Apx. 19 Geological Log of Diamond Drilling Hole, BR–17

DDH No. BR–17 LOCATION (UTM GRID) X : 740.807mE Y : 9,979.577mN ELEVATION : 1,340.5m BEARING : INCLINATION : –90° LENGTH : 50.20m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)	CORE RECOVERY %	DEPTH (m)
0		1.50	Grey to brown strongly weathered gneiss	S	–	–																						0
5			Light grey, partly brownish grey strongly weathered biotite bearing gneiss (quartz-feldspathic; granitic) Black porous veinlets of iron oxide : 1.50–1.70m, 2.30–2.60m, 4.60–4.80m, 5.40–5.70m, 10.10–10.30m.	S	–	–	C																				5
10		11.20																										10
15		15.95 10°	Khaki to brownish grey strongly weathered biotite bearing gneiss, veined by iron-oxide	S	–	–	C																					15
		16.50 60°	Brown amorphous siliceous iron ore	S	–	–	V	← 16.10m	BR–17–01	15.95 (0.55)	1525	3.01	1185	570	1950	16.5	1564	0.610	1.06	0.42	4270	134.8	39.7	57.2	7.4	2.090		
		35° 19.60	Light grey medium-grained biotite bearing felsic gneiss, iron-oxide vein ; 17.70–17.85m	M	–	–	C	BR–17–A (WA)																				
20		20.70	Black fine porous oxidized Mn-Fe ore	M	–	–	V		BR–17–02	19.60 (1.10)	993	1.88	526	135	580	26.6	879	0.220	0.64	0.29	2650	75.4	34.0	23.3	3.5	1.150		20
		21.35	Gneiss intruded by ferrocarbonatite (21.35–21.90m)	M	–	–	C		BR–17–03	20.70 (1.20)	876	2.38	432	700	1050	21.5	961	0.330	0.54	0.19	2380	80.6	25.0	47.2	6.5	1.060		
		21.90	Black, partly red, fine porous oxidized Mn-Fe ore	M	–	–	V		BR–17–04	21.90 (0.90)	1310	1.37	3100	99	550	26.4	944	0.190	0.48	0.28	3520	94.8	22.3	25.6	4.5	0.950		
		22.80	Greenish grey strongly weathered amphibole bearing gneiss, carbonatite vein : 23.10–23.20m, 24.15–24.25m	S	–	–	C		BR–17–05	22.80 (1.85)	749	2.19	786	1450	610	21.6	938	0.430	0.61	0.20	2780	91.3	19.2	30.3	4.2	1.240		
25		24.65	Black massive porous oxidized Mn-Fe ore	S	–	–	V	25.50m	BR–17–06	24.65 (0.95)	1770	2.24	337	165	700	19.7	528	0.150	0.40	0.17	1420	47.4	26.3	37.8	5.4	0.720		25
		25.60	Greenish grey strongly weathered amphibole bearing gneiss, black porous Mn-Fe vein : 27.05–27.20m, 27.80–28.00m brown porous Fe-oxide vein : 28.40–28.60m	S	–	–	C	BR–17–B (WA)																				
