

70/78
4

COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

053815*

Record No. 1970/78



**Some Characteristics of Formation Waters
Obtained from Petroleum Exploration and
Development Wells in Australia and Papua
including the Continental Shelf**

by

B.A. McKay and V. Laban

The information contained in this report has been obtained by the Department of National Development as part of the policy of the Commonwealth Government to assist in the exploration and development of mineral resources. It may not be published in any form or used in a company prospectus or statement without the permission in writing of the Director, Bureau of Mineral Resources, Geology & Geophysics.



**BMR
Record
1970/78
c.4**

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS
MINERAL RESOURCES BRANCH
PETROLEUM TECHNOLOGY SECTION

1970/78



Some Characteristics Of Formation Waters Obtained
From Petroleum Exploration And Development Wells
in Australia and Papua Including The Continental
Shelf.

by

B.A. McKay

and

V. Laban

SOME CHARACTERISTICS OF FORMATION WATERS OBTAINED FROM
PETROLEUM EXPLORATION AND DEVELOPMENT WELLS IN AUSTRALIA AND
PAPUA INCLUDING THE CONTINENTAL SHELF

INTRODUCTION

In the course of petroleum exploration and development drilling operations in Australia Papua and the offshore areas, a large number of formation water samples have been collected and analysed by laboratories of the Bureau of Mineral Resources, State Mines Departments and by private facilities. Results of 454 analyses of samples from 205 wells are included in this report.

It is the intention of the Bureau to broaden this information by subsequent yearly publication of supplemental reports. In this manner, it is hoped to provide a ready source of regional information on formation water characteristics.

EXPLANATORY NOTES

The following notes have been prepared to facilitate the use of the information tabulated on pages 1 to 28.

1. Basin: The water analyses data in this report are grouped according to sedimentary basins; 28 out of the total of 45 sedimentary basins and sub-basins are represented. Some individual wells (example Bonnie No. 1) have penetrated two or more overlapping basins, and are listed accordingly.
2. Well name and number: The normal practice throughout the Commonwealth and Papua is to identify the wells by names and consecutive numbers reflecting the order of drilling. Numbers such as 1A refer to wells which have been relocated as a result of drilling problems in the previous hole 1.
3. Operator: The company which has elected to drill the well in consideration. Joint ownership or other partnership arrangements are not shown in this column.
4. Test interval: Most fluid samples have been recovered from open hole drillstem tests during exploration drilling. As such, the intervals shown generally designate the depth zone between the packer and the bottom open hole section under test. Occasional samples have been recovered from perforations through cased intervals. Some single depths shown indicate fluids recovered from specific depths during air or mist drilling operations, short perforated intervals or wireline formation interval tests.
5. Formation and age: Where possible, the local name of a particular formation or bed is shown together with the geologic age. Some interval names in rank wildcat areas are not defined.
6. Date sample received: The month and year in which the sample was received by the B.M.R. Occasional samples have not been designated in the column, these being fluids from water supply bores, or from wells which were not drilled under subsidy arrangement.

7. Rw (ohm-meters): The resistivity of the formation fluid sample in ohm-meters. All values are assumed to be calculated electrically; figures are rounded to the second decimal.

8. Temperature ($^{\circ}$ F): The temperature in degrees Fahrenheit, at which the formation water resistivity values were measured.

9. Cl ion (ppm): The chloride ion in the formation fluid expressed in parts per million. To the best of our knowledge, these data were derived by titration analyses of fluid samples. However, it is possible some results were determined by reference to a Rw-salinity-temperature plot (1).

10. Na Cl (ppm): The sodium chloride content in parts per million. It is becoming increasingly common in Australia to derive this value from the atomic absorption determination which is displacing the older method of flame photometry. However, other methods still used are the separate chemical evaluation of the sodium and chloride ions or the alternate method of using a simple multiplier, 1.65 times the chloride ion. The latter method is valid when all of the chloride ions are balanced by the sodium ions only.

11. Total dissolved solids (ppm): This is determined by evaporation of the filtered fluid sample at controlled temperatures, and is a measure of all the dissolved solids in the formation fluid sample. The resistivity (Rw) of most formation waters is controlled by this value; a direct correlation usually exists between the total dissolved solids and the salts determined by reference to a resistivity-temperature plot (1).

DISCUSSION OF DATA

The majority of samples listed in the data sheets are from wells classified as exploration drilling. Formation fluids from these wells have been produced during drillstem testing of open hole sections, and the greatest single error in fluid analysis of such samples could be attributed to contamination from the mud filtrate and any water cushion used during drillstem testing. The degree of contamination is probably greatest in those wells in which the section is of low productivity; in formations with good productivity, provided the well has been allowed to properly "clean up" before fluid samples are caught, the contamination would be eliminated.

Since most drilling fluids used in Australia would be classified as low salt muds, the general effect of mud contamination on formation water characteristics will be to raise the total dissolved solid content, and to lower the chloride/sodium chloride saturation. The resistivity may be essentially unchanged or lowered depending on whether the contaminating chemicals are ionized. Some of these characteristics can be recognised in the analyses contained in this report, in which case the particular data should be used with caution.

Additional contamination in the samples may be due to using metal cans for shipping. Metal corrosion has often been noted in these containers, in some cases being serious enough to cause leakage and loss of sample in a short period. It is suggested that operators use plastic or glass containers for all fluid samples in future to circumvent this problem.

Some rare inconsistencies in the data are noted, in which the total dissolved solids are somewhat lower than the salts determined by reference to an R_w -temperature plot (1). This condition usually occurs in highly saline waters, and is probably the result of naturally occurring divalent or trivalent ions (from compounds such as CaCl_2 , MgCl_2 and FeCl_3) which have an inordinate lowering effect on the R_w value. Reference is also made to some of the "fresh" formation waters of the Great Artesian Basin area, in which the total dissolved solids may greatly exceed the very low chloride/sodium chloride saturation, due to the presence of alkaline minerals.

ACKNOWLEDGEMENT

The authors wish to acknowledge the help given by the operating companies in supplying some of the information, also to M.C. Konecki for his suggestion initiating the report, and to R. Vine for assistance in defining basins.

REFERENCES

- (1) Schlumberger Limited - Plot Gen 9, Log Interpretation Charts, 1969.

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RV (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Adavale	Bonnie No. 1	25°00'43"S 145°22'01"E	Phillips Aust. Oil Company	3,940- 4,070	Hutton - Jurassic	06-66	8.30	68	364	600	1,500
	Bury No. 1	25°02'40"S 145°36'20"E		8,791- 9,004	Un-named - L. Devonian	05-66	0.08	68	190,727	314,700	352,780
	Carlow No. 1	24°50'27"S 145°25'48"E		6,414- 6,558	Etonvale - Devonian	02-66	0.09	68	80,970	133,600	
	Dartmouth No. 1	26°08'39"S 145°20'34"E		9,360- 9,495		08-66	1.60	68	606	1,000	1,100
	Leopardwood No. 1	25°37'10"S 144°40'13"E		5,530- 5,620	Buckabie - Devonian	03-66	2.20	68	728	1,200	550
				12,634- 13,025	Etonvale - Devonian	05-66	0.07	68	188,000	310,000	
				12,930		06-66	0.06	68	181,500	300,000	
Stafford No. 1	25°17'29"S 145°26'10"E		3,704- 3,817	Hutton - Walloon - Jurassic	09-66	5.60	68	242	400	500	
Amadeus	Alice No. 1	23°54'47"S 133°58'00"E	Magellan Petroleum Australia Ltd	3,481- 3,530	Goyder - M. Cambrian	11-63			300	495	
				6,068- 6,119	Jay Creek - Cambrian	11-63			450	743	
				6,090- 6,137		11-63			450	743	
				7,205- 7,518	Arumbera - Cambrian	11-63			123,900	204,435	
				7,285- 7,518		11-63			135,370	223,360	
	Mt Crispe No. 1	26°26'43"S 135°22'36"E	Total Exploration Aust. Pty Ltd	3,729- 3,777	Stairway - Ordovician	05-66	0.74	68	5,090	8,400	
	North West Mearns No. 1	23°53'22"S 131°22'27"E	Magellan Petroleum Australia Ltd	4,771- 5,000	Pacoota - Ordovician	08-69	0.22	68	16,969	28,000	38,200
				4,771- 5,000		08-69	0.19	68	19,030	31,100	38,200
				4,771- 5,000		08-69	0.20	68	18,000	29,700	38,200

