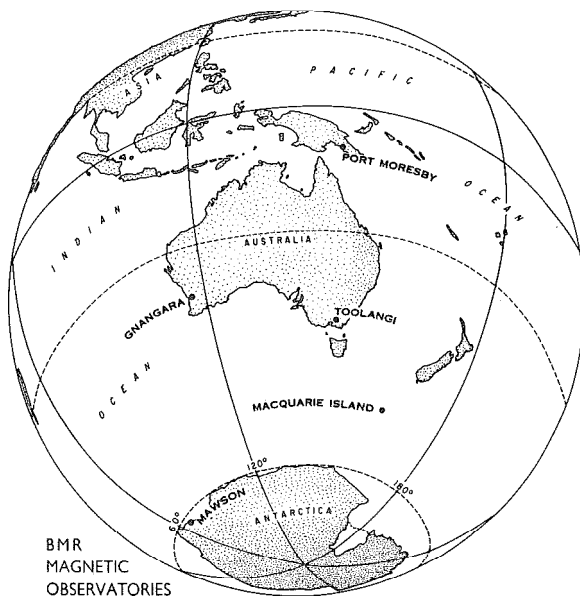




BUREAU OF MINERAL RESOURCES,
GEOLOGY & GEOPHYSICS

GEOFYSICAL OBSERVATORY REPORT



Volume 16, No. 5
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*Issued under the authority of
The Hon. David Fairbairn, Minister for National Development*

COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

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The terminology used in this report is that accepted by international convention. All times are in Universal time. Should further information be required, explanation can be obtained by applying to:-

Assistant Director (Geophysics),
Bureau of Mineral Resources,
P.O. Box 378,
CANBERRA CITY. A.C.T. 2601.

CONTRIBUTING OBSERVATORIES

OBSERVATORY	OBSERVER IN CHARGE	GEOGRAPHIC		GEOMAGNETIC	
		LAT.	LONG.	LAT.	LONG.
GNANGARA	<i>I.B. Everingham</i>	31°47'S	115°57'E	-43.2°	185.8°
MACQUARIE I.	<i>J.B. Connelly</i>	54°30'S	158°57'E	-60.7°	243.0°
MAWSON	<i>R.S. Smith</i>	67°36'S	62°53'E	-73.2°	103.1°
PORT MORESBY	<i>D. Denham</i>	9°24'S	147°09'E	-18.7°	218.0°
TOOLANGI	<i>C.A. van der Waal</i>	37°32'S	145°28'E	-46.7°	220.8°

MAGNETOGRAPHS

OBSERVATORY	TYPE	NOMINAL SCALE VALUES								
		NORMAL			INSENSITIVE			RAPID RUN		
		D	H	Z	D	H	Z	D	H	Z
GNANGARA	<i>Eschenhagen</i>	1.1	2.5	5.3						
MACQUARIE I.	<i>La Cour</i>	2.4	25	21				1.0	5.4	6.1
MAWSON	<i>La Cour</i>	0.9	9.6	9.7	2.4	51	50			
PORT MORESBY	<i>La Cour</i>	0.4	2.8	3.3				0.05	1.2	0.3
TOOLANGI	<i>La Cour</i>	1.2	4.5	4.4						

Scale values are in minutes of arc/mm (D) and gammas/mm (H,Z)

G N A N G A R A

MAGNETIC K-INDICES - MAY 1968

Range for lower limit of K=9 is 350 gammas

<u>Day</u>	<u>K-Indices</u>								<u>K-Sum</u>	<u>C</u>
1	2	1	1	0	5	3	4	4	20	1
2	3	3	2	3	3	2	1	2	19	1
3	2	3	2	2	2	1	1	2	15	0
4	2	1	1	1	0	1	1	1	08	0
5	1	1	1	1	0	2	1	1	08	0
6	1	2	1	0	0	1	1	1	07	0
7	3	5	6	4	6	5	4	3	36	2
8	3	2	1	1	1	2	2	2	14	0
9	2	2	2	4	3	3	5	3	24	1
10	2	2	2	1	1	2	1	2	13	0
11	3	3	4	3	3	2	2	2	22	1
12	4	3	3	4	3	2	3	3	25	1
13	3	2	2	3	2+	3+	2+	2+	19+	1
14	2+	2	2	2	3	2	3	2	18+	1
15	2	2	3	1	0	1	1	2	12	0
16	2	2	2	3	3	3	2	1	18	0
17	1	1	1	1	4	2	3	3	16	0
18	2	2	3	1	2	4	3	2	19	1
19	2	1	2	1	2	4	2	4	18	1
20	4	2	3	4	1	3	2	3	22	1
21	3	2	3	1	4	5	3	3	24	1
22	2	3	3	2	1	3	1	2	17	0
23	2	1	0	2	2	2	3	3	15	0
24	2	3	3	2	2	2	3	1	18	0
25	1	0	0	1	1	3	2	1	09	0
26	1	1	0	0	1	0	0	0	03	0
27	0	0	1	0	0	0	1	1	03	0
28	1	0	0	0	1	1	3	0	06	0
29	1	1	2	2	3	2	3	3	17	0
30	2	3	2	2	2	2	2	2	17	0
31	2	2	2	1	4	3	2	2	18	1

