	FSH
238'	to	247'	Broken limerock and sand	Crevice fill?
247'	to	252'	Soft broken limerock	
252'	to	271'	Lime rock (water bearing)	
271'	to	280'	Limerock	
280'	to	315'	Limerock	F. Atkinson
315'	to	340'	Limerock and shale	

After drilling was completed at 340' a test pump was installed. The well only produced 75 gpm. Because of low production, 500 gallons of muratic acid was pumped into the well under pressure.

After the acid had remained in the well 72 hours a pumping test was resumed. The water production was increased to 225 gpm with a drawdown in the well from a static water level of 4' to 113'. After a total of 30 hours intermittent pumping, sand began to breakdown around the end of the 10" casing which was at 251'. It was then decided to install a 20' sand screen from 235' to 255'. The hole was then plugged back to 265' and a screen was installed. The test pump was then re-installed but the well only pumped about 100 gpm. It was then thought that the screen was plugged with drilling mud. Attempts were made by using poly-phosphate and air injection to un-plug the screen. After these attempts were unsuccessful, it was decided to remove the screen and further examine the formation, upon doing this it was found that the formation contained natural mud and silt. This type of formation would prevent developing a successful well. The mud condition had not been noticeable in the original samples of the test well. Upon further examination of the formation it was decided that from 247' to 268' was the formation that was producing the most water and was a clean formation that could be successfully screened. After the screen was re-set from 247' to 268', the well was test pumped. The water was free of sand and at the end of the 24 hour test it was pro-

ucing 227 gpm with a drawdown to 109'. After completing the pumping test, the test pump was removed and the casing was grouted to 35'. The 10" casing extends from 1" above ground level to a total depth of 248'. The screen is a Johnson stainless steel 9 3/4" OD x 8 5/8" ID x 20 feet long. The screen has 8' of 8" ID pipe welded to the bottom of screen and has a 10" rubber packer at the bottom of the screen. The total overall length of the screen with the 8" pipe welded to the top of 8" pipe on screen is at 239' from the ground level. Total depth of the well is 280'. The static water level is 38' from ground level and the water level lowered to 109' after pumping 24 hours continuously at the rate of 220 gpm. On permanent pump installation to pump 150 to 200 gpm, I would recommend installing the pump to 120' to 140'.
