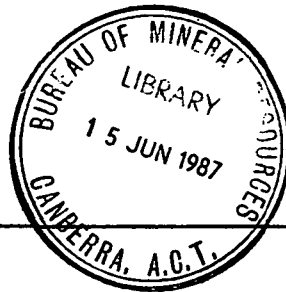


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1965 PROGRAMME

AND

1966 TENTATIVE PROGRAMME

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BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS.

1965 PROGRAMME

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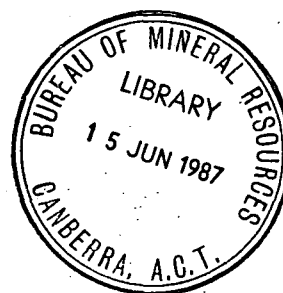
1966 TENTATIVE PROGRAMME

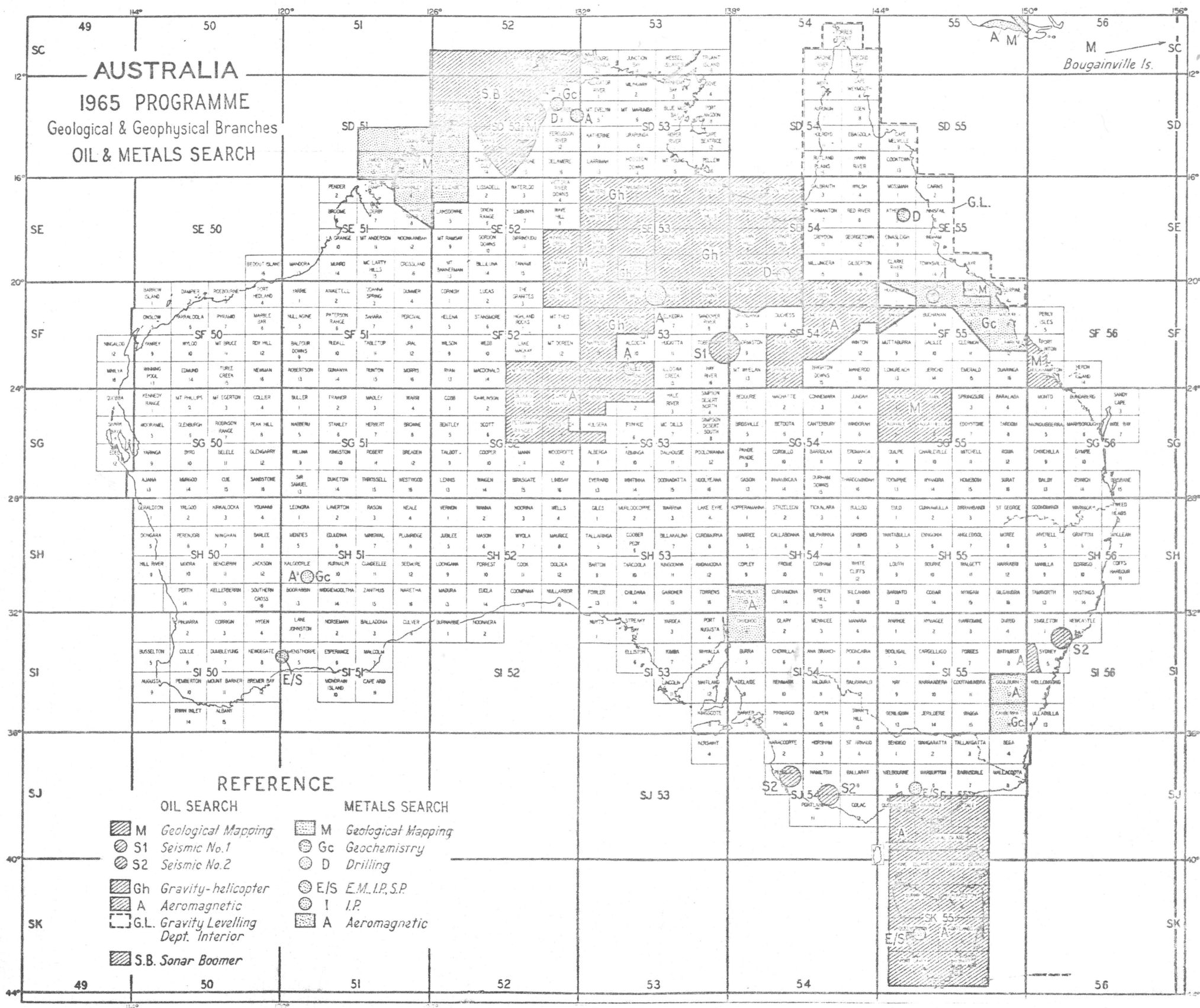
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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Amadeus Basin, N.T. 64/702 64/703 64/704	Complete records on 1964 field work by July (Wells Ranford Forman and Milligan). Reporting on results of 1964 work; preparing Bulletin on basin and writing 16 Explanatory Notes with corrected 1:250,000 maps; amending previously written and edited records for Reports. Hydrology of the basins to be written by T. Quinlan and D. Woolley. Cook to continue sedimentary petrology of Stairway Sandstone in conjunction with Dr. Crook, A.N.U.	Continuous Jan.-March Jan.-April	((4)A.T.Wells (D.J.Forman (L.Ranford (1)P.Cook (2)R.Shaw (3)A.Stewart (5)T.Quinlan (Part time)	Nil	Nil	(1) P.Cook to work in Antarctica from December to March. (2) R.Shaw to join North Yarrol Basin party in April. (3) A.Stewart joins Wiso party. (4) A.Wells to visit comparable basin in U.S.A. for study during June to August. (5) T.Quinlan is completing report on Town and Farm area water supplies, as well as Amadeus Hydrology.
Georgina Basin, N.T. including Stratigraphic Drilling (62/580)	Complete report on the basin (K.G.Smith); finish writing 7 Explanatory Notes with corrected 1:250,000 maps (7 previously completed); report on B.M.R. stratigraphic drilling.	Jan.-March then part time Jan.-April Continuous from February-April then part time	K.G.Smith (1)M.Randal (2)R.Nicholls	Nil	Nil	(1) M.Randal transfers to Helen Springs party in April. (2) R.Nicholls on leave December-January; then continues with notes, reports and work on carbonate petrology; with Wiso Party for several weeks.
Wiso Area, N.T. 60E021 65/1306	Commence mapping area west of Tennant Creek, covering parts of about 7 x 1:250,000 areas viz. Green Swamp Well, Tanami East, South Lake Woods, Winnecke Creek, Lander River, Mt. Solitaire and Bonney Well. Helicopter and core hole drilling contract.	April-Sept.	E.Milligan K.G.Smith A.Stewart R.Nicholls (Part time)	Cook Mechanic 3 F/Assts. Draftsman (part time)	2 4x4 3 ton Bedfords 4 S/W L/R 1 office Caravan (in Alice Springs) 1 x 400 gal. "Ships Water Tank" 2 x 350 gal. rubber collapsible water tanks ex Adelaide. Normal camp equipment. 4 Transceivers.	Helicopter operations for 4-5 weeks involving 2 helicopters during June-July. Core hole drilling contract with shot hole rig involving about 20 holes to a maximum depth of 500 feet (average depth 100 ft.) - maximum total footage 5000'.
<u>Results</u>	Preparation of Record.	Oct. 1965 - Mar. 1966	Milligan et al			
Bonaparte Gulf, N.T. & W.A. 6022 63/48	Complete Cambrian-Ordovician report on 1963 season and continue petrology and palaeontological study of Devonian-Carboniferous section. Regional geology of western 2/3rds of Port Keats and Cape Scott 1:250,000 areas to complete systematic coverage of basin; re-examine critical areas in Spirit Hill, Burt Range and Point Spring area; examine Cambrian in western part of Pine Creek Sheet. Helicopter contract.	Jan.-March April-Oct.	J.J.Veevers J.Roberts (1)C.Gatehouse)Part (2)J.M.Dickins)time (3)P.Jones) (4)E.Druce	Cook Mechanic 2 F/Assts.	1 4x4 3 ton Bedford 4 S/W L/R 1 Water trailer 1 4 wheel trailer 1 2 wheel L/R trailer Normal camp equipment 3 transceivers	Helicopter operation for 2-3 weeks in Sept. (1) Gatehouse to examine Cambrian in type area near Pander Ridge and visit deposits on W. Pine Creek. (2) Dickins to examine Permian with helicopter in September. (3) Jones to visit for 4 weeks to collect conodont and ostracod material to continue his studies. (4) Druce joins party on 1st August.
<u>Results</u>	Preparation of Record.	Nov.1965-May 1966	J.J.Veevers J.Roberts			
Artesian Basin, Q'ld. 6023 64/707	Complete record on 1964 field work by May (Vine and Galloway). Regional geology of Tambo, Blackall, Augathella and Adavale 1:250,000 areas. Core hole drilling contract.	May-Sept.	N.Exon D.Casey (Q.G.S.) one other (QGS or EER) (1)R.Vine (part time)	Cook Mechanic 3 F/Assts. Draftsman	1 4x4 3 ton Bedford 4 S/W L/R (including ZSW272,266) 1 water trailer 1 office caravan (2) 1 kitchen caravan (1 2 wheel trailer 3 transceivers Normal field equipment	(1) R. Vine expected to visit field party for short periods during the season. Core hole drilling contract required. Geophysical logging in deep holes 500-600'. (2) If these not available, a replacement of 1 x 4 wheel trailer request. Visit by palaeontologist R. Day (specialist) for 3 weeks in August proposed.
<u>Results</u>	Preparation of Record. Prepare report on Northern Eromanga basin and map (Vine); Explanatory Notes on 8 1:250,000 areas.	Oct.1965-May 1966	N.Exon D.Casey			

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional staff	Vehicles, Equipment	Remarks
Bowen Basin Qld. 60EO22 64/705 64/706	Complete previously written records for publication; complete records on 1964 field work by April (Mollan Forbes & Exon); write Bulletin on basin (Malone and Dickins); write Explanatory Notes to 8 x 1:250,000 areas.	Continuous	((1)E.J.Malone (1)F.Olgers G.Mollan A.Kirkegaard Q.G.S. V.Forbes Q.G.S. J.M.Dickins R.Jensen	Nil	Nil	(1) Malone and Olgers may visit area to east (Yarrol Basin extension) if mapping of this in 1965 reveals geology relating to Bowen Basin.
Bandanna Party (Bowen Basin) Q'ld. 6024 65/1310	Field study of Permian Bandanna Formation in Bowen Basin; involves sedimentary petrology, examination of formation contacts, porosity trends, coal occurrences, palaeogeography, and direction and environment of sedimentation; core hole drilling.	May-Sept.	R.Jensen One other (B.M.R.)	Mechanic F/Asst.	2 S/W L/R (1) 1 Forward control 30 cwt L/R 1 office caravan 1 water trailer 2 transceivers Field equipment	Survey a two year project. Some shallow core hole drilling required.
<u>Results</u>	Preparation of Record	Oct.1965-Mar.1966	R.Jensen			
North Yarrol Basin Q'ld. 6025 65/1311	Regional geology of western parts of Rockhampton and Port Clinton 1:250,000 areas.	May-Sept.	A.G.Kirkegaard (Q.G.S.) R.Shaw (B.M.R.) C.Murray (Q.G.S.) F.Olgers(Part time)	Cook Mechanic 2 F/Assts.	1 4x4 3 ton Bedford 4 S/W L/R 1 water trailer 1 2 wheel trailer 1 4 wheel trailer if available 1 transceiver Normal field equipment	Supervised by J. Thompson, with visits by Malone and Olgers. Responsibility for technical work, reports and maps is Qld. Geological Survey. (1) One extra F/assistant may be required if geochemical samples are to be collected (see Metalliferous programme). Possible visit by A. Webb for age determination samples.
<u>Results</u>	Preparation of Record is to be done by Q.G.S. - no timetable available.					
Helen Springs, N.T. 6021 65/1307	Regional geology of Beetaloo and parts of Helen Springs and Tennant Creek 1:250,000 area. Helicopter and core hole drilling contract.	May-Sept.	M.A.Randal M. Brown	Cook Mechanic 2 F/Assts Draftsman (part time)	1 4x4 3 ton Bedford 2 S/W L/R 1 office Caravan (in Alice Springs) 1 2 wheel water trailer (in Darwin ZTLO34) 1 2 wheel L/R trailer Normal camp equipment 3 transceivers.	Helicopter operation for one week in July. Core hole drilling contract with shot hole rig involving about 10 holes to a maximum depth of 500 feet (average depth 100 ft.). Water sampling for chemical analyses.
<u>Results</u>	Preparation of Record	Oct.1965-May 1966	M.A.Randal			

OIL SEARCH
GEOLOGICAL BRANCH
PUBLICATIONS
BULLETINS

3

Subject	Author	Writing	Timetable	Editing	Remarks
Geology of Amadeus Basin with Hydrology	Wells, Forman, Ranford, Quinlan, Woolley	May 1965 to Oct. 1966			
Geology of Bowen Basin	Malone, Dickins	Jan. 1965 to May 1966			
Marine geology of Sahul Shelf	Van Andel, Veevers	To Feb. 1965		to Sept. 1965	Written in conjunction with Van Andel of Scripps Institute, California.
<u>REPORTS</u>					
North West Amadeus Basin	Wells, Forman, Ranford	Completed		Editing complete	Ready for publication.
South West Amadeus	Forman	Completed		First edit completed	Some amendments and integrations being made by author; ready for press March 1965.
Central Amadeus	Ranford, Wells, Cook	Completed		First edit completed	Some amendments and integrations being made by author; ready for press June 1965.
South East Amadeus	Wells, Stewart, Skwarko	Completed		First edit completed	Correction of edited copy; ready for press Sept. 1965.
North East Amadeus	Wells, Ranford et al.	Jan. 1965 to May 1965		to Mar. 1966	
North Margin of Amadeus	Forman, Milligan	Dec. 1965 to May 1965		to April 1966	
Stratigraphic Drilling-Georgina Basin	Nicholls, Lloyd, Johnson et al.	Nov. 1964 to April 1965		to Sept. 1966	Records on B.M.R. 11 and 13 written. Smith to integrate 3 separate records into report.
Petrology of carbonates in Georgina Basin	Nicholls	June 1965 to Aug. 1965		to Dec. 1966	
Geology of Georgina Basin	Smith	Oct. 1964 to Apr. 1965		to June 1966	
Hydrology of the Barkly Tableland	Randal	To May 1965		to Mar. 1966	
Cambrian-Ordovician Geology of Bonaparte Basin	Veevers, Kaulback	To Nov. 1964		to Nov. 1965	Ready for editing in March 1965 after preparation of record.
North Eromanga Basin	Vine	May 1965 to Dec. 1965		to Dec. 1966	
Springuare Geology	Mollan et al.	Written		to Aug. 1966	Some amendments needed. Ready for editing July 1965.

OIL SEARCH
GEOLOGICAL BRANCH
PUBLICATIONS
REPORTS (Ctd.)

