

SINCLAIR REFINING COMPANY

The hard-and soft paraffin fraction in the medium-pressure product.

Hoiter, May 6, 1942

S-9

Dr. Velde

Re: Hard-and soft-paraffin fraction in the medium-pressure synthesis

At the meeting of the synthesis plants of October 3, 1942, the possibility of producing a higher percentage of gatch has been discussed. Dr. Roelen reported on the laboratory tests using concentrated cobalt catalysts in the medium pressure synthesis. He said that such catalysts, being of greater activity operate at lower temperatures than normal cobalt catalysts, the paraffin fraction being 50% of the liquid products, whereas otherwise the maximum is 30%. He said, however, that the major part of the increase is in the hard-paraffin range.

It seems to be of interest to see what changes the hard-and soft paraffin fractions undergo in correlation with the mode of operation. The relation will be different

- 1.) In the case of new contacts which were started at step III with a gas very rich in inverts, staying there for some length of time, while the temperature goes up to 300°.
- 2.) After the changing-over of these contacts into Steps I and II, whereby the temperature is considerably lowered.
- 3.) With older contacts in Steps I and II, when the synthesis temperature is higher.

The samples may be drawn in the form of condensate, such as it flows from the reactors into the terminal gas circuit. Ideally, we may start from the assumption that practically all the fractions boiling at a temperature of more than 320° will be recovered. However, the method of condensation will have a given effect.

Now that concentrated cobalt catalysts are the object of large scale experiments, this question becomes of special interest to us. Further tests ought to be run with four samples.

WVFF

M. Deak

6-7-48