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Amadeus	North West Mereenie No. 1	23°53'22"S 131°22'27"E	Magellan Petroleum Australia Ltd	4,935	Pacoota - Ordovician	08-69	0.23	68	17,969	29,650	33,000
				4,995		08-69	0.20	68	21,030	34,700	37,800
	Orange No. 1	24°02'34"S 133°45'32"E		2,060	Larapinta - Ordovician	01-67	6.87	68	364	600	
				2,145		01-67	7.28	68	364	600	800
				3,160	Pacoota - Ordovician	01-67	3.31	68	788	1,300	
				3,173		01-67	3.35	68	727	1,200	2,000
				3,478		01-67	3.34	68	788	1,300	1,940
				3,794		01-67	3.52	68	727	1,200	1,980
				4,085	Coyder - Cambrian	01-67	6.20	68	364	600	
				4,377		01-67	1.73	68	1,939	3,200	4,040
				6,310	Hugh River - Cambrian	01-67	18.0	68	182	300	320
				6,832	Giles Creek - Cambrian	01-67	1.86	68	1,758	2,900	
				7,461- 7,653	Chandler - Cambrian	01-67	0.06	68	179,750	296,600	303,160
				7,461- 7,653		01-67	0.05	68	197,151	325,300	328,170
	Palm Valley No. 1	24°00'00"S 132°46'20"E		6,318- 6,476	Pacoota - Ordovician	07-65			112,150	185,048	217,300
	Tyler No. 1	23°45'23"S 132°24'45"E		144	Brewer - Devonian	07-68	0.92	68	303	500	2,220
				144		07-68	0.51	68	424	700	2,070
				8,805 9,143	Mereenie - Devonian	12-68	0.52	68	2,727	4,500	6,000

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RV (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Amadeus	West Waterhouse No. 1	24°00'00"S 133°06'30"E	Magellan Petroleum Australia Ltd	1,870	Brewer - Devonian	10-69	2.42	68	545	900	2,820
				3,600- 3,845	Mereenie - Devonian	11-69	7.14	68	424	700	820
				4,226		11-69	6.98	68	352	580	800
				5,068	Stairway - Ordovician	11-69	0.93	68	5,697	9,400	
				5,865	Horn Valley - Ordovician	11-69	0.06	68	138,181	228,000	220,000
				5,895	Pacoota - Ordovician	11-69	0.06	68	127,272	210,000	200,000
Arckaringa	Weedina No. 1	28°28'31"S 135°39'20"E	Pexa Oil N.L.	2,685- 2,880	Un-named - Devonian	07-70	1.90	60	1,339	2,310	4,200
Bonaparte	Keep River No. 1	15°10'05"S 129°05'22"E	Australian Aquitaine Petroleum Pty Ltd	6,177- 6,200	Milligan - Carboniferous	03-69	0.53	72	7,000	11,550	12,560
				6,444- 6,480		03-69	0.39	72	10,600	17,500	17,500
				6,896- 6,963		12-68	0.29	68	15,939	26,300	27,200
				6,896- 6,963		12-68	0.26	68	16,970	28,000	46,600
				6,896- 6,963		12-68	0.27	68	17,697	29,200	29,600
				6,896- 6,963		12-68	0.28	68	15,940	26,300	26,360
				7,178 7,234		03-69	0.45	68	14,545	24,000	26,200
				7,510 7,600		03-69	0.75	68	6,667	11,000	32,900
				12,727 12,733	Ningbing - Devonian	03-69	0.23	68	23,636	39,000	47,320

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Bonaparte	Keep River No. 1	15°10'05"S 129°05'22"E	Australian Aquitaine Petroleum Pty Ltd	13,246 13,300	Ningbing - Devonian	03-69	0.25	68	22,727	37,500	55,520
	Kulshill No. 2	14°24'18"S 129°32'40"E		4,052	Kulshill - Permian	06-66	1.04	68	3,879	6,400	
				5,244- 5,306	Tunmurra - Carboniferous	08-66	0.60	68	4,970	8,200	
				5,244- 5,306		08-66	0.66	68	5,697	9,400	
				5,447- 5,511		08-66	0.51	68	8,848	14,600	
				5,447- 5,511		08-66	0.51	68	9,212	15,200	
	Lacrosse No. 1	14°17'51"S 128°34'58"E	Arco Limited	5,624- 5,770	Un-named - Permian	04-69	0.39	68	8,364	13,800	38,280
				5,624- 5,770		04-69	0.88	68	2,788	4,600	17,320
				5,624- 5,770		04-69	0.32	68	8,788	14,500	61,400
				9,188- 9,275	Undifferentiated - Carboniferous	05-69	0.09	68	53,939	89,000	100,140
Bowen	Blyth Creek No. 1	26°37'22"S 148°57'05"E	Associated Aust. Oilfields N.L.	3,786- 3,820	Hoolayember - Triassic	05-64	1.25	77	1,865	3,077	5,600
(Below Bowen)				3,823- 3,998	Timbury Hills - Devonian	05-64	1.26	77	1,845	3,044	6,100
Bowen	Brucedale East No. 1	26°55'25"S 148°56'55"E			5,050- 5,120	Hoolayember - Triassic	05-65	1.37	77	1,835	3,028
	Burunga No. 1	26°00'00"S 150°04'43"E	Union Oil Develop- ment Corp.	4,106- 4,214	Kianga - Permian	03-63	3.67	68	970	1,600	2,100
	Conloi No. 1	26°25'42"S 149°57'48"E			4,935- 4,965	Wandooan - Triassic - Jurassic	09-64	20.8	77	20	33
		Crystalbrook No. 1	25°29'03"S 147°59'35"E	Planet Exploration Co. Pty Ltd	1,655- 1,685	Clematis - Triassic	06-64	10.0	77	17	28
1,842- 1,887					06-64		3.57	77	25	41	2,150

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIES (ppm)
Bowen	Dalmuir No. 1	26°25'00"S 149°04'20"E	Associated Aust. Oilfields N.L.	3,617- 3,673	Moolayember - Triassic	10-64	1.46	77	1,555	2,566	4,300
	Glenhaughton No. 1 (Water well)	25°12'30"S 149°07'45"E	Marathon Pet. Australia Ltd	2,100	Clematis - Triassic		27.4	77	65	107	225
	Inderi No. 1	24°17'00"S 148°29'00"E	Associated Aust. Oilfields N.L.	1,818- 1,901	Aldebaran - Permian	08-63	2.13	77	500	825	4,040
				1,829 1,925		08-63	2.00	77	545	899	3,360
				2,332- 2,466		08-63	2.86	77	200	330	2,910
				3,814- 3,944		08-63	0.65	77	4,925	8,126	9,660
	Kildare No. 1	25°43'16"S 148°24'46"E		3,664- 3,701	Units 4 to 7 - Permian	03-63	0.48	77	1,345	2,219	17,200
	Kildare No. 2	25°43'09"S 148°23'00"E		2,996- 3,065		05-63	0.76	77	350	578	9,950
	Limebon No. 1	28°49'06"S 150°03'47"E	Union Oil Develop- ment Corp.	5,720- 5,786	Kianga-Back Creek - Permian	10-67	2.77	68	1,940	3,200	
	Myall Creek No. 1	27°04'47"S 149°12'11"E		6,968- 6,989	Kianga - Permian	02-64	0.97	77	3,025	4,491	6,700
	Rosewood No. 1	26°04'00"S 148°41'50"E	Associated Aust. Oilfields N.L.	2,027- 2,056	Moolayember - Triassic	03-63	13.7	68	30	50	4,240
	Sunnybank No. 1	26°56'25"S 149°13'30"E		5,136 5,578		Pickanjinnee - Triassic	03-63	1.76	77	610	1,007
5,723- 5,820				03-63			2.27	77	625	1,030	2,850
6,032- 6,196				03-63			0.94	77	396	653	4,420
6,139- 6,175				03-63			1.68	77	475	783	2,550
			6,134- 6,196		03-63	2.35	77	659	1,087	4,190	

