

INTERVAL: 4092 - 4119 FEET.

DATE: 16/11/1979

LOGGING GEOLOGIST: G. HORNER

THIS INTERVAL IS CHARACTERIZED BY A SANDSTONE: CLEAR TO VERY LIGHT GREY TO DOMINANTLY GREEN-GREY, LOOSE TO FRIABLE, DOMINANTLY LOOSE, MEDIUM TO COARSE GRAINED, DOMINANTLY MEDIUM GRAINED, SUBANGULAR TO SUBROUNDED, WELL SORTED, QUARTZ GRAINS WITH 2% ELLIPSOIDAL MEDIUM TO COARSE GLAUCONITE GRAINS, MINOR CARBONACEOUS AND CALCAREOUS MATERIAL, TRACE FOSSIL FRAGMENTS AND LITHIC FRAGMENTS, WEAK SILICEOUS CEMENT IN PART, RARE PYRITE CEMENT, GOOD ESTIMATED POROSITY AND PERMEABILITY. THIS UNIT IS overlain BY 230 FEET OF DARK GREY ARGILLACEOUS SILTSTONE WITH MINOR SANDS IN THE UPPER PORTIONS. NO FLUORESCENCE OR CUT WAS PRESENT IN THIS SILTSTONE UNIT.

THE SHOW INTERVAL SANDSTONE HAD NO NATURAL FLUORESCENCE, CUT COLOUR OR CUT FLUORESCENCE. NO OIL STAINING WAS OBSERVED. NO HYDROCARBON ODOUR WAS NOTED OVER THE DRILLING MUD RETURNS, WITH NO FREE OIL BEING PRESENT IN EITHER THE DRILLING FLUID OR A CUTTINGS/WATER MIX.

ON PENETRATION OF THIS UNIT THE GAS ROSE FROM A BACKGROUND OF 1 UNIT OF TOTAL GAS WITH NO PETROLEUM VAPOURS TO A MAXIMUM OF 5 UNITS OF TOTAL GAS AT THE TOP OF THE SAND DECREASING TO 3 UNITS AT THE BASE. NO PETROLEUM VAPOURS, HYDROGEN SULPHIDE OR NON-COMBUSTIBLE GAS WERE DETECTED FROM THE FORMATION. THE CHROMATOGRAPHIC GAS ANALYSIS GAVE A MAXIMUM OF 900 PARTS PER MILLION OF METHANE, WITH 10 PARTS PER MILLION OF ETHANE. NO HEAVIER GASES WERE PRESENT. A BLENDOR CUTTINGS GAS ANALYSIS ON THE DRILLING MUD GAVE NO OBSERVABLE READING, WITH NO OBSERVABLE READING FROM THE MICRO-CUTTINGS GAS BEFORE OR DURING THE SHOW. A NEW BIT WAS IN THE HOLE, WHICH GAVE AN INCREASE IN DRILL RATE FROM A BACKGROUND OF 35 FT/HR IN THE SILTSTONE TO A MAXIMUM OF 150 FT/HR IN THE SANDSTONE.

MUD PROPERTIES FOR GAS LIBERATION FROM THE DRILLING FLUID WAS GOOD, HOWEVER, A POSSIBLE MUD OVERBALANCE RESULTED IN A DAMPING OF GAS INTAKE INTO THE WELL BORE, MAKING DEFINITIVE IDENTIFICATION OF ANY SHOW DIFFICULT.

SUMMARY

THIS UNIT APPEARS TO HAVE AN EXCELLENT FLOW POTENTIAL, BUT DUE TO DAMPING OF GAS INTAKE INTO THE WELL BORE BY A POSSIBLE MUD OVERBALANCE, A PORE FLUID IDENTIFICATION IS DIFFICULT, BUT FROM THE ABOVE ANALYSIS A HIGH WATER/GAS RATIO WOULD BE SUGGESTED.

DEPT. NAT. RES & ENV



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NORTH PARATITE - 1
SHOW REPORT