

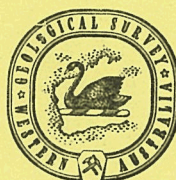
RECORDS OF THE GEOLOGICAL SURVEY OF WESTERN AUSTRALIA

No. 1962/13

TITLE: WELLS DRILLED FOR PETROLEUM EXPLORATION
IN WESTERN AUSTRALIA TO THE END OF 1962

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TO THE END OF 1962.

by

P. E. Playford and D. C. Lowry.

Record No. 1962/13

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TABLE: Wells drilled for petroleum exploration in
Western Australia to the end of 1962.

MAP: Western Australia, showing wells drilled
for petroleum exploration to the end of 1962.

15th January, 1963.

INTRODUCTION

A total of 57 oil-test wells have been completed in Western Australia. Of these, 30 are in the Canning Basin, 21 are in the Carnarvon Basin, 5 are in the Perth Basin, and 1 is in the Ord Basin. A further test well is currently being drilled in the Perth Basin. In addition, some 56 wells have been drilled for stratigraphic and structural information in connection with oil exploration in the Canning, Carnarvon, Perth, and Eucla Basins, and another is now being drilled in the Perth Basin. No wells have yet been drilled in the Officer Basin, nor in that part of the Bonaparte Gulf Basin lying in Western Australia.

The positions of wells drilled to the end of 1962 are shown on the accompanying map, and summary information on each well is given in the attached table.

HISTORICAL REVIEW

The first wells drilled for oil in this State were put down in 1902-04 near the Warren River, in the southern part of the Perth Basin. They were drilled following the discovery of small quantities of bitumen washed up on the coast in this area, and because the local residents had noticed that their tea had a strong flavour of "kerosene" when made from water obtained in certain localities. The ensuing "oil boom" was not followed by the discovery of any oil.

In 1919 intense interest was aroused by the report of traces of oil in a water bore being drilled on Gogo Station in the Kimberley District. The report was confirmed by a geologist, and as a result the Freney Kimberley Oil Company was formed. This company drilled a number of wells in the Canning Basin in the years 1922 to 1941, but without success. The interests of the company were taken over by Associated Freney Oilfields N.L. in 1954, and this organization has since

drilled three test wells in the Canning Basin.

The first large-scale exploration in this State employing modern geophysical and drilling techniques began in 1952, when West Australian Petroleum Pty. Ltd. (Wapet) commenced operations in the Carnarvon Basin. This company had spectacular success in 1953 with its first well, Rough Range no.1. This well produced oil at a rate of 500 barrels per day from Lower Cretaceous sands of the Biddrong Formation, at a depth of 3,602 feet. Since then the company has drilled a total of 35 test wells without further success, other than in Rough Range no. 1A, which was drilled a few yards from the discovery well. The company holds exploration permits covering most of the Canning, Carnarvon, and Perth Basins, and it is continuing with active exploration in each.

For more detailed information on the status of oil exploration in Western Australia the reader is referred to publications by Hobson (1936), Playford and Johnstone (1959), Bureau of Mineral Resources (1960), McWhae (1960), and Playford (1962).

EUCAL BASIN

The only wells drilled for oil exploration in the Eucla Basin were put down in 1960 by Exoil Pty.Ltd. to obtain stratigraphic information. These two wells, Myre no.1 and Gombanga no.1, entered Precambrian basement rocks at shallow depths.

PERTH BASIN

Five oil-test and 7 stratigraphic wells have been completed in the Perth Basin. With the exception of 3 shallow test wells drilled by the Westralian Mining and Oil Corporation in 1962-64 near the south coast, drilling has been concentrated in the north-central part of the basin. Two test wells and 5 stratigraphic holes have been drilled by Wapet, and 2 stratigraphic holes by the Bureau of Mineral Resources. Wapet is currently drilling oil-test and stratigraphic wells at Woolmulla and Eganu respectively, but the greater part of the basin remains untested.

CARNARVON BASIN

All the test wells drilled to date in the Carnarvon Basin have been put down by Wapet. Most are concentrated in the Exmouth Gulf area, where a total of 17 have been drilled. In addition, several of the Tertiary anticlines outside this area have been tested, but there are no test wells in the central and eastern parts of the basin.

