

WESTERN AUSTRALIA—1956

REPORT

OF THE

Geological Survey Branch

FOR THE

YEAR 1954

EXTRACT FROM THE REPORT OF THE
DEPARTMENT OF MINES

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DIVISION IV

Annual Progress Report of the Geological Survey Branch of the Mines Department for the Year 1954

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- Report on Search for Alleged Meteorite Crater, West-North-West of Madura " Motel," Great Eastern Highway (W.A.).
- The Search for Oil in Western Australia.
- A Summary Report on the Mt. Magnet District, Murchison G.F. Part I. Regional Geology ; Part II. Report on Selected Mining Groups in the Mt. Magnet District, Murchison G.F.
- Report on Ground Water Prospects on Location F (4,700 ac.) Barramining, Williams, South-West Division, W.A.
- Notes on a Reconnaissance of the Stirling Range Area, South-West Division.
- Manganese Deposits of the Hamersley River and Mount Chester Areas, Phillips River Goldfield.
- Report on Radioactivity Occurrence, " Elverdton " Workings, Phillips River Goldfield.
- Report on Alleged Opal and Uranium Claims, P.A.'s 948H and 951H, Jeramungup, South-West Division, W.A.
- Report on Reconnaissance of the Diamondiferous Country in the Vicinity of Nullagine, Pilbara Goldfield, W.A.
- Notes on the Geology of the Nullagine District, Pilbara Goldfield, W.A.
- Report on the Manganese Deposits at Frazer Range, Dundas G.F.
- Report on the Chiron Coal Seam in the Vicinity of the Centaur Colliery, Collie Coal Field, with particular reference to its suitability for deep mining.
- Report on Some Roof and Floor Conditions, Drilling Ahead of the Centaur Colliery, Collie Mineral Field.
- Progress Report on Diamond Drilling, Collie Mineral Field, W.A. (7) : Bore No. 8—Site B—Mineral Lease 440, 60 chains South-West of Western No. 2 Colliery.
- Report on Some Roof and Floor Conditions, Drilling Ahead of Western No. 2 Colliery, Collie Mineral Field.
- Report on Uranium Deposit on Location 6100, Brookton, South-West Division, W.A.
- Report on Radioactivity near Lake Dundas, Dundas Goldfield, W.A.
- Progress Report on Exploratory Diamond Drilling of Abandoned Gold Shows : D.D.H.Y1, Site A1, " White Horseshoe " G.M., Yilgarn Goldfield.
- Progress Report on Exploratory Diamond Drilling of Abandoned Gold Shows : D.D.H.Y2, Site B1, " Spring Hills " G.M., Parker's Range, Yilgarn Goldfield,

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- Progress Report on Exploratory Diamond Drilling of Abandoned Gold Shows : D.D.H.Y4, Site D1, " Great Unknown " G.M., Reidel's Find, Yilgarn G.F.
- Progress Report on Exploratory Diamond Drilling of Abandoned Gold Shows : D.D.H.Y5, Site D1, " Great Unknown " G.M., Reidel's Find, Yilgarn G.F.
- Progress Report on Exploratory Diamond Drilling of Abandoned Gold Shows : D.D.H.Y6, Site E1, " Allen's Find " G.M., Marda, Yilgarn G.F.
- Report on " Pernatty " G.M., G.M.L. 227PP, Location 50, Hampton Plains Properties, Feysville, East Coolgardie Goldfield.
- Report on Investigation of Radioactivity on Government Reserve 5913, Canning River Catchment Area, SF 22.
- Report on " Marjorie Glen Reward " G.M., G.M.L. 76PP, Jilbadji Location 387, Yilgarn G.F.
- Report on New Gold Strike (P.A. 373PP) Location 387, Yilgarn Goldfield.
- Report on P.A. 6728 (late G.M.L. 1837), Nevoria, Yilgarn G.F.
- Report on Investigation of Radioactivity on P.A. 356PP, Woonanup, Mt. Barker, S.W. Division.
- Report on " Greta " G.M., G.M.L. 5955, Bullabulling Group, Coolgardie Goldfield.
- Report on Inspection of P.A. 953H for Uranium, 3/4 mile North 30° East of Kalamunda, South-West Land Division, W.A.

