

THE BIG JOB

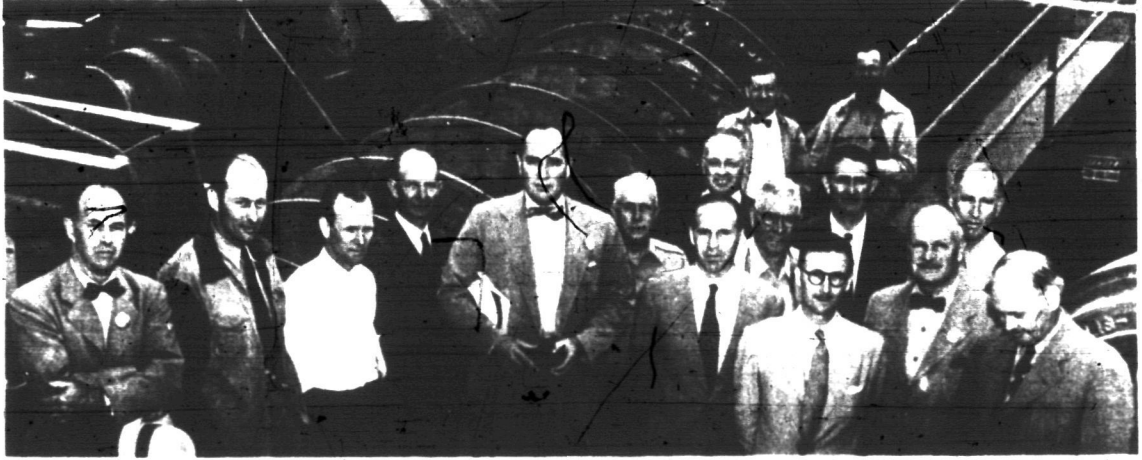
BASIC MAGNESIUM NEWS LETTER

NUMBER 2

OFFICE OF PUBLICATION -
DEPARTMENT OF INDUSTRIAL RELATIONS

JULY 2 1942.

BMI Wheels at Gabbs Roll For Victory



Howard P. Eells, Jr. (center) President of Basic Magnesium, Incorporated, snaps the switch to start production at the Gabbs Valley magnesium oxide plant. At the extreme right is Howard C. Mann, Project Manager. With a whirr, the world's largest plant of its kind began to roll. It was the first of actual operations for the BMI project. Others in the picture commencing on the left are: G.H. Shattuck, Vice-president, Southwestern Engineering Company; N.B. Thomsen, Superintendent, Macdonald Engineering Company; R.M. Crawford, Supervising Engineer, Defense Plant Corporation; W.W. Patnoe, Project Manager at Gabbs; Harley C. ... e, Manager of Technical Services; Dr. S.J. Fletcher, British Consultant; Thomas R. Cook, General Manager of Engineering; J.E. Ryan, Acting General Superintendent Shops and Services; Major C.J.P. Ball, Vice-president of BMI; R.C. Kelley, Director of Purchases, BMI; R.E. Phelan, Manager of Operations; George W. Burpee, Partner in Firm of Coverdale and Colpitts, Consulting Engineers; D.W. Stewart, Assistant Project Manager, BMI; and Clyde E. Collins, Chief Development Engineer at Gabbs.

IT'S THE BIGGEST IN THE WORLD

The world's largest magnesium oxide producing plant--Basic Magnesium's raw material feeder in Gabbs Valley--is rolling. Howard P. Eells, Jr., President of BMI last Friday snapped the switch that sent energy surging through the great conveyors, ore crushers, ball mills, flotation plant and other units which will supply the giant metals division at Las Vegas with 150,000 tons of magnesium oxide a year.

The Gabbs plant--located 32 miles from the nearest State Highway and railroad--is a triumph of modern engineering, handling the process from raw magnesite to magnesium oxide through a maze of conveyors and pipe lines in an uninterrupted flow.

FOR BOMBS AND BULLETS

Take some salt, some coal, some peat moss, some magnesium oxide and some chlorine. Mix them, make some pellets, treat these in a Chlorinator and you get some magnesium chlorides, give this brew a shot of high amperage "juice" and presto!--you've got metallic magnesium.

TO WIN A WAR

Simple, eh? Sure. A scientist could do it in a lab with apparatus a yard square. And get a pinch of magnesium. But suppose you've got a war to win. And you need a lot of magnesium--say 112,000,000 pounds a year. Then, brother, you've got to build something.

WHEN IT'S OVER OVER THERE

Maybe around about 1965 one of your grandchildren will say, "What did you do in the big war, grampaw?" (Or Gramma.) Tell him, Old Timer. And when you do it, stick out your chest.