Wapet has completed 30 stratigraphic and structure holes in the Carnarvon Basin, and a further 5 have been put down by the Bureau of Mineral Resources. Most of the Wapet holes were drilled for structural information on the Rough Range and Dirk Hartog Anticlines.

Although the initial success at Rough Range nos. 1 and 1A has not been followed by further oil discoveries, some of the other test wells have had showings of oil or gas, especially Cape Range nos. 1 and 2, which recorded substantial gas showings.

CANNING BASIN

In the Canning Basin, exploratory drilling has been restricted to the northern part and the coastal strip, where a total of 30 test wells and 3 stratigraphic holes have been drilled. A huge area, covering the central and western parts of the basin, remains untested, mainly because of its inaccessible and inhospitable nature.

Wapet has drilled more holes (14 oil-test and 3 stratigraphic holes) in the Canning Basin than any other organization. The rest have been put down by the Freney Kimberley Oil Company (15 oil-test holes), Associated Freney Oilfields N.L. (3 oil-test holes) and the Bureau of Mineral Resources (5 stratigraphic holes).

Traces of oil and gas have been reported from a number of wells drilled in the Canning Basin, and one, Meda no. 1, produced a few gallons of oil from the Lower Carboniferous sequence.

ORD BASIN

In 1920 bitumen was discovered at two localities in the Ord River area, in jointed and vesicular basalts underlying Lower Cambrian limestones. This discovery led to the formation of the Okes Durack Kimberley Oil Company, which drilled one dry hole in 1924. Since then there has been no serious oil exploration in the basin.

REFERENCES

- Bureau of Mineral Resources, 1960, Summary of oil search activities in Australia and New Guinea to June, 1959: Bur. Min. Resour. Aust. Rept. 41A, 63 p.
- Hobson, R.A., 1936, Summary of petroleum exploration in Western Australia to January 1935: West. Australia Geol. Survey Ann. Rept. 1935, p. 22-34.
- McWhae, J.R.H., 1960, Oil exploration in Western Australia to June 1960: Pan Ind. Ocean Sci. Congress, Karachi, 1960.
- Playford, P.E., 1962, A geological appreciation of recent oil exploration in the Canning, Carnarvon, and Perth Basins, Western Australia: Aust. Inst. Mining and Metallurgy, 1962 Ann. Conference Oil in Australasia Symposium, paper no. 8.
- Playford, P.E., and Johnstone, M.H., 1959, Oil exploration in Australia: Amer. Assoc. Petroleum Geologists Bull., v. 43, p. 397-433. Reprinted, revised, 1959, Australasian Oil and Gas Jour., v. 6, no. 1, p. 5-17, no. 2, p. 5-17, no. 3, p. 5-11.

WELLS DRILLED FOR PETROLEUM EXPLORATION IN WESTERN AUSTRALIA

TO THE END OF 1962.

Name	Type	Location		Depth (feet)	Bottomed in	Drilled for	Year com- pleted	Remarks
		Lat. (S.)	Long. (E.)					
EUCLA BASIN								
Eyre No. 1	Strat.	32°07'	126°58'	1,718	Precambrian	Exoil	1960	
Cambridge No. 1	Strat.	32°16'	126°50'	1,282	Precambrian	Exoil	1960	

FROTH BASIN								
Abbarwardoo No. 1	Strat.	28°35'10"	115°49'35"	2,000	L. Permian	WAPET	1962	
B.M.R. No. 10 (Beagle Ridge)	Strat.	29°49'30"	114°58'30"	3,910	L. Permian	B.M.R.	1959	Minor oil shows
B.M.R. No. 10A (Beagle Ridge)	Strat.	29°49'58"	114°58'30"	4,862	Precambrian	B.M.R.	1960	Minor oil shows
Egami No. 1	Strat.	29°59'05"	115°49'35"			WAPET		Drilling
Eneabba No. 1	Oil test	29°34'14"	115°49'56"	13,712	L. Triassic	WAPET	1961	Minor oil and gas shows
Hill River No. 1	Strat.	30°16'	115°18'	1,900	L. Jurassic	WAPET	1962	5 coal seams 2 to 3 feet thick.
Hill River No. 2	Strat.	30°11'	115°14'	1,620	L. Jurassic	WAPET	1962	Minor lignite
Hill River No. 3	Strat.	30°00'32"	115°11'13"	865	U. Triassic	WAPET	1962	
Hill River No. 4	Strat.	30°23'24"	115°13'49"	1,010	U. Triassic	WAPET	1962	
Jurien No. 1	Oil test	30°08'40"	115°02'54"	3,366	Precambrian	WAPET	1962	Minor gas shows