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Subject	Author	Writing	Timetable	Editing	Remarks
Taroom	Jensen	Completed		to Jan. 1966	Some amendments needed. Ready for editing April 1965.
Baralaba	Olgers	Completed		to Aug. 1965	Some amendments needed. Ready for editing Mar. 1965.
Mackay	Jensen	Completed			Amendments being made; to be combined with Proserpine - not ready for final edit until Dec. 1965.
Duarina-St. Lawrence	Malone, Olgers, Kirkegaard	Completed		to May 1966	Extensive amendments needed; ready for editing March 1965
Petrology of wells in Surat Basin	Bastian	To April 1965		to Dec. 1965	

EXPLANATORY NOTES

Amadeus Basin

Bloods Range	Forman	To Apr. 1965		to May 1965
Rawlinson	Forman	" Mar. 1965		" Sept. 1965
Mc Donald	Wells	" Jan. 1966		
Mt. Liebeg	Ranford	" Apr. 1966		
Mt. Rennie	Ranford	" Feb. 1966		
Lake Amadeus	Cook	" Dec. 1965		
Hermannsburg	Quinlan & Forman	" Dec. 1965		
Alice Springs	Wells	" June 1966		
Illogwa Creek	Milligan	" Jan. 1966		
Hale River	Shaw	" Apr. 1966		
Rodinga	Ranford	" June 1966		
Henbury	Cook	" Feb. 1966		
Finke	Wells	" Mar. 1966		
Ayers Rock	Forman	" May 1965		to July 1965
Kulgera	Stewart	" May 1965		
Mc Dills	Stewart	" Jan. 1966		

Georgina Basin

Tobermory	R. G. Smith	To Nov. 1964		
Sandover River	Nichols	" Mar. 1965		to Nov. 1965
Elkedra	Smith	" Apr. 1965		" July 1965
Ranken	Randal	" Apr. 1965		" June 1965
Avon Downs	Randal	" May 1965		" June 1965
Brunette Downs	Randal	" Apr. 1965		" July 1965
Alroy	Randal	" Mar. 1965		" June 1965

OIL SEARCH
GEOPHYSICAL BRANCH
PUBLICATIONS
EXPLANATORY NOTES (Ctd.)

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Subject	Author	Writing	Timetable	Editing	Remarks
<u>Gt. Artesian Basin</u>					
Richmond	Vine or Casey (Q.G.S.)	To Dec. 1965			
Hughenden	Vine & Paine	" July 1965		To Jan. 1966	
Manuka	Casey (Q.G.S.)	" May 1965		" Nov. 1965	
Tangorin	Casey (Q.G.S.)	" June 1965		" Jan. 1966	
Muttaborra	Vine	" Dec. 1965			
Winton	Casey (Q.G.S.) or Vine	" Dec. 1965			
Maneroo	Jauncey	" June 1965			
Longreach	Vine	" Dec. 1965			
<u>Bowen Basin</u>					
Mt. Coolon	Jensen	To Dec. 1965			
Clermont	Mollan	" Dec. 1965			
Emerald	Olgers	" Sept. 1965			
Mackay	Jensen	" Mar. 1965			
Springure	Mollan	" Dec. 1965			
Baralaba	Olgers	" Dec. 1964			
Taroom	Forbes (Q.G.S.)	" Dec. 1965			
Eddystone	N. Exon	" May 1965			
<u>Bonaparte Gulf Basin</u>					
Cambridge Gulf	J. Veevers & Plumb	To Apr. 1965			

MAPS

Subject	Author	Compilation	Timetable	Fair Drawing	Remarks
<u>Amadeus Basin 1:250,000</u>					
Bloods Range	Forman	To Nov. 1965	}	Estimated average time to complete fair drawing is 5 months after date of compilation	
Rawlinson	Forman	" Mar. 1965			
Mc Donald	Wells	" Jan. 1966			
Mt. Liebeg	Ranford	" Apr. 1966			
Mt. Rennie	Ranford	" Feb. 1966			
Lake Amadeus	Cook	" Dec. 1965			
Hermannsburg	Quinlan & Forman	" Dec. 1965	}		

OIL SEARCH
GEOLOGICAL BRANCH
PUBLICATIONS
MAPS (Ctd.)

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Subject	Author	Compilation	Timetable	Fair Drawing	Remarks
<u>Amadeus Basin 1:250,000</u>					
Alice Springs	Wells	To June 1966	}	Estimated Average time to complete fair drawing is 5 months after date of compilation	
Illogwa Creek	Milligan	" Jan. 1966			
Hale River	Shaw	" Apr. 1966			
Rodonga	Ranford	" June 1966			
Hentbury	Cook	" Feb. 1966			
Finke	Wells	" Mar. 1966			
Ayers Rock	Forman	" May 1966			
Kulgera	Stewart	" May 1965			
Mc Dills	Stewart	" Jan. 1966			
<u>Georgina Basin 1:250,000</u>					
Tobermory	K. G. Smith	To Nov. 1964	}		
Sandover River	Nichols	" Mar. 1965			
Elkedra	K. G. Smith	" Apr. 1965			
Ranken	Randal	" Apr. 1965			
Avon Downs	Randal	" Feb. 1965			
Brunette Downs	Randal	" Apr. 1965			
Alroy	Randal	" Mar. 1965			
<u>Gt. Artesian Basin 1:250,000</u>					
Richmond	Vine or Casey (Q.G.S.)	To Dec. 1965	}		
Hughenden	Vine, Paine	" July 1965			
Manuka	Casey (Q.G.S.)	" May 1965			
Tangorin	Casey (Q.G.S.)	" June 1965			
Muttaborra	Vine	" Dec. 1965			
Winton	Casey (Q.G.S.) or Vine	" Dec. 1965			
Maneroo	Jauncey	" June 1965			
Longreach	Vine	" Dec. 1965			
<u>Bowen Basin 1:250,000</u>					
Mt. Coolon	Jensen	" Dec. 1965	}		
Clermont	Mollan	" Dec. 1965			
Emerald	Olgers	" Sept. 1965			
Mackay	Jensen	" Mar. 1965			
Springsure	Mollan	" Dec. 1965			
Baralaba	Olgers	" Dec. 1964			
Taroom	Forbes (Q.G.S.)	" May 1965			
Eddystone	N. Exon	" May 1965			

OIL SEARCH
GEOLOGICAL BRANCH
PUBLICATIONS
MAPS (Ctd.)

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Subject	Author	Timetable		
		Compilation	Fair Drawing	Remarks
<u>Bonaparte Gulf Basin 1:250,000</u>				
Cambridge Gulf		To Feb. 1962		
Bowen Basin 1:500,000 (2 Sheets)	Malone, Dickins.	To April 1965		Northern sheet completed but for some amendments; southern sheet in progress.
Georgina Basin 1:500,000 (4 Sheets)	Smith	To Mar. 1965	Estimated time to complete fair drawing is 5 months after date of compilation.	Compilation completed, waiting drafting.
North Eromanga Basin 1:1000,000	Vine	To Dec. 1965		
Amadeus Basin 1:500,000 (2 Sheets)	Wells, Forman, Ranford, Cook.	To Dec. 1965		

OIL SEARCH
GEOPHYSICAL BRANCH

8

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles and Equipment	Remarks
Seismic No. 1 Party N.T. S. Georgina Tobermory 70S13 64/712	Georgina Basin (a) Continue the experimental refraction-reflection shooting of the Lower Palaeozoic carbonate rocks near Cockroach Bore (B.Y.R. 12) and at other localities until a successful reconnaissance seismic technique has been established.	9 months March - November	J. Davies P. Montecchi 2 Surveyors C. Chenon (I.F.P.) for experimental work.	Observer Jnr. Observer Clerk Shooter 5 Drillers Mechanic Asst. Mechanic Cook Cook's Offsider 14 F/Assts.	900 H.S.J. Geophones 8000 Texas Instr. Amplifiers DS7 Magnetic Recorder S.I.E. TRO. 6. Camera 3 F.M. Pye Transceivers 2 T.M.2 Traeger Transceivers 2 Mayhew 1000 Drills 1 Carey Drill 2 Inter. 1 ton 4 x 4 8 Bedford 5 ton 4 x 4 2 Inter. 5 ton 4 x 4 4 Land Rovers 1 Office Caravan 1 Kitchen Caravan 5 4 Wheel Trailers 1 Generator Trailer Mounted	The previously proposed reconnaissance programme over Cockroach W.M., Marqua Structures, and north west Poko Syncline will be partially incorporated in the more regional reconnaissance programme now proposed following the developments from the recent aeromagnetic and gravity surveys. If the experimental work fails to produce results then the party will move to an alternative reconnaissance survey in the Monda- Tangorin Gravity Depression. If the hard drilling makes it uneconomical to carry out the survey the party will move to the alternative programme and consideration given to using a weight dropping contract crew on the Tobermory Survey.
<u>Results</u>	Preparation of Record.	Dec. 1965- June 1966	J. Davies P. Montecchi			
Seismic No. 2 Party Vic. NSW 70SE010 63/515	Comparison with regard to economy as well as quality of results obtained by shot-hole methods with results obtained by the Vibroseis Survey, 1964, in difficult reflection areas in : (1) Otway Basin (a) on volcanics in the Portland Sunklands, S.W. Victoria. (b) on the Gambier Limestone in S.E. South Australia. (c) on sand dunes in S.E. South Australia. (d) On a local area of poor reflection quality in the Gambier Sunklands, S.E. South Australia. (2) Sydney Basin on the Hawkesbury Sandstone.	March to June	J.S. Raitt B.F. Jones E. Schwing (I.F.P.) will supervise the operation. J.S. Raitt or D. Taylor B.F. Jones	Observer Clerk Mechanic Shooter 5 Drillers Maximum of 16 Wages Hands including 1 Mechanic 1 Cook 1 Cook's offsider	936 EVS 2B Geophones PMR 20 Magnetic Recorder DS7 Magnetic Recorder VT6 Oscillograph T.I. 700B Amplifiers Programmed Gain Unit Pre-Fitters 3FM Pye Transceivers 2TM-2 Traeger Transceivers Mayhew 1000 Drill 2 Carey Drills 2 Internationals, 5 ton 4 x 4. 8 Bedfords, 5 ton, 4 x 4. 2 Internationals, 1 ton, 4 x 4 3 Land Rovers L.W.B. 1 Land Rover, Station Wagon 1 Office Caravan 1 Kitchen Caravan 5 Trailers, 4 wheel.	
<u>Results</u>	Preparation of Record.	July 1965- Feb. 1966	E. Schwing and J. Raitt or B. Jones			
Seismic No. 2 Party N.S.W. 70SE010 63/515	Sydney Basin Reconnaissance traverses in the central part of the Sydney Basin on a regional scale with emphasis on the western margin.	July to November	D.D. Taylor B. Jones			The monoclinical western margin of the basin may be associated with a hingeline where facies more favourable for possible oil accumulation could occur.
<u>Results</u>	Preparation of Record	Dec. 1965- June 1966	D. Taylor			

OIL SEARCH
GEOPHYSICAL BRANCH (Ctd.)

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles and Equipment	Remarks
Contract Marine Surface Gravity Sonar Boomer N.T. W.A. 70GEO21 64/1125 64/1126	Bonaparte Gulf Area of the Timor Sea. Reconnaissance gravity and seismic boomer survey to investigate the extent of possible offshore sedimentary basins, the near surface sedimentary structure, and the regional basement tectonics.	4 months May - August	E.R. Smith Officers of Seismic Engineering and Gravity Groups cooperating.		12,000 WS Sonar Boomer 1 Land Rover may be required.	The contractor will supply all the necessary equipment and personnel for the complete gravity survey and will install and operate the Sonar Boomer equipment which is at present on order by the Bureau.
<u>Results</u>	Preparation of Record. Preparation of Interpretative Report	Sept.1965-Mar.1966 Sept. - Dec.	E.R. Smith Contractor			
VH-MIN Amadeus Basin N.T. 70AF10 65/1312	Aeromagnetic and radiometric 2-mile spacing of Mt. Rennie, Mt. Liebig, Hermannsburg, Alice Springs, Rodinga (part). Petermann Ranges, Kulgera (part) and 4-mile spacing of Blood's Range, Lake Amadeus, Henbury (part), Ayers Rock 1:250,000 areas.	May - August	G. Young P. Shelley	P. Turner I. Parkinson K. Mort D. Park D. Lankaster	1 mobile darkroom 1 station wagon 4 x 2 2 x 1 ton 4 x 4 A/Borne magnetometer, scintillograph, navigation equipment, etc.	To supplement gravity data, resolve ambiguities in gravity interpretation part with reference to sediment thickness in Amadeus and Ayers Rock gravity depressions.
<u>Results</u>	Preparation of Record.	Sept.-Oct.	G. Young			
Contract Gt. Artesian Basin, Q'land. 70AEO1 65/1313	Aeromagnetic, 4-mile spacing of Julia Creek, Richmond, McKinlay, Manuka (part), Tangorin (part) Boulia, Mackunda (part), Winton (part), Springvale, 1:250,000 areas.	June - November	J. Quilty supervision of contract.			To extend A/mag coverage of Gt. Artesian Basin, investigate gravity depression in Richmond, Julia Creek, Tangorin areas. £35,000 provided in estimates for contract.
<u>Results</u>	Preparation of Record.	Dec.1965-Mar.1966	J. Quilty			
VH-MIN Crustal Investigation 70AF10 65/1314	High altitude E-W aeromagnetic profiles over Tasmania including continental shelf and extending to adjacent ocean area. Amount of flying will depend on progress results, maximum envisaged is 12,000 line miles.	October- November	R. Wells	P. Turner K. Mort D. Park I. Parkinson 1 draftsman	1 mobile darkroom 1 station wagon 4 x 2 1 2-ton Pickup truck 4 x 4	Aim is to study deep crustal structure relationship between continental and oceanic crust and possibly tectonics of igneous intrusion.
VH-MIN Sydney, N.S.W. 70AF10 65/1315	Sydney Basin. Aeromagnetic, 2-mile spacing, extension of Bathurst survey to east. Approximately 900 line miles.	September	R. Wells P. Shelley	P. Turner C. Braybrook K. Mort D. Park 1 Draftsman	1 mobile darkroom 1 station wagon 4 x 2 2 x 1 ton 4 x 4 A/Borne magnetometer, scintillograph, navigation equipment, etc.	Requested by Mines Dept.; Attempts in 1961, 62 and 63, unsuccessful owing to unfavourable weather. Survey will be done during course of Goulburn Survey.
<u>Results</u>	Preparation of Record.	October- November	P. Shelley			

OIL SEARCH
GEOPHYSICAL BRANCH (Ctd.)