30		29.80	Brown, with black spots, porous weathered ferrocarbonatite, partly earthy	S	–	–	C		BR–17–07	29.80 (2.25)	2850	2.13	968	450	680	30.2	594	0.400	0.81	0.25	1640	61.2	27.2	28.1	3.8	1.460		30
		32.05	Black, partly brown, fine-porous Mn-Fe ore with xenolithic occurrence of granitoid gneiss	S	–	–	C		BR–17–08	32.05 (1.35)	1630	1.87	2220	70	480	25.7	424	0.250	0.60	0.20	1570	48.6	20.7	18.3	3.1	1.050		
		33.50 34.20																										
35		34.50 55°	Brown to dark grey or ocher banded carbonatite, non calcareous by leaching	S	–	–	R		BR–17–09	34.50 (2.20)	1365	3.61	1835	1050	940	24.8	715	0.660	0.88	0.23	1880	73.2	25.2	30.2	4.0	1.770		35
		36.70	Brown earthy weathered rock, possibly carbonatite in origin, including breccia of gneiss	S	–	–	C		BR–17–10	36.70 (2.80)	1160	2.41	2230	940	810	21.7	720	0.380	0.66	0.20	1810	61.7	17.0	27.1	3.8	1.240		
40		39.50	Brecciated granitoid gneiss, black porous Mn-Fe ore (vein) : 40.90–41.10m	S	–	–	V			39.50																		40
		41.50	Brown porous loose rock, possibly carbonatite in origin	S	–	–	R	(P)	BR–17–11	41.50 (1.50)	1365	1.97	1605	960	790	25.6	680	0.590	0.77	0.23	2320	76.0	29.7	28.5	5.5	1.590		
		43.00		M	–	–	R	BR–17–C ← 44.10m	BR–17–12	43.00 (2.00)	2010	3.54	2170	740	770	35.1	840	0.500	0.90	0.31	2290	72.8	27.0	31.3	5.6	1.710		
45		45.00	Black porous Mn-Fe ore, partly brown porous Fe-oxide ore	M	–	–	C	45.40 – 46.40m	BR–17–13	45.00 (2.10)	3150	3.00	1090	620	960	34.2	950	1.190	1.11	0.21	1870	73.6	38.0	39.0	6.8	2.510		45
		47.10								47.10																		
		47.50	Pale brown porous rock (upper part), grey gneiss (lower part)	S	–	–	C	BR–17–M (S)	BR–17–14	47.50 (0.90)	4820	2.29	7780	450	1450	80.4	2084	0.340	0.63	0.20	2490	109.2	46.4	59.8	12.2	1.170		
		48.20								48.40 (1.70)	11840	5.35	5420	650	1350	86.5	1338	1.470	1.26	0.19	1960	67.4	39.9	82.1	16.5	2.920		
		49.90	Grey to dark grey porous rock (carbonatite origin), pale grey granitic gneiss : 49.90–50.00m	S	–	–	C	(E) 50.00m	BR–17–15	49.90 (0.20)	2770	7.03	5240	225	1400	860	1309	1.680	1.53	0.23	1740	93.5	43.9	57.9	7.9	3.440		
50		50.20						← BR–17–O	BR–17–16	50.20 (0.30)																		50