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Bowen	Sunnybank No. 2	26°56'25"S 149°13'59"E	Associated Aust. Oilfields N.L.	5,522- 5,590	Sub Unit 7 - Triassic	03-63	0.64	77			
	Wallabella No. 1	26°46'50"S 149°09'55"E		5,133- 5,166	Clematis - Triassic	03-64	1.84	77	870	1,436	5,280
	Warrinilla No. 2	25°03'33"S 148°33'10"E	Planet Exploration Co. Pty Ltd	4,033- 4,058 4,165- 4,230	Aldebaran - Permian	12-64 12-64	0.43 0.50	77 77	2,540	4,191	25,500
	Warrinilla No. 4	24°58'25"S 148°33'55"E		3,886- 4,021 4,640- 4,674		02-68 02-68	0.11 0.40	68 65	58,060 6,000	95,800 9,900	99,000 28,360
	Warrinilla No. 5	25°00'02"S 148°34'25"E		2,592- 2,658 4,455- 4,465		05-68 05-68	0.09 0.36	69 69	66,667 4,000	110,000 6,600	123,680 13,370
	Warrong No. 1	25°09'46"S 147°53'37"E		2,602- 2,652		08-64	4.44	77	148	244	
	Werrina No. 2	28°47'49"S 149°24'00"E	Harbourside Oil N.L.	5,086- 5,132	Clematis - Triassic	07-69	2.00	68	1,788	2,950	3,080
	Westgrove No. 1	25°32'00"S 148°26'00"E	Associated Aust. Oilfields N.L.	1,345- 1,360 3,546- 3,558	Rewan - Triassic Unit 6 - Permian	03-63 03-63	6.41 0.46			1 13	6 97
	Westgrove No. 2	25°33'00"S 148°26'00"E		3,067- 3,110 3,207- 3,267	Unit 7 - Permian	03-63 03-63	0.48 0.49		1,645 1,575	2,714 2,599	19,500 21,300
	Westgrove No. 3	25°34'00"S 148°26'00"E		3,001- 3,028	Unit 6 - Permian	03-63	0.44	77	2,225	3,671	18,650
Canning	Kemp Field No. 1	20°19'10"S 123°27'58"E	Total Exploration Aust. Pty Ltd	2,773- 2,867	Tandalgoo - Devonian	12-68	0.91	68	3,333	5,500	7,340

DASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Canning	Kemp Field No. 1	20°19'10"S 123°27'58"E	Total Exploration Aust. Pty Ltd	2,773- 2,867	Tandalgo - Devonian	06-69	0.90	68	3,455	5,700	7,400
	Langoora No. 1	17°18'07"S 124°06'48"E	West Australian Petroleum Pty Ltd	4,826- 4,856	Laurel - Carboniferous	03-63	0.55		500	825	
				4,826- 4,856		03-63	0.49		660	1,089	
				4,826- 4,856		03-63	0.63		640	1,056	
	Matches Springs No. 1	18°41'28"S 124°03'11"E	Total Exploration Aust. Pty Ltd	1,795- 1,850	Un-named - Devonian	09-69	4.38	68	600	1,000	2,880
				5,644- 5,767	Tandalgo - Devonian	11-69	3.20	68	739	1,220	2,720
				5,644- 5,767		11-69	3.72	68	618	1,020	1,700
				5,644- 5,767		11-69	1.85	68	1,000	1,650	5,480
	McLarty No. 1	19°23'45"S 123°39'30"E		960- 996	Cuncudgerie - Permian	07-68	1.20	68	1,394	2,300	6,020
	Mowla No. 1	18°43'50"S 123°42'35"E		1,580- 1,945	Un-named - Devonian	12-69	0.30	68	11,818	19,500	24,240
	Napier No. 2	17°04'55"S 124°21'20"E	Lennard Oil H.L.	4,025- 4,232	Un-named - M. Devonian	12-69	7.50	68	240	396	1,240
				4,750- 4,915		12-69	3.35	68	580	957	1,760
				4,750- 4,915		12-69	3.20	68	780	1,287	1,660
Carnarvon	Point Moody No. 1	21°15'34"S 127°48'22"E	Australian Aquita- ine Pet. Pty Ltd	1,770- 1,780	Poole - Permian	01-66	0.76	66	5,394	8,900	10,340
	Willara No. 1	19°10'48"S 122°04'14"E	West Australian Petroleum Pty Ltd	2,586- 2,725	Grant - Permian	09-65	1.22	68	2,590	4,274	5,770
	Anchor No. 1	21°32'51"S 114°42'38"E		4,417- 4,466	Barrow - Cretaceous	09-69	0.19	68	23,000	37,950	38,000
	Barrow Island No. 1	20°49'06"S 115°23'38"E		2,826- 2,907	Muderong - Cretaceous	06-64	0.29	68	14,800	24,420	27,000

[illegible]

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RV (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Carnarvon	Onslow No. 1	21°45'56"S 114°52'17"E	West Australian Petroleum Pty Ltd	1,687- 1,754	Nanutarra - Cretaceous	10-66	0.25	67	17,757	29,300	32,260
				1,687- 1,754		10-66	0.23	67	19,454	32,100	34,360
				1,724- 1,728		12-66	0.21	71	19,515	32,200	35,360
				1,724- 1,728		12-66	0.20	72	19,515	32,200	35,540
	Pendock No. 1	23°17'02"S 113°20'10"E	Genoa Oil N.L.	1,480- 1,537	Giralia - Eocene	12-69	1.50	68	1,560	2,574	5,500
				3,332- 3,382	Birdrong - Cretaceous	12-69	0.27	68	11,600	19,140	
	Quail No. 1	23°57'04"S 114°29'57"E	West Australian Petroleum Pty Ltd	7,210- 7,321	Sandstone Unit - Carboniferous	10-63			3,085	5,090	6,530
	Tortoise Island No. 1	21°35'08"S 114°51'11"E		3,778- 3,799	Basal - Cretaceous	03-67	0.21	66	22,000	36,300	36,800
				3,778 3,799		03-67	0.20	66	22,424	37,000	37,060
				3,778 3,799		03-67	0.16	66	24,000	39,600	47,160
	Vandagee No. 1	23°53'15"S 114°23'51"E		1,054- 1,091	Unit "A" - Silurian	03-63	0.77	68	4,390	6,750	
				1,809- 1,955	Dirk Hartog - Silurian	03-63	0.81	68	3,120	4,940	
				3,457- 3,521	Tumblagooda - Ordovician	03-63	0.23	68	19,000	20,650	
	Whale back No. 1	22°43'35"S 113°51'37"E		3,789- 3,838	Muderong - Cretaceous	10-63	0.80	68	4,420	7,293	8,500
				3,853- 3,868	Vogatti - Cretaceous	10-63	0.23	68	21,980	36,267	64,000
				3,853- 3,868		10-63	0.25	68	12,980	21,417	37,400
Below Carpentaria	Burketown No. 1	18°03'43"S 139°32'16"E	Mid-Eastern Oil N.L.	3,146- 3,315	Un-named - Proterozoic	11-64	5.19	72	448	740	1,460