10

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles and Equipment	Remarks
Northern Georgina Basin N.T. & Qld. 70GEO22 64/1135 64/1137	Helicopter Gravity: Mt. Solitaire, Tanami East, Winnecke Ck., Napperby, Mt. Peake, Lander River, Green Swamp Well, South Lake Woods, Newcastle Waters, Daly Waters, Tanumbirini, Beetaloo, Helen Springs, Tennant Creek, Bonney Well, Barrow Creek, Frew River, Alroy, Brunette Downs, Walballow, <u>Bauhinia Downs, Robinson River, Calvert Hills, Mt. Drummond,</u> Ranken, Avon Downs, Urandangi (part), Mt. Isa, Camooweal, Lawn Hill, <u>Westmoreland, Mornington, Cape van Diemen, Burketown, Donor's Hill,</u> <u>Dobbyn, Cloncurry, 1:250,000 areas.</u>	March - November	<u>A. Flavelle</u> <u>J. Shirley</u>		1 Land Rover	Contract Survey £120,000 let to Wongala. Sheets underlined denote second priority.
<u>Results</u>	Preparation of Record	Dec. 1965- Mar. 1966	A. Flavelle			
Dept. of Interior Levelling Q'ld. 64/974	Levelling required for 1966 Helicopter Gravity Torres Strait, Jardine, Oxford Bay, Weipa, Cape Weymouth, Burukun, Coen, Holyroyd, Ebagoola, Cape Melville, Rutland Plains, Hann River, Cooktown, Galbraith, Walsh, Mossman, Cairns, Normanton, Red River, Atherton, Innisfail, Croydon, Georgetown, Einasleigh, Ingham, Millungera, Gilberton, Clarke River, Townsville, Ayr, Julia Creek, Richmond, Hughenden, Charters Towers, Bowen, Prosperine 1:250,000 areas.	April- November				
Water Bores, Queensland 70G23 64/879	Water bore logging by-contract		Supervisory visits	A. Radeski	Vehicle and logging equipment.	£50,000 in 1964/65 estimates.
<u>Results</u>	Preparation of Record.		L. Cookson			
Miscellaneous Logging 70G23 65/1304			L. Cookson	A. Radeski	Vehicle and logging equipment.	As required.
Seismic Playback Centre 70S12 65/1309		Continuous	J. Moss			

OIL SEARCH
GEOPHYSICAL BRANCH

PUBLICATIONS
BULLETINS

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Subject	Author	Timetable		Remarks
		Writing	Editing	
Canning Basin	Flavelle	Nov. 1964-Jan. 1965		
Recco Gravity Surveys 1959-63 Nth. Eromanga and Drummond Basin	Gibb	to Mar. 1965		
Amadeus Basin	Langron	to June 1966		

REPORTS

Recco Gravity Surveys 1959-61 Western Q'ld.	Gibb	Completed		Text with Editor
Helicopter Gravity Manual	Langron Flavelle Barlow	July-Sept. 1965		
Carnarvon Basin Aeromagnetic	Quilty	to Dec. 1964		
Georgina Basin Aeromagnetic	Wells	Jan.-Feb. 1965		

MAPS

Subject	Author	Timetable		Remarks
		Compilation	Fair Drawing	
<u>1:500,000</u> Bouguer Anomaly Contour Maps			Approx. 75 in batches of 25 at Feb. 1965 30 at June 1965 20 at Sept. 1965	Approx. 35 carryover from 1961-63 helicopter surveys Approx. 25 from 1964 helicopter contract. Approx. 5 from 1965 Nat. Map. survey. Approx. 10 revised maps. Total 75.
Aeromagnetic				Approx. 12 in Georgina and Great Artesian Basins.

OIL SEARCH
PETROLEUM EXPLORATION BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
<u>Subsidy Section</u> Drilling Group	Process applications, inspect operations, edit reports of drilling operations.	Continuous	<u>P.T. Class 4</u> F.H.Lepine J.A.White E. Young	Hodgins Boring Sup.	Short term vehicle hire as required.	Visits to State Mines Departments and Company offices.
Geology Group	Assess geological aspects of applications; Edit geological parts of all final reports.	"	<u>S.Marchant</u> J.Hays	Carton	"	"
Geophysics Group	Assess applications, inspect operations, Edit final reports of geophysical operations.	"	<u>Geop.Class 4</u> Wal.Forsyth W.Brown D.Denham W.McAvoy			
<u>Subsurface Section</u> Sedimentary Basins Study Group	Collect, collate, compile and review available data on following basins;		<u>M.A.Reynolds</u>			
90E01 62/2092 63/292	1. New Guinea Basin 2. Otway Basin	Jan.-May 1965 Jan.-May 1965	G.A.V.Stanley M.A. Reynolds K. Lodwick A. Bigg-Wither P.J. Hawkins J. Scorer	Carton	Short term vehicle hire as required.	
65/1280	3. Sydney and Ipswich- Clarence Basins *	June 1965- June 1966				* Requires discussion with Mines Departments of N.S.W. and Q'ld.
<u>Results</u>	Preparation of Records Sydney and Ipswich-Clarence Basins.	Oct. 1965- Mar. 1966.				
Core and Cuttings Laboratory	Receive, catalogue and store cores and cuttings.			Kraitsowits Brown Brown Pavelic		
90E02	Examine material from selected wells as requested by Subsidy Group and S.B.S.G.	Continuous	R. Bryan K. Edworthy J. Dellenback (I.F.P.)		Panel Van Lab. equipment	Visit Mines Department Core Stores to select material when offered.

PUBLICATIONS

REPORTS

Subject	Author	Writing	Timetable	Editing	Remarks
Northern New Guinea Basin	Stanley	to Apr. 1965		to Nov. 1965	Drafting will be completed by May 1965.
Bonaparte Gulf Basin	Drummond and Bigg-Wither Lodwick.	Completed		to June, 1965	Drafting completed.

OIL SEARCH
PETROLEUM EXPLORATION BRANCH
PUBLICATIONS (Ctd.)
REPORTS

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Subject	Author	Writing	Timetable	Editing	Remarks
Otway Basin	Reynolds, Lodwick, Bigg-Wither, Scorer	To May 1965		To Nov. 1965	Drafting will be completed by May 1965.
Summary of Oil Search Activities in Australia and New Guinea (41A)					Completion of this report is dependent on contributions from Petroleum Technology Section. See Publications Mineral Resources Branch.

P.S.S.A.

Subject	Company	Technical Editing	Technical Editing	Timetable	Final Editing	Remarks
Summary Drilling Operations Carnarvon Basin	W.A.P.E.T.	Marchant Chase	Completed		To Jan. 1965	
South Canning Basin Aeromagnetic Survey	W.A.P.E.T.	Brown	Completed		To Feb. 1965	
Summary Aeromagnetic Survey Great Artesian Basin	Delhi	Forsyth		To Jan. 1965	To Mar. 1965	
Summary Drilling Operations Gippsland Basin	Woodside (L.E.) Arco	Hays Lepine		To Feb. 1965	To Apr. 1965	
Gidgealpa No. 2 Well	Delhi	Hays		To Mar. 1965	To May 1965	
Surat-Bowen Basin Aeromagnetic Survey	Union	Brown		To Apr. 1965	To June 1965	
Summary Drilling Operations Great Artesian Basin	Delhi	Marchant Lepine Chase		To May, 1965	To July, 1965	
Summary Drilling Surat Basin	A.P.O. A.A.O.	Marchant Chase Lepine		To June, 1965	To Aug. 1965	
Summary Seismic Surveys Great Artesian Basin	Delhi	Denham		To July, 1965	To Sept. 1965	
Bonaparte No. 2 Well	Alliance	Reynolds		To Aug. 1965	To Oct. 1965	
Gilmore No. 1 Well	Phillips	Marchant Scorer		To Sept. 1965	To Nov. 1965	
Summary Aeromagnetic N.W. outer shelf	Woodside (L.E.) Alliance A.C.P.	Brown		To Oct. 1965	To Dec. 1965	

OIL SEARCH

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MINERAL RESOURCES BRANCH

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-Professional Staff	Vehicles, Equipment	Remarks
Seismic Party No. 1, Seismic shothole drilling W. Georgina Basin 80S6		Commence April 1965 and continue to November 1965	Drilling Superintendent (intermittently)	Beever 1 Driller Gr. 2 2 Drillers Gr. 1 2 Drill Assts.	1 Landrover 2 Mayhew/Drills "1000" 1 Carey Drill	
Seismic Party No. 2, Seismic shothole drilling Otway Basin; Sydney Basin 80SED6	Contract shothole drilling	Commence April 1965 and continue to Nov. 1965	Drilling Superintendent (intermittently)	Beever 1 Driller Gr. 2 2 Drillers Gr. 1 2 Drill Assts.	1 Landrover 2 Carey Drills 1 Mayhew "1000" drill	1 Mayhew "1000" is now being ordered and is expected to replace 1 Carey Drill some time during 1965 (about June) £12,000 on 64/65 Estimates
Contract Drilling in Four Areas: 1. Wiso Tableland 2. Helen Springs 3. Bandanna 4. Great Artesian Basin. 80CD1	Shallow Core drilling for geological information (mapping)	Commence next June and continue to November 1965	Drilling Superintendent or J. Henry - as required.			Pet. Tech. Section will prepare tender schedule for contract to be negotiated by the Contracts Board.

PUBLICATIONS

Subject	Author	Writing	Timetable	Editing	Remarks
Petroleum Newsletter	M. Bell	Jan. 1965 Apr. 1965 July 1965 Oct. 1965		Jan.-Feb. 1965 Apr.-May 1965 Jul.-Aug. 1965 Oct.-Nov. 1965	Ready for distribution (750 copies) in February, 1965 " " " in May, 1965 " " " in August, 1965 " " " in November, 1965
Petroleum Exploration Contractors, Service Companies, and Consultants	M. Bell, J. Henry	Mar. 1965 June 1965 Sept. 1965 Dec. 1965		Mar. 1965 June 1965 Sept. 1965 Dec. 1965	Ready for distribution (400 copies) in March, 1965 " " " in June, 1965 " " " in September, 1965 " " " in December, 1965
Summary Oil Search Activities in Aust. & New Guinea (41A)	J. Henry	Mar. 1965		June 1965	

MAPS

Subject	Author	Compilation	Timetable	Fair Drawing	Remarks
Petroleum Tenement Map and Key. List of Exploration Cos.	M. Bell J. Henry	Jan. 1965 July 1965		Feb. 1965 Aug. 1965	Ready for distribution (500 copies) in March, 1965 " " " in September, 1965

GEOLOGICAL BRANCH

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Kimberley W.A. 6M44 65/1316	Regional Mapping of Kimberley Plateau, Mt. Elizabeth, Charnley, Camden Sound, Prince Regent, Ashton, Medusa Banks, Drysedale, Montague Sound, Browse Is., Londonderry, part Lennard River - 1:250,000 areas.	May-Aug.	H.G. Roberts K. Plumb D. Cellatly G. Derrick 4 - W.A.G.S. J. Perry (part time) W. McArd (Camp Manager)	3 F/Assts. 1 Cook 1 Cook's offsider 1 Mechanic 2 Draftsmen	5 L/R's S.W.F. 2 L/R Trailers 2 4x4 3 ton Bedfords 1 Water trailer 1 Office Caravan 3 Transceivers	Continuation of Geological Mapping in Kimberleys in cooperation with W.A. Geological Survey. 300 hours Helicopter hire 40 (min.) - 60 (max.) hours light aircraft hire. Records as bases for Bulletin.
<u>Results</u>	Preparation of Record.	Aug.1965-June 1966	Party			
Darwin Uranium Group N.T. 6UD 64/733 63/557 62/541	(i) Continue synthesis, analysis and compilation of all data from Rum Jungle area supplemented by detailed geological mapping. Maps to be produced at Standard scale 400 feet to one inch. (ii) Compilation and report on all data available on South Alligator Uranium Field. (iii) Geochemical sampling follow-up 1964 work in Rum Jungle East area. (iv) Reconnaissance geochemical sampling Gould Airstrip area. (v) Diamond Drilling of electro- magnetic and geochemical anomalies Rum Jungle East area. (vi) Fog Bay (Gemco Drill) Uranium (vii) Supervise Bureau's Gemco Drill	Continuous	C. Prichard R. Dodson (J. Shield) D. O. Shatwell A. Wiriasumata(Sept-Oct) Yao - May A. D. Haldane (Laboratory) A. L. Mather (?)	As per establishment	As per establishment B.M.R. Gemco Drill	Commenced 1963; in co-operation with A.A.E.C. and Territory Enterprises. Est. 10,000 feet minimum using B.M.R. Gemco. Deep profile sampling near radio- metric anomalies; other sampling by mattock. Est. 10,000 feet minimum B.M.R. Gemco; other sampling by mattock. Geophysical Branch to arrange radiometric gridding. Est. 2,000-4,000 ft. maximum - £18,000 available in estimates. Two contract drills required. Will provide trace element information in primary zone and information for future drilling. Investigate possibility syngenetic uranium-bearing deposit.
<u>Results</u>	Preparation of Record	Nov.1965-May 1966	D.U.G.			
Bowen North Q'ld. 6M47 64/724	Complete regional mapping Bowen (northern part) and Proserpine (part) 1:250,000 scale.	Mid May - Sept.	A.G.L. Paine D.F. Clarke (Q.G.S.) C. Gregory A.W. Webb (part time)	3 F/Assts. 1 mechanic 1 cook	1 L/R L.W.B. 4 L/R's S.W.B. 1 4x4 3 Ton Bedford 1 L/R Trailers 1 Water Trailer 1 - 4 berth Caravan 1 Traeger Transceiver (TM2 or TM3) 1 Rock Drill (Atlas Cobra)	In cooperation with Q.G.S. - complete regional mapping Charters Towers - Bowen area. 3 weeks launch charter. 15 hours (min.) - 30 hours (max.) Helicopter hire.
<u>Results</u>	Preparation of Record.	Oct.1965-May 1966	A.G.L. Paine et al			
Bowen Geochemical Q'ld. 6M48 64/726	Regional Geochemical sampling Bowen Basin to complete gap between 1964 areas. Includes parts Charters Towers, Bowen, Mt. Coolon, Mackay, Proserpine, St. Lawrence, (part Hughenden) 1:250,000 Sheet areas.	May - Oct.	R. de Ferranti A.L. Mather (part time) N. Marshall (Laboratory)	6 F/Assts. 1 Cook 1 mechanic	4 L/R S.W.B. 1 Forward Control L/R 2 Trailers L/R 3 Caravans 3 Tote Gotes	Commenced 1964 - stream sediment sampling. 1 - Caravan, Kitchen - Mess. 2 - 4 berth caravan for sleeping and office. Will base with Party Leader - Bowen North.
<u>Results</u>	Preparation of Record.	Nov.1965-May 1966	R. de Ferranti N. Marshall			

METALS (INC. URANIUM) SEARCH

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GEOLOGICAL BRANCH (Ctd.)

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Dobbyn Q'ld. 6M49 64/739	Diamond Drilling to test geophysical anomalies - and geological targets - up to 6,000 feet. Geochemical sampling.	May - Sept.	1 Geologist	1 F/Asst. Contractor	1 L/R S.W.B. 1 L/R Trailer	Test anomalies discovered by Geophysical Branch and projects by Geological Branch in 1964. Assays of core at A.M.D.L. (?); core chips for detailed spectrographic analysis at B.M.R. Depends on discussions with Mines Dept. Funds to be provided in 1965/66 Est.
<u>Results</u>	Preparation of Record - when assays available.		1 Geologist			
Canberra A.C.T. 6M50 64/735	Geological Mapping and Stream Sediment sampling in selected 1:50,000 Sheet areas in Canberra 1:250,000 Sheet area.	Continuous	J.F. Ivanac Students	2 F/Assts.	2 L/R S.W.B. 1 4x4 3 ton Bedford	Continuation work commenced in 1964.
<u>Results</u>	Preparation of Record.	As time permits	J.F. Ivanac			
Bougainville T.P.N.G. 6M45 65/1302	Regional Mapping Bougainville Island	Apr. - Aug.	D. Blake D. Middleton(part time) C. Branch (part time) Y. Mizietis (?) Chong Foo Shin (Colombo Plan)	2 F/Assts. Cook 12 native labourers	Boat: 5th Apr.-7th Aug. Helicopter: late June/early July	In conjunction with Conzinc Riotinto Aust. 5 months launch charter - 100 hours helicopter charter. (1 month) Boat 5th Apr.-7th Aug. £6500. Helicopter late June/early July.
<u>Results</u>	Preparation of Record.	Oct.1965-Apr.1966	D. Blake			
Orientation Geochemical 6M51	Katherine/Darwin - other areas as opportunity offers.	As time permits	A.L. Mather (?) J.F. Ivanac	-	-	Vehicle from Darwin Uranium Group.
Age Determination 6M5 64/734	Dating of samples collected in 1964 in Kimberleys, Bowen Basin, N.Guinea Cloncurry, Mt. Isa, oil-bores.	Continuous	A. Webb M. Bofinger R. Harding may replace P. Leggo	3 F/Assts.	Short term vehicle hire	Determination of samples collected in 1964 and other projects. In cooperation with A.N.U.
Ultrabasic Belt T.P.N.G. 6M46 65/1308	Systematic reconnaissance mapping of ultrabasic belt at 1:250,000 scale. Complete progress report by June 1966	Mar. - Nov. (3 separate excursions)	H. Davies	Native labourers	1 L.W.B. L/R 1 L/R Trailer	Mapping to determine nature and distribution of ultrabasic rocks. Boat hire 5-6 days £30-£35/day Light Aircraft hire 25-30 days. £600
Herberton Q'ld. 6M36 63/522	Continuation of 1964 diamond drilling (approx. 3000 ft.) at United North Australia, Extended, Smith's Creek, Summer Hill, Adelaide Blocks and Dover Castle.	Continuous	K. Levingston (Q.G.S.) W. Dallwitz	-	Short term Vehicle hire	£14,000 on 1964/65 estimates. Additional targets to be decided after geophysical survey at U.N.A. Q.G.S. will prepare reports.
Palaeomagnetism 6M52 64/789	Collection and palaeomagnetic dating of samples from Bowen Basin.	As available	F. de Keyser	1 F/Asst.	1 L.W.B. L/R 1 Diamond Drill 1 L/R Trailer	In cooperation with A.N.U.
Georgetown 6M53 65/1317	Re-examination of areas to finalize geology of Georgetown area.	Early April	C. Branch Jacobsen		Short Term Vehicle Hire	To finalize Bulletin.
Herberton/Mt. Garnet 6M36 63/522	Re-examination of areas to coordinate geological mapping.	June-Mid.July	K. Yates J. Smith		Short Term Vehicle Hire	To finalize Herberton and Mt. Garnet 1 mile areas.