PERMIAN BASIN

Warren River No. 1	Oil test	34°34' (app.)	115°55' (app.)	81	U. Jurassic	W. M. & O.	1902	Dry
Warren River No. 2	Oil test	34°35' (app.)	115°54' (app.)	504	U. Jurassic	W. M. & O.	1902	Dry
Warren River No. 3	Oil test	34°37' (app.)	115°51' (app.)	1,719	U. Jurassic	W. M. & O.	1904	Dry
Woolmilla No. 1	Oil test	30°1'24"	115°11'28"			WAPET		Drilling

CARMARVON BASIN

B.M.R. No. 5 (Giralia)	Strat.	22°39'15"	114°14'25"	2,070	L. Permian	B.M.R.	1958	
B.M.R. No. 6 (Muderong)	Strat. & Struct.	24°05'55"	114°46'30"	1,002	L. Permian	B.M.R.	1958	
B.M.R. No. 7 (Muderong)	Strat. & Struct.	24°05'55"	114°46'30"	1,997	L. Permian	B.M.R.	1958	
B.M.R. No. 8 (Mt. Madeline)	Strat. & Struct.	25°44'50"	115°40'40"	3,004	L. Permian	B.M.R.	1959	
B.M.R. No. 9 (Gawrie Strat.)	Strat. & Struct.	25°32'20"	115°32'50"	2,299	L. Permian	B.M.R.	1959	
Cape Currier No. 1	Strat.	24°13'30.5"	113°23'43.6"	1,500	Devonian	WAPET	1955	
Cape Range No. 1	Oil test	22°03'56.5"	114°00'32.5"	8,019	M. Jurassic	WAPET	1954	Minor gas shows
Cape Range No. 2	Oil test	22°05'50.5"	113°55'41.2"	15,170	L. Jurassic	WAPET	1956	Gas, non-commercial
Cape Range No. 3A	Oil test	22°03'42.3"	113°53'54.2"	3,737	U. Jurassic	WAPET	1956	Dry
Cape Range No. 4	Oil test	22°19'26.5"	113°56'09.1"	3,053	U. Jurassic	WAPET	1956	Dry
Dark Hartog Nos. 1-16	Struct.	25°42'00"- 25°57'45"	112°58'20"- 113°09'20"	778- 1,500	Eocene	WAPET	1955- 1956	
Dark Hartog No. 17B	Oil test	25°51'58"	113°04'40.5"	4,998	L. Silurian	WAPET	1957	Dry
Ramoth No. 1	Struct.	22°23'01"	114°06'38.5"	1,755	U. Cretaceous	WAPET	1956	
Ramoth No. 2	Struct.	22°21'25"	114°03'17"	2,029	U. Cretaceous	WAPET	1956	