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Clarence	Kyogle No. 1	28°37'37"S 152°58'36"E	Mid-Eastern Oil N.L.	2,755- 2,780	Marburg - Jurassic	08-63	1.68	77	1,073	1,770	
Below Coonamble	Kelvin No. 1	30°50'33"S 150°18'54"E		4,133- 4,208	Un-named - Permian	03-65	1.32	71	1,818	3,000	5,420
Cooper	Bodalla No. 1	26°25'43"S 143°26'09"E	B.P. Exploration Aust. Pty Ltd	6,019- 6,160	Un-named - Triassic	10-67	2.92	66	800	1,320	5,000
	Chandos No. 1	25°15'14"S 143°19'36"E	Alliance Oil Development N.L.	6,829- 6,886	Chandos - Triassic	05-66	2.00	68	1,418	2,340	
				7,430- 7,520		05-66	1.72	68	1,455	2,400	2,500
				7,556- 7,686		04-66	1.90	68	1,333	2,200	2,930
				7,613- 7,709		05-66	1.73	68	1,273	2,100	2,540
	Chandos South No. 1	25°57'02"S 143°22'00"E		7,218- 7,300		01-70	1.50	68	2,079	3,430	4,360
				7,650- 7,722		01-70	1.86	68	1,242	2,050	3,160
	Cherri No. 1	29°07'21"S 140°12'45"E	Pexa Oil N.L.	4,210- 4,281	Gidgealpa - Permian	07-70	2.94	65	700	1,155	2,720
	Coongie No. 1	27°12'03"S 140°06'56"E	Flinders Petroleum N.L.	7,750- 8,007	Gidgealpa - Merrimelia - Permian	05-70	1.56	61	1,576	2,600	7,900
				7,850- 8,053		05-70	1.04	61	3,303	5,450	7,200
	Cumbroo No. 1	25°08'39"S 143°22'47"E	Alliance Oil Development N.L.	6,360- 6,468	Chandos - Triassic	12-68	1.90	68	727	1,200	3,850
				6,694- 6,800		12-68	1.19	68	1,030	1,700	2,820
	Dulingari No. 1	28°07'56"S 140°52'30"E	Delhi Australian Petroleum Ltd	7,933- 7,976	Un-named - Permian	03-63	0.85		3,550	5,860	11,000
	Galway No. 1	25°04'30"S 142°33'41"E	Total Exploration Aust. Pty Ltd	7,861- 7,939	Un-named - L. Triassic	12-66	1.08	68	3,394	5,600	7,140
	Gidgealpa No. 2	27°56'44"S 140°03'02"E	Delhi Australian Petroleum Ltd	6,773- 6,778	Un-named - Permian	04-64			455	750	

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REG'D	RV (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Cooper	Gidgealpa No. 2	27°56'44"S 140°03'02"E	Delhi Australian Petroleum Ltd	6,837- 6,842	Un-named - Permian	04-64			1,455	2,405	
				6,858- 6,867		01-64		950	1,566		
	Gidgealpa No. 3	27°58'27"S 140°03'05"E		7,096- 7,125		06-64	1.03	72	2,606	4,300	6,360
				7,164- 7,177	06-64	0.85	70	3,455	5,700	7,500	
				8,598- 8,658	06-64	1.54	73	2,000	3,300	8,500	
	Gilpeppee No. 1	26°25'25"S 141°33'17"E	Alliance Oil Development N.L.	8,032- 8,084	Chandos - Triassic	02-70	1.24	70	1,879	3,100	3,380
				8,871- 8,912		03-70	0.66	70	3,636	6,000	6,380
	Gurra No. 1	29°01'23"S 140°16'30"E	Pexa Oil N.L.	4,115- 4,342	Gidgealpa - Permian	07-70	2.60	65	900	1,485	2,620
				4,344- 4,686		07-70	0.80	65	3,697	6,100	10,000
	Innaminka No. 1	27°27'10"S 141°03'17"E	Delhi Australian Petroleum Ltd	8,511- 8,675		08-65	0.59	77	5,830	9,702	11,052
				8,511- 8,675		08-65			6,054	9,981	
	Kumbarie No. 1	28°54'55"S 140°11'00"E	Pexa Oil N.L.	4,818- 5,037		07-70	2.00	60	1,300	2,145	3,680
Merrimelia No. 1	27°47'05"S 140°06'55"E	Delhi Australian Petroleum Ltd	7,765- 7,846	Un-named - L. Triassic	11-64			1,448	2,388		
			7,922- 7,983	Un-named - Permian	11-64			5,576	9,196		
			8,459- 8,527		11-64			6,904	11,380		
Merrimelia No. 2	27°41'60"S 140°14'04"E			7,249- 7,337	Un-named - L. Triassic	02-65			218	359	
Moomba No. 1	28°09'09"S 140°16'11"E		7,734- 7,936	Gidgealpa - Permian		1.06	77	2,420	3,993	5,980	

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Cooper	Moomba No. 2	28°10'56"S 140°13'36"E	Delhi Australian Petroleum Ltd	7,578- 7,645	Gidgealpa - Permian				2,855	4,710	5,016
	Mount Howitt No. 1	26°37'27"S 142°28'17"E		6,086- 6,149	Un-named - L. Triassic	10-66	1.53	68	2,848	4,700	4,900
	Napacoongie No. 1	28°01'53"S 140°44'39"E		6,165- 6,228	Un-named - Permian	12-65			2,465	3,840	
				6,230- 6,330		12-65			5,979	9,857	
				6,230- 6,330		12-65			5,925	9,812	
				6,337- 6,426		12-65			5,885	9,702	
			6,337- 6,426	12-65				5,323	8,775		
			6,436- 6,535	12-65				5,762	9,499		
	Packsaddle No. 1	27°12'03"S 140°06'56"E	Alliance Oil Development N.L.	7,728- 7,815	Chandos - Triassic	06-70	1.26	69	1,900	3,140	7,600
	Roseneath No. 1	28°09'48"S 141°14'43"E	Total Exploration Aust. Pty Ltd	6,063- 6,343	Gidgealpa - Permian	12-69	0.74	68	4,240	6,963	8,320
				6,063- 6,343		12-69	0.76	68	4,640	7,650	8,440
				6,846- 7,208		01-70	0.56	68	6,606	10,900	11,380
				6,846- 7,208		01-70	0.58	68	6,800	11,200	11,400
	Tinga-Tingana No. 1	29°00'45"S 140°05'38"E	Delhi Australian Petroleum Ltd	5,087- 5,200	Un-named - U. Paleozoic	02-68	2.90	68	967	1,600	2,050
				5,548- 5,698		02-68	0.91	68	3,030	5,000	7,400
				6,390- 6,535		03-68	1.94	68	727	1,200	3,360
				7,113- 7,208		03-68	2.00	68	727	1,200	3,200

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Below Darling	Pondie Range No. 1	31°28'35"S 143°06'46"E	Mid-Eastern Oil N.L.	1,946- 2,006	Un-named - U. Devonian	01-67	0.85	68	3,570	5,900	
				2,401- 2,450		01-67	0.55	68	10,300	17,000	
Drummond	Bancannia North No. 1	30°39'25"S 141°50'10"E	Planet Exploration Co. Pty Ltd	1,390- 1,633	Un-named - Devonian - Carboniferous	05-68	0.45	66	8,485	14,000	14,500
				1,849- 1,880		06-68	0.74	68	5,152	8,500	9,740
				2,727- 2,860		06-68	0.45	68	7,455	12,300	17,540
	Bancannia South No. 1	31°05'30"S 141°49'00"E		4,784- 4,795	Red Beds - Devonian	03-68	0.73	68	4,424	7,300	9,120
				4,784- 4,795		03-68	0.73	68	4,420	7,300	9,340
	Jericho No. 1	23°46'19"S 146°05'01"E	Alliance Oil Development N.L.	5,586- 5,685	Ducabrook - Carboniferous	10-65	1.25	77	2,450	4,043	4,550
	Penjobe No. 1	24°25'31"S 147°56'48"E		1,172- 1,810		04-68			364	600	7,500
Eromanga	Alice River No. 1	23°37'08"S 145°19'15"E	Farmout Drillers N.L.	1,121- 1,155	Unit III - Cretaceous	10-63	3.12	77	400	660	19,800
	Arrabury No. 1	27°11'35"S 141°04'50"E	Flinders Petroleum N.L.	6,980- 7,476	Hutton - Jurassic	05-70	2.06	63	1,103	1,820	4,500
	Balfour No. 1	25°32'13"S 146°42'40"E	American Overseas Petroleum Ltd	3,103- 3,149	Precipice - Jurassic	08-66	22.6	68	120	200	200
	Belmore No. 1	23°53'00"S 143°27'00"E	Longreach Oil Ltd	1,910- 1,989	Hooray - Jurassic - Cretaceous	07-70	5.71	63	388	640	2,760
				2,703- 2,733	Adori - Jurassic - Cretaceous	07-70	4.60	63	600	990	3,200
	Bonnie No. 1	25°00'43"S 145°22'01"E	Phillips Aust. Oil Company	3,940- 4,070	Hutton - Jurassic	06-66	3.30	68	364	600	1,500
	Budgerygar No. 1	25°14'19"S 143°48'28"E	Alliance Oil Development N.L.	4,786- 4,814	Yongala - Jurassic	01-69	1.17	68	970	1,600	2,400

