THE MACLEAY ARGUS

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"WOW DADDY! YOU DRANK A WHOLE BOTTLE OF MACLAE MILK!"

The World seeks . . . SPACE-AGE MINERALS FROM THE MACLEAY

Down a 13-mile stretch of sand, curving along the sea margin south of Crescent Head, the race for minerals for tomorrow's space age has suddenly intensified. Huge floating dredges, quarrying in the dunes, are winning a production dash for more and more of the "golden" sands which are rich in rutile and zircon — the minerals of the future.

It is an urgent race, with unexpected economic overtones. Since 1957, when Minerals Deposits Pty., Ltd., began its operations on the back beach just south of Crescent Head, to October, 1964, exports of rutile and zircon won from this fragment of Australian coastline have contributed £A4m. to the national purse. Crash production in 1965 will yield a record £A1¼m. Even in cautious mining circles, the outlook for years ahead is bright.

By next year, approximately 14 per cent. of the world's output of rutile and nearly 10 per cent. of the world's output of zircon will be shipped from the Macleay to overseas markets.

Thus, in the space of seven years, the rural peace of the Macleay has been riven by the strident voice of international industry demanding the district's raw minerals to satisfy a gargantuan appetite.

With each technological gain, the defence and commercial potential of these minerals advances.

As man probes space, his need for light metals multiplies. As he harnesses power, his demand for nuclear metals grows. And it is from rutile

Titanium is the glittering star hurtling through the sky at incredible speeds, spun into spacecraft, missiles and supersonic aircraft.

It is America's two-man orbital spacecraft; it is the rocket booster, Titan III.

But that is not all. The development in the U.S.A. of an experimental submarine designed for deep diving suggests this avenue could involve a very large offtake of

Flows into industry

And zircon, the honey-coloured by-product of rutile production?

It flows into industry as a foundry sand or in the production of ceramics and refractories.

Titanium is the rare metal in later years.

At present, titanium metal consumes only about two per cent. of the world's output of rutile. Ore — mainly as a coating for welding rods — takes about two-thirds.

Roughly 33 per cent. of all rutile produced is converted into manufactured titanium dioxide, a brilliant white pigment — the basis of all modern paints.

He told an "Argus" reporter "Rutile in particular has figured in some of the most startling developments of our age.

"With the space age not ten years old, who can say where the mineral is headed?"

He then announced: "Within three months, our production will have doubled.

"Within 12 months, Crescent Head mill will be the major producer of minerals in N.S.W.

"At present, we are producing 300 tons of rutile a week and about 250 tons of zircon.

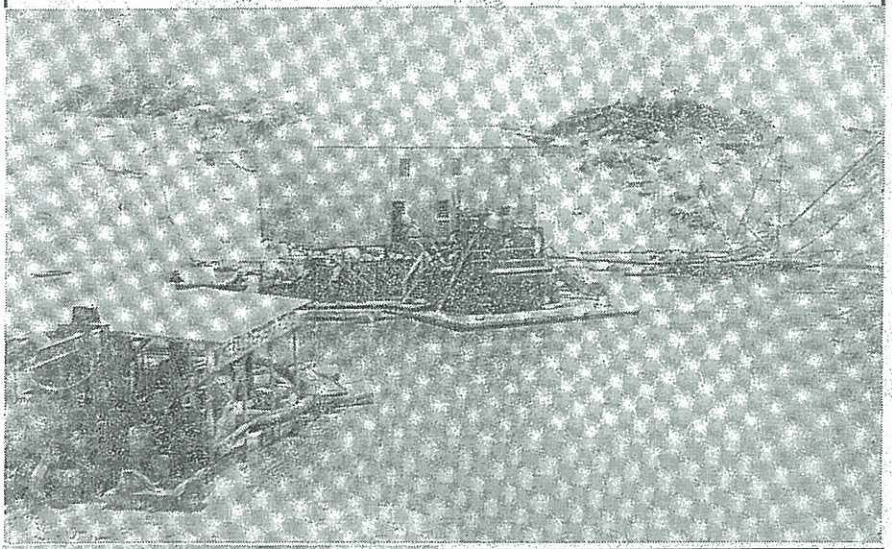
Next year, we will send to overseas markets 30,000 tons of rutile and 25,000 tons of zircon. Its nett value to the national economy will be to