Giralia No. 1	Oil test	22°59'35"	114°11'20"	4,080	L. Permian	WAPET	1955	Dry
Grierson No. 1	Strat. & Struct.	24°12'00"	113°16'00"	1,437	Devonian	WAPET	1955	
Grierson No. 2	Strat. & Struct.	24°12'00"	113°17'00"	1,470	Devonian	WAPET	1955	
Grierson No. 3	Strat. & Struct.	24°12'00"	113°18'00"	1,450	Devonian	WAPET	1955	
Learmonth No. 1	Oil test	22°10'58.5"	114°03'31.2"	1,636	L. Permian	WAPET	1958	Minor gas show
Rough Range No. 1	Oil test	22°25'06.6"	114°04'54.4"	14,007	Devonian	WAPET	1955	Oil saturated 3,602-3,628 ft.
Rough Range No. 1A	Oil test	22°25'06"	114°04'53"	3,627	D. Jurassic- L. Cretaceous	WAPET	1955	Oil saturated 3,602-3,628 ft.
Rough Range No. 2	Oil test	22°25'50"	114°04'00"	4,072	D. Jurassic	WAPET	1954	Dry
Rough Range No. 3	Oil test	22°24'40"	114°03'00"	3,215	L. Cretaceous	WAPET	1954	Dry
Rough Range No. 4	Oil test	22°25'23"	114°04'54"	3,760	L. Cretaceous	WAPET	1954	Dry
Rough Range No. 5	Oil test	22°25'07"	114°04'33"	3,772	L. Cretaceous	WAPET	1954	Dry
Rough Range No. 6	Oil test	22°25'42.7"	114°04'42.8"	3,407	L. Cretaceous	WAPET	1955	Dry
Rough Range No. 7	Oil test	22°26'40"	114°04'06"	4,281	D. Jurassic- L. Cretaceous	WAPET	1955	Dry
Rough Range No. 8	Oil test	22°26'46"	114°03'44"	3,943	L. Cretaceous	WAPET	1955	Dry
Rough Range No. 9	Oil test	22°26'50"	114°04'20"	3,844	D. Jurassic- L. Cretaceous	WAPET	1955	Dry
Rough Range No. 10	Oil test	22°25'04.6"	114°03'02.4"	3,730	D. Jurassic- L. Cretaceous	WAPET	1957	Minor oil show
Rough Range South No. 1	Struct.	22°37'47.5"	113°37'37.6"	2,866	L. Cretaceous	WAPET	1956	
No. 2	Struct.	22°23'48.2"	114°00'20.4"	1,503	L. Cretaceous	WAPET	1956	
No. 3	Struct.	22°30'08.7"	114°02'23.5"	1,300	L. Cretaceous	WAPET	1956	
No. 4	Struct.	22°32'00"	114°01'20.4"	2,203	L. Cretaceous	WAPET	1956	
No. 5	Oil test	22°34'24.6"	113°53'16.3"	4,760	L. Permian	WAPET	1956	Dry
No. 6	Struct.	22°32'22"	114°00'43.4"	1,324	L. Cretaceous	WAPET	1956	

Wandagee No. 1	Strat.	23°55'15"	114°23'31"	3,520	L. Silurian	WAPET	1962	Minor gas show
No. 2	Strat.	23°53'13"	114°31'38"	1,013	L. Permian	WAPET	1962	
No. 3	Strat.	23°49'43"	114°20'03"	750	pre-Ordovician gneiss	WAPET	1962	
Warroom No. 1	Oil test	23°30'30.1"	115°52'48.1"	5,992	Carboniferous	WAPET	1955	Minor oil show
Yanroy No. 1	Oil test	22°15'45.7"	114°34'56.8"	1,413	Precambrian	WAPET	1957	Dry

CANNING BASIN

Babrongan No. 1	Oil test	18°23'23"	123°55'37"	6,395	U. Devonian	WAPET	1962	Dry
Barlee No. 1	Oil test	17°48'25"	122°42'40"	8,101	U. Carbonif- erous	WAPET	1960	Minor gas show
B.M.R. No. 1 (Jurgurn Creek)	Strat.	18°19'49"	123°42'45"	1,680	L. Permian	B.M.R.	1955	
B.M.R. No. 2 (Laurel Downs)	Strat.	18°07'06.1"	125°20'05.1"	4,003	U. Devonian	B.M.R.	1956	
B.M.R. No. 3 (Prices Creek)	Strat.	18°39'40" (app.)	125°54'05" (app.)	694	Precambrian	B.M.R.	1956	
B.M.R. No. 4 (Wallal)	Strat.	19°44'12"	120°44'28"	1,410	Jurassic	B.M.R.	1958	
B.M.R. No. 4A (Wallal)	Strat.	19°44'12"	120°44'28"	2,223	Precambrian	B.M.R.	1958	
Dampier Downs No. 1	Strat.	18°18'00"	123°06'00"	3,028	L. Ordovician	WAPET	1956	
Fraser River No. 1	Oil test	17°25'04"	123°09'33"	10,144	post-Carbonif- erous gabbro	WAPET	1956	Dry
Frans Rocks No. 1	Oil test	18°11'48"	123°38'42"	4,003	Rock salt	WAPET	1959	Dry
Frans Rocks No. 2	Oil test	18°15'15"	123°39'35"	7,504	U. Devonian	WAPET	1955	Minor oil show

