

Details of Work

As the ground has not been leveled for derrick foundation, only the approximate derrick floor elevation can be given at this time. This elevation was obtained by the Civil Engineers when staking location for this well and is based upon the derrick floor elevation of Well No. 1. The geological name for the surface formation is Recent sands.

This well is to be drilled by a heavy duty rotary drilling rig to an approximate total depth of 11,940 feet. The same geological formations will be encountered in this well as were found in Well No. 1. The estimated depths to the top of important markers will be approximately the same as those reported in Well No. 1. It is anticipated that the only potable water will be encountered in the upper sands which will be cased off by the surface string of casing. Oil and gas bearing sands should be encountered at approximately 11,820 feet.

The surface hole will be drilled with a 17-1/4-inch bit to permit the setting of approximately 400 feet of 13-3/8-inch 48-pound H-40 casing which will be cemented to the surface. The intermediate hole will be drilled with a 12-inch bit to permit the setting of approximately 3,020 feet of 9-5/8-inch 36-pound J-55 casing. The amount of cement to be used will depend upon calculations based upon a caliper survey. An estimated 2,030 sacks will be required. An attempt will be made to cement the intermediate string to the surface. The lower hole will be drilled with an 8-3/4-inch bit to permit the setting of approximately 11,940 feet of 5-1/2-inch casing composed of 17-pound J-55, 17-pound N-80, 20-pound N-80, and 23-N-80 and designed to afford maximum strength in tension and collapse. The amount of cement to be used will be restricted to an amount which will impose a hydrostatic head of slightly less than twice the formation pressure and will depend upon calculations based upon a caliper survey. The well will be completed with approximately 11,940 feet of 2-inch NUE 4.70 N-80 tubing and high test pressure Christmas tree. The well will be drilled with a low water loss mud having a weight of 9-1/2 - 10 pounds per gallon, and a viscosity of 36 - 80 centipoises dependent upon whether lime or shale is being drilled. The mud will consist principally of a bentonitic clay chemically treated with caustic, quebracho and impernox to which may be added barites to give additional weight. Sufficient mud will be available to control anticipated drilling requirements.

Cores will be cut and drill stem tests made in those formations where it appears advisable to gather such data as these means will afford. The mid portion of the 5-1/2-inch casing opposite the main part of the oil zone will be gun-perforated with from 2 to 3 shots per foot. If the initial gun perforating does not appear to have given sufficient openings in the casing, the same section may be gun-perforated a second time. If it appears advisable to acid treat after gun perforating to open up the formations contiguous to the perforations, this will be done.

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This well is to be drilled by a heavy duty rotary drilling rig to an approximate total depth of 11,940 feet. The same geological formations will be encountered in this well as were found in Well No. 1. The estimated depths to the top of important markers will be approximately the same as those reported in Well No. 1. It is anticipated that the only potable water will be encountered in the upper sands which will be cased off by the surface string of casing. Oil and gas bearing sands should be encountered at approximately 11,800 feet.

The surface hole will be drilled with a 17-1/4-inch bit to prevent the setting of approximately 400 ft of 17-1/4-inch 48-pound 11-40 casing which will be cemented to the surface. The intermediate hole will be drilled with a 13-inch bit to permit the setting of approximately 3,000 feet of 9-5/8-inch 36-pound 7-55 casing. The amount of cement to be used will depend upon calculations based upon a caliper survey. An estimated 2,000 sacks will be required. An attempt will be made to cement the intermediate string to the surface. The lower hole will be drilled with a 10-1/2-inch bit to permit the setting of approximately 11,940 feet of 8-1/2-inch casing composed of 17-pound 7-55, 16-pound 8-80, 20-pound 8-80, and 22-pound 8-80 and depending on strength in tension and collapse. The amount of cement to be used will be restricted to an amount which will impose a hydrostatic head of slightly less than twice the formation pressure and will depend upon calculations based upon a caliper survey. The well will be completed with approximately 11,940 feet of 8-inch 4.70 8-80 tubing and high test pressure Christmas trees. The well will be drilled with a low water loss mud having a weight of 9-1/2 - 10 pounds per gallon, and a viscosity of 30 - 50 centipoises dependent upon whether lime or shale is being drilled. The mud will consist principally of a bentonitic clay chemically treated with caustic, quaternary and lignite to which may be added barites to give additional weight. Sufficient mud will be available to control anticipated drilling requirements.

Core will be cut and drill stem tests made in those formations where it appears advisable to gather such data as these means will afford. The mid portion of the 2-1/2-inch casing opposite the main part of the oil zone will be gun-perforated with from 2 to 3 shots per foot. If the initial gun perforating does not appear to have given sufficient openings in the casing, the same section may be gun-perforated a second time. If it appears advisable to sand treat after gun perforating to open up the formation conditions to the perforations, this will be done.