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PLANT COST ESTIMATES FOR "AF" PROCESSING

As requested at our meeting 4/12/51 an estimate has been prepared indicating the cost of installing in the CPC plant the additional equipment needed to isolate all Blue crude by the "AF" (acid flushing) process. Based upon information from semi-works runs and one full scale plant trial, it appears that approximately \$240,000 would have to be spent to equip the CPC plant to handle all the crude synthesized after the current expansion facilities are in operation.

An operating cost estimate was also prepared to determine the effect of "AF" processing on the cost of finished CPC. Assuming 4.4 syntheses per day (maximum realistic production) and solvent milling capacity for 3.4 syntheses per day, with the extra 1 synthesis per day to be used on finished crude for BP-173-D and JBL-288-D, there would be a net annual loss of approximately \$87,000. This loss is largely due to the additional raw material costs for 98% sulfuric acid and 50% sodium hydroxide.

Since the cost of neutralization of the drowned slurry with 50% sodium hydroxide imposed a severe raw material cost penalty, an alternate process was costed. The alternate process comprises filtration of the drowned material before neutralization, followed by lime treatment of the acid filtrate. The press cake would then be reslurried, alkaline extracted and refiltered, etc.

The equipment and installation cost for the alternate process would be approximately \$400,000, as compared with \$240,000 for the original process. There would be a gross profit of roughly \$180,000, or 14.7% return on the \$400,000 investment (after all deductions), as compared with an \$87,000 yearly loss for the NaOH process.

From the above data, it must be concluded that "AF" processing cannot be justified on an economic basis.

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