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Eromanga	Bury No. 1	25°02'40"S 145°36'20"E	Phillips Australian Oil Company	2,018- 2,219	Blythesdale - Jurassic	04-66	7.05	68	279	460	1,420
				2,796- 2,899	Walloon - Jurassic	04-66	4.20	68	848	1,400	4,080
				3,363- 3,466	Hutton - Jurassic	04-66	26.0	68	200	300	400
	Canaway No. 1	25°56'06"S 143°57'47"E	Alliance Oil Development N.L.	2,962- 3,031	Roma - Cretaceous	07-63	4.44	77	430	680	1,460
				3,234- 3,271	Mooga - Cretaceous	07-63	4.54	77	125	206	1,465
				3,948- 3,980	Gubberamunda - Jurassic	07-63	11.5	77	55	91	840
				4,618- 4,652	Un-named - Jurassic	07-63	7.06	77	175	289	1,135
				4,804- 4,891	Un-named - Paleozoic	07-63	3.10	77	800	1,320	1,890
	Eromanga and basement										
	Eromanga	Chandos No. 1	25°15'14"S 143°19'36"E	5,296- 5,378	Yongala - Jurassic	04-66	3.90	68	297	490	2,180
		Dartmouth No. 1	26°08'39"S 145°20'34"E	3,620- 3,740	Blythesdale - Jurassic	08-66	14.9	68	200	330	540
				4,527- 4,700	Hutton - Jurassic	08-66	6.95	68	364	600	1,000
		Fermoy No. 1	23°08'32"S 143°03'26"E	3,537- 3,604	Transition Beds - Cretaceous	09-64	5.41	77	150	248	1,440
				4,622- 4,687	Lower Sandstone - Jurassic - Cretaceous	09-64	8.85	77	65	107	1,280
				4,884- 4,994	Basal Sandy Shale - Jurassic - Cretaceous	09-64	8.33	77	70	116	3,100
Eromanga	Galway No. 1	25°04'30"S 142°33'41"E	Total Exploration Aust. Pty Ltd	7,343- 7,414	Evergreen - Jurassic	12-66	2.16	68	848	1,400	1,600
				7,559- 7,624	Precipice - Jurassic	12-66	2.38	68	848	1,400	2,960

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Eromanga	Gidgealpa No. 1	27°56'46"S 140°04'56"E	Delhi Australian Petroleum Ltd	6,490- 6,525	Walloon - Jurassic	12-63			767	1,260	
	Gidgealpa No. 2	27°56'44"S 140°03'02"E		6,500- 6,505	Un-named - Jurassic	04-64			820	1,352	
	Leopardwood No. 1	25°37'10"S 144°40'13"E	Phillips Austral- ian Oil Company	4,539- 4,589	Walloon - Jurassic	03-66	7.46	68	291	480	750
	Mayneside No. 1	23°35'23"S 143°31'11"E	Australian Aquitaine Pet. Pty Ltd	4,933- 5,050	Pemroy - Jurassic	11-64	7.41	77	70	116	880
	Nokari No. 1	26°19'06"S 136°26'32"E	Total Exploration Aust. Pty Ltd	5,739- 5,826	Walloon - Jurassic	07-66	1.00	68	3,697	6,100	7,960
				5,739- 5,826		07-66	1.06	68	3,270	5,400	7,280
	Mount Howitt No. 1	26°37'27"S 142°28'17"E	Delhi Australian Petroleum Ltd	5,474- 5,535	Hutton - Jurassic	10-66	3.37	68	727	1,200	2,240
	Packsaddle No. 1	27°12'03"S 140°06'56"E	Alliance Oil Development N.L.	6,322- 6,372	Yongala - Jurassic	06-70	2.36	69	679	1,120	5,920
				6,566 6,596		06-70	1.96	69	900	1,485	3,220
	Stormhill No. 1	24°08'45"S 143°35'06"E	Longreach Oil Ltd	4,890- 5,099	Hutton - Jurassic	05-69	4.56	68	354	600	2,500
				4,890- 5,099		05-69	4.32	68	424	700	1,560
	Thunda No. 1	25°29'30"S 143°28'28"E	Alliance Oil Development N.L.	6,911- 6,943	Yongala - Jurassic	08-68	1.37	68	1,091	1,800	6,750
	Yongala No. 1	25°30'19"S 143°55'48"E		5,407- 5,436		08-65	7.69	77	65	107	1,100
5,507- 5,636				08-65		3.84	77	190	314	3,000	
5,632- 5,771				08-65		5.62	77	150	278	1,800	
6,304- 6,395				08-65		1.68	77	1,950	3,218	3,600	
Yongala No. 2	25°31'40"S 143°53'34"E		5,896- 5,946		06-67	0.95	77	3,720	6,138	7,300	

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Fitzroy	Yulleroo No. 1	17°51'16"S 122°54'25"E	Gewerkschaft Elverath	10,965- 11,015	Un-named - Carboniferous	02-68	0.10	68	74,000	122,000	
Galilee	Alice River No. 1	23°37'08"S 145°19'15"E	Farmout Drillers N.L.	1,876- 1,910	Clematis - Triassic	10-63	3.63	77	400	660	4,250
				3,302- 3,336	Unit III - Permian	10-63	1.93	77	1,610	2,657	3,260
				3,836- 3,870	Unit V - Permian	10-63	1.95	77	1,620	2,673	3,230
	Balfour No. 1	25°32'13"S 146°42'40"E	American Overseas Pet. Ltd	4,116- 4,203	Clematis - Triassic	08-66	20.7	68	218	316	440
	Beryl No. 1	22°22'08"S 143°58'26"E	Associated Austrian Oilfields N.L.	3,976- 4,154	Un-named - Permian	08-64	2.50		870	1,436	
	Bonnie No. 1	25°00'43"S 145°22'01"E	Phillips Australian Oil Company	4,423- 4,443	Clematis - Triassic	06-66	27.9	68	200	200	280
				4,807- 4,825	Un-named - U. Permian	06-66	0.75	68	4,424	7,300	7,940
	Brookwood No. 1	22°28'55"S 144°19'58"E	Exoil N.L.	3,495- 3,889		03-63	7.50	77	100	165	1,620
	Carlow No. 1	24°50'27"S 145°25'48"E	Phillips Aust. Oil Company	4,290- 4,413	Clematis - Triassic	02-66	7.50	68	364	600	960
	Coreena No. 1	23°18'53"S 145°23'19"E	Beaver Exploration Aust. N.L.	2,434- 2,567	Colinlea - Permian	04-70	6.50	72	297	490	1,240
				3,607- 3,754	Joe - Joe - Permian	04-70	7.76	72	352	580	720
				4,520- 4,740		04-70	8.40	72	248	410	1,080
	Glenaras No. 1	23°05'52"S 144°43'23"E	Phillips Aust. Oil Company	2,954- 3,084	Bandanna - Permian	10-66	6.54	68	667	1,100	1,200
				5,008- 5,113	Un-named - L. Permian	10-66	4.44	68	424	700	860
	Jericho No. 1	23°46'19"S 146°05'01"E	Alliance Oil Development N.L.	5,392- 5,422	Joe - Joe - Carboniferous	10-65	4.80	77	320	528	2,000
	Lake Galilee No. 1 (Water Well)	22°11'33"S 145°58'32"E	Exoil N.L.	375	Noolayember - Triassic		0.38	77	10,450	17,243	19,000