Goldwyer No. 1	Oil test	18°22'47"	122°22'58"	4,720	Precambrian	WAPET	1958	Minor oil shows
Grant Range No. 1	Oil test	18°01'00"	121°00'25"	12,915	U. Carbonif- erous	WAPET	1935	Dry
Hawkestone Peak No. 1	Oil test	17°14'45"	121°24'26"	3,837	Precambrian	WAPET	1962	Dry
Langoora No. 1	Oil test	17°18'07"	121°06'48"	5,299	Precambrian	WAPET	1962	Dry
Meda No. 1	Oil test	17°24'00"	121°11'30"	8,809	Precambrian	WAPET	1958	Oil and gas shows
Meda No. 2	Oil test	17°24'35"	121°11'23"	7,628	U. Devonian	WAPET	1959	Oil and gas shows
Mount Wynne No. 1	Oil test	18°05'35"(app.)	124°23'44"(app.)	896	L. Permian	F.K.O.	1923	Minor bitumen present
Mount Wynne No. 3	Oil test	18°05'35"(app.)	124°23'44"(app.)	2,154	L. Permian	F.K.O.	1925	Minor oil shows
Myroodah No. 1	Oil test	18°16'15"	121°11'27"	6,001	L. Permian	A.F.O.	1956	Dry
Nerrima No. 1 (A.F.O.)	Oil test	18°26'55"	121°22'17"	9,072	U. Carbonif- erous	A.F.O.	1955	Minor oil shows
Nerrima No. 1 (F.K.O.)	Oil test	18°28'16"	121°24'02"	4,271	L. Permian	F.K.O.	1941	Dry
Poole Range No. 3	Oil test	18°53'06"(app.)	125°47'20"(app.)	3,264	L. Permian	F.K.O.	1930	Minor oil shows
Poole Range No. 5	Oil test	18°52'27"(app.)	125°49'02"(app.)	1,545	L. Permian	F.K.O.	1933	Dry
Prices Creek No. 1	Oil test	18°40'30"(app.)	125°55'00"(app.)	1,008	Ordovician	F.K.O.	1922	Minor oil shows
Prices Creek No. 2	Oil test	18°40'40"(app.)	125°55'55"(app.)	340	Ordovician	F.K.O.	1923	Minor oil shows
Prices Creek No. 3	Oil test	18°41'25"(app.)	125°55'15"(app.)	809	Ordovician	F.K.O.	1923	Minor oil shows
Prices Creek No. 4	Oil test	18°40'55"(app.)	125°54'05"(app.)	444	L. Permian	F.K.O.	1923	Dry
Reebuck Bay No. 1	Strat.	18°09'33.9"	122°27'27.8"	4,000	L. Ordovician	WAPET	1956	
Sapphire Marsh No. 1	Oil test	19°31'07.6"	121°10'50.8"	6,664	Precambrian	WAPET	1958	Dry
Sisters No. 1	Oil test	17°43'31"	121°25'03"	9,828	Devonian	A.F.O.	1957	Dry
Thangoo No. 1	Oil test	18°22'06"	122°53'22"	3,475	L. Ordovician	WAPET	1959	Minor oil shows
Thangoo No. 1A	Oil test	18°21'52"	122°53'09"	5,429	Precambrian	WAPET	1960	Minor oil shows
Wallal No. 1	Strat.	19°51'45.5"	120°57'58.5"	1,014	Jurassic	WAPET	1957	

Okeas Dursack

Oil test

17°16'(app.)

128°57'(app.)

1,196

L. Cambrian
basalt

O.D.K.

1924
(app.)

Dry

Abbreviations:

Strat. = Stratigraphic Hole

Struct. = Structure Hole

app. = Approximately

L. = Lower

M. = Middle

U. = Upper

A.F.O. = Associated Frengy Oilfields N.L.

B.M.R. = Bureau of Mineral Resources

F.K.O. = Frengy Kimberley Oil Co.

W.A.P.E. = West Australian Petroleum Pty.
Limited.

W.M.O. = Westralian Mining and Oil
Corporation.

O.D.K. = Okeas Dursack Kimberley Oil Co.

Exoil = Exoil Pty. Ltd.