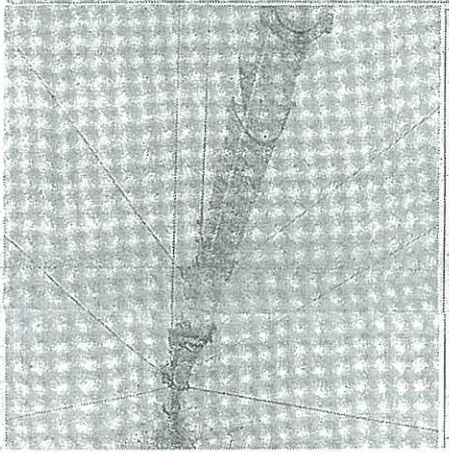
conquest of space, the sea, and energy.

The implications are enormous.

Australia produces 90 per

NEW PLANT IN ACTION . . .





Methodist leader travels for aid

The Rev. A. Walker, Superintendent of the Central Methodist Mission, made two flying visits to Kempsey this week on his barnstorming tour of N.S.W.

On Tuesday, he called in at Kempsey en route to Lismore and completed arrangements for his official visit last night.

Now he's off again, over the ranges to Tamworth.

Before the end of next two weeks, he will have travelled thousands of miles to organise committees for the State-wide Methodist door-knock appeal on November 15.

to be replaced by a £900,000 nine-storey building to be known as Wesley Centre.

Mr. Walker says: "It is a gigantic undertaking.

"We will obtain £600,000 from bank loan, a further £200,000 from fire insurance and the sale of Fellowship House and the balance will come from public gifts."

A total of 50,000 gift boxes are now being distributed to the 700 Methodist churches

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Thus, in the space of seven years, the rural peace of he Macleay has been riven by the strident voice of international industry demanding the district's raw minerals to satisfy a gargantuan appetite.

With each technological gain, the defence and commercial potential of these minerals advances.

As man probes space, his need for light metals multiplies. As he harnesses power, his demand for nuclear metals grows. And it is from rutile and zircon that he draws the raw commodity to satisfy [illegible] requirements.

So it is that from each 100 tons of black rutile, won from the splinter of sand on the southern coastline of the Macleay, 60 tons of titanium metal are produced in America.

Titanium is to-morrow's metal — light, strong, extremely resistant to corrosion and heat.

Titanium is the glittering star hurtling through the sky at incredible speeds, spun into spacecraft, missiles and supersonic aircraft.

It is America's two-man orbital spacecraft; it is the rocket booster, Titan III.

But that is not all. The development in the U.S.A. of an experimental submarine designed for deep diving suggests this avenue could involve a very large offtake of the rare metal in later years.

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Flows into industry

And zircon, the honey-coloured by-product of rutile production?

It flows into industry as a foundry sand or in the production of ceramics and refractories; alloys and chemicals. Converted to zirconium metal, it is used mainly in nuclear reactors, both as a structural material and as a fuel cladding.

It is also being consumed, experimentally, in connection with the U.S. Army laser gun project.

Although these minerals have specific chemical and industrial uses, their future is bound, inextricably, to man's conquest of space, the sea, and energy.

The implications are enormous.

Australia produces 90 per cent. of the world's rutile and nearly 70 per cent. of the world's zircon, but production is limited to a few beaches on the 500-mile strip of eastern coastline between Southport (Qld.) and Wyong (N.S.W.).

The strength of the demand for Australian rutile can be gauged by the intense interest in the output shown by American industrial leaders — Du Pont, Cabot Corporation Cyanamid, National Lead.

It is this demand which is inducing leading Australian producers, such as Mineral Deposits, to undertake a dynamic programme of expansion.

FACING CHALLENGE

Aware that techniques for winning the precious sands must be geared to these developments — implied and actual — Mineral Deposits Pty. Ltd. has bumped its programme sky high.