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Galilee	Lake Galilee No. 1 (Water Well)	22°11'33"S 145°58'32"E	Exoil N.L.	520- 990	Moolayember - Triassic		2.20	77	1,480	2,442	2,700
	Lake Galilee No. 1			3,314- 3,488	Un-named - U. Permian	09-64	2.08	77	1,050	1,733	
				3,445- 3,491		09-64	1.61	77			
				8,150- 8,183	Un-named - L. Permian	09-64	1.41	77			
				8,986- 9,080	Un-named - Carboniferous	09-64	2.20	77	1,305	2,153	3,500
	Muttaburra No. 1	22°48'33"S 144°31'35"E	Pursuit Oil N.L.	4,563- 4,590	Un-named - Permian	12-69	5.10	63	500	825	3,080
				4,563- 4,590		12-69	6.42	63	360	594	2,200
	Rand No. 1	23°07'23"S 144°43'06"E	Longreach Oil Ltd	5,350- 5,620	Joe - Joe - Permian	08-69	2.60	68	1,200	1,980	9,200
				5,350- 5,620		08-69	2.60	68	500	825	7,260
				6,160- 6,516	Basal Sandstone - Carboniferous	08-69	3.64	68	600	990	14,740
				6,160- 6,516		08-69	3.26	68	1,091	1,800	
Georgina	Netting Fence No. 1	22°56'05"S 138°02'06"E	Papuan Apinaigi Petroleum Ltd	3,518- 3,744	Georgina - Cambrian	03-65	3.94	77	445	734	1,850
Gippsland	Carrs Creek No. 1	38°17'32"S 147°15'55"E	Arco Limited	3,400- 3,500	Latrobe Valley - Eocene	05-63	16.0	75	90	149	450
	Merriman No. 1	38°20'52"S 147°10'43"E		5,774- 6,000	Strzelecki - Cretaceous	04-63			9,620	15,850	18,211
	St Margarets Island No. 1	38°38'16"S 146°50'05"E	Woodside Oil Co. N.L.	1,950- 2,010	Lakes Entrance - Oligocene	02-66	3.26	67	400	660	2,540
				4,090- 4,160	Strzelecki - Cretaceous	07-66	0.34	68	14,181	23,400	23,500
				4,320- 4,335		06-66	0.34	68	11,272	18,600	

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Gippsland	Sunday Island	38°42'19"S 146°40'11"E	Woodside Oil Co. N.L.	1,491- 1,680	Un-named - Eocene - Paleocene	02-66	2.10	68	1,758	2,900	3,000
	Seaspray	38°19'29"S 147°09'43"E	Arco Limited	3,206- 3,254	Latrobe Valley - Eocene	02-64	12.2	68	182	300	603
Murray	Berri North No. 1	34°12'17"S 140°38'06"E	Beach Petroleum N.L.	2,629- 2,722	Un-named - L. Cretaceous	07-67	0.23	68	15,636	25,800	
	Sunset No. 1	34°16'30"S 141°06'25"E	Associated Aust. Oilfields N.L.	2,783- 3,287	Un-named - Cambrian	04-70	0.22	74	16,969	28,000	32,000
N.W. Shelf	Ashmore Reef No. 1	12°10'50"S 123°05'11"E	Burmah Oil Australia Limited	9,230	Un-named - U. Triassic	03-68	0.39	68	8,182	13,500	19,920
Officer	Birksgate No. 1	27°56'20"S 129°48'10"E	Continental Oil Company of Aust.	430	Emu - Cretaceous	12-66	9.60	68	303	500	1,000
				555	Red Beds - Permian	12-66	10.2	68	303	500	860
				1,417		12-66	2.70	68	1,212	2,000	2,620
				1,939	Unit A - Proterozoic	12-66	0.42	68	7,091	11,700	18,600
				2,112		12-66	0.62	68	6,910	11,400	11,880
	Munyari No. 1	27°41'53"S 132°00'03"E		3,800	Unit 2 - Devonian	08-68	1.90	68	1,394	2,300	3,480
Otway	Caroline No. 1	37°56'30"S 140°54'30"E	Alliance Oil Development N.L.	4,670		08-68	1.30	68	2,182	3,600	5,120
				2,936- 2,961	Dilwyn - Paleocene - Eocene	01-67	1.24	71	2,242	3,700	5,800
				3,042- 3,130	Pebble Point - Paleocene	01-67	3.36	68	727	1,200	2,000
				3,042- 3,130		01-67	3.50	68	727	1,200	1,980
				8,256- 8,256- 8,432	Waare - Cretaceous	01-67	0.26	71	10,000	16,500	30,640
				8,610- 8,730		02-67	0.29	71	7,576	12,500	26,820

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Otway	Flaxmans No. 1	38°33'00"S 142°46'00"E	Frome-Broken Hill Co. Pty Ltd	5,356- 5,396	Paaratte - Cretaceous	03-63			11,600	19,100	21,260
				6,891- 6,913	Waare - Cretaceous	03-63			12,440	17,147	21,390
	Geltwood Beach No. 1	37°39'20"S 140°13'53"E	Beach Petroleum N.L.	3,859- 3,901	Merino - Cretaceous	11-63			12,400	19,600	
				4,708- 4,780		11-63			17,160	24,260	
				4,982- 5,054		11-63			15,880	22,360	
				6,039- 6,081		11-63			12,090	15,660	
	Carvoc No. 1	38°19'09"S 142°52'33"E	Interstate Oil Ltd	4,478- 4,548	Pretty Hill - Cretaceous	07-68	0.47	68	8,121	13,400	22,760
	Heathfield No. 1	37°37'38"S 141°11'08"E	Planet Exploration Co. Pty Ltd	4,078- 4,144	Merino - L. Cretaceous	04-64			15,340	25,310	26,840
	Hindhaugh Creek No. 1	38°16'43"S 144°12'07"E	Pursuit Oil N.L.	2,239- 2,259	Otway - Cretaceous	02-70	0.76	68	3,818	6,300	7,340
				2,328- 2,373		02-70	0.82	68	4,000	6,600	7,100
				3,770- 3,800		02-70	0.48	68	8,000	13,200	16,880
				4,144- 4,145		02-70	0.23	68	22,000	36,300	40,000
				4,144- 4,175		02-70	2.45	68	909	1,500	6,300
	Kalangadoo No. 1	37°34'40"S 140°41'40"E	Alliance Oil Development N.L.	3,100- 3,160	Merino - Cretaceous	09-65			14,890	20,800	
	Lake Bonney No. 1	37°50'39"S 140°28'21"E		8,590- 8,652	Waare - Cretaceous	09-67	0.19	71	21,515	35,500	38,460
	Lake Eliza No. 1	37°13'56"S 139°59'06"E	Esso Exploration and Production Australia Inc.	3,500- 3,515	Otway - Cretaceous	02-70	0.28	68	14,000	23,100	26,880
				3,515- 3,562		02-70	0.28	68	14,000	23,100	27,600

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Otway	Lucindale No. 1	37°05'56"S 140°18'42"E	Esso Exploration and Production Australia Inc.	2,405- 2,462	Otway - Cretaceous	02-70	0.26	68	15,000	24,750	28,360
				2,405- 2,462		02-70	0.26	68	15,500	25,500	28,240
	Nerita No. 1	38°37'43"S 144°13'44"E	Shell Development Australia Pty Ltd	2,400	East-View Coal Measures - Paleocene	08-67	2.90	66	600	990	2,340
				3,670	Boonah - Eocene	08-67	1.38	66	1,552	2,560	6,040
				4,777	East-View Coal Measures - Paleocene	08-67	0.48	66	7,600	12,540	15,120
	Port Campbell No. 2	38°36'00"S 142°59'00"E	Frome-Broken Hill Co. Pty Ltd	7,910- 7,918	Waare - Cretaceous	03-63		75	695	1,147	3,460
				8,188- 8,194		03-63		75	8,440	13,926	16,990
				8,188- 8,194		03-63		75	9,460	15,609	17,540
				8,188- 8,194		03-63		75	8,930	14,735	16,540
				8,188- 8,196		03-63		75	8,830	14,570	16,400
				8,188- 8,192		03-63		75	9,238	15,230	17,470
				8,294- 8,299		03-63		75	8,650	14,273	15,830
				8,338- 8,350		03-63		75	8,650	14,273	16,050
	Robertson No. 1	37°11'23"S 140°46'47"E	Alliance Oil Development N.L.	3,242- 3,267	Undifferentiated Cretaceous	03-67	0.26	72	15,515	25,400	25,400
	Sherbrook No. 1	38°37'33"S 143°07'16"E	Frome-Broken Hill Co. Pty Ltd	3,763- 3,800	Waare - Cretaceous	12-63			263	434	1,733
	Woolsthorpe No. 1	38°08'08"S 142°29'47"E	Interstate Oil Ltd	5,920- 6,140	Otway - Cretaceous	06-68	0.43	68	13,090	21,600	21,700
Papuan	Borabi No. 1	08°10'40"S 144°22'29"E	Phillips Aust. Oil Company	4,023 4,380	Taurian - Miocene	11-67	1.35	73	1,510	2,490	4,830