METALS (INCLUDING URANIUM) SEARCH

GEOLOGICAL BRANCH

PUBLICATIONS

BULLETINS

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Subject	Author	Writing	Editing	Remarks
Katherine/Darwin	Walpole, Malone, Dunn, Randal, Yates	To Mid Mar. 1965	To June 1965	P.R. Dunn writing Economic Geology Section.
Carpentaria No. 1	Dunn, H.G. Roberts and J.W. Smith	To Apr. 1965	To Oct. 1965	Includes Roper River and McArthur River 1:500,000 Sheets
Carpentaria No. 2	Dunn, H.G. Roberts and Plumb	To June 1965	To Dec. 1965	Dates depend on completion of drafting Arnhem Land 1:500,000 Sheet
Hodgkinson Basin	de Keyser and Lucas	To Apr. 1965	To Sept. 1965	Lucas contribution to be recompiled.
Laura Basin	Lucas	?	?	To be completed by Lucas, possibly available end 1965.
East Kimberley Region	Dow and I. Gemuts (W.A.G.S.)	To Nov. 1965	To Apr. 1966	
Mount Garnet/Herberton	Yates and J.W. Smith	To Apr. 1966	May 1966-Oct. 1966	
Charters Towers (2 parts)	Paine, et al	To May 1967	Jan. 1967-Oct. 1967	Bulletin in two parts.
Kimberley Basin	Plumb and H.G. Roberts	To Dec. 1966	Jan. 1967-May 1967	
Georgetown	White			Proof with editor.
Magmatic Relationships Georgetown	Branch			With editor, minor revision needed involving field work.
Polarography and Adsorption	Beevers			With editor.

NOTE: Completion is subject to Drafting facilities
being available.

METALS INC. (URANIUM) SEARCH

GEOLOGICAL BRANCH

PUBLICATIONS (Ctd.)

REPORTS

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Subject	Author	Writing	Timetable	Editing	Remarks
Tennant Creek	Crohn and Oldershaw			To Dec. 1964	Issued as Records 1964/79 - Edited report returned to author for corrections 1/11/64
Captains Flat	Oldershaw	To Mar. 1965		Apr. 1965 - July 1965	Text completed; maps to be drafted and tentative completion date 1/3/65
Union Reefs	Shields, D.A. White and Ivanac	To May 1965		Jan. 1965 - Nov. 1965	80% drafting completed; 70% text completed
Astrolabe Mineral Field and Environs	Yates, de Ferranti and Mather	To Sept. 1965		Oct. 1965 - Feb. 1966	To be issued as a Record and combined geological and geophysical results
Townsville/Pentland	Wyatt, Paine, Harding and D.E. Clarke	To Apr. 1965		Mar. 1965 - July 1965	Progress report. Results of 1963 field season. Provisional title is Progress Report on the regional Geology of the Townsville-Pentland area, North Qld. - 1963 Survey.
Bismarck Ranges	Dow and Dekker				In press
Kainantu	Dow and Plane				In press
Basic Intrusives, Katherine/Darwin	Bryan				With author for corrections since September 1963; record completed.
Proterozoic Volcanics	Stewart				With author for corrections.
Fergusson & Goodenough Is.	Davies and Ives				In press
Charters Towers/Townsville	D.H. Wyatt (Q.G.S.) and Paine				
Granitic Rocks/ Katherine-Darwin	Bryan	To mid 1965			In preparation
Mount Garnet Tin Field	Zimmerman				To be incorporated with Bulletin on Mount Garnet/Herberton.
Rum Jungle Complex	Rhodes				In press.
Geology of the Mt. Woodcock 1 mile Sheet area	Dunnet	To June 1965			

METALS (INCL. URANIUM) SEARCHGEOLOGICAL BRANCHPUBLICATIONS (CTD.)EXPLANATORY NOTES

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Subject	Author	Timetable		Remarks
		Writing	Editing	
Gordon Downs	J.W. Smith and Gemuts (W.A.G.S.)	To Apr. 1965	To May 1965	Prepared as Record to be revised in light of new mapping.
Dixon Range	Dow and Gemuts (W.A.G.S.)	" Apr. 1965	" May 1965	To be completed as Record, map to be completed on Author's return from field.
Lissadell	Dunnet, and Plumb	" Nov. 1965	" Feb. 1966	Prepared as Record: Preliminary Map with Printer.
Cambridge Gulf	Plumb and Veevers	" Nov. 1965	" Feb. 1966	Hard rock section completed - with Sedimentary Section.
Lansdowne	Gellatly and Derrick	" Oct. 1965	" Jan. 1966	To be prepared as a Record.
Mount Ramsay	H.G. Roberts, Halligan and P. Playford (W.A.G.S.)	" May 1965	" Aug. 1965	To be prepared as Record.
Arnhem Bay/Gove	Dunnet			Issued as Record.
Port Langdon-Blue Mud Bay	Plumb and H. G. Roberts			Issued as Record.
Cooktown	Lucas and de Keyser	" Dec. 1964	" Feb. 1965	Issued as Record July, 1964: map with drafting sections; text with Supervisor.
Cape Melville	Lucas and de Keyser	" Dec. 1964	" Feb. 1965	Issued as Record, text with Supervisor, map with Supervisor.
Ingham	de Keyser, Fardon and Cuttler (Q.G.S.)	" Oct. 1964	" Dec. 1965	Issued as Record September, 1964; text and map with editors.
Hughenden	Vine and Paine	" Jan. 1965	" Feb. 1965	Hard rock sections completed; with Sedimentary Basins Section. Text to be written.
Charters Towers	Paine	" Jan. 1966	" Feb. 1966	Record to be compiled by May 1965. Explanatory Notes at end of 1965 session.
Ayr	Gregory	" Jan. 1966	" Feb. 1966	Record to be compiled by May 1965. Explanatory Notes at end of 1965 season.
Townsville	D.H. Wyatt (Q.G.S.)			Needs Economic Geology Section.

METALS (INC. URANIUM) SEARCH

GEOLOGICAL BRANCH

PUBLICATIONS (Ctd.)

MAPS

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Subject	Author	Compilation	Timetable	Fair Drawing	Remarks
<u>1:50,000 Sheets</u>					
Mount Garnet	Yates		To Oct. 1965		
Herberton	J.W. Smith		" Oct. 1965		
Mount Woodcock	Dunnet and Harding		" June 1965		Geochemical overlays as specials.
Geboria and Tupuseleai (T.P.N.G.)	Yates and de Ferranti		" Sept. 1965		
Galle and Gea (T.P.N.G.)					Geochemical overlays as specials.
<u>1:250,000 Sheets</u>					
Gordon Downs	J.W. Smith and Gemuts (W.A.G.S.)	To Apr. 1965		To Nov. 1965	
Dixon Range	Dow and Gemuts (W.A.G.S.)	" Apr. 1965		" Nov. 1965	
Lissadell	Dunnet and Plumb	" Nov. 1965		" Nov. 1965	
Cambridge Gulf	Plumb and Veevers	" Nov. 1965		" Nov. 1965	
Lansdowne	Gellatly and Derrick	" Oct. 1965		" Dec. 1965	
Mount Ramsay	H.G. Roberts, Halligan & Playford (W.A.G.S.)	" May 1965		" Dec. 1966	
Arnhem Bay / Gove	Dunnet			In progress	Preliminary printed.
Port Langdon / Blue Mud Bay	Plumb and H.G. Roberts			In progress	Preliminary printed.
Cooktown	Lucas and de Keyser			In progress	With Supervisor - Preliminary printed.
Cape Melville	Lucas and de Keyser			In progress	"
Ingham	de Keyser, Fardon & Cuttler (Q.G.S.)	" Oct. 1964		In progress	With editor "
Hughenden	Vine and Paine	" Jan. 1965		To Apr. 1965	
Townsville	Wyatt (Q.G.S.)	" Feb. 1965		" July 1965	
Charters Towers	Paine	" May 1965		" Oct. 1965	
Ayr	Gregory	" May 1965		" Oct. 1965	
<u>1:500,000 Sheets</u>					
Arnhem Land	H.G. Roberts & Dunn				Not started - require draftsman
Roper River	Dunn	Completed		With Contractor	
Mc Arthur River	H.G. Roberts & Dunn	-		-	Preliminary edition being printed; colour guide in preparation.
East Kimberley	Dow and Gemuts (W.A.G.S.)	To Oct. 1965		To Feb. 1966	Mount Ramsay, Lissadell, Dixon Range, Gordon Downs.
Kimberley Plateau	Plumb and H.G. Roberts	" Dec. 1966		May 1967	Mapping in 1965.
Hodgkinson / Laura Basins	de Keyser and Lucas	" Apr. 1965		Sept. 1965	
Charters Towers	Paine et al.	" May 1967		Oct. 1967	Ingham (Southern half) Townsville, Ayr, Hughenden (North-east), Charters Towers, Bowen and Proserpine.
<u>1:1,000,000 Sheet</u>					
S.E. 55	Paine et al.				Can now be planned. Requires consideration in regard to format and timing.
S.D. 55	de Keyser				

METALS (INC. URANIUM) SEARCH

GEOPHYSICAL BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Mt. Lyell, Tas. 7MG23 63/584	Investigation of Comstock Valley area for sulphide orebodies using EM, IP, SP methods. Continuation of work started in 1964. Area of about 5,500 ft. x 6500 ft. Also Five Mile-Razorback area if time permits.	January - April	J. Williams A. Howland-Rose R. Andrews	N. Ashmore 3 F/Assts.	3 Land Rovers IP, EM, SP equipment.	Requested by Mt. Lyell M. & R. Co. Surveying to be done by Company.
<u>Results</u>	Preparation of Record.	May-Aug.	J. Williams			
Hoddle's Creek Warburton, Vic. 7MG25 65/1318	Experimental Survey on gold-antimony lode.	May	R. Smith 1 Geo. Cl. 1.	3 F/Assts.	Vehicles from Footscray (as required) IP, EM, SP equipment.	Requested by L. & K. Mc Rae and supported by Victorian Mines Department.
<u>Results</u>	Preparation of Record	June-July	R. Smith			
Ravensthorpe W.A. 7MG26 65/1319	Search for additional copper orebodies in concealed ground Ravensthorpe area. EM, IP, SP, magnetic methods.	June - September	E. Sedmik A. Howland-Rose 1 Geo. Cl. 1.	N. Ashmore 3 F/Assts.	2 Land Rovers 1 Utility	Requested by Ravensthorpe Copper Mines, supported by W.A. Mines Department, Surveying to be done by D. of I.
<u>Results</u>	Preparation of Record.	Oct. 1965-Jan. 1966	E. Sedmik			
Dobbyn Q'ld. 7MG22 64/739	Electrical logging of drill holes and tests on core samples.	Depends on drilling programme	J. Gardener	1 F/Asst.	1 Land Rover Widco 1000 ft. logger (ex Darwin)	Testing of geophysical anomalies.
<u>Results</u>	Preparation of Record.					
Liontown Q'ld. I.P. Test Survey 7MG27 64/740	Tests of I.P. Method over EM anomalies recorded in B.M.R. 1959 survey and subsequently drilled by Q'ld. Department of Mines.	August	J. Williams R. Smith	C. Bannerman 3 F/Assts.	1 3-ton truck 2 Land Rovers I.P. equipment	Programmed for 1964 but not carried out.
<u>Results</u>	Preparation of Record.	Sept.-Dec.	J. Williams			
Darwin Uranium Group N.T. 7UGD 64/733 62/118 63/557	Laboratory Services, logging, field surveys. Radiometric and EM Survey Gould airstrip area.	Continuous	J. Ashley K. Duckworth J. Gardener (from May to replace Ashley)	K. Eastick B. Riley J. Zeroni Dept. of Interior Surveyor (?)	Vehicles listed under Darwin Uranium Group.	
VE-MIN South Australia 7MAF17 65/1305	Aeromagnetic and radiometric, 1 mile spacing, 500 ft. a.g.l. Orreroo and Parachilna 1:250,000 areas.	March - April	D. Tipper W. Finney G. Young (last 2 weeks)	P. Turner I. Parkinson K. Wort D. Park 1 Draftsman (S.A. Dept. Mines)	1 mobile darkroom 1 station wagon 4x2 2 1-ton pick up trucks 4x4 A/borne magnetometer scintillographs navigation equipment.	Requested by S.A. Mines Department to assist regional mapping and mineral investigation.
<u>Results</u>	Preparation of Record.	May-June	D. Tipper W. Finney			
VE-MIN New South Wales 7MAF17 63/1320	Aeromagnetic and radiometric, 1 mile spacing, 500 ft. a.g.l. Goulburn 1:250,000 area.	September	R. Wells P. Shelley	P. Turner I. Parkinson K. Wort D. Park 1 Draftsman (B.M.R.)	1 mobile darkroom 1 station wagon 4x2 2 1-ton pick up trucks 4x4 A/borne magnetometer scintillographs navigation equipment.	Requested by N.S.W. Mines Department to assist interpretation of regional geology and encourage detailed prospecting.
<u>Results</u>	Preparation of Record.	October	R. Wells			

METALS (INC. URANIUM) SEARCH

GEOPHYSICAL BRANCH (Ctd.)

