REG. 4. 6. 28

MAGNIFICENT RACE.

University Rowing Championship.

Old "Blues" Mingle.

It is amazing how melodramatic fortune always is in big sporting events, and Saturday's University boat race at Mannum was no exception to the rule. During the week the Melbourne crew started the ball rolling. No. 7 became sick, and later on No. 5 broke his slide, and in endeavouring to regain his seat, he put his foot through the bottom of the boat, and it sank in a few minutes, with the result that the crew missed a few important rows. A Western Australian had to retire from training for a while, and as a climax, a Queenslander became ill at the last moment, and this necessitated a reshuffling of positions.

The Western Australians were the best conditioned oarsmen in the event, beating even Melbourne in that respect. The Western Australians demonstrated what organization will do. This eight was probably together longer than any of the others, and under the tutelage of an astute old Victorian rower in Jim Chute, and the result of that early start in training and the blending of the crew was manifest on Saturday, especially over the last mile.

A Great Course.

It is certain that as a result of Saturday's race, the river course at Mannum will receive greater consideration when the venue of other important rowing events is being considered. Despite the distance from the city, there was a splendid attandance. Mannum offers almost ideal conditions for rowing and race viewing, while the broad reaches permit ample rowing room for an unlimited number of crews, and the terraces above the river permit many vantage points. It is well sheltered, too, and throughout the race on Saturday the river was like a millpond. Old rowers came from every direction to see Saturday's event. There was interstate representation of old rowing "blues," and it gave much pleasure to some of them to participate in official positions, just, as Mr. C. R. Cudmore remarked, "to see the thing through." Many old oarsmen were noticed. In the judge's box were Messrs. C. R. Cudmore and C. T. Madigan, who had rowed in the late 90's and early part of the present century. Dr. Simpson Newland (who rowed No. 7 in the crew of '96) is president of the Adelaide University Boat Club, and Dr. F. J. Douglas (bow in that crew), was present to see his son row, No. 5 in the 1928 Adelaide crew. Then Dr. Bronte Smeaton (No. 6 also in that crew), was on the official launch, and Mr. Arthur Nicholls, who coached Adelaide University crews for about 25 years, was also observed wandering about. Dr. Newland and others consider that "A. N." did more for Adelaide University rowing than anybody else. Dr. J. R. Muirhead, stroke of the 1903 Adelaide crew, and also a member of the 1905 eight, and Mr. Leslie Maiden, stroke and member of the crews of 1920, 1922, 1923 and 1924, were also present, among many others. Then Dr. H. M. Fisher was one of the judges, Mr. J. H. Hill acted as starter, and Mr. J. H. Gosse as umpire.

Mr. E. C. H. Taylor, coach of the Melbourne crew, is also coach of the Melbourne Grammar School, and, like Mr W. J. Middleton, coach of the Sydney eight, has played a prominent part in Australian rowing.

Tribute to W. H. Gosse.

South Australian rowing, particularly University rowing, is under a deep debt of gratitude to the efforts of W. H. Gosse in the 90's. To those who knew him, he was a great oarsman, a sportsman, and a gentleman. Mr. Gosse was a member of several Adelaide eights, and his efforts culminated in the winning crew of 1896. Associated with him on that occasion were J. A. R. Smith (bow), Dr. F. J. Douglas (2), E. C. Badman (3), now a mining engineer in Kalgoorlie, Western Australia, J. A. Bonnett (4), G. W. Halcombe, S.M (5), Dr. Bronte Smeaton (6), Dr. H. S Newland (7), and C. M. Marryatt (cox) It was quite one of the best crews that has represented Adelaide. Mr. Gosse later went to Melbourne, and his rowing triumphs ended there in his stroking the Victorian crew of 1899 to victory. Dr. Newland said on Saturday:—"He did his duty in peace and in war." It was a fitting tribute to his memory that the remaining members of his crew banded together and endowed the eight in which Adelaide rowed into third place on Saturday—it would have been more fitting if it had been rowed into first place, but it was not to be—and before the race it was christened by Mrs. Bronte Smeaton. The boat is an example of the best work of Charlie Towns, the old world's champion rower.

REG. 4. 6. 28

KING'S COLLEGE.

Mr. Bills, New Head Master.

Advice was received in Adelaide on Saturday of the acceptance by Mr. James Bills, B.A. (Adelaide), second master of the Carey Baptist Grammar School, Kew, Victoria, of the position of head master of King's College, Kensington Park. The appointment will be popularly received in educational circles, where Mr. Bills is much esteemed for his fine personal qualities and intellectual equipment. He will begin his duties on July 1. Mr

MR. J. BILLS.