In his office at the "dry" mill in the lee of Crescent Head, Mr. C. O. Newey, the company's manager, sketched the production know-how that will lift output in the next few months by 100 per cent.

MR. C. O. NEWEY.

He told an "Argus" reporter "Rutile in particular has figured in some of the most startling developments of our age.

"With the space age not ten years old, who can say where the mineral is headed?"

He then announced: "Within three months, our production will have doubled.

"Within 12 months, Crescent Head mill will be the major producer of minerals in N.S.W.

"At present, we are producing 300 tons of rutile a week and about 250 tons of zircon.

Next year, we will send to overseas markets 30,000 tons of rutile and 25,000 tons of zircon. Its nett value to the national economy will be to the order of £A1½m.

"Our staff will rise from 90 to 110."

Output from Crescent Head is fully sold for 1965. Firm contracts are already being negotiated for the harvest of succeeding years.

Surviving cyclical fluctuations in price (with a peak of £100 per ton followed by a drop to £16 per ton) rutile has now firmed at between £A38 and £A40 per ton and zircon at £A14 — £A16 per ton.

Mr. Newey says: "The industry is stabilising. We face a challenging, exciting future."

ALL POSSIBLE SPEED

Against this background, Mineral Deposits has been developing its new techniques for winning the yield.

As old as time itself, the black sands are found in seams deep under sand dunes.

Countless thousands of years ago, they were liberated by the decomposition of the containing rock. Wind and sea action concentrated the heavy minerals in layers on the beach and wind and sea mantled them with sand.

To extract the minerals with all possible speed is the cry of industry and the architects of to-morrow.

Old methods have been discarded.

In a small design room adjacent to Mr. Newey's office, the blueprint for the company's future expansion was traced months ago. Now, the bold lines have materialised as powerful steel giants, burrowing into the dunes on a lonely stretch of beach within sight of Port Macquarie; ingesting raw sand, digesting the heavy minerals, expelling the waste.

Floating in a brown pond at the bottom of a sand quarry 30ft. deep and about 200ft. in diameter, the monsters will each eat their way through 300 tons of sand an hour.

Already one of these units

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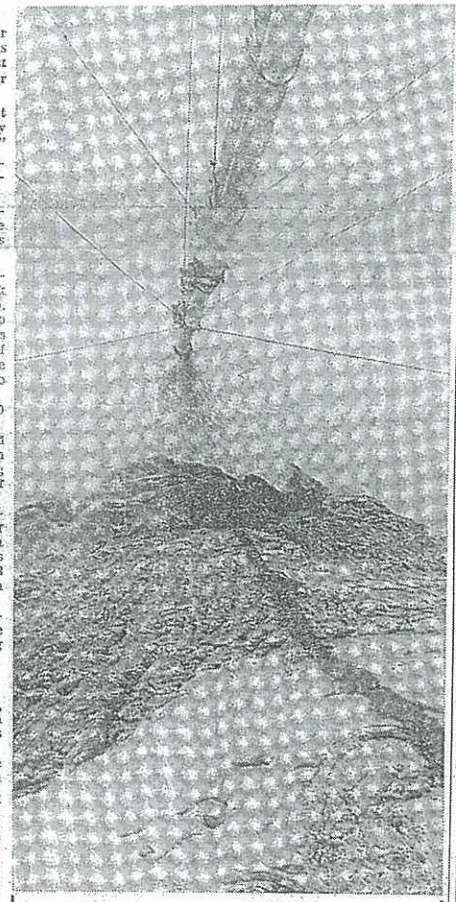
More Photos — Page 18



TOP: Using newly-constructed plant, Mineral Deposits Pty. Ltd. has lifted its production of rutile and zircon by 100 per cent to cope with overseas demand. Below Point Plomer, this huge concentrating unit, floating in a 6ft. dredge pond, wins the raw minerals from the sand dunes. From here it is taken back to Crescent Head for refining. Another unit will soon be in operation 3 miles further south of the Pt. Plomer installation.

ABOVE: Rehabilitation of sand dunes and the surrounding country is part and parcel of a beach mining company's responsibility. This giant boom carries tailings from the concentrating pond to surrounding dunes, filling in the excavated area as it goes. Vegetation is also planted and within three years a mined area is restored.