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
VH-GEO Kalgoorlie South W.A. 7MAF16 64/744	Detailed aeromagnetic in Kalgoorlie-	March-May	B. Dockery P. Shelley	A. Scherl J. Boyd 1 Geoph. Asst. 1 Draftsman (R. Buckley)	1 station wagon 4x2 1 1-ton truck 4x4 Proton magnetometer.	Supported by W.A. Mines Department. Requested by Western Mining Corporation.
<u>Results</u>	Preparation of Record.	April-June	B. Dockery			
VH-GEO Darwin-Pine Creek, N.T. 7MAF16 64/745	Detailed aeromagnetic, follow up of 1963 Contract survey. Mainly Mt. Masson area.	June	D. Tipper W. Finney	Lade Boyd Geoph. Asst. Zerail (Draftsman)	1 station wagon 4x2 1 1-ton truck 4x4 Proton magnetometer.	Completion of work started in 1964.
<u>Results</u>	Preparation of Record.	July	D. Tipper			
VH-GEO Davenport Range, N.T. 7MAF16 64/1321	Detailed aeromagnetic, investigation of DC 3 anomalies in Whistleduck area and Skinners Pound or Kurrenelli areas.	July-Aug.	B. Dockery 1 Geo. Cl. 1.	Lade Boyd Geoph. Asst. Zerail (Draftsman)	1 station wagon 4x2 1 1-ton truck 4x4 Proton magnetometer.	Final decision on areas to be surveyed dependent on results of geological and geochemical work by Geological Branch.
<u>Results</u>	Preparation of Record.	September	B. Dockery			
VH-GEO Strangways Range N.T. 7MAF16 64/1322	Detailed aeromagnetic, Strangways Range. Investigation of Red Rock, Mt. Pfitzner, Pinnacles and Mud Tank prospects.	Sept.-Mid Oct.	W. Finney Geo. Cl. 1	Lade Boyd Geoph. Asst. Zerail (Draftsman)	1 station wagon 4x2 1 1-ton truck 4x4 Proton magnetometer.	Recommended by Resident Geologist Alice Springs.
<u>Results</u>	Preparation of Record.	Mid Oct.-Mid Nov.	W. Finney			
Astrolabe T.P.N.G. 7MG624 64/748	Contract aeromagnetic survey	June-August	P. Goodeve (Supervision)			Tenders indicate cost to be £12,000.
<u>Results</u>	Preparation of Record.	Sept.-Dec.	P. Goodeve			

METALS (INC. URANIUM) SEARCH

GEOPHYSICAL BRANCH

PUBLICATIONS

BULLETINS

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Subject	Author	Writing	Timetable	Editing	Remarks
Dobbyn area Geophysical Surveys	Gardener	Sept.-Dec. 1965			
Savage River	Eadie	Dec. 1964			

REPORTS

Kalgoorlie-Southern Cross Aeromagnetic	Quilty	Jan. 1965			
Gravity Interpretation using Relaxation Methods	Daly				Interpretation completed Dec. 1964.

MAPS

Subject	Author	Compilation	Timetable	Fair Drawing	Remarks
Aeromagnetic					Approx. 8 maps in Granites Tanami area.

MINERAL RESOURCES BRANCH

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
<u>MINING ENGINEERING SECTION</u>						
Tailings Survey West Australia 8MB 62/224	Sample and Measure Old Mine Tailings Dumps.	August 1965	R.W.L. King		Short Term Hire Dept. Supply Perth	Continuation Survey Made in previous Years.
<u>Results</u>	To be incorporated in Record - depend on availability of analyses etc. from A.M.D.L.	Dec.-Feb. 1966				Record to be completed as other duties permit.
Tailings Survey Queensland. 62/224						Field Work Completed 1964.
<u>Results</u>	To be incorporated in Record. Depends on availability of results from A.M.D.L.	Dec. 1964 March 1965				

GEOLOGICAL BRANCH

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Phosphate Investigation 6X2 64/694	<u>Continental Sub-Group</u> (a) Basic reviews of basins (with cooperation of State Surveys) (b) Assistance to Specialist (Dr. Sheldon) (c) Review of programme in light of (i) Specialist's Report (ii) Results of basin reviews (iii) Programmes of State and Companies.	Continuous if staff available June-Aug.	J.M. Barrie A. Kaulback (part time Feb.-March) A. Kaulback (part time)		L/R - short hire from possibly Brisbane, Adelaide and Perth.	Vehicle requirements depend on Specialist's programme and State cooperation.
	<u>Oceanographic Sub-Group</u> (a) Marine sediment sampling - Bougainville-N. Britain Trobrian Is. (b) Recce of shelf- Christmas Is. (c) Assistance to Specialist (Dr. van Andel) (d) Continued collection and handling of marine sediment samples ex R.A.N. and other oceanographic groups	April-July-Sept. Possibly August 1 month between May-Aug. As required	A. Kaulback A. Kaulback A. Kaulback A. Kaulback	2 T/A or F/A 2 T/A or F/A 2 T/A or F/A	Ocean going launch- (with Metalliferous Section) Boat to be supplied by Phosphate Commission	Timing to suit Metalliferous Programme Timing depends on Specialist's visit and facilities at Christmas Island. Time of visit to be arranged
	<u>Island Deposits</u> <u>Christmas Island Party</u> Investigation and mapping of Christmas Island.	April-Oct.	J.M. Barrie			Field staff accommodation and vehicle provided by Phosphate Commission.

PUBLICATIONS

Possible publication of the results of specialists study of phosphate in

Records - Basic Reviews compiled, Australia Christmas Island and oceanographic investigations.

GEOLOGICAL BRANCH

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Corin Damsite, Upper Cotter River (Damsite E) A.C.T. 6S1 64/991	Further design investigation and report Services during construction	6 months (4 months discontinuous)	E.J. Best	1 F/Asst. or T/Asst. (+ 1 F/Asst. to 30/4/65)	1 L/R) see below 1 trailer)	Date for start of construction probably July.
<u>Results</u>	Preparation of Record	June	E.J. Best			
Other damsite investigations A.C.T. 6S1 64/991	Inspection of 2 possible damsites - 1 on Cotter River, 1 on Molonglo River. Feasibility investigation of damsites on Queanbeyan and Molonglo Rivers.	1 week 3-6 months	E.K. Carter)D.E. Gardner)E.J. Best)	As for Corin Dam; to be supplied by A.C.T. Engineering Group. Additional temporary staff may be needed at times.	As for Corin Dam + camping equipment. To be supplied by A.C.T. Engineering Group.	In view of uncertainty about requirements and timing, need for geophysics cannot be evaluated at present, possibly needed during 1965.
<u>Results</u>	Preparation of Record					
Minor Investigations (A.C.T. Engineering) 6S1 64/754	Completion of records, foundation investigations, construction materials, mapping of urban development areas, drainage problems. Specific projects at present known include investigations of sources of building stone in A.C.T.; testing of building stone for use in A.C.T. buildings; reticulation reservoirs; Woden and Belconnen development areas; road & building foundations & tunnel conditions, Capital Hill area; Secretariat and other building foundations; Bendora-Mt. Stromlo pipeline (continued). The work includes geological mapping; design, supervision and logging of augering and drilling; seismic timer testing; general advice and reports; some laboratory work.	Continuous	E.K. Carter D.E. Gardner E.J. Best) part J.K. Hill) time Other engineering geologists as available.	2 T/Assts. (temporarily F/Assts). 1 F/Asst (see above) Also to assist in preparation of material for N.T. and P.N.G. reports.	1 Holden utility 3 L/R 1 trailer (1 L/R and 1 trailer to be available to Corin Damsite and other damsite parties as required)	Some assistance is to be provided for engineering geology projects in Papua- New Guinea. No requirements for engineering geophysics are known at present, but provision should be made for 2 geophysicist-weeks' work.
<u>Results</u>	Preparation of Records	as surveys completed	D.E. Gardner			
Miscellaneous Investigations (Hydrology and drainage) 6X1 64/755	Siting and testing of bores, Investigation of sub-surface drainage in urban development areas. Routine measurements of water quality and levels in A.C.T. bores, Lake George and Lake Burley Griffin. Miscellaneous queries A.C.T. and elsewhere. Detailed geological mapping as required for above and for engineering geology map.	As required Discontinuous; total 8 geologist- months?	G.M. Burton 1 other	1 T/Asst. (temporarily F/Asst)	1 L/R 1 Jeep trailer Pump equipment, etc.	Carried out concurrently with map editing and compilation duties.
<u>Results</u>	Preparation of Records	as surveys completed	G.M. Burton			
Adelaide River Damsite and barrage(?) N.T. 6S2 65/1322	Detailed mapping of damsite and saddles, logging of costeans and diamond drill holes.	6 months + May ?	?	1 F/Asst.	1 L/R Camping equipment	To be requested by Director, Water Resources Branch, N.T.A. Subject to certain information from him. May include barrage near mouth. Geophysical work will be required in August.
<u>Results</u>	Preparation of Record					
Hydrology School Adelaide 61/29	Refresher course organised by T.C.U.W. (See page 27)	April 2 weeks	G. Burton T. Quinlan D. Woolley			The Secretary T.C.U.W. Mr. D.A. White will also attend this course. See also P.27.

GEOLOGICAL BRANCH (Ctd.)

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Port Moresby No. 2 Underground Power Station T.P.N.G. 6S3 65/1323	Service during construction- geological mapping, advice on support of tunnels and machine hall, etc.	12 months continuing into 1966	J.R.L. Read. (Temporary position sought)	-	-	Any accommodation, assistance, etc. required to be supplied by C.D.W.
<u>Results</u>	Preparation of Record	1967(?)				
Upper Ramu Hydro- Electric Project T.P.N.G. (a) Tunnel-power station (b) Damsites 6S3 65/1324	(a) Logging of drill core and supervision of drilling and water pressure testing. (b) Mapping, probably of 2 damsites in Upper Ramu River, including storage areas. Designing and mapping costeans; designing drilling.	See Remarks 4 months?	J.K. Hill	-	-	Accommodation, transport, assistance required to be supplied by C.D.W. Magnitude of effort remaining on power station and tunnel investigation is dependent on decision whether power station is to be underground or on surface. Decision to be made next March.
<u>Results</u>	Preparation of Record (depends on progress of survey)					
Lower Warangoi Hydro-Electric Scheme New Britain 6S3 64/752	Logging of drill core and supervision of drilling and water-pressure testing. Possibly further mapping.	3 months?	See Remarks	-	-	Accommodation, transport, assistance required to be supplied by C.D.W. Services to be provided by Port Moresby Resident staff; some assistance from Canberra necessary. Geophysics required?
<u>Results</u>	Preparation of Record	Late 1965 (?)				
General Unspecified 65/1325	Advice on foundation conditions to C.D.W. as and where required, probably including Commonwealth Centre, Melbourne.	1 month	E.K. Carter			C.D.W., Melbourne, have indicated that no firm requests can be made at this stage but that possibly 16-20 geologist- days would be required on unspecified projects.

PUBLICATIONS

REPORTS

Title	Author	Writing	Timetable	Editing	Remarks
Miscellaneous Investigations, Canberra District	Noakes et al.	June 1965			Subject to work load permitting
Geology of Farrar-Hoskinstown Area	Wilson	March 1965			Amended version of M.Sc. thesis
Bendora Dam completion report	Hill	June 1965?			Subject to work load permitting

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
North Stradbroke Island, Q'ld. 7S13 64/760	Hydrological. Seismic resistivity gravity for underground water.	June-Aug.	<u>P. Mann</u> L. Kevi (3 weeks only on gravity)	Radeski Driller and 4 field assistants from Mines Dept.	Seismic recording cab and 2 Land Rovers from S. & T. Brisbane.	Concluding investigations started in 1964.
<u>Results</u>	Preparation of Record	Sept. 1965-Jan. 1966	"			
Clare, Q'ld. 7S20 65/1326	Hydrological. Principally resistivity supplemented with seismic, drilling, EM, etc.	June-Sept. July-Sept. Sept. Oct.	<u>J.S. Milsom</u> (Resistivity) L. Kevi (Gravity) <u>P. Mann</u> <u>E.J. Polak</u> (Seismic)	Radeski and Driller 4 field assistants from I.W.S.C.	Seismic recording cab. Tractor mounted Proline drill Land Rover, S. & T. Melbourne. Station Sedan S. & T. Brisbane. Vehicle from I.W.S.C.	Adjacent to Burdekin Delta area surveyed in 1962, 1963. This survey may finish whole region.
<u>Results</u>	Preparation of Record	Nov. 1965-Apr. 1966	J.S. Milsom, L. Kevi P. Mann			
Burdekin Delta 7S14 64/759	Salt water intrusion resistivity.	May 2-3 weeks	<u>E.J. Polak</u> J. Milsom	"	Use same vehicles and personnel as for Clare.	Repeat resistivity check on underground salt water movement from sea.
<u>Results</u>	Preparation of Record	June-Dec.	"			
Brisbane, Q'ld. 7S19 65/1327	Victoria bridge foundations and Hamilton Wharves tunnel or bridge	May	<u>P. Mann</u> J. Milsom	Radeski 4 field assistants from C.O.G. Dept.	One survey boat - two work boats with outboard motors, Sonar Probe and Underwater geophones and cables. Seismic Recording truck and 1 Land Rover S. & T. Brisbane.	Could prove a test of sonar probe. Only verbal request so far.
<u>Results</u>	Preparation of Record	June	P. Mann			
Benalla, Vic. 7S19 65/1303	Nillahcootie dam site Seismic, resistivity, magnetic, 3 component geophones.	Feb.-Mar.	L. Kevi	Pigott 5 field assistants from S.R.W.S.C.	Seismic recording cab and Land Rover S. & T. Melbourne. Vehicle from S.R.W.S.C.	Sonic testing of drill hole cores to be integrated.
<u>Results</u>	Preparation of Record	Apr.	"			
Koo-wee-Rup, Vic. 7S19 65/1328	Test S.M.R. methods resistivity, IP, EM, etc. an area where salt intrusion is known.	March	J. Milsom	4 field assistants	Land Rover, S. & T. Melbourne.	
<u>Results</u>	Preparation of Record	April	"			
Risdon Brook, and Trevallyn Bridge Tas. 7S19 64/1211	Elastic constant determination 3 component geophones	Jan. or Feb.	<u>P. Mann</u>	4 field assistants from Tas. Mines Dept. Pigott		Small job; promised for late 1964.
<u>Results</u>	Preparation of Record	Mar.-Apr.	P. Mann			
Laboratory Work 7S19	Sonic testing of cores. Model resistivity tank tests and sand/ clay mixtures.					Continuing when staff permits. See Benalla, S.R.W.S.C. requested core testing from a number of dam sites.

ENGINEERING INVESTIGATIONS AND HYDROLOGY

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GEOPHYSICAL BRANCH (Ctd.)

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Vibration tests, 7S19 64/761						To be arranged with applicant when required.
Adelaide River, N.T. 7S19 65/1322	Survey of proposed dam site	July	<u>E.J. Polak</u>	Pigott		
<u>Results</u>	Preparation of Record	Nov.-Dec.	"			
Hydrology School Adelaide 61/29	Refresher course in underground water investigation organised by Technical Committee on Underground Water.	April (2 weeks)	P. Mann L. Kevi J. Wilson			Wiebenga and Polak to assist in preparation of lectures on geophysics.
Crustal Seismic Survey Warragamba Dam N.S.W. 7S19 65/1329	Record underwater shots off East Coast to establish velocities in crustal layers	19-25th April	M. Wainwright W.A. Wiebenga E.S. Polak	Pigott Radeski	Two 24 channel S.I.E. Seismic Refraction Recorders Traeger Transceivers	At request of A.N.U. Navy will explode five 900 lb. charges - three off Sydney and two off Jervis Bay.

PUBLICATIONS

BULLETINS.