MACQUARIE ISLAND

MAGNETIC K-INDICES - MAY 1968

Range for lower limit of K=9 is 1500 gammas

<u>Day</u>	<u>K-Indices</u>								<u>K-Sum</u>	<u>C</u>
1	0	0	0	2	6	5	4	3	20	1
2	3	3	3	6	4	2	0	1	22	1
3	3	4	2	2	2	2	0	0	15	0
4	2	0	1	1	0	0	0	0	04	0
5	0	0	0	1	0	0	0	0	01	0
6	0	1	0	0	0	0	0	0	01	0
7	3	5	5	6	7	6	3	3	38	2
8	2	1	1	4	3	1	1	1	14	0
9	3	2	4	6	5	5	5	3	33	1
10	2	3	0	1	1	1	1	1	10	0
11	2	3	5	5	4	2	1	1	23	1
12	3	6	4	6	5	3	2	3	32	1
13	2	2	2	5	3	4	2	2	22	1
14	2	3	3	3	3	3	2	1	20	1
15	2	2	5	3	0	0	2	1	15	0
16	2	2	1	5	5	5	3	1	24	1
17	0	3	2	4	5	-	-	-	--	-
18	1	2	3	2	5	6	4	2	25	1
19	1	0	3	2	3	3	3	3	18	1
20	3	4	4	6	4	4	3	3	31	1
21	3	2	4	3	6	7	5	3	33	1
22	3	5	5	3	2	3	2	2	25	1
23	3	1	0	2	4	3	3	3	19	1
24	4	4	6	5	4	2	2	1	28	1
25	1	0	2	1	2	4	1	1	12	0
26	0	1	0	1	0	0	0	0	02	0
27	0	0	0	0	0	0	0	0	00	0
28	0	0	0	0	0	1	2	1	04	0
29	0	1	4	4	3	3	2	1	18	1
30	1	2	3	2	2	2	0	1	13	0
31	2	1	2	3	5	2	2	0	17	0

M A W S O N

MAGNETIC K-INDICES - MAY 1968

Range for lower limit of K-9 1500 gammas

Day	K-Indices								K-Sum	C
1	4	3	2	2	3	4	4	6	28	1
2	4	5	4	4	3	2	2	2	26	1
3	5	6	5	3	3	2	1	3	28	1
4	2	4	3	3	2+	1	1	4	20+	1
5	1	2	2	1	0	1	0	3	10	0
6	2	2	1	0	0	2	2	3	12	0
7	3	6	5	4	5	4	6	6	39	2
8	6	3	3	1	2	2	3	5	25	1
9	5	5	5	4	3	4	7	4	37	2
10	3	4	3	1	2	2	1	3	19	1
11	3	5	5	4	2	2+	4	5	30+	1
12	6	5	6	5	3	2	6	6	39	2
13	6	4	4	4	3	4	6	4	35	2
14	3	5	4	3	4	3	5	3	30	1
15	4	4	5	3	2	3	2	6	29	1
16	3	4	3	4	4	3	4	3	28	1
17	1	4	3	3	4	4	5	6	30	1
18	4	4	4	4	3	4	4	6	33	1
19	2	3	4	3	3	5	3	6	29	1
20	7	5	5	5	2	3	3	5	35	2
21	5	4	5	3	3	7	5+	7	39+	2
22	6	5	5	3	3	4	2	6	34	2
23	4	3	2	2	3	4+	4	6	28+	1
24	5	5	5	3	3	2	5	3	31	1
25	4	2	1	3	2	2	5	3	22	1
26	2	4	2	0	1	1	0	0	10	0
27	1	1	2	1	0	0	1	4	10	0
28	2	2	2	0	0	1	5	4	16	0
29	5	3	4	5	3	4	3	3	30	1
30	2	3	3	3	3	3	6	6	29	1
31	6	5	3	3	3	4	3	5	32	1