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Now he's off again, over the ranges to Tamworth.

Before the end of next two weeks, he will have travelled thousands of miles to organise committees for the State-wide Methodist door-knock appeal on November 15.

And, at each stop, he will also conduct a Christian mission for people of all faiths.

By the time his tour is ended, he hopes to have established the organisation to collect £100,000 from the States' Methodist community to help rebuild the church's headquarters.

Destroyed by fire in February of this year, the Lyceum, which then housed many Methodist activities, is to be replaced by a £900,000 nine-storey building to be known as Wesley Centre.

Mr. Walker says: "It is a gigantic undertaking.

"We will obtain £600,000 from bank loan, a further £200,000 from fire insurance and the sale of Fellowship House and the balance will come from public gifts."

A total of 60,000 gift boxes are now being distributed to the 700 Methodist churches in N.S.W. for issue to congregations.

Last night, Mr. Walker addressed organisers who are collating names of Methodist families throughout the district.

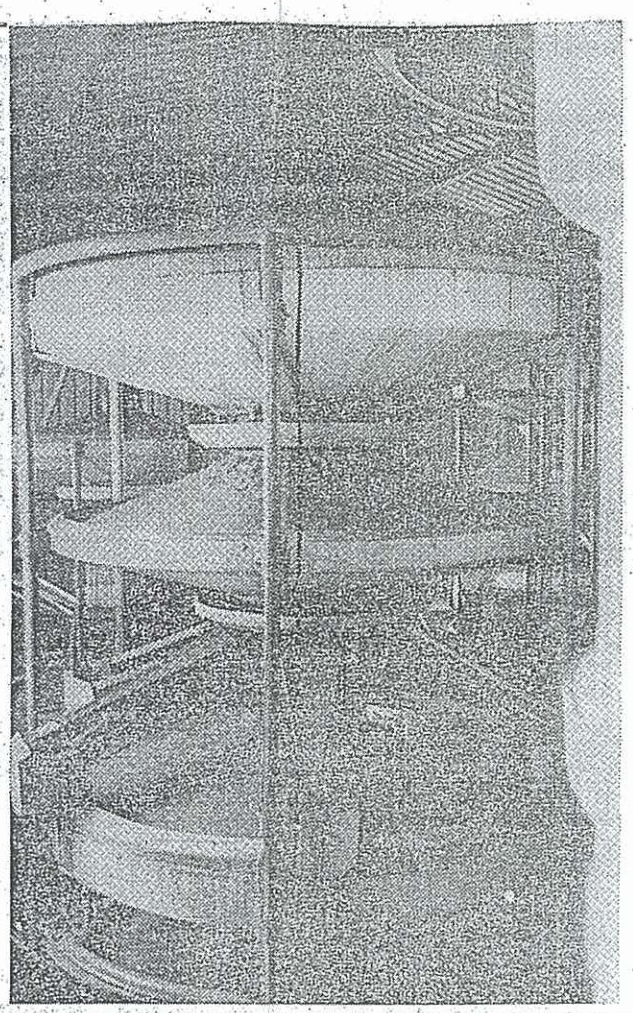
Each one will be canvassed for a donation.

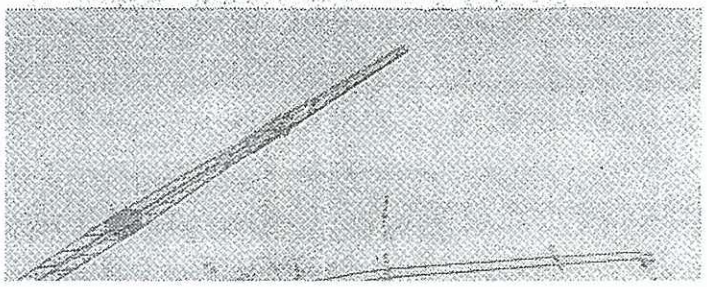
"We have no doubt that our target will be reached," Mr. Walkers says, confidently.

