

SCIENTIFIC EVENTS

MAGNESITE IN SOUTHERN NEVADA

A MASSIVE deposit of magnesite of unusual character that has recently been brought to the attention of the United States Geological Survey promises to yield a large and readily available supply of this material. The deposit lies in Clark County, Nevada, in the valley of Muddy River, one of the tributaries of Virgin River, a few miles above the town of St. Thomas. The material has been known for some time as kaolin, and successful experiments for utilizing it as a porcelain clay are reported to have been made, though they have not yet resulted in the exploitation of the deposit. The recognized outcrops have been located as mining claims, and some preliminary exploration and development work has been done. A side track on the St. Thomas branch of the Los Angeles and Salt Lake Railroad, about three miles northeast of the northernmost group of claims, offers a readily available railroad connection, and the station has been named Kaolin from this deposit.

The so-called kaolin is stated by the Geological Survey to be in fact a magnesite and was deposited in a highly magnesian sedimentary bed, a part of a regularly stratified series of sedimentary beds exposed by stream channels that cut across a low ridge at the upper edge of Muddy Valley. The deposit forms a chalky-looking bluff, dazzlingly white in the bright sunlight. The material is porcelain-white, fine grained and massive, is remarkably free from foreign material, and has the structureless appearance and conchoidal fracture that are generally characteristic of magnesite. It is not so hard as the more typical magnesite, and it crumbles more rapidly on exposure to the weather.

The deposit is included between tilted beds of conglomerate and sandstone below and shale above. The lower contact is sharply defined, but the magnesite grades up into the overlying beds. The purer part of the deposit consists of beds aggregating at least 200 feet in thickness. Within the section of purer material there are a few bands of sandy matter, but these are minor in amount and apparently almost negligible, as they could undoubtedly

be avoided in mining. The whole section lies in the form of a "hogback"—that is, the softer beds lap up against a uniform slope of the sandstone and conglomerate that has a northeasterly dip of 30° to 50°.

The region in which the deposit lies is in large part covered with alluvial wash, which conceals most of the bedrock formations, so that the section including the magnesite is exposed at only a few places where streams have cut down through the overlying deposits. The regularity of the exposed section and the continuity of the harder beds, which project through the surface wash, justify the assumption that the magnesite is practically continuous between exposures and for considerable distances beyond. Its length at the surface seems to be a mile at least.

THE BRITISH CHEMICAL INDUSTRY

SIR JOSEPH LARMOR, professor of mathematical physics at Cambridge and member of parliament, writes to the *London Times* as follows:

I have no claim to expert technical knowledge on chemical matters, but with others I have been wondering what is involved in the announcement in the House of Commons that the British Dyes Association are entering into negotiation with the German Color Industry Combine.

I well remember the remonstrances of scientific chemists when this national venture was placed under the direction of business men and members of the House of Commons early in the war; but it was reasonable at that time that the energies of the government that was conducting the war should not be distracted on smaller matters.

The welcome letter of Sir William Pope suggests further questions, to which answers must now be available and possibly instructive. Has the American dye industry, also started during the war, been as hopelessly unfortunate as our own? Have the attempts to develop the fixation of atmospheric nitrogen in this country, on methods which supplied the paramount needs of Germany during the war, met with better success? If the industry of fine chemicals is to be worked by British companies supported by the government, under German direction and instruction, what is to become of the armies of young men who, at the universities, have been undergoing long and expensive training in chemistry, in order

to take advantage of the openings that public policy seemed to offer?

We were informed on the highest authority that British effort, in the universities and in technical works, overtook and far out-distanced that long start that German military chemists possessed as regards noxious gases and other agents of chemical warfare. Has that superiority now disappeared, and why? One may even ask, judging from public pronouncements, is the same the case with our war-time superiority in aircraft and the relative scientific problems? Or is it that these things are now back under official control, with copious production of Blue-books?

A dozen years ago my duties threw me in the way of observing some of the great German university chemists who developed into chemical engineers on the grand scale and founded the German industry. While struck by their quiet capacity and apparent friendliness, it did not appear for a moment that they rated themselves higher than their British colleagues who had never had the same opportunities.

AGRICULTURE AND WIRELESS TELEPHONY IN FRANCE

AN editorial article in the *London Times* says:

WHILE England has been considering France has acted and has arranged to bring wireless telephony to the assistance of agriculture. A generous extension of the telephone system to rural districts has long been urged on our own General Post Office. It would help to redress the isolation of the country and it would confer the special benefit of prompt knowledge of approaching meteorological changes. Farmers and gardeners, who are at the mercy of vagaries of the weather, could do much to arrange their work or even to protect their crops were they in possession of weather bulletins such as are posted at harbors for the benefit of fishermen and mariners. But the cost of telephone cables has retarded the progress of extensions, and would, indeed, prohibit even the ultimate completion of a sufficient network. According to a message from our Paris correspondent, printed in our columns last Wednesday, France has overcome the difficulties of cost and distance by a prompt application of wireless telephony. The ministers of air and of agriculture, acting in concert, have arranged that the National Meteorological Office shall "broadcast" a weather bulletin twice daily. Every commune will have a receiving station in the parish school or police station, where the mes-

sages will be received and posted. It is proposed, further, that the peasants shall be warned of any sudden storm by ringing the village bell. Such an organization is well suited to rural France, where, for the most part, the owners are the actual cultivators and live in villages from which they sally forth to their fields. It would require modification in this country, where the isolated farm rather than the village is the center which would have to be reached. But messages issued by the Meteorological Office, now under the Air Ministry, could be received at suitably chosen towns, from which they would be redistributed not only to villages, but to farms in possession of the cheap wireless receivers already at the disposal of the general community.

THE MOUNT EVEREST EXPEDITION

At a recent meeting of the Royal Geographical Society Sir Francis Younghusband, the president, made the following announcement in regard to the Mount Everest Expedition:

As this is the last meeting of the session and consequently the last occasion on which I shall have the honor of addressing you as your president, perhaps you will allow me to summarize the results of the Mount Everest Expedition, so far as we at present know them. The climbers were on June 6 to have made a final effort to reach the summit—or rather the real attempt, for the previous efforts were more in the nature of reconnaissances. But we know that the monsoon broke on June 3 and we fear that this will have definitely frustrated any further effort.

But the expedition has, in spite of terrific weather, already accomplished much. As you know, they have reached 26,800 feet without oxygen and 27,300 feet with its aid. And in accomplishing these great feats they have gained much experience for future use. They have ascertained that the mountain itself at the highest points reached is, in Mallory's words, "not difficult," and Finch and Bruce were able to proceed along the north face without ropes. Mallory was convinced, too, that with favorable weather the porters could have carried a camp to 26,000 feet and so brought the climbers within reach of the summit. And Finch's experience was that by a moderate use of oxygen in camp both sleep and hunger were induced. So that, even if the final climbers did not carry oxygen on them, they might start from their high camp refreshed by its use.

The experience gained this year also shows that skilled mountaineers are able to take those un-