Key: Weathering S:strong M:moderate W:weak F:fresh

Reaction to HCl +:react –:not react

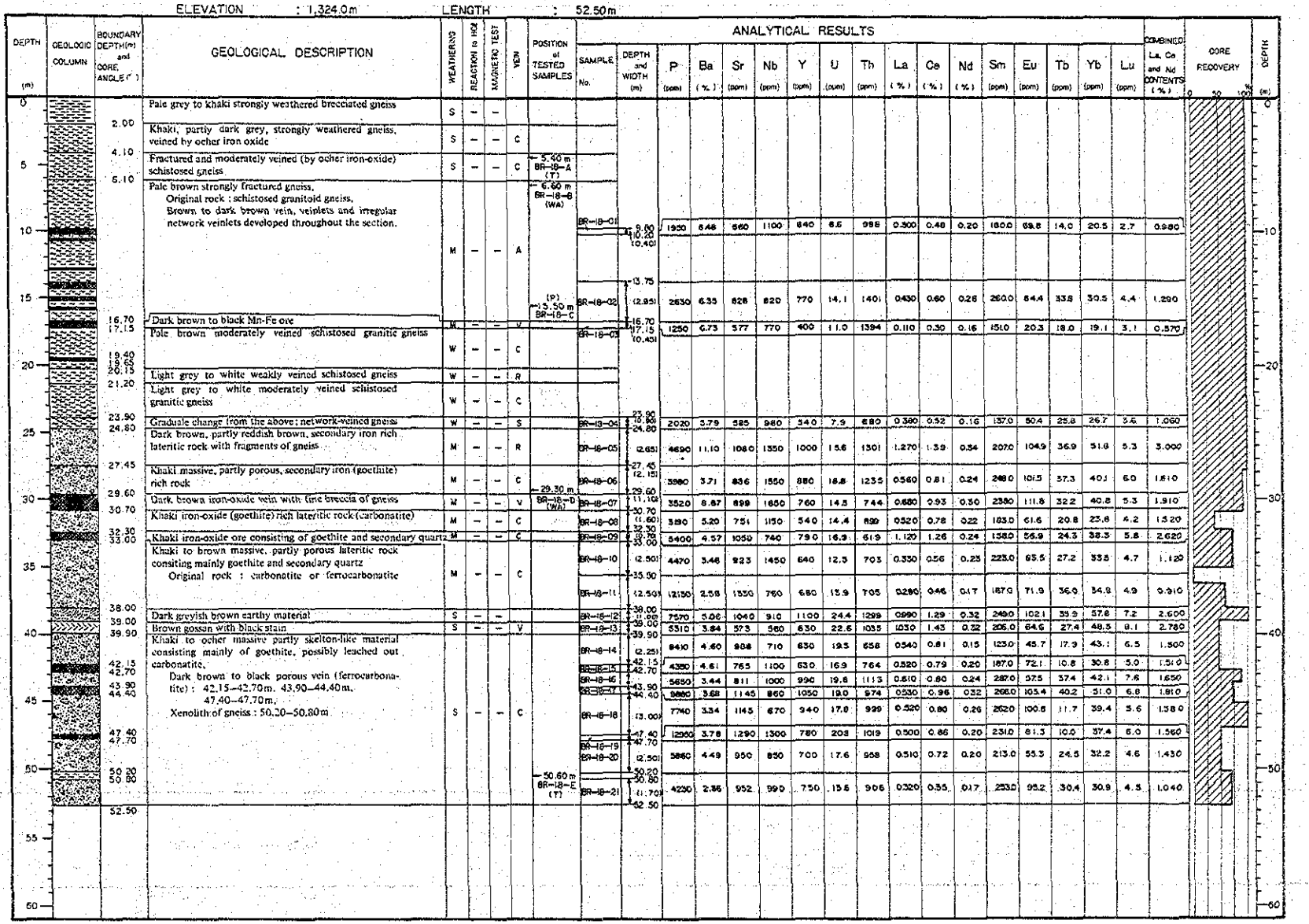
Magnetic test +:magnetic –:non magnetic

Vein V:vein part A:abundant C:common R:rare N:not veined

Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 20 Geological Log of Diamond Drilling Hole, BR–18

DDH No. BR–18 LOCATION (UTM GRID) X : 740.687mE Y : 9,978.815mN BEARING : INCLINATION : −90° ELEVATION : 1,324.0m LENGTH : 52.50m