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Papuan	Iamara No. 1	08°24'04"S 142°56'19"E	Oil Search Ltd	3,366- 3,500	Un-named - L. Cretaceous	03-63			12,715	19,850	
				5,658- 5,950		03-63			34,600	35,800	
	Iokea No. 1	08°23'35"S 146°11'46"E	Phillips Aust. Oil Company	4,539- 4,840	Ivorian - Miocene	07-68	0.44	68	8,848	14,600	
	Iviri No. 1	07°35'54"S 144°46'30"E	Australasian Pet. Co. Pty Ltd	7,585- 7,644	Darai - Miocene	09-65	0.36	77	9,812	15,970	20,360
				9,179- 9,239		10-65	0.35	77	10,000	16,380	20,640
	Kapuri No. 1	08°18'22"S 146°08'04"E	Phillips Aust. Oil Company	5,110- 5,166	Muruan - Pliocene	08-68	0.52	68	9,697	16,000	
				5,511- 5,572		08-68	0.46	68	8,485	14,000	
	Muabu No. 1	07°22'52"S 144°40'11"E	Australasian Pet. Co. Pty Ltd	7,572- 7,721	Un-named - Eocene	07-67	0.53	69	7,393	12,200	16,500
				7,572- 7,721		07-67	0.42	69	7,878	13,000	17,480
				7,572- 7,721		07-67	0.40	69	8,727	14,400	17,740
				7,572- 7,721		07-67	0.40	69	8,606	14,200	18,800
				7,572- 7,721		07-67	0.42	69	7,878	13,000	18,140
				8,221- 8,370		08-67	0.39	68	9,939	16,400	
				8,221- 8,370		08-67	0.38	68	10,242	16,900	
				8,221- 8,370		08-67	0.39	68	8,375	13,820	14,470
	Mutare No. 1	08°33'16"S 142°59'18"E	Oil Search Ltd	3,521- 3,646	Un-named - Jurassic	11-63	0.17		26,380	30,248	44,500
				4,005- 4,130		11-63	0.16		29,440	31,150	48,600

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Papuan	Orokolo No. 1	08°04'25"S 145°23'58"E	Phillips Aust. Oil Company	1,730- 1,765	Un-named - Pleistocene	05-68	0.28	68	13,090	21,600	
	Pasca No. 1	08°36'27"S 144°53'43"E		8,094- 8,210	Un-named - L. Miocene	12-68	0.36	68	12,900	21,300	22,700
	Tovala No. 1	08°04'23"S 146°08'45"E	Basin Oil N.L.	4,580- 4,620	Murua - Miocene - Pliocene	09-69	0.27	68	13,940	23,000	26,960
				5,875- 5,890		09-69	0.58	68	6,000	9,900	10,200
				9,481- 9,520		09-69	0.34	68	11,030	18,200	20,920
	Uramu No. 1A	07°48'23"S 144°41'39"E	Phillips Aust. Oil Company	6,663	U. Taurian - Cenozoic		0.45	74	4,520	7,458	11,016
				9,345	Un-named - Eocene		0.39	75	5,540	9,140	13,160
	Wuroi No. 1	08°48'52"S 143°02'20"E	Oil Search Ltd	3,000- 3,125	Un-named - Jurassic	11-64	0.24	68	16,420	27,100	
				3,000 3,125		11-64	0.23	68	16,730	27,600	
				3,702- 3,765		11-64	0.27	68	16,667	27,500	
				3,702- 3,765		11-64	0.27	68	17,393	28,700	
				4,097- 4,249		11-64	0.40	68	11,690	19,300	
Pedirka	Mokari No. 1	26°19'06"S 136°26'32"E	Total Exploration Aust. Pty Ltd	6,593- 6,693	Purni - Permian	07-66	0.62	68	6,303	10,400	
				7,011- 7,131		07-66	0.64	68	6,061	10,000	12,520
Perth	Gingin No. 1	31°08'32"S 115°49'35"E	West Australian Petroleum Pty Ltd	12,434- 12,446	Cockleshell Gully- Jurassic	09-65	0.04	68	152,000	250,880	254,000
				12,514- 12,532		09-65	0.34	68	11,800	19,470	21,000
				12,514- 12,564		09-65	0.68	68	5,370	8,861	10,600

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)				
Perth	Gingin No. 1	31°08'32"S 115°49'35"E	West Australian Petroleum Pty Ltd	12,546- 12,564	Cockleshell Gully- Jurassic	09-65	0.66	68	710	1,172	8,430				
				12,680- 12,728		09-65	0.33	68	12,900	21,280	22,100				
				12,680- 12,728		09-65	0.38	68	11,200	18,480	19,300				
				12,680- 12,728		09-65	0.46	68	8,700	14,355	15,800				
				12,754- 12,771		09-65	0.80	68	1,340	2,211	12,300				
				12,890- 12,908		09-65	0.67	68	994	1,640	11,000				
				12,956- 12,998		09-65	0.06	68	101,100	166,000	166,000				
				12,962- 12,980		09-65	1.22	68	1,200	1,980	6,410				
				12,980- 12,998		09-65	1.06	68	2,590	4,274	7,240				
				12,980- 12,998		09-65	0.85	68	3,160	5,214	7,780				
				13,620- 13,630		09-65	1.10	68	2,240	3,690	6,560				
				Whicherina No. 1		28°49'53"S 115°14'19"E	Union Oil Development Corp.	4,853- 4,911	Nangetty - L. Permian	03-64	1.44	68	2,630	4,340	5,100
				Whicher Range No. 1		33°50'15"S 115°22'11"E		12,958- 13,008	Un-named - U. Permian	03-69	0.81	68	303	500	10,000
12,958- 13,074	03-69	0.73	68		758			1,250		11,960					
13,112- 13,204	03-69	1.02	68		909			1,500		10,520					
13,306- 13,318	03-69	0.76	68		606			1,000		10,120					
			13,662- 13,694	03-69	0.92	68	1,273	2,100	9,680						

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Perth	Whicher Range No. 1	33°50'15"S 115°22'11"E	Union Oil Development Corp.	13,662- 13,694	Un-named U. Permian	03-69	0.91	68	1,212	2,000	8,940
	Woolmulla No. 1	30°01'24"S 115°11'28"E	West Australian Petroleum Pty Ltd	3,797 3,861	Unit B - Triassic	03-63	2.24	68	493	775	2,280
				9,030- 9,224	Un-named - Precambrian	04-63	0.29	68	14,400	22,490	
				9,030- 9,224		04-63	0.27	68	16,380	25,680	
	Yardarino No. 1	29°13'13"S 115°03'10"E		7,542- 7,622	Wagina - Permian	06-64	0.48	68	7,100	11,715	18,200
				7,558- 7,568		06-64	0.41	68	10,700	17,655	19,300
St Vincent	Edithburgh No. 1	35°06'10"S 137°38'40"E	Beach Petroleum N.L.	1,701- 1,783	Ramsey - Cambrian	10-66	0.13	68	37,576	62,000	70,160
				2,206- 2,296		10-66	0.12	68	60,606	100,000	
				2,630- 2,827	Kulpara - Parara - Cambrian	10-66	0.08	68	75,515	124,600	133,000
				3,028- 3,216		10-66	0.09	68	72,303	119,300	127,200
	Stansbury Town No. 1	34°54'24"S 137°46'46"E		4,049- 4,162	Un-named - Cambrian	07-66	0.09	66	63,030	104,000	117,600
	Stansbury West No. 1	34°54'02"S 147°42'46"E		1,159- 1,221	Kulpara - Parara - Cambrian	07-66	0.45	68	8,151	13,450	16,080
				4,191- 4,251		07-66	0.01	68	75,151	124,000	
				4,720- 4,832		07-66	0.07	68	100,000	165,000	177,640
				5,290- 5,315		07-66	0.08	68	84,242	139,000	155,940
				5,636- 5,724	Un-named - Cambrian	07-66	0.07	68	89,090	147,000	166,460