OR FIGURE IT FOR YOUR OWN HOMETOWN

You're knocking over world records like a tank in a bean patch. This Basic plant is the biggest thing of its kind in the world. The main plant site itself is a mile and three quarters long and three quarters of a mile wide. Set it down in Los Angeles and it would blanket the whole business district--from First Street to Venice Boulevard one way and from Figueroa to Los Angeles Street the other.

SEE OTHER SIDE

THE BIG JOB — BASIC MAGNESIUM NEWS-LETTER

WHY THEY HAVE CRICKS IN THEIR BACKS

Already draftsmen have turned out 2300 separate drawings. To get the whole project down on paper they'll have to produce 1700 more.

A BLUEPRINT ROAD TO RENO

Lay down the blueprints already issued and you'd cover 1,258,536 square feet, or just about 30 acres. When all the construction blueprints are finished, cut them into strips a foot wide and on your day off lay them in a row. You'll have a strip 360 miles long.

WANTA' BUILD A MOUNTAIN?

Tell this to your grandson. Or tell it to the cockeyed world. Dirt already moved on this job totals 4,000,000 cubic yards. To finish up you'll move 6,000,000 yards. That's 162,000,000 cubic feet. That would make a mountain three miles high and a hundred feet square, or fill a hole dug in an acre to a depth of 3/4 of a mile.

IT BLOWS AWAY--BUT IT COMES BACK

In a country like this it isn't hard to find a place to dump all this dirt. A lot of it's in your eye.

FIGURE IT OUT FOR A SIDEWALK

The concrete job here is something to write home about. 717,000 cubic yards have already been poured. There are 75,000 yards yet to go. The whole business would make a six-foot wall, a foot thick, from the plant to Vegas--four times. And put this in your hat. Experts say they've never seen such a good job of concrete work anywhere.

A FEW OFFICE HEADACHES, TOO

All the tough jobs in the layout are not in the field. For example, try buying all the material. It's coming from almost every state in the Union and Canada. Already 20,000 purchase orders have been placed. One was for more than \$2,000,000. There were six for over a million each.

CALLING ALL POINTS EAST

After material is ordered, expeditors try to get it to the job--on time. Their success--even counting misses--is next to a miracle. They work a lot by telephone. Basic phones hook up daily all over the continent. The average is about 200 long distance calls a day. Some of them are recorded and can be played back.

The precious freight of words is carried in and out by telegraph, too. There's a telegraph office here on the job. It's handling nearly 250 messages--in and out--every day.

PIPE FABRICATION BY JIG

You're doing things here that have never been done before. The boss told you that last week. You plumbers, for example. Problem: Three inch lines in cell buildings--a whole flock of them--all alike; headers each 18 feet long, to each of these

six legs of 2 inch pipe to be welded. Solution: Men on the job suggested these assemblies be fabricated in the shop by jigs. Result: Jigs are made; finished welded units delivered to job usable on any cell. They fit to a gnat's eyebrow. And when they have to be replaced in operations the same jigs can be used for installation on any unit. No such operation has ever been performed before--anywhere.

ROOFERS IN THE CELLAR

Wonder why rubber's scarce? In addition to the fact that the Japs have snatched most of the crude rubber country, war industries, as well as the armed forces, are needing plenty. Ask the McNeil roofers. For lining acid storage tanks where brick lining isn't specified, roofers--most of them working inside for the first time in their lives--are installing synthetic rubber sheets--trade-named Tygon. Together with its cement this material costs \$3.00 a square foot. The job here is taking 300,000 square feet. Nothing else will suit this particular purpose. So--watch out for your tires, pardner.

EIGHT TONS OF HOLES

You could write a book about copper buss bars. No other buss bar job in the world has even approached it in size. The order: 4,000 tons. A world record. In the buss bar plant they're drilling in this heavy bar 1,114,600 holes, 7/8" in diameter--and milling 156,180 slots. The scrap from these holes alone will weigh 15,500 pounds, or nearly eight tons.

FROG'S WHISKER BRICKLAYING

Six guys with slide rules are now computing the size of the brick job. It'll be another new record. You'll get the lowdown later. Meantime you might like to know that the bricklaying on this baby is like making a Swiss watch. The tolerance is 1/64 of an inch on hundreds of thousands of chemical brick in chlorinators, electrolytic cells and acid pipes, tanks, and sumps. Reason: these linings have to withstand temperatures up as high as 1200° Centigrade, high amperage, resist acid corrosion and be gas tight. It's the most precise brick job tackled in the country and the biggest refractory brick job the world has ever known.

AND WHAT A TOWN IT WOULD PAINT

The paint used on the job will run over 250,000 gallons. That's enough to paint a three-inch traffic strip three times around the world. Boy, hand me that brush!

KEEP HEALTHY

Advice from the plant surgeon: Men in the field should eat five salt tablets a day. Office workers should take two.

Your Department missing? Well, it's a big job and we couldn't cover it all in one issue. Catch yours next week.