P O R T M O R E S B Y

MAGNETIC K-INDICES - MAY, 1968

Range for lower limit of K-9 is 300 gammas

<u>Day</u>	<u>K-Indices</u>								<u>K-Sum</u>	<u>C</u>
1	2	1	1	2	4	4	3	5	22	1
2	3	3	4	4	3	2	2	2	23	1
3	2	3	3	2	3	1	1	1	16	0
4	3	2	1	1	1	1	0	1	10	0
5	1	1	1	1	1	2	1	1	09	0
6	2	2	1	1	0	2	3	2	13	0
7	4	7	6	4	5	4	2	3	35	2
8	2	1	3	3	1	1	1	1	13	0
9	3	2	3	3	2	2	2	2	19	1
10	3	2	2	2	3	3	2	3	20	1
11	3	3	3	3	3	2	1	-	--	1
12	4	3	4	3	3	1	2	1	21	1
13	4	2	2	3	2	2	1	1	17	1
14	2	3	2	2	2	1	1	2	15	0
15	2	3	4	2	0	1	1	1	14	1
16	2	2	2	3	3	2	2	1	17	0
17	1	1	2	2	4	3	2	2	17	1
18	2	2	2	2	2	4	3	2	19	1
19	3	3	4	2	2	2	2	2	20	1
20	3	3	3	3	2	2	1	3	20	1
21	3	2	4	2	3	4	2	2	22	1
22	3	3	3	2	1	1	1	3	17	0
23	2	1	1	2	3	3	3	3	18	0
24	2	3	3	1	3	1	1	1	15	0
25	1	1	1	1	1	3	1	0	09	0
26	2	1	1	0	0	0	0	0	04	0
27	0	0	3	1	0	0	1	1	06	0
28	2	1	2	1	2	1	2	1	12	0
29	1	1	2	4	2	1	2	1	14	1
30	3	3	1	2	2	2	1	1	15	0
31	2	3	1	2	3	3	1	1	16	0

T O O L A N G I

MAGNETIC K-INDICES - MAY, 1968

Range for lower limit of K=9 is 500 gammas

<u>Day</u>	<u>K-Indices</u>								<u>K-Sum</u>	<u>C</u>
1	1	1	1	1	4	4	3	4	19	1
2	3	3	3	3	3	1	1	1	18	1
3	2	4	2	1	2	1	0	1	13	0
4	2	1	1	1	0	1	1	1	08	0
5	0	1	1	1	0	1	0	1	05	0
6	1	2	0	0	0	1	1	1	06	0
7	4	5	6	5	6	5	3	2	36	2
8	2	2	1	2	1	1	2	1	12	0
9	2	2	3	4	2	3	4	3	23	1
10	2	3	2	1	1	2	0	2	13	0
11	3	3	3	3	3	2	1	1	19	1
12	3	4	3	4	3	2	3	3	25	1
13	3	2	2	3	1	3	2	1	17	0
14	2	2	2	3	2	2	2	1	16	0
15	2	2	3	2	0	1	1	1	12	0
16	1	2	2	3	3	3	1	1	16	0
17	0	1	1	2	3	3	2	3	15	0
18	1	1	2	2	2	4	2	2	16	0
19	1	1	3	2	3	3	3	3	19	1
20	4	3	3	4	3	3	1	3	24	1
21	2	1	3	2	4	4	3	3	22	1
22	3	3	3	3	1	2	2	2	19	1
23	3	2	2	1	2	2	2	2	16	0
24	2	2	3	3	3	2	2	0	17	0
25	1	1	1	1	1	3	2	1	11	0
26	1	1	0	0	0	0	0	0	02	0
27	0	0	1	0	0	0	1	1	03	0
28	1	1	1	0	1	0	2	1	07	0
29	0	1	3	3	3	1	2	2	15	0
30	2	3	2	2	2	1	1	2	15	0
31	1	2	2	2	-	2	2	1	--	0

MAY 1968
PRINCIPAL MAGNETIC STORMS

Observatory	Storm - time					Sudden commencement			Degree of activity	Maximal activity on K - scale 0 to 9			Ranges			
	Begin			End		Type	Amplitudes			Day	3 - hour period	K	D	H	Z	
							D	H								Z
	d	h	m	d	h		γ	γ					/	γ	γ	
GNANGARA	07	00	32	08	02	ssc	+1	+8	+2	ms	07	3, 5	6	33	160	186
ORT MORESBY	07	00	30	07	18	ssc	+0.1	+24	+20	ms	07	2	7	10	240	120
TOOLANGI	07	00	32	07	24	ssc	--	+7	--	ms	07	3, 5	6	45	158	78

MAY 1968

PRELIMINARY MONTHLY MEAN VALUES

Based on selected quiet days

OBSERVATORY	H γ	D ° ,	Z γ
GNANGARA	23852	2 55.2W	-53496
MACQUARIE I.	13055	26 54.3E	-64133
MAWSON	18358	61 44.0W	-48083
PORT MORESBY	36253	6 11.2E	-23122
TOOLANGI	22440	10 37.9E	-56359

SUDDEN COMMENCEMENTS AND OTHER PHENOMENA

OBSERVATORY	DAY	TIME	TYPE	SENSE OF MOVEMENT		
				H	D	Z
GNANGARA	1	1432	bp A	+	-	-
	7	0032	ssc B	+	+	+
	9	1109	bp B	+	-	-
	18	1441	p12 B			
	NO RECORD 13/1420 - 14/0320					
PORT MORESBY	01	1430	bps A	+	0	+
	07	0030	ssc B	+	-	+
	07	1158	s1 A			
	09	1107	bps B	+	+	+
	25	1501	bp B	+	0	+
	31	1225	bp B	+	-	+
	31	1725	bp B	+	+	+
TOOLANGI	01	1429	bps B	+	-	+
	07	0032	ssc B	+	-	+
		1157	bps A	+	-	+
	09	1108	bps B	+	+	+
	18	1441	bp B	+	-	+
	20	1118	bp B	+	-	+
	31	1732	bp B	+	+	+