NOTE.—*Owing to a change in the Mines Department's publication policy, the reports listed above do not appear with this Annual Report. The arrangement is that they will appear as a Geological Survey bulletin under the title of "Miscellaneous Reports for 1954."*

DIVISION IV

Annual Progress Report of the Geological Survey of Western Australia for the year ended 31st December, 1954

The Under Secretary for Mines,

I have the honour to submit, for the information of the Honourable the Minister for Mines, my report on the operations and progress of the Geological Survey for the year ended 31st Dec. 1954.

STAFF.

Strength as at 31st December:—

<i>Professional.</i>				Total.
Ellis, H. A., B.Sc., Government Geologist A.O.S.M.				6
Berliat, K., D.Sc. Senior Geologist	....		
Sofoulis, J., B.Sc. Geologist, Grade 1	....		
de la Hunty, L. E., B.Sc. Geologist, Grade 1	....		
Low, G. H., B.Sc. Geologist, Grade 1	....		
Noldart, A. J., B.Sc. Geologist, Grade 1	....		
<i>Clerical.</i>				
Connolly, R. R. Clerk			3
Clift, J. N. Junior Clerk	....		
White, S. V. G. Typiste	....		
<i>Laboratory.</i>				
Fimmell, L. H. Laboratory Technician				1

Promotions, Resignations, Appointments.

Dr. K. Berliat was promoted on 1st October to Senior Geologist, in which position he had been acting for twelve months.

Messrs. Sofoulis, de la Hunty and Low were promoted to Geologists Grade 1 on 1st January, 1954.

Mr. A. J. Noldart acted in the vacant Geologist Grade 1 position from 1st January and his appointment to this position was confirmed on 1st October.

Mr. L. H. Fimmell was promoted to the position of Laboratory Technician on 1st January.

Mr. T. H. McNamara was absent on National Service Training from 4th January to 7th June, and on completion of this service was transferred to the Hospitals Collection Service, Chief Secretary's Department.

Mr. J. N. Clift joined the staff as Trainee Junior Clerk on 18th January, replacing Mr. McNamara.

Professional Staff.

The approved establishment for Professional officers as at 31st December is as follows:—

Government Geologist	....	H. A. Ellis
Senior Geologist	....	K. Berliat
Geologist, Grade 1	....	J. Sofoulis
Do.	....	L. E. de la Hunty
Do.	....	G. H. Low
Do.	....	A. J. Noldart
Geologist, Grade 2	....	Vacant
Do.	....	Vacant
Do.	....	Vacant
Do.	....	Vacant

This year, despite an Australia wide demand for geologists at most attractive salaries, no professional officers resigned, and the professional staff numerical strength is therefore the same as at the end of 1953. Efforts were made during the year to fill the existing vacancies, but without success.

The following tabulated statement shows the relation between the area of the State and the availability of geologists during the year:—

Period.	No. of Geologists available including Govt. Geologist.	Area of State (sq. miles).	Square Miles per Geologist.	Population of State.
Jan.-Dec. 1954.	6	975,920	162,650	641,679

ACTIVITIES OF PROFESSIONAL OFFICERS

H. A. Ellis, Government Geologist.

In addition to head-office duties, the following field work was undertaken:—

Places Visited	Purpose of Visit or Matters Investigated	Period
Katanning	Water Supply	Jan.
Koolyanobbing	Pyrite Drilling	
Collie	Coal Drilling	Feb.
Yilgarn G.F.	Gold Drilling	
Cuballing	Ochre and Uranium Claims	March
Collie	Coal Drilling	
Koolyanobbing	Pyrite Drilling	April
Leonora	Sons of Gwalia G.M. inspection	
Collie	Coal Drilling	May
Koolyanobbing	Pyrite Drilling	
Dundas	Uranium Claims inspection	June
Madura	Alleged Meteorite Crater	
Ravensthorpe	Uranium, Dundas	July
Koolyanobbing	Pyrite Drilling	
Carnarvon	Water Supply	Aug.
Exmouth Gulf	Oil Drilling Activity inspection	
Mt. Magnet	Regional Survey inspection	Sept.
Koolyanobbing	Pyrite Drilling	
Collie	Coal Drilling	Oct.
Koolyanobbing	Pyrite Drilling	
Collie	Coal Drilling	Nov.
Koolyanobbing	Pyrite Drilling	
Kalgoorlie	Diamond Drilling Technique	Dec.
Spargoville	Beryl and Columbite	
Cue	Great Fingall Drilling	
Koolyanobbing	Pyrite Drilling	

K. Berliat, Senior Geologist—

Jan.-Feb.—Office work in connection with the Linden Area Survey.