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Surat	Alton No. 1	27°56'13"S 149°22'13"E	Union Oil Development Corp.	6,148- 6,154	Evergreen - Jurassic	09-64	2.94	77	300	495	3,200
				6,213- 6,218		09-64	1.96	77	995	1,642	3,650
	Boggo Creek No. 1	27°34'14"S 149°08'46"E		5,740- 5,753		02-64	2.63	77	590	974	2,500
				5,868- 5,880		02-64	1.94	77	1,150	1,898	3,300
	Brigalow Creek No. 1	27°37'03"S 150°20'12"E	Associated Aust. Oilfields N.L.	5,496- 5,527	Precipice - Jurassic	01-64	3.39	77	75	124	2,050
	Bruce Dale No. 1	26°54'51"S 148°56'39"E		4,768- 4,825		11-63	1.63	77	1,165	1,922	3,930
	Cecil Plains No. 1	27°31'57"S 151°14'50"E	Phillips Aust. Oil Company	2,203- 2,330	Hutton - Jurassic	10-63	4.90	77	95	157	2,400
Below Surat				3,085- 3,285	Precipice - Jurassic	10-63	5.76	77	15	25	1,500
				3,832- 3,950	Un-named - Carboniferous	10-63	4.63	77	130	215	1,600
Surat	Condamine No. 1	27°01'58"S 150°17'52"E	Union Oil Development Corp.	4,572- 4,599	Precipice - Jurassic	12-64	1.82	77	1,400	2,310	3,700
				4,643- 4,673		12-64	1.83	77	1,440	2,376	3,300
	Conloi No. 1	26°25'42"S 149°57'48"E		4,570- 4,605		09-64	1.22	77	40	66	2,900
	Cooloomala No. 1	27°03'09"S 150°16'09"E		4,821- 4,836		06-64	2.22	77	1,105	1,823	2,830
	Crowder North No. 1	27°51'43"S 150°14'40"E		5,609- 5,629		04-64	2.80	77	435	718	2,385
	Dockerill No. 1	27°50'46"S 150°17'21"E		5,780- 5,790		03-64	3.08	77	385	635	3,600
	Foyleview No. 1	27°17'30"S 148°02'52"E		3,500- 3,540	Hutton - Jurassic	06-68	9.24	68	218	360	760

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Surat	Gil Gil No. 1	29°11'23"S 149°52'37"E	Esso Exploration and Production Australia Inc.	2,550- 2,716	Blythesdale - Jurassic	10-65	5.28	62	800	1,320	
	Giligulgul No. 1	26°22'21"S 149°56'22"E	Union Oil Development Corp.	4,282- 4,318	Evergreen - Jurassic	10-64	22.2	77	22	36	340
	Glenroy No. 1	26°49'27"S 148°10'18"E	Associated Aust. Oilfields N.L.	3,596- 3,712	Hutton - Jurassic	07-65	11.4	77	75	124	1,675
	Gurulmundi No. 1	26°25'50"S 150°03'56"E	Union Oil Development Corp.	3,758- 3,874	Precipice - Jurassic	12-64	12.8	77	70	116	500
	Iminbah No. 1	27°52'10"S 150°15'07"E		5,466- 5,487		04-64	3.36	77	265	437	2,450
				5,565- 5,674		04-64	3.79	77	295	487	2,450
	Kalima No. 1	26°06'04"S 148°45'11"E	Associated Aust. Oilfields N.L.	1,899- 1,952		12-64	35.8	77	15	25	600
Below Surat	Killoran No. 1	25°54'00"S 148°19'00"E		1,777- 1,842		03-63	19.9				12
				2,242- 2,350	Timbury Hills - Devonian	03-63	9.07				4
Surat	Kooringa No. 1	26°07'10"S 148°58'40"E		1,582- 1,594	Precipice - Jurassic	03-63	3.18		15	25	310
	Kumbarilla No. 1	27°25'38"S 150°47'06"E	Phillips Aust. Oil Company	2,905- 3,048	Hutton - Jurassic	12-63	3.85	77	130	215	1,800
	Liddell No. 1	27°35'32"S 150°21'28"E	Union Oil Development Corp.	5,555- 5,582	Precipice - Jurassic	01-64	23.6	77	125	206	900
				5,599- 5,644		01-64	4.22	77	165	272	1,590
	Mackie No. 1	26°56'16"S 150°21'35"E		3,754- 3,770		01-64	3.39	77	1,380	2,277	2,500
	Meeleebee No. 1	26°11'00"S 149°12'00"E	Associated Aust. Oilfields N.L.	2,619- 2,705		03-63	15.6				7
	Minnabilla No. 1	27°55'31"S 115°15'23"E	Union Oil Development Corp.	5,374- 5,390		08-64	2.94	77	665	1,097	2,600

BASIN	WELL NAME AND NUMBER	LOCATION	OPERATOR	TEST INTERVAL (feet)	FORMATION AND AGE	DATE SAMPLE REC'D	RW (ohm meters)	TEMP. (° F)	Cl-ion (ppm)	NaCl (ppm)	TOTAL DISSOLVED SOLIDS (ppm)
Surat	Quibet No. 1	26°27'06"S 148°50'05"E	Associated Aust. Oilfields N.L.	3,325- 3,474	Evergreen - Jurassic	08-64	1.16	77	280	462	6,700
Surat- Boven				3,424- 3,446	Precipice - Moolayember - Jurassic	08-64	1.13	77	275	454	6,850
				3,457- 3,471		08-64	1.11	77	260	429	6,940
Surat	Richmond No. 1	26°40'30"S 148°53'00"E		4,010- 4,062	Precipice - Jurassic	09-63	1.98	77	990	1,634	3,500
	Rosewood No. 1	26°04'00"S 148°41'50"E		988- 1,017	Boxvale - Hutton - Jurassic	03-63	6.24	68	170	281	6,450
				1,760- 1,790	Evergreen - Jurassic	03-63	20.9	68	20	33	450
	Sawpit Creek No. 1	26°29'55"S 149°09'25"E		3,558- 3,597	Precipice - Jurassic	06-64	1.56	77	1,130	1,860	4,250
	Tinker Creek No. 1	27°45'25"S 150°47'46"E	Phillips Aust. Oil Company	2,790- 2,865	Hutton - Jurassic	09-63	4.00	77	340	561	1,750
				3,992- 4,056	Evergreen - Jurassic	10-63	5.05	77	95	158	
	Tregole No. 1	26°27'31"S 146°59'32"E	American Overseas Petroleum Ltd	2,428- 2,475	Precipice - Jurassic	12-66	14.4	68	121	200	210
	Tey No. 1	27°08'37"S 150°13'31"E		5,141- 5,150		09-63	4.17	77	150	248	1,560
	Wagabba No. 1	27°42'01"S 150°54'58"E	Phillips Aust. Oil Company	2,470- 2,556	Hutton - Jurassic	09-63	4.99	75	200	330	1,360
				3,773- 3,821	Precipice - Jurassic	09-63	3.16	75	173	285	2,150
	Whyenbirra No. 1	28°36'50"S 147°21'55"E	North American International Inc.	2,692- 2,832	Blythesdale - Jurassic	12-66	5.60	67	303	500	2,300
	Zig Zag No. 1	27°53'25"S 150°55'43"E	Phillips Aust. Oil Company	1,935- 2,101	Hutton - Jurassic	10-63	5.08	77	200	330	

[illegible]