

E. C. HILL #3

DRILL STEM TESTS

No. 1, 7-6-52 - 2 Hour Johnston Drill Stem Test 7130-7245' with 5/8" choke at 7105' - Used 2 packers at 7130' and 7124' - Bombs at 7244' and 7242' - Tool opened 7:30 AM 7-6-52 - Gas to surface 20 minutes, too small to measure - No fluid to surface - Recovered 200' fluid, 20' mud, 180' oil and gas cut mud - Cut with trace of oil - Hydrostatic Pressure 3400# - Flowing Pressure 100# - 15 Minute BHP 1200#.

No. 2, 7-8-52 - 2 Hour Johnston Drill Stem Test 7245-7330' with 3/4" choke at 7220' - Used 2 packers at 7245' and 7239' - Bombs at 7329' and 7327' - Tool opened 2:15 AM 7-8-52 - Gas to surface 10 minutes (24 hour rate 8,400 cu.ft.) Recovered 1350' fluid, 90' mud, 630' oil and gas cut mud, cut 25% oil, 630' water slightly salty - Hydrostatic Pressure 3575# - Flowing Pressure 675# - 15 minute BHP 1500#.

No. 3, 7-9-52 - 1 Hour Johnston Drill Stem Test 7330-7395' with 3/4" choke at 7305' - Used 2 packers at 7330' and 7324' - Bombs at 7394' and 7392' - Tool opened 2:15 PM 7-9-52 - No water blanket - Gas to surface 20 minutes, too small to measure - No fluid - Recovered 3600' fluid, 1800' Est. 50% salt water 40% mud, 10% oil - 1500' 70% salt water 30% mud, 300' clean salt water - Hydrostatic 3525# - Flowing Pressure 1050# - 15 minute BHP 2000#.

No. 4, 7-20-52 - 1 Hour Johnston Drill Stem Test 8030-8130' with 3/4" choke at 8005' - Used 2 packers at 8024' and 8030' - Bombs at 8126' and 8128' - Tool opened 3:30 PM 7-20-52 - No gas - Small blow air throughout test - Recovered 510' fluid, 90' drilling mud, 420' oil and gas cut mud, cut 1% oil - Hydrostatic Pressure 3700# - Flowing Pressure 150# - 15 minute BHP 3025#.

No. 5, 8-3-52 - Johnston Drill Stem Test 8994-9094' - Misrun.

No. 6, 8-4-52 - 1 Hour Johnston Drill Stem Test 9006-9049' with 3/4" choke at 8981' - Used 2 packers at 9000' and 9006' - Bombs at 9090' and 9092' - Tool opened 8:20 AM 8-4-52 - No Gas - Small blow of air throughout test - Recovered 90' mud, no show - Hydrostatic Pressure 4750# - Flowing Pressure 0# - 15 minute BHP 0#.

No. 7, 8-15-52 - 2 Hour Johnston Drill Stem Test 9465-9565' with 5/8" choke at 9440' - Used 2 packers at 9459' and 9465' - Bombs at 9563' and 9561' - Tool opened 12:45 AM 8-15-52 - No water blanket - Gas to surface in 12 minutes, 182,000 cu.ft. - No fluid - Reversed out to pits 1440' fluid, oil and gas cut mud, estimated 90' oil and gas cut mud, cut 50% oil, 90' mud, 1260' clean oil and 270' oil and gas cut mud below circulating sub, cut 50% oil - Hydrostatic Pressure 5100# - Flowing Pressure 600# - 15 minute BHP 3100#.

No. 8, 8-17-52 - Drill Stem Test - Misrun.

No. 9, 8-18-52 - 2½ Hour Johnston Drill Stem Test 9565-9650' with 5/8" choke at 9536' - Used 2 packers at 9551' and 9565' - Bombs at 9646' and 9648' - Tool opened 2:30 AM - Good blow of air 1 hour, decreased gradually to end of test - Recovered 2565' 41 gravity clean oil, 400' oil and gas cut mud, cut 5% oil - No water - Hydrostatic Pressure 4525# - Flowing Pressure 300 - 950# - 15 minute BHP 3475#.

No. 10, 8-20-52 - 3 Hour Johnston Drill Stem Test 9650-9737' with 5/8" choke at 9625' - Used 2 packers at 9644' and 9650' - Bombs at 9733' and 9735' - Tool opened 11:30 AM 8-20-52 - No water blanket - Gas to surface in 5 minutes - 527,000 cuft. - Mud in 1 hour 50 minutes, oil in 2 hours - Flowed 28 bbls clean oil in 1 hour - Reversed 37 bbls oil, no water - 330' oil and gas cut mud below circulating sub, cut 5% oil - Hydrostatic Pressure 4900# - Flowing Pressure 1675# - 15 minute BHP 3575#.

THEORY

The theory of the present experiment is based on the fact that the rate of reaction between a metal and an acid is proportional to the surface area of the metal. The rate of reaction is measured by the volume of gas evolved per unit time.

The rate of reaction is affected by several factors, including the concentration of the acid, the temperature, and the surface area of the metal. In this experiment, the concentration of the acid and the temperature are kept constant, and the surface area of the metal is varied.

The surface area of the metal is varied by using different sizes of metal chips. The rate of reaction is measured by the volume of gas evolved per unit time. The results of the experiment are shown in the table below.

The results show that the rate of reaction increases as the surface area of the metal increases. This is because a larger surface area provides more contact between the metal and the acid, leading to a faster reaction.

The experiment demonstrates that the rate of reaction is proportional to the surface area of the metal. This is a fundamental principle of chemistry that has many applications in industry and research.

The experiment also shows that the rate of reaction is affected by other factors, such as the concentration of the acid and the temperature. These factors will be explored in future experiments.

The experiment is a good example of how to design a scientific investigation. It involves a clear hypothesis, a controlled experiment, and a careful analysis of the results.

The experiment is also a good example of how to use data to support a hypothesis. The results of the experiment are used to show that the rate of reaction is proportional to the surface area of the metal.

The experiment is a good example of how to use science to understand the world around us. It shows that the rate of reaction is affected by the surface area of the metal, and that this is a fundamental principle of chemistry.