Mar.—Water Supply investigations, Williams District. Geological investigations in connection with proposed Serpentine Dam sites.

Apl.-Oct.—Field work—Mt. Magnet Survey.

Nov.-Dec.—Office work in connection with Mt Magnet Survey.

J. Sofoulis, Geologist Grade 1—

Jan.-May—Compilation of reports and completion of regional investigations and minor examinations, Phillips River Goldfield, Stirling Ranges and Kent District.

May-June—Reconnaissance of Nullagine District, Pilbara Goldfield.

June-Dec.—Compilation of Bulletin 110 on the Geology of the Phillips River Goldfield.

L. E. de la Hunty, Geologist Grade 1—

Jan.—Report writing.

Feb.—Miscellaneous inspections in Dundas, Coolgardie and Yilgarn Goldfields.

Mar.—Damsite survey, Serpentine River. Collection of bulk samples of Gypsum in South-West Division and Yilgarn Goldfield.

Apl.-Oct.—Field work—Mt. Magnet Survey.

Nov.-Dec.—Report writing.

G. H. Low, Geologist Grade 1—

Jan.-Dec.—Supervision of Collie Coal Drilling and general colliery investigations.

A. J. Noldart, Geologist Grade 1—

Jan.-Dec.—Supervision Diamond Drill programme to test Abandoned Gold Shows, Yilgarn Goldfield. Preparation of Diamond Drill exploratory programme for Murchison and Pilbara Goldfields. Miscellaneous inspections of gold and radioactive mineral claims.

FIELD WORK.

Major Field Work completed during the Year and in Progress as at Dec. 31.

(1) Supervision of Government exploratory drilling on the Collie Coal Field continued throughout the year.

(2) A geological survey of the Mt. Magnet Mining District was commenced and completed.

(3) A drilling programme to test abandoned gold shows mainly in the Yilgarn Goldfield was commenced and continued throughout the year. No payable ore had been discovered at any of the six prospects drilled during the year.

(4) Diamond Drilling of the Koolyanobbing iron ore and pyrites deposits continued during the year to give further information on the extent and attitude of the ore bodies.

Due to the continued shortage of staff and the frequent demands for water supply and mineral assessment projects made on the existing staff, several major items of fieldwork proposed for the year could not be undertaken.

Field Work for 1955.

(1) Completion of Collie Coal Field exploratory drilling.

(2) Completion of group work in the Linden Mining District.

(3) Continuation of the Koolyanobbing exploratory drilling.

(4) Continuation of diamond drilling to test abandoned gold shows in the Yilgarn and other goldfields.

(5) Drilling of the "Great Fingall" G.M. to determine the possibility of payable gold ore at depth.

(6) A reconnaissance survey of portions of the Kimberley Division to determine the possibility of occurrence of uranium-bearing minerals.

(7) A regional survey of an area between Coolgardie and Dundas.

(8) An assessment of the water potentialities of an area between Mingenew and Mullewa.

(Items 2, 6 and 7—provided staff can be obtained.)

TRANSPORT.

Tabulated details of transport at present in use by the Geological Survey are as shown below.

SERVICE TO THE GENERAL PUBLIC, MINING INTERESTS AND GOVERNMENT DEPARTMENTS.

Much information, both written and oral, was given to a variety of applicants during the year, and our publications were frequently sought. As the technical reports show, considerable assistance has been rendered to both private interests and other Government departments in the search for water and minerals in this State.

ACTIVITIES OF THE COMMONWEALTH BUREAU OF MINERAL RESOURCES.