Title	Author	Timetable	Writing	Editing	Remarks
Burdekin Delta	Wiebenga, Polak, Andrew and Wainwright	To Oct. 1965			

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Isogal Reg. Gravity Survey 7RG11 64/763	E & W gravity ties across Australia between pendulums using chartered aircraft.	January	B. Barlow	W. Lowndes	3 Gravity Meters	Completion of 1964 programme. Finance provided for Charter aircraft.
<u>Results</u>	Preparation of Record	Feb.-Dec.	B. Barlow et al			
Computing 7RG11 64/764	Automatic Computing Procedures	January- December	New Class 1 J. van Son.	D. Townsend V. Belcher		
Gravity Map 7RG11 64/764	Gravity map of Australia					Continuing as available.
Earth Tide 7RG11 64/764	Earth tide recording, development, etc.	January- December	New Class 1		Occasional use of 1- ton vehicle when shifting equipment.	This project depends on availability of staff.
<u>Results</u>	Preparation of Record					
First order Regional magnetic survey 7RM9 63/85	First order survey of Moruya, Newcastle, Grafton, Moree, Bourke, Condobolin, Maryborough, MacKay, Ingham, Winton, Barcaldine, Quilpie, Roma, Woorah, Alroy Downs and Cambridge.	June to October	van der Linden		1 Station Sedan 1 Panel van	Programme is subject to the fluxgate variographs being made and tested in time.
<u>Results</u>	Preparation of Record	Nov. 1965- June 1966	van der Linden			
Magnetic Variograph 7RM8 63/85	Move fluxgate from Hobart to Launceston and install fluxgate or Askania variograph on N shore of Bass Strait.	January or February	van der Linden Parkinson			Could be part of testing of fluxgate variograph for regional magnetic survey.
Development and Testing of Fluxgate Variograph 64/777	Laboratory project (See Development Group Laboratory and Workshop).		Observatory and Laboratory Staff as available.			A large part of 1965 will be spent developing and testing the fluxgate variograph which eventually will be used in a routine way for first order regional magnetic stations. It is hoped that a pair of variographs can be installed on the north and south shores of Bass Strait to test the effect of shallow water on the magnetic field.
Ice Thickness Antarctica 7RMS 63/247	Ice thickness measurements on dome South east of Wilkes		G. Allen			
W.P.C.L. Phase 1 7RG12 63/39	Gravity readings at Darwin and along East Coast	February	J. Shirley			In cooperation with U.S.A.F. and IUGG.

REGIONAL GEOPHYSICAL SURVEYS

GEOPHYSICAL BRANCH

PUBLICATIONS

BULLETINS

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Subject	Author	Timetable		Remarks
		Writing	Editing	
Otway Basin Gravity Survey	Wiebenga Neumann	Nov. 1964 - May 1965		
Regional Gravity Survey Victoria	Langron	July 1965 - Jan. 1966		

REPORTS

Gravity Meter Calibration Ranges Australia	Barlow	Jan. 1965 - May 1965		
Pendulum Gravity Tie Melbourne Tokyo	Langron	Jan. 1965 - April 1965		Dates tentative
Isogal Survey	Barlow Lowndes	July 1965 - Dec. 1965		Dates tentative
Regional Gravity N.S.W.	Langron van Son	June 1965 - Aug. 1965		
Gravity Meter Performance Tests	Barlow Langron Shirley	April 1965 - Feb. 1966		
Aust. Pendulum Measurements	Shirley	Dec. 1966		
Isogonic Map 1965.0	van der Linden	Nov. 1964	Jan. 1965	
Secular Variation	van der Linden	Jan. - Feb. 1965	Mar. 1965	
Isomagnetic Maps	van der Linden	Mar. 1965	Apr. 1965	

MAPS

Subject	Author	Timetable		Remarks
		Compilation	Fair Drawing	
Gravity Map of Australia	Langron	June 1966		Tentative only.

OBSERVATORIES

GEOLOGICAL BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Rabaul T.P.N.G. 6GR 64/990	Maintenance and extension of vulcanological observatories in New Guinea; programme under following categories:- (a) <u>Seismology</u> Installation of telemetred network (5 stations) at Rabaul Completion of observatory at Esa'ala Commence installations at Manam Interpretation of seismic Records (b) <u>Vulcanology</u> Urgent investigation of volcanic activity. Inspection of volcanoes in New Britain. Collection of volcanic gases. Commence systematic petrological collections.	Continuous	J. D'Addario	2 T/A Native Labourers		Both officers to be replaced in 1965. Geophysical investigation to establish crustal model - Rabaul - requested 1966.
GEOPHYSICAL BRANCH						
Toolangi Observatory 7R01 63/147	Geomagnetic and seismic recording	Continuous	C.H. van Erkelens		Station Wagon	
Mundering Observatory 7R04 64/916	Geomagnetic, seismic and ionospheric recording Seismic recording at Kalgoorlie	Continuous Most of 1965	P.M. McGregor I.B. Everingham P.J. Gregson	Parkes Woad	Station Wagon Sedan	
Port Moresby 7R05 64/874	Geomagnetic, seismic and ionospheric recording. Field seismic recording and analysis	Continuous Most of 1965	J.A. Brocks J.P. Wilkie I.D. Ripper	Jones Cizek	Station Wagon Sedan	Long period seismometers and USD recorders.
Macquarie Island 7R06 63/147	Geomagnetic and seismic recording	Continuous	R.G. Sutton			
Mawson 7R07 63/147			J.E. Haig			
Wilkes 7R08 63/147			P.J. Browne-Cooper			
Darwin 7R09 62/118	Seismic recording	May start during 1965			World standard seismic equipment.	

OBSERVATORIES
GEOPHYSICAL BRANCH (Ctd.)

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Magnetogram scaling	Melbourne Office	Continuous				The change of technique of scaling magnetograms represents a major development project. This is almost ready for routine application, but some minor development will continue during 1965.
Terrella Project 7LX4	Model experiment on electromagnetic induction.	As time permits	D. Parkinson and laboratory and workshop staff.			Work has continued throughout 1964 and will extend to mid 1965.
Analysis of Solar Quiet Day Diurnal Variations		-	D. Parkinson	-		Work will be continued when authority to use the C.S.I.R.O. computer network is obtained. This will extend throughout most of 1965.
Phase Velocity Dispersion project 7RO5	Port Moresby Observatory	Continuous	P.M. Observatory Staff			The project should become fully operative late in 1964 or early 1965 and will continue throughout the year.
Crustal Structure and Seismicity of W.A. 7RO4 63/382	Mundaring Observatory	Continuous	Mundaring Observatory Staff			Work will continue throughout 1965 possibly with outstations at Kalgoorlie and Wittenoom George.
Induction Loop	Analysis of traces, Mundaring Observatory	Continuous	"			Work will continue during 1965.
Analysis of Seismograms	Seismograms from Antarctic Observatories will be analysed at Melbourne Office for T-phases in earthquake waves propagated across the Pacific Ocean.	Continuous	Antarctic Staff after return.			

OBSERVATORIES
GEOPHYSICAL BRANCH
PUBLICATIONS
REPORTS

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Subject	Author	Timetable		Remarks
		Writing	Editing	
Mean Hourly Values of Geomagnetic Field				
Watheroo 1953-54	Mc Gregor	To Feb. 1965	To June 1965	Preparation of these Reports will also occupy the whole time of B.G. Cook J.C. Branson and two assistants throughout the year 1965.
" 1955-56		Jan.-Feb. 1965	" May 1965	
" 1957-58			" June 1965	
Gnangara 1957-60	Mc Gregor	To June 1965	To Dec. 1965	
" 1961-62		" March 1966	" July 1966	
Toolangi 1959-60	van der Waal	To June 1965	To Nov. 1965	
" 1961-62		" Jan. 1966	" April 1966	
Port Moresby 1958-60	Brooks	To June 1965	To Nov. 1965	
" 1961-62		" Jan. 1966	" May 1966	
Macquarie 1955-56	van der Waal	To June 1965	Nov. 1965	
Island 1957-58				
1959-60				
Mawson 1957-58	van der Waal	To June 1965	To Nov. 1965	
1959-60		" Oct. 1965	" Feb. 1966	
Wilkes 1959-60	van der Waal	To Sept. 1965	To Jan. 1966	
Analysis of Sq.	Parkinson	July-Dec. 1965	?	
T-phases at Macquarie Island	Cooke	Oct.-Nov. 1965	To Dec. 1965	
Crustal Structure of W.A.	Everingham	Sept.-Dec. 1965	To Jan. 1966	
Monthly Geophysical Observatory Reports		Continuous		

RESIDENT GEOLOGICAL STAFF

GEOLOGICAL BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Darwin, N.T. 6GD 64/773 62/568	Service and advice to Northern Territory Administration including the following programmes:- (a) Supervision of diamond drilling programmes at mineral prospects (b) Evaluation of mineral deposits (c) Reports on application for assistance under Mining Development ordinance. (d) Follow-up on geophysical work, Mt. Bunday, Daly River etc. (e) Geochemical orientation - South Alligator River area. <u>Non-Metals</u> (f) Continued investigation of clay deposit and of raw materials for brick and cement manufacture - Darwin. <u>Engineering Geology</u> (g) Foundations of tracking station - Cove Peninsula and of Adelaide River bridge. (h) Adelaide River dam sites and barrage (with Canberra-based staff) <u>Water Supply</u> (i) Ground water supplies - McMinns Lagoon area. (j) Assessment of ground water resources of Daly River Basin (k) Selection of bore sites on pastoral holdings and logging of bores.	Continuous	R.G. Dodson Class 2 Geologist (to be appointed) P. Rix J. Shields A. Van der Plank			Discussions desired with Geophysical Branch and Sedimentary Section, Geological Branch.
Tennant Creek N.T. 6GT 64/773 62/568	(a) Supervision of Mines Branch drilling at Lone Star, Mary Lane and other mines and prospects. (b) Examination of mines and prospects, including reports on application for assistance under Mining Development Ordinance. (c) Geological mapping and examination of prospects in Davenport Ranges.	Continuous	S. Yeaman			Minor magnetic and E.M. investigations requested. Aeromagnetic surveys proposed in Davenport Ranges or Mt. Hardy-Yuendumu area.
Alice Springs, N.T. 6GA 64/773 62/568	(a) Continued investigation of ground water potential of Mereenie Sandstone, Alice Springs. (b) Preliminary investigation of additional ground water supplies within 20 miles of Tennant Creek. (c) Investigation of ground water potential - Ti-Tree Basin.	Continuous	D. Woolley I. Youles I. Faulks 1 Class 1 Geologist (to be appointed)			

RESIDENT GEOLOGICAL STAFF

GEOLOGICAL BRANCH (Ctd.)

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Party Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Alice Springs N.T. (Ctd.) 6GA 64/773 62/568	(d) Interpretation of drilling results - Farm Basin, Alice Springs. (e) Selection of bore sites on pastoral holdings and logging of bores. (f) Geological and geochemical investigations of potential mineral bearing areas - Pinnacles, Strangways, Yuendumu and Napperby areas.		I. Youles			Aeromagnetic surveys proposed in Strangways Range Area.
Port Moresby T.P.N.G. 6CMO 63/477	Services and advice to Administration including the following programmes:- (a) Supervision of drilling - Misima Island (b) Collation of data on heavy mineral prospects - Papua (with Mines Dept.) (c) Completion of reconnaissance of Southern New Ireland with report. (d) Continuation of mapping - Astrolabe Gold-Copper field (e) Compilation of 1:250,000 geological sheets - Ramu and Explanatory Notes - Markham (f) Phosphate investigation Abau district <u>Engineering Geology including Geohydrology</u> Programme of many small investigations under the following categories:- (a) Foundation and drainage (b) Supply of rock materials (c) Ground water supplies (d) Hydro-electric scheme (major investigations largely handled by Canberra-based staff)	As required As required Jan.-May June-Dec. (as available) March	R.A. Renwick ? (and replacement) D. French D. French D. French R. McGregor One additional geologist (J. Read?)			Proportion of ad hoc work should be decreased in 1965 following programme discussions with client Departments.
Wau T.P.N.G. 6GW 63/418	Services to the Administration, including the following programmes:- (a) Examination of metal prospects at Porgera, Western Highlands (b) Geochemistry - Orientation Surveys - Wau-Edie Creek Kainantu) (c) Assessment of ore in sight - Edie Creek-Wau area. (d) Reconnaissance of possible phosphatic cave deposits - Central Highlands (e) Search for pozzolans - Central Highlands (f) Map Compilation Wau 1:50,000 Sheet with Explanatory Notes Wau 1:250,000 Sheet Salamaua 1:250,000 Sheet (?) (g) Age determination - Highlands, Wau, Ultrabasic Belt.		R.G. Horne J.A.J. Smit R.G. Horne R.G. Horne R.G. Horne J. Smit J. Smit J. Smit and R.G. Horne			Compilation of Wau sheets well under way. October 1964.

RESIDENT GEOLOGICAL STAFF

GEOLOGICAL BRANCH

PUBLICATIONS

REPORTS

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Subject	Author	Timetable		Remarks
		Writing	Editing	
Miscellaneous Investigations, Northern Territory	Several	Collation of existing Records of several significant water investigations	To Editor in July	Final selection of material to be included not yet made.
Miscellaneous Vulcanological Investigations - New Guinea	C.D. Branch	Collation of existing records and one in writing - completed by January 1965.	To Editor in March	

LABORATORY & WORKSHOPS

GEOLOGICAL BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Remarks		
<u>PALAEONTOLOGY</u>							
Macrofossils 6LMA 64/775	1. Preparation of final report on Bowen Basin Regional Survey	Continuing	J.M. Dickins		Visit to Bonaparte Gulf Basin to carry out work on Permian in conjunction with field party in September.		
	2. Examination, description and identification of surface and core samples for macrofossils.						
	3. Description of Permian pelecypods and gastropods from Eastern Australia.						
	1. Examination and description of Ordovician fossils from Amadeus Basin and elsewhere	Continuing	Joyce Gilbert-Tomlinson			Some field visits probably necessary.	
	2. Field and associated studies of Ordovician of Fergusson River (Daly River) and probably Wiso Tableland.						
1. Examination and description of Mesozoic molluscs from Northern Australia.	Continuing	S.K. Skwarko	A. Miniotas M. Doyle (Technical Assistants)				
2. Description of Lower Cretaceous Pelecypods and gastropods.							
3. Examination of ammonites from Artesian Basin.							
1. Description of Early Middle Cambrian trilobites from Daly River Basin.	March Continuing	C.G. Gatehouse				Field examinations in Daly River Basin and Litchfield area in conjunction with Bonaparte Gulf Party. August-September.	
2. Study of Middle and Upper Cambrian inarticulate brachiopods from Northern Territory.							
3. Field and associated studies in Daly River Basin (W. part of Pine Creek Sheet) and Litchfield area of N.T.							
Description and stratigraphical application of Upper Devonian and Lower Carboniferous brachiopods from the Bonaparte Gulf Basin.	Continuing	J. Roberts	Work as member of field party: May-September.				
Microfossils 6LMI 64/775	1. Detailed studies of samples collected by B.M.R. field parties and private companies.	Continuing	G.R.J. Terpstra			General supervision on laboratory activities and preparation of records of reports made by Mrs. M. E. White; prepare 6 monthly records on results from Section.	
	2. Lower Cretaceous faunas from water bores Q'ld.	Continuing					
	3. Permian and Lower Cretaceous faunas from samples from subsidized wells.	Continuing					
	1. Carboniferous Foraminifera, Bonaparte Gulf Basin.	Continuing	D.J. Belford		F. Hadzel		
	2. Tertiary of New Guinea	Continuing					
	1. Preparing reports on the Foraminifera and fossiliferous non-marine limestone of Northern Australia for publication.	February 1965	A.R. Lloyd	A. Miniotas			
	2. Study Permian faunas Westgrove 2 Queensland.	Continuing					
	3. Preparing report for publication Wreck Island (Q'ld.).	To start probably November 1964.				A. Wilson	About 4-6 weeks in field in Bonaparte Gulf Basin.
	4. Study foraminifera Wuroi No. 1 Well, Papua.						
	1. Lower Palaeozoic conodonts of the Bonaparte Gulf, Amadeus, Georgina and Daly River Basins.	Continuous	P.J. Jones				
	2. Upper Palaeozoic ostracods and conodonts of the Bonaparte Gulf Basin.						
	1. Mesozoic and Upper Palaeozoic spores and microplankton in eastern Australia and TPNG.	Continuous	P.R. Evans and E.A. Hodgson	Miss H. Mackenzie			
	2. Detailed studies on B.M.R. shallow drill holes and field samples from Great Artesian and Bowen Basins.						
	3. Subsurface stratigraphic palynology of selected subsidized and unsubsidized wells.						
4. Devonian spores from Amadeus Basin.							
	To end March 1965.						

