KANSAS GEOLOGICAL SURVEY
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KANSAS DOLOMITES

by

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Kansas Dolomites

Because of the urgent demand for magnesium all potential sources of this metal should be throughly investigated. The mineral dolomite ($CaMg(CO_3)_2$), dolomitic limestone, and natural brines are now potential magnesium ores.

Two dolomitic limestones crop out in southwestern Kansas. The Stone Corral dolomite is exposed in eastern Harper county, Kingman county, Reno county, and in eastern Rice county. Originally and now in the subsurface some distance from outcrops the Stone Corral dolomite is a mixture of dolomite or dolomitic limestone and of anhydrite, but on the surface and in the shallow subsurface nearly all of the anhydrite content has been removed through the action of ground water. In places where now exposed the remaining dolomitic ledge has its maximum development in T. 20 S., R. 6 W., Rice county. The ledge is 6 feet thick there. In outcrops farther south it is somewhat thinner.

A chemical analysis of samples taken from a quarry in eastern Rice county follows.

Analysis of samples of Stone Corral dolomite from T. 20 S., R. 6 W., Rice county, Kansas

SiO_2	3.04	per cent
Al_2O_3	1.43	" "
Fe_2O_3	0.53	" "
CaO	36.22	" "
MgO	14.40	" "
Loss on ignition	41.40	" "

The Geological Survey has recently obtained additional samples of the same ledge in the same general area and will soon have more analyses.

The topography in the area of the Stone Corral outcrops is such that stripping operations are practical. The rock lies in a nearly

horizontal position and over wide areas is beneath but a few feet of overburden. It has been observed that single stripping operations could be carried out over an area of a square mile or more and very little overburden would have to be moved. Quarry sites can be located near railroads, especially in eastern Rice county.

The Day Creek dolomite is a thinner bed having a thickness of about two feet. There are excellent exposures near Ashland, Clark county. A chemical analysis of samples taken from this bed from an outcrop in sec. 34, T. 32 S., R. 23 W., Clark county is given below.

Chemical analysis of samples of Day Creek dolomite, from c.sec. 34, T. 32 S., R. 23 W., Clark county, Kansas

SiO_2	1.64	per cent
Al_2O_3	1.28	" "
Fe_2O_3	1.98	" "
CaO	31.54	" "
MgO	18.02	" "
Loss on ignition	46.34	" "

From the data at hand it seems that the Stone Corral dolomite, because of its greater thickness and of its availability for stripping, is a promising magnesium ore. At outcrops of the Day Creek bed the overburden is greater. The Stone Corral deposit, situated as it is near trunk railroad lines, is well disposed for convenient shipping.

The accompanying map shows locations of outcrops of these two deposits of dolomitic limestone in Kansas, and the railroad facilities available for shipping are to Hugoton. It will be observed that although the Day Creek dolomite in Clark county is much nearer to Hugoton, the distance by rail is nearly as great as from the more favorable Stone Corral dolomite deposits in eastern Rice county.

Concerning constituents of Hugoton natural gas suitable for synthetic rubber production: The average of the available analyses we have on hand shows the content of 4 carbon compounds to be 1.46 per cent.