Geological and geophysical work was continued in the Kimberley and North-West Divisions in the potentially oil bearing sedimentary basins by two geological parties and three geophysical parties. One of these parties, to which was attached two W.A. Lands Department surveyors, operated in the South-West Desert Basin, in the far North-Western part of the Eastern Division. Air-borne magnetometer traverses were flown across the Desert Basin, and also over the Eucla Basin by Bureau planes during the year, and an air-borne scintillometer survey of a reconnaissance nature (E-W flights at 4 mile intervals) was conducted over the belt of

TRANSPORT.

Vehicle W.A.G.	Make & Type	Load cwt.	Mileage as at 31/12/54	Mileage for 1954	Date Vehicle Purchased	Remarks
1175	Ford Utility	15	?	1,219	1946 (new)	Disposed of 4/11/54
1194	do.	15	81,322	2,613	1946 (new)	
1307	Chevrolet Utility	15	120,660	4,037	1947 (used)	Disposed of 28/5/54
1413	do.	15	80,490	7,688	1947 (new)	
1421	do.	15	65,520	5,491	1947 (new)	Mileage inc. 2411 w/o speedo
2044	Dodge Utility	18	45,361	9,661	1950 (new)	
2393	International Utility	14	45,223	16,195	1950 (new)	
2412	do.	14	62,079	14,383	1950 (new)	
2608	do.	14	38,132	6,863	1951 (new)	
909	Willys Jeep	5	12,632	5,402	1953 (new)	
3135	Fargo Utility	15	8,765	8,765	1954 (new)	

Total miles, 82,317.

Pre-Cambrian country extending from the vicinity of Hall's Creek N-N-E. to the Northern Territory—W.A. border. Many radioactive anomalies were recorded in this latter work, but the preparation of the 1 mile = 1 inch maps had not been completed by the end of the year.

The Commonwealth Bureau of Mineral Resources has thus given much high quality assistance in the search for oil and uranium in the State during the year.

THE SEARCH FOR URANIUM IN WESTERN AUSTRALIA.

During the year numerous companies have had prospecting parties, all equipped with geiger counters and some with aeroplanes and air-borne scintillometers, operating over the known mineral bearing areas of the State from the far north to the Southern borders. The Commonwealth Bureau of Mineral Resources covered an area (recommended by me subsequent to a visit of inspection to the uranium localities of the Northern Territory in Oct. 1953) extending from south of Hall's Creek in the Kimberley Division E.-N.-E. to the Northern Territory border in a reconnaissance air-borne scintillometer survey, the results of which are not yet available in map form, although we have been advised that some high grade anomalies have been discovered. When the 1 mile = 1 inch maps are available early in 1955 some of these anomalies will no doubt be investigated on the ground by interested companies.

The much publicised Dundas uranium find (of Norseman Gold Mines N.L. association—Dec. 1953) has failed under exploration to be of any commercial value whatever, as has the occurrence at Wilgie Mia and Ravensthorpe. These deposits were officially described by me as being of no commercial value at the time of discovery.

Some, as yet unexplored, secondary uranium mineral occurrences have been found by two companies in the East Kimberley area, and several claims have been pegged on them. Prospecting operations on these finds are to continue at the end of the Wet Season early in 1955.

PUBLICATIONS.

Issued during 1954.

Annual Progress Report of the Geological Survey of Western Australia for 1951.

In the Press.

Bulletin No. 108: The Geology of the Irwin River and Eradu Coal Basins, by W. Johnson, B.Sc. (Hons.), J. S. Gleeson, B.Sc., and L. E. de la Hunty, B.Sc.

Annual Progress Reports of the Geological Survey of Western Australia for 1952 and 1953.

Compiled and Awaiting Authority to Print.

Mineral Resources of Western Australia Bulletin No. 6: Silver, Lead and Zinc, by W. Johnson, B.Sc. (Hons.).

Mineral Resources of Western Australia Bulletin No. 7: Vermiculite, Talc and Soapstone, Fuller's Earth, Bentonite and Diatomite, by W. Johnson, B.Sc. (Hons.).

Mineral Resources of Western Australia Bulletin No. 8: Gypsum, by L. E. de la Hunty, B.Sc., and G. H. Low, B.Sc.

In Course of Preparation.

Bulletin No. 110: A Geological Survey of the Ravensthorpe District, Phillips River Goldfield, W.A., by J. Sofoulis, B.Sc.

H. A. ELLIS,
Government Geologist.

January, 1955.