LABORATORY AND WORKSHOPS

GEOLOGICAL BRANCH (Ctd.)

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Remarks
Specialists Contracts					
S248	1. New Guinea and Papua forams for examination in conjunction with Basin study by P.E. Branch. 2. Revision of the report on fossil types housed in the B.M.R. Museum, Canberra.		Dr. I. Crespin		
S249	Determining and reporting on plant fossils collected by field parties etc.	Up to £450.0.0 per year as occasion arises.	Mrs. M.E. White		
S297	1. Preparation of final typescript, index and proofs of Bulletin 74 - Upper Cambrian Mindyallan trilobites from Q'ld. (about 600 pp.). 2. Final compilation of Explanatory Notes, Camooweal 1:250,000 sheet. 3. Preparation of text on organization and structure of the trilobite <i>Xystridura</i> . 4. Completion of paper "Middle Cambrian <i>Nepidae</i> of Q'ld. and N.T." 5. Photography for the description of the <i>Dolichometopidae</i> of Q'ld. and N.T.	Continuing	A.A. Opik		
S295	Examination and stratigraphical application of Cretaceous molluscs of Great Artesian Basin; reports will be prepared for inclusion in field party's record.	Continuing	R.W. Day		Limited field work in association with Great Artesian Basin Party.
60E05	Petrological study of outcrop samples, and cores and cuttings from selected wells in Georgina, Artesian and Bowen Basins.	Continuing at least to June 1965	I.F.P. petrologist	2 Technical Assts. (I.F.P.)	In conjunction with B.M.R. petrologists R. Nicholls, L. Bastian and M. Arman.
S278	Sedimentary petrology of samples from measured sections and cores in Ordovician Stairway Sandstone, Amadeus Basin, N.T.	Continuing from 1964 project as time permits.	Dr. K. Crook (A.N.U.)	At University Laboratory	In conjunction with P. Cook of B.M.R.
SEDIMENTARY PETROLOGY 6LP 64/996	Continue sedimentary petrology of samples from Bowen, Artesian and Georgina Basin, and report on results. Provide determinations of problem lithologies for field parties.	Continuing	L. Bastian R. Nicholls M. Arman		Visits to field for special problems may be necessary.

PUBLICATIONS
BULLETINS

Subject	Author	Timetable	Remarks
		Writing	Editing
Palaeontological papers	Dickins, Belford, Gatehouse, Opik, Lloyd.	To be finished March 1965.	Collection of papers on a Permian Crinoid, Hunter Valley fossils, Middle Cambrian Daly River trilobites, Permian forams from B.M.R. 8 and 9, Lower Ordovician from Fergusson River, Tertiary forams (with McMichael of Australian Museum).
Middle and Upper Cambrian trilobites - specific features	Opik	Various periods throughout 1965.	
Lower Carboniferous ostracods of the Bonaparte Gulf	P. Jones	To be finished by November 1965.	
Miocene and Pliocene Forams of Papua-New Guinea.	Belford	Written	Editing completed. Ready for press by December 1964.

REPORTS

Permian stratigraphic palynology of Bowen and Artesian Basins.	Evans	To be finished May 1965.
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GEOLOGICAL BRANCH (Ctd.)

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LABORATORIES AND WORKSHOP

GEOPHYSICAL BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
<u>Development Group</u> Fluxgate Variograph 7LX4 64/777 61/468	Complete construction and testing of variograph. Request for first order absolute magnetic surveys.	Jan.-Feb.	K.J. Seers E.H.G. Muir			
Proton Magnetometers 7LX4	Continue development of MNS1 magnetometer (airborne). Acceptance test initial production model of MNS1.	Feb.-July January	" "			
G.S.I. Pendulum Apparatus 7LX4	The major part of this equipment is to be re-designed using semi-conductors instead of vacuum tubes for greater portability and reliability.	August- November	"			
Seismic Cable Tester 7LX4	Completion of design of short circuit detector.	As available	"			
Laboratory Instruments. 7LX4	Design and construction of specialised testing facilities, viz :- a) Decade Test Unit b) Precise Frequency Reference c) Magnetic Interference Detector.	As available	"			
Handbook Writing 7LX4	Writing of handbooks for equipment already designed, e.g. MNZ1 proton magnetometer, MFD3 fluxgate magnetometers, and for all equipment to be designed in 1965.	As available	"			
Circuit Development 7LX4	Application of new election devices to instrumentation.					
Remanent Magnetometer 7LX4	Design of remanent magnetometer for checking rock samples obtained by Airborne Section.					
Conductivity Bridge 7LX4	Further development to extend the range of existing apparatus.					
Conversion of Prototype Equipment 7LX4	Conversion of MND1 proton magnetometer to MNZ1 for observatory use. Conversion of prototype crystal timing unit to final form of NCD2 crystal clock.					
Low Frequency Generator 7LX4	Design and construction of low frequency sine-wave generator to replace bulky and over-sophisticated commercial equipment for observatory use.					

These projects are desirable and
should be pursued if staff
position allows.

LABORATORIES AND WORKSHOP

GEOPHYSICAL BRANCH (Contd.)

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
<u>Maintenance Group</u> General Maintenance 7LX5 64/777 61/468	Overhaul, repairs and testing of geophysical field and laboratory equipment as required.	Continuous	A.J. Barlow A. Spence	Young Gan Lynne Ryan		
Seismic Field Equipment Installation 7LX5	Integration of FM magnetic recorder. Programmed Gain Unit, Prefilters, Oscillograph and FM radio with existing seismic amplifiers and direct magnetic recorder for sedimentary basin seismic party. Reinstallation in Seismic Cab.	Oct. 1964 March 1965	A.J. Barlow	Gan Ryan (Workshop)		
Digital Recording Equipment VH-MIN 7LX5	Rebuild, with necessary design changes, digital recording equipment to suit new 8 channel repeaters and C.D.C. preferred input code. Addition of digital scintillation counting equipment.	May 1965 December 1965	A.J. Barlow A. Spence	Jackson Lynne		
Rock Testing 7LX5	Susceptibility and elastic property rock sample measurement as required	Continuous	A. Spence	?		
Other 7LX5	Small construction projects as required.	As time available	A. Spence A.J. Barlow	Gan Ryan		
<u>Mechanical Design</u> 7W	Design of mechanical devices, instruments and equipment as required.	Continuous	Mechanical Design Group			
<u>Workshop</u> 7W 64/977	Construction, maintenance and repairs of instruments and equipment as required.	Continuous	Supervisors	Workshop Staff.		

LABORATORY & WORKSHOPS

MINERAL RESOURCES BRANCH

42

Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
<u>MINING ENGINEERING SECTION</u>						
Vanadium in East Coast Ilmenite 6LC 64/830	Investigate significance and recovery of vanadium from ilmenite from East Coast of N.S.W.		A.M.D.L.			By Contract with A.M.D.L.
Jervois Range Copper Sulphate 6LC 64/1181	Investigation depends on results of inspection of plant.		A.M.D.L.			By Contract with A.M.D.L.
<u>PETROLEUM TECHNOLOGY SECTION</u>						
Laboratory SLX 62/318 62/399	Laboratory Investigations 1. Core analysis and petrophysics 2. Analysis of reservoir fluids 3. Standard oil tests 4. Drilling fluid investigations 5. Other reservoir investigations including possibly P.V.T. work.	Continuous	M. Konecki P.G. Duff F.H. McKay J. Puchel	Williams	Full complement of suitable laboratory equipment	P.V.T. work depends on the delivery of P.V.T. equipment to be made during 1965.

OFFICE & MISCELLANEOUS

OPERATIONS BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Remarks
<u>PLANNING & CO-ORDINATION SECTION</u>					
	General study, preparation and co-ordination of programme. Advice to and liaison with States and companies on programme activities. Examination of contract specifications for field operations. Processing and preparation of correspondence to the Secretary and Minister as required. Supervision and preparation of Pictorial Index, supervision of preparation of Programme maps. Secretariat of Technical Committee on Underground Water.	Continuous	D.A. White G.F. Clarke Class II Class I		Visits to field parties.
<u>PUBLICATIONS AND INFORMATION SECTION</u>					
	1. Attend to matters concerning publications as follows:- (a) submit policy proposals (b) administer publications programme (c) recommend approval (d) supervise distribution	Continuous	K.M. Kennedy R.W. Haynes A.J. Courlay P.M. Stott	Clerk Clerk (Library)	
	2. Prepare press statements and technical articles	As required			
	3. Answer technical Enquiries	Continuous			
	4. Attend to matters concerning Records as follows: (a) Recommend approval (b) Recommend classification (c) Supervise distribution to Open File Centers.	Continuous			
	5. Review past technical information and suggest appropriate classification.	Continuous			
	6. Prepare Open File Circulars in January, March, June, September and December.	Continuous			
	7. Review and prepare Catalogue of Publications.	Continuous			
	8. Establish library in new building and coordinate unification of existing libraries.	12 months			

OFFICE & MISCELLANEOUS

OPERATIONS BRANCH

PUBLICATIONS

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Subject	Author	Timetable		Remarks
		Writing	Editing	
Poole Range Seismic Survey	Compagnie General De Geophysique	Jan. 1963	Feb.-March	To be printed together as a B.M.R. Report. Footnotes will be added where necessary by P. & I. Section.
I.F.P. Report Aus. 69.	J. Ferrand	May 1963	Feb.-March	
Open File Circular	A.J. Gourlay	Quarterly	Quarterly	Circulars No. 3, 4, 5, 6 and 7 to be produced.
Catalogue of Publications	P.W. Stott	Jan.-Oct.	Jan.-Oct.	Revision and updating of existing Catalogue.

OFFICE & MISCELLANEOUS

GEOLOGICAL BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
Miscellaneous Transport 6X	Vehicles used to support field activities e.g. purchases, collection of parcels etc. in the A.C.T.					
Australia and Oceania	Compilation of 1:4,000,000 Geological maps.	Continuous	B.K. Graham	1 Draftsman		
Stratigraphic Indexing and Hexicons	Maintenance of Stratigraphic index cards	Continuous	F.I. Townsend C. Mitchell			Mrs. Townsend is temporarily seconded to Library.
Map Editing	Editing of Geological maps for publication.	Continuous	G.M. Burton 1 Geologist			
PHOTOGEOLOGICAL GROUP 6X4	Preparation of base maps where not available from National Mapping: photo-interpretation and geological interpretation for use by field parties: reporting on results. Areas involve Artesian, Carpentaria, Wiso, Ngalia basins and the Kimberley Plateau. Some detailed photo-studies for Engineering Geology and structural studies.	Continuous	W.J. Perry Field party geologists part time. I.F.P. Photo- geologist.	3 Draftsman) 1 Photographer) E.M.R.	Nil	Visits to field are necessary for interpretation checks. (1) This staff also handle sedimentary petrological logs from other I.F.P. specialists.
GENERAL	Prepare statements, collect and record information on Oil Advisory work, company subsidy applications and completion reports, current drilling information; prepare punch card information on geology and water supply; prepare map showing location covered by all Bureau records.	Continuous	J.N. Casey D.J. Guppy J.E. Thompson Miss B. Graham	Clerk (when available)	Nil	
	Editing	Continuous	K. Townley R. Jacobsen (D. Trail) Part Time			
MINERAL RESOURCES	Preparation of index to mineral deposits; mineral maps. Answer queries on mineral resources. Preparation of metallogenic maps.	Continuous	I. McLeod Y. Mizieris			
ANTARCTICA 6X5 64/985	Mapping of Enderby Land	Dec.1964-Mar.1965	I. McLeod P. Cook D. Trail Wallace (N.S.W.G.S.)			Use of helicopter Trail responsible for writing up results.

OFFICE & MISCELLANEOUS

GEOPHYSICAL BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff and Wages Hands	Vehicles, Equipment	Remarks
Aeromagnetic Interpretation Study	Application of digital computer to calculations of anomalies from 3-dimensional sources; compilation of directory of type anomalies for interpretation of aeromagnetic data.	Feb.-March Oct.-Dec.	G. Young			
Computer programme for Airborne Data Reduction	Rewriting of aeromagnetic reduction programme for CDC computer; investigation of use of digital recording for radiometric data.	April-Aug.	R. Wells			
Rock Magnetism	Study of rock magnetism to assist aeromagnetic interpretation. Investigate feasibility of spinner magnetometer for field use.	February November December.	B. Dockery			
Water Table Detection	Investigate possible use of radioaltimeter for recording water table in arid areas. Mainly literature search.	Oct.-Dec.	D. Tipper			
Miscellaneous Transport 7X	Vehicles used to support field activities e.g. purchases, collection of equipment etc.					
General	Editing	Continuous	H. Oldham			

OFFICE AND MISCELLANEOUS

MINERAL RESOURCES BRANCH

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional	Vehicles	Remarks
<u>Mineral Economics Section</u>						
Commodity Studies 8X	Surveys of industry	*	As required	-	Short term hire	* The amount of time which can be spent on these projects will depend on the pressure of other commitments, in particular ad hoc activities and publications. The experience of 1964 indicates that the time available will be negligible with the present staffing position. Accordingly, no estimate of time to be spent on these projects has been made.
Regional Studies	Studies of world mineral industry	*	As required	-		
Basic Investigations 8X	Investigations of					
	(1) Long-range production and consumption trends	*	D.F. Livingstone Others as available			
	(2) New Techniques in mineral extraction,* processing, utilization.		As available		Short term hire	
	(3) Substitution	*	As available			
	(4) Resources economics	*	D.F. Livingstone Others as available			
International Commodity Problems	Preparation of appropriate advices	3 man-months	As required	As required		
General	Preparation of advices, briefs, papers, etc. Preparation and circulation of specialized information. Dealing with enquiries and visitors.	At least 30 man-months	As required	As required		

PUBLICATIONS

Subject	Author	Timetable		Remarks
		Writing	Editing	
A.M.I. Annual Review, 1964	Section	June-Aug.	July-Sept.	Followed by proof-reading by editor.
A.M.I. Quarterly Review	Section	Vol. 17 No. 3	February	Followed by proof-reading
		No. 4	May	"
		Vol. 18 No. 1	August (-Sept.)	"
		No. 2	November	"
Australian Mineral Resources - Statistical volume	Kalix	January	January	Followed by proof-reading later in the year, by editor.

OFFICE AND MISCELLANEOUS
MINERAL RESOURCES BRANCH (Ctd.)