Bills was born at Orroroo on April 30, 1882, and is a son of Mr. and Mrs. Josiah Bills. He was educated at Orroroo State School. In 1897 he was attached as pupil teacher to the Hindmarsh School, and studied under the late Mr. Andrew Scott, B.A., at the Teachers' Training College in Grote street, and later at the University Training College. He served as assistant at Peterborough School, and was one of the first five men selected to open continuation schools. For four years he was assistant-in-charge of the Peterborough Continuation School, three years in a similar capacity at Gawler, two years at Lefevre's Peninsula. He was chief assistant at Woodville High School for one year, the latter half of which he served as acting head master during the absence of late Col. Coghill on active service. From 1916-1922 Mr. Bills was head master of the Gawler High School. In 1923 he accepted the position of second master of the Carey Baptist Grammar School, Kew, Melbourne, and in 1926 was promoted to vice-principalship of that school. He is keenly interested in all branches of school life, in all branches of healthy sport, and in all that pertains to the highest development of character. His many old friends and successful old boys will rejoice at his return to his home State. Mr. Bills married a daughter of Mr. and Mrs. J. H. Chinner.

THE NEWS

SATURDAY, JUNE 2, 1928

GEOPHYSICAL PROSPECTING

(By Prof. Kerr Grant, M.Sc.)

The calamitous decline of the mining industry in Australia must be a matter of grave concern to all who have at heart the economic prosperity of this country.

Two main factors in this decline undoubtedly are:—Firstly, the great increase in the costs of working a mine due to the rise of wages inevitably associated with an increased cost of living; and, secondly, the exhaustion of the richer mineral lodes lying comparatively near the surface.

There appears to be little hope of any immediate revival of mining based upon a return to a cheaper wage or increased daily output of labor. Only by the adoption of more efficient and economical methods of mining and of treating ores or by the discovery of new fields in which rich and easily accessible ore bodies exist can the mining industry hope to regain in some degree its former flourishing condition.

Past Discoveries

The discoveries of the great mining fields of the past have all been due to surface indications of highly mineralised lodes. It seems likely that few, if any, similar discoveries will be made in the future, for there are few areas in Australia which have not been explored by prospectors skilled in the detection of mineral indications.

But the experience of the older continents supports the contention of geologists who assert the probability of the existence of many undiscovered lodes and mineralised areas of which no visible surface indications exist.

It is here that the prospector must call to his aid methods of detection depending on less direct evidences. Such geophysical methods of detection have been employed for several decades in Europe, in America, and other countries, and their usefulness has been repeatedly demonstrated by the success achieved. It is a matter for congratulation that the Commonwealth Council of Scientific and Industrial Research, in association with the Empire Marketing Board, is now having these physical methods of mineral exploration put to a test in Australia.

Mr. A. Broughton Edge, an English mining geologist, who has already achieved notable successes in this field, is in charge of operations. He will be assisted by a staff of physicists and geologists, some of whom have also had experience in one or other of the methods to be employed.

These methods are various in character. In general it may be said that any modification of the physical characteristics of the earth containing or surrounding the metalliferous body or of the space in the air above it may be utilised.

Various Methods

Thus the electrical conductivity of the soil is, as a rule, greatly increased by the presence of metallic salts or compounds. Several methods of localising mineral lodes have been based upon this effect.

Again, the existence of a body of ore of denser or harder consistency than the surrounding earth may be determined by the effect which is produced upon seismic waves—artificially generated by the explosion of a charge of dynamite—in passing across the boundary of the two media.

This seismic method of exploration, it is stated, has been successfully employed by American companies in the location of oil domes. A third method utilises the extremely slight variations in the direction and force of gravity produced by a body of subterranean material, either lighter or denser than the earth or rock in which it lies.

The usual method of gravity determination (by timing the swing of a pendulum) fails to indicate these changes, but we owe to Baron Eotvos, a Hungarian physicist, an instrument of exquisite sensibility to local variations of gravity which has proved a most valuable aid to the geophysical prospector.

So sensitive is this instrument that it is necessary to shield it from the slightest inequality of temperature by encasing it in a triple-walled metal case, and even then its readings are most reliable when taken at the uncomfortable hour of 2 a.m.

Nevertheless, it is probable that no other method of discovering geological discontinuities excels the gravimetric in power and reliability, and many valuable discoveries of ore bodies and of oil pools are put to its credit. The equipment of the Australian geophysical party includes two Eotvos balances, and there is no doubt that this method will be thoroughly tested in its two years of work.

Other methods involve the observation of magnetic irregularities. These have been used, particularly in Sweden, with great success for the location of bodies of iron ore.

Numerous Pitfalls

The power of these and other methods properly used to locate ore bodies is well established. Yet numerous pitfalls beset the path of the geophysical prospector. Increase of electrical conductivity in the soil may be due, and most commonly is due, merely to the presence of water containing dissolved salts of sodium or magnesium; disturbances of the normal magnetic or electrical conditions may be caused by iron rails or pipes or even by wire-netting fences; irregularities of the earth's surface—hills or valleys, or dense rock—masses of no metallurgical value will disturb the gravitational field equally with valuable ore bodies.

The difficulties, by no means slight, of making the measurements surmounted, those, still more formidable, of correctly interpreting these measurements begin.

Nevertheless, the conduct of the experiment is in experienced and capable hands, and it may be confidently anticipated that a convincing demonstration will be given of the utility of the more important methods of prospecting.

It would be too much to expect—nor is it the main object in view—that in the short space of two years any actual discovery of direct economic value should result from these preliminary trials. Far more important will be the demonstration of the correct technique of the various methods with their respective potentialities and limitations, and the training which will create a small band of local experts competent to direct future and much more extensive explorations.