Continued Page 4

Aboriginal deaths "not satisfied"

STORY PAGE 3





SPACE-AGE MINERALS FROM THE MACLEAY

is in operation. It was constructed on pontoons floated into a small man-made fresh-water lake, cut into the sand near the roadside below Point Plomer.

The sand dredge, concentrating barge and tailing unit — the head, stomach and tail of the giant, wallowing in the dredge pond that has travelled with it — have already chewed through 800ft. of sandhills.

The sluggish advance masks controlled energy.

A pulp of sand and water, drawn through a suction cutter plunging 8ft. into the sand at every powerful thrust, is siphoned from the sand dredge to the three-deck galvanised iron concentrating unit floating behind.

Double cone concentrators extract the heavy minerals by gravitational means and the minerals thus collected are pumped through pipes to the loading bay, near the roadway 600ft. back across the sandhills.

Tailings — the lighter minerals, sand and water — pumped to the tailing stacker, progressively fill the quarry as the floating unit moves slowly forward, rehabilitating the scarred dues as it goes.

The water filters back to the pond for re-cycling.

The first unit will soon be joined by a second now under construction and destined to begin operations three miles south of the Point Plomer installation.

Mr. N. Bishop, who is in charge of the company's beach mining operations, tool:

CONTINUED FROM PAGE 1

80 tons of sand an hour, it has severe production difficulties.

The pulp has to be pumped through 800ft. of pipeline to a land-based concentrating unit. With each 1000ft. advance in the dredge pond, the concentrator had to be moved accordingly.

Mr. Bishop said, analytically: "It has outlived its usefulness. Our floating units do not have anywhere near the operating time loss and production is increased as a result."

URGENCY STRESSED

The urgency of production needs overrides all other considerations.

For 24 hours a day, seven days a week, the high whine of the power-driven units rises from these deep excavations, obliterating the sound of waves exploding only a few feet away and the shrieks of hundreds of seagulls, protesting endlessly at the intrusion.

From an advancing army of poles carrying high voltage electricity down the company-made road at the back of the sandhills, arteries of black rubber snake across the dunes, carrying the power to animate these robots.

A battery of men of all skills stand round-the-clock shifts to ensure the plant is never idle.

Heavy-duty trucks pound endlessly along the 13-mile road, hauling the crude min- removed by electromagnetic separators.

The resulting rutile-zircon mixture is passed through electromagnetic separators and the separate concentrates of the two minerals thus obtained are subjected to further electromagnetic cleaning.

The pure minerals then begin their long journey to their world markets.

Ilmenite (an impure ore of titanium), monazite, tin and other minerals extracted in the process are stockpiled for future use.

AND THE FUTURE?

In June, 1957, Mineral Deposits mined its first ton of black sand at the northern end of Back Beach and took three years to work out 200 chains of deposit.

Operations for the next three years shifted to Racecourse Headland, and ten months ago, the plant moved into the Point Plomer area.

The chase seems without end.

Men who know will tell you that black sand deposits run back from the beach to the Maria River and down to the Hastings mouth.

How long, then, can Crescent Head and the Macleay expect to enjoy the security of this mineral boom?

Leases to mine the minerals behind the sea belt have long since been snatched into the protective custody of companies with an eye to the fu- area are guaranteed for a other four years at least.

He says: "When we fini here, we will move our oper tions elsewhere. Whether close down the dry mill he depends on the economics hauling beach sands from o other leases back to Cresce Head."

He sees no likelihood of c lapse in this supply source

"Our company and oth large Australian compan involved in rutile mining h considerable reserves leases," he says.

"Ourselves, we have lea between Grafton and N castle, and the outlook sound."

CRICKET TEAMS

Continued from Page

Independent cricket tea

A grade, to play Colt South Kempsey: J. Stir J. Farrawell, D. Craig, L. Lachlan, G. Gee, K. Mc L. Scott, W. Patterson Wilson, M. Lidster, B. Sav N. Hanson.

C grade, to play Rove Sea Street: P. Drummon Lanardo, J. Fisher, D. M B. Chapman, I. Duncar Nugent, R. Cutler, P. I C. Davison, K. Banner