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Party/Project Symbol File	Nature of Work	Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
<u>MINING ENGINEERING SECTION</u>						
Gold Mining 8X	Report on operation of mines receiving subsidy under the Gold Mining Industry Assistance Act and on development programmes of mines applying for assistance under the Gold Mines Development Assistance Act (1962).	Continuous	G.F. Mead		Short Term Hire Dept. of Supply as required.	
Manganese and Iron Ore.	Processing applications to export these ores which are controlled.	As Required	G.F. Mead R.W.L. King			Field Inspections often required for proposals to develop iron ore deposits.
Lode Tin Recovery Q'ld. 6LC	Preparation of design Specifications and pilot plant studies of compact 1 - 2 tons/hour capacity mill for small tin mines.	Depends on results of first stage.				To be carried out by Queensland University Research Division. Further work in 65/66 Financial Year.
Explosives	Liaison with State Mines Departments in preparation of a code of rules for the safe use of A.N.F.O. explosives in mines.	As required	G.F. Mead R.W.L. King			
<u>PETROLEUM TECHNOLOGY SECTION</u>						
Oil Advisory Committee	All matters of O.A.C. (Chief of Section is a member of the Committee and, also the Convenor/Secretary)	Continuous	H.S. Taylor-Rogers M. Konecki (Part Time)	Clerk (Part Time)		

1966 TENTATIVE PROGRAMME

OIL SEARCH
GEOLOGICAL BRANCH

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Party/Project	Nature of Work	Approx. Timetable	Staff	Remarks
Amadeus N.T.	Finish writing Bulletin on the geology of the Basin and complete the Explanatory Notes and Maps.		A.T. Wells L. Ranford	
Ngalia N.T.	Commence the geological mapping of the Ngalia Basin.		P.J. Cook	Helicopter operation required for 10 days. Shallow core hole drilling contract.
Wiso Area N.T.	Complete mapping of sheets commenced in 1964, and start mapping Wave Hill and Newcastle Waters 1:250,000 Sheets.		E.N. Milligan	Helicopter contract required for 1 week. Shallow core hole drilling contract.
Daly Waters N.T.	Continue the mapping of the Georgina Basin to tie with the Daly River Basin by covering the Daly Waters and Larrimah 1:250,000 Sheets.		M.A. Randal	Helicopter operation for 1 week, and shallow core hole drilling contract required.
Bonaparte Gulf N.T./W.A.	Complete Bulletin and maps on the geology and palaeontology of the basin.		J.J. Veevers J. Roberts	
Great Artesian Q. Basin	Continue the September mapping of the basin by completing the 1:250,000 sheets of Connemara, Jundah, Canterbury and Windorah.		R. Vine	Shallow core hole drilling may be necessary - to be decided after 1964 season.
Carpentaria Basin Q.	Commence geological mapping in this basin by completing the 1:250,000 sheets of Millungera and Donors Hill.		W. Jauncey	Shallow core hole drilling required.
Drummond Basin Q.	Complete the mapping of the Buchanan, Galilee and Jericho 1:250,000 sheets, and commence a study of the Devonian - Carboniferous and Permian of the Drummond basin and its extension into the Adavale Basin.		F. Olgers	Shallow core hole drilling probably required.
Bandanna Study in the Bowen Basin. Q.	Continue the study of the Upper Permian Bandanna formation started in 1965.		R. Jensen	Shallow core hole drilling required.
North Yarrol Basin. Q.	Complete the geological mapping of Rockhampton and Port Clinton 1:250,000 sheets begun in 1965.		A. Kirkegaard (Q.G.S.)	
Bowen Basin. Q.	Completed the Bulletin, maps and Explanatory Notes on this Basin.		E.J. Malone J.M. Dickens G. Mollan	Most of this will be completed by May, 1966.
General	Provide geologist with some Geophysical Branch field parties, particularly seismic.			

OIL SEARCH
GEOPHYSICAL BRANCH

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Party/Project	Nature of Work	Approx. Timetable	Staff	Remarks
<u>Seismic No. 1</u>				
Georgina Basin	Continue Reconnaissance commenced in 1965			
	OR			
Ayers Rock Gravity Depression	Investigation of association of Depression with sediments			1965 Aeromagnetic survey will have a bearing.
	OR			
Tangorin - Nanda Gravity Depressions.	Investigation of structural significance and relation to Palaeozoic sedimentation of the Depression			
	OR			
Wiso Plateau	Follow up of suggested basin development following from geological, gravity, and aeromagnetic reconnaissance in 1965.			
<u>Seismic No. 2</u>				
	Experimental work on elimination of multiple reflections. e.g. Gippeland			
	OR			
	Research on estimating thickness of refractors from rate of attenuation of energy.			
	OR			
	Research on matching field records to synthetic records at well sites and inversely obtaining a velocity log from field records.			
<u>Contract Operations</u>				
Carnarvon - Canning Basins seaward Link.	Marine Gravity - Sonar-Boomer			A firm recommendation for marine operations must be subject to the 1965 operation being successful. If it is then the marine work will, in general, provide the greater amount of information, and aid to oil search, per £ spent. However, since major contract funds are being spent on gravity on land, policy may dictate that these funds be directed more towards seismic. If marine work is approved other areas deserving attention are offshore extensions of Carpentaria, Eucla, Perth, Sydney, Papuan, New Guinea and other basins and the Coral Sea Plateau.
	OR			
Carnarvon-Perth Basins seaward extension.	Marine Gravity - Sonar-Boomer			
	OR			
Sahul - Shelf	Marine Gravity - Sonar-Boomer			
	OR			
Tangorin-Nanda Gravity Depression	Surface Impact Seismic			
	OR			
Georgina Basin Limestone	Surface Impact Seismic			
Carpentaria Basin Q'ld.	Helicopter Gravity: Millungera, Croydon, Normanton, Galbraith, Rutland Plains, Holroyd, Aurukun, Weipa, Jardine River, Torres Strait, Orford Bay, Cape Weymouth, Coen, Ebagoola, Hann River, Walsh, Red River, Georgetown, Gilberton, Clarke River, Einasleigh, Atherton, Mossman, Cooktown, Cape Melville, Innisfail, Ingham, Ayr, Townsville.	March - December		Contract Helicopter £120,000?
National Mapping N.S.W.	Helicopter Heighting and Gravity of 6:250,000 Sheets.	April - June		
VH-MIN S.A.	Aeromagnetic of parts of Coober Pedy, Billakalina, Tarcoola, Kingoonya 1:250,000 areas.	1½ months		Requested by S.A. Mines Department.
Contract	Contract Aeromagnetic surveys to fill in gaps in coverage of Great Artesian Basin - parts of Muttaturra, Longreach, Blackall, Jundah, Windorah, Eromanga, Thargomindah, 1:250,000 areas.	2 months		? £50,000
	OR Test with high resolution Magnetometer.			
VH-MIN	Experimental flying, crustal investigation or other projects.	2 months		

OIL SEARCH
GEOPHYSICAL BRANCH. (Cont'd.)

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Party/Project	Nature of Work	Approx. T timetable	Staff	Remarks
Gravity along Seismic Traverses, N.T., Q'land.	Gravity readings at seismic shot-points.	March - June		
Dept. of Interior levelling N.T.	Levelling required for 1967 Helicopter gravity survey. Approx. 25 1:250,000 sheet areas immediately east of N.T. - W.A. border and bounded by Boomer survey area in N and 1962 helicopter area in S.	April - November.		
Well logging Great Artesian Basin	Contract.			? £50,000

PETROLEUM EXPLORATION BRANCH

Subsidy Section	Normal subsidy programme similar to 1965.			
Subsurface Section	(a) Sedimentary Basin Study Group. Complete Basin Studies on 1. Sydney Basin 2. Clarence - Ipswich Basin (b) Core and Cuttings Lab. As for 1965 but directed to (a) above.			

METALS (INC. URANIUM) SEARCH

GEOLOGICAL BRANCH

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Party/Project	Nature of Work	Approx. Timetable	Staff	Remarks
Kimberley	Regional Mapping, parts Lennard River, Yampi.	Mid May - Sept.	H.G. Roberts D. Gellatly G. Derrick 2 - W.A.G.S.	Complete mapping of Kimberley region; commenced in 1962 in co-operation with W.A. Geological Survey.
Cape York Peninsula	Regional Mapping Red River, Hann River Walsh 1:250,000 Sheet area.	Mid May - Sept.	3 Geologists.	With Sedimentary Basins Mapping Section.
Ultrabasic Belt New Guinea	Complete Regional Mapping.	May - Oct.	3 Geologists	Commenced 1965.
Bowen Geochemical	Complete stream sediment sampling.	May - Oct.	1 Geologist	Commenced 1964.
Darwin Uranium Group	Complete synthesis and analyses of geology etc. in Hundred of Goyder.	1966 (part)	As per establishment.	
Canberra	Continue stream sediment sampling on selected 1:50,000 Sheet areas.			
Regional Geochemical Sampling	Trained samplers to be attached to all regional geological mapping parties.			
Victoria River Basin	Literature study, Mines Dept. Records Water Supply etc. prior to commencing work in 1967 and 1968.	-	-	Aeromagnetic cover by D.C.3 or contract, should be completed prior to commencing geological survey.
Age Determination			Bofinger Harding	
Orientation Geochemical	Continuation of orientation sampling.			
Mount Isa	Continue study trace element distribution.			Commenced 1963.
Kalgoorlie	Continue study trace element dispersion haloes.			Commenced 1964.
Western P.N.G. or Sudest Island	Reconnaissance mapping			

METALS (INC. URANIUM) SEARCH

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GEOPHYSICAL BRANCH

Party/Project	Nature of Work	Approx. Timetable	Staff	Remarks
Tasmania	Surveys as recommended by Tasmanian Mines Department.			
Queensland	Test surveys on tin lodes in Herberton district.			
I.P. Tests	Test with I.P. method in selected areas.			
Darwin Uranium Group	Laboratory services, logging, field surveys.			
VH-MIN, S.A.	Aeromagnetic and radiometric of Copley 1:250,000 area.	1 month		Requested by S.A. Mines Department.
VH-MIN, W.A.	Aeromagnetic and radiometric of Edjudina 1:250,000 area.	1 month		Requested by W.A. Mines Department. Programmed for 1964 but not surveyed.
VH-MIN, New England, N.S.W.	Aeromagnetic and radiometric, $\frac{1}{2}$ mile spacing of Tingha, Glencoe, Glen Innis, Clive, Emmaville, Maryland, part Inverell, 1-mile areas.	1 month		Depends on mapping becoming available
Contract Survey, N.T.	Aeromagnetic of Auvergne (part), Delamere, Waterloo, Victoria River Downs, Limbunya, Wave Hill, Birrindudu, Winnecke Creek, 1:250,000 areas.			2 mile spacing (£70,000). 4 Sheets in 1966. 4 Sheets in 1967.
VH-GEO, W.A.	Detailed aeromagnetic, follow-up of DC3 surveys, in Kalgoorlie region.	3 months		
VH-GEO, TAS.	Detailed aeromagnetic, Renison Bell (Extension to 1964 survey) <u>or</u> Mt. Bischoff <u>or</u> Mt. Balfour areas.	2 months		
VH-GEO, N.T.	Detailed aeromagnetic on areas to be selected.	2 months		

NON-METALS SEARCHGEOLOGICAL BRANCH

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Party/Project	Nature of Work	Approx. Timetable	Staff	Non-professional Staff	Vehicles, Equipment	Remarks
	<u>PHOSPHATE</u>					
	<u>Continental Sub-Group</u>					
	(a) Possible continuation of basic reviews					
	(b) Possible detailed investigation arising out of basic reviews		2 Geols.	minimum 3 F/A Cook	L/Es, Lab. Caravan	Programme depends on results of 1965 work and report of Specialist.
	<u>Oceanographic Sub-Group</u>					
	Continued recce and sampling of bottom sediments etc. More detailed work in New Guinea possible				Boat	

ENGINEERING INVESTIGATIONS AND HYDROLOGY

GEOLOGICAL BRANCH

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Party/Project	Nature of Work	Approx. Timetable	Staff	Remarks
<u>Australian Capital Territory</u>				
Corin Dam	Construction services	Discontinuous through year	1 geologist	If earth dam is to be built very little work load may be involved; will however, probably be rock-fill structure.
Minor Investigations	Much as for 1965 programme. Specific projects will differ.	Continuous	1-2 geologist	
Miscellaneous Investigations (Hydrology and drainage)	As for 1965.	Discontinuous 6-8 geologist months	1-2 geologists involved	
Canberra water supply damsite investigations	Design investigation at Googong, Queanbeyan River, or alternatively feasibility investigations on Gudgenby or Cotter Rivers.	6 months +	1 geologist	} Timing for these projects, which eventually will be required, uncertain.
Water-control damsites, Queanbeyan and Molonglo Rivers	Design investigation for two damsites?	6 months? each damsite	2 geologists	
<u>Northern Territory</u>				
Adelaide River, and/or other unspecified damsites	Possible design investigation for Adelaide River, together with feasibility investigations on at least one other - possibly Katherine or Daly River Dams or Adelaide River barrage.	6 months +	1 geologist +	Some services probably from N.T. Resident staff.
<u>Papua-New Guinea</u>				
Port Moresby No. 2 Underground Power Station	Services during construction.	2 months +	1 geologist	} Certain of these services may be provided by Port Moresby resident staff. Work load contingent on some schemes proving feasible and on P.N.G. Electricity Commission development programme.
Upper Ramu Hydro-electric Project - power station and dam.	Probably further design and feasibility investigations.	?	1 geologist	
Lower Warangoi Hydro-electric Scheme	Probably further design investigations; possibly construction services.	?	1 geologist	
<u>GEOPHYSICAL BRANCH</u>				
Upper Ramu T.P.N.G.	New Tunnel line Seismic, magnetic and resistivity	1965 ?	Mann, Kevi or Wilson	Assistants to be supplied by Administration. Project uncertain.
Queanbeyan and Molonglo Rivers, A.C.T.	Small Canberra Lake level control dams. Seismic and some resistivity.	1966?	Polak or Kevi or Mann	
Cotter E	Test on effectiveness of cement grouting.	1966	"	

REGIONAL GEOPHYSICAL SURVEYS

GEOPHYSICAL BRANCH

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Party/Project	Nature of Work	Approx. Timetable	Staff	Remarks
Pendulum Gravity	Ties to Antarctic Bases W. Coast ? International ties (e.g. W.P.C.L.) Chain W. Aust.	January - October	<u>J. Shirley</u>	W. Langron to join Shirley for selected portions of work. W.P.C.L. requirements may modify this programme.
Regional Traverses	Regional gravity traverses W.A., N.T., and S.A.	July - December	<u>J. van Son</u>	J. van Son to make one supervisory visit. Dependent on recruitment of T.A. 2. Timing of work dependent on progress made by National Mapping in surveying traverses.
Isogal Survey	Completion E-W ties across Australia and N-S connections.	February - June	<u>B. Barlow</u>	Charter Aircraft. Vehicles, mechanic and F.A. needed to emplace fuel, test for landing strips, Feb-April period. Could be modified by W.P.C.L. requirements.
Earth Tide Recording.		January - December	?	
Regional Magnetic				£3,000 Light Aircraft

OBSERVATORIES

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GEOPHYSICAL BRANCH

Party/Project	Nature of Work	Approx. Timetable	Staff	Remarks
Bass Strait Upper Mantle Project	Seismic recording of explosions in Bass Strait.	? February- March	? Crustal studies group or Observatory & Exploration seismic personnel	In cooperation with Universities and Exploration companies and Navy.
Rabaul crustal thickness	Deep seismic refraction	? May	As above	Requested for time corrections to volcanological network stations. Local velocity measurements.