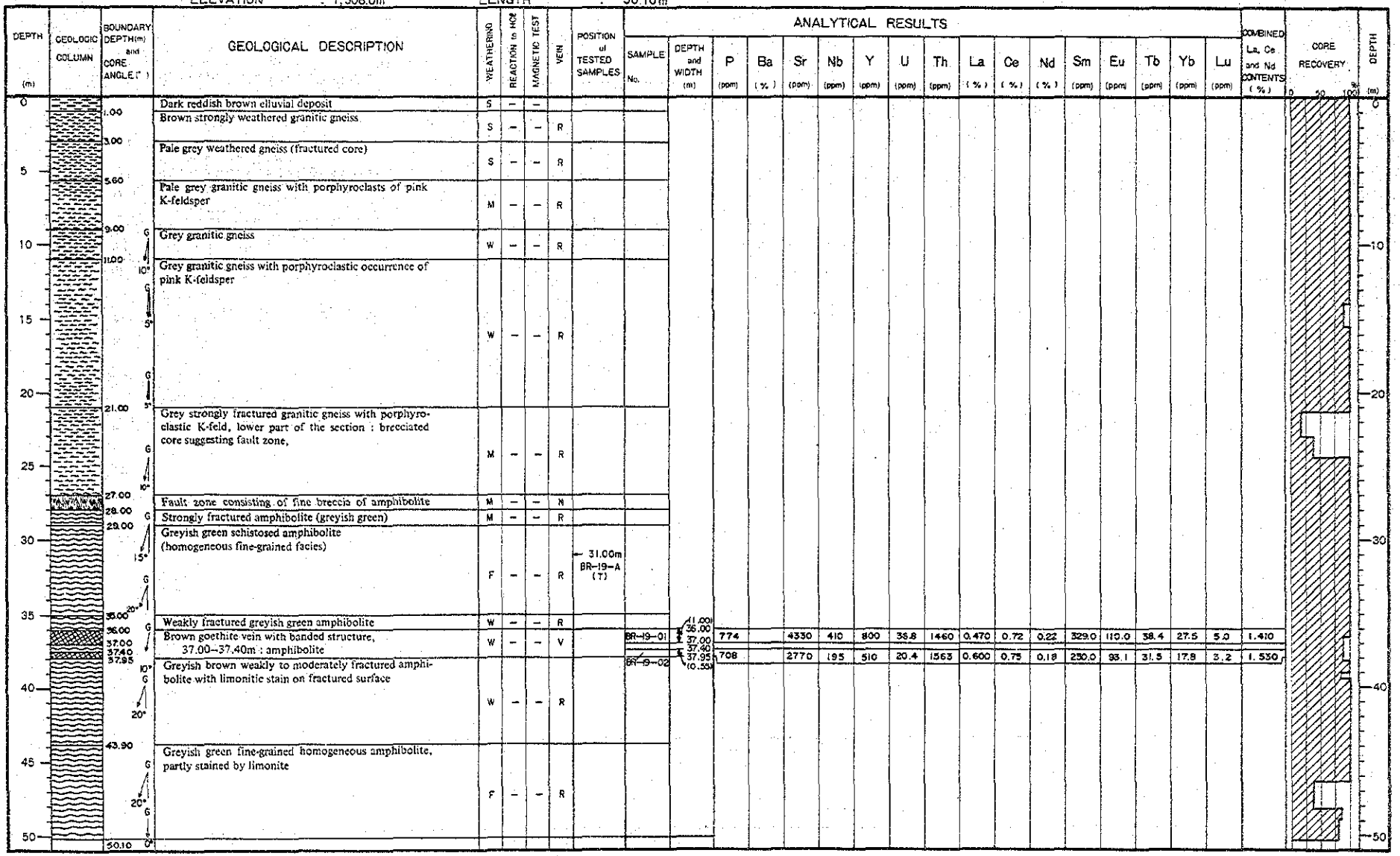


SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
BR–18–01	9.00 10.20 (1.40)	1950	6.46	560	1100	640	6.5	998	0.300	0.48	0.20	180.0	69.8	14.0	20.5	2.7	0.980
BR–18–02	13.75 (2.95)	2630	6.35	828	820	770	14.1	1401	0.430	0.60	0.28	260.0	84.4	33.8	30.5	4.4	1.290
BR–18–03	16.70 17.15 (0.45)	1250	6.73	577	770	400	11.0	1394	0.110	0.30	0.16	151.0	20.3	18.0	19.1	3.1	0.570
BR–18–04	23.90 (0.90)	2020	3.79	585	960	340	7.9	680	0.380	0.52	0.16	137.0	50.4	25.8	26.7	3.6	1.060
BR–18–05	24.80 (2.65)	4690	11.10	1080	1350	1000	15.6	1301	1.270	1.39	0.54	207.0	104.9	36.9	31.8	5.3	3.000
BR–18–06	27.45 (2.15)	3980	3.71	836	1550	880	18.8	1235	0.560	0.81	0.24	248.0	101.5	37.3	40.1	6.0	1.610
BR–18–07	29.60 (1.10)	3520	8.87	899	1650	760	14.5	744	0.680	0.93	0.30	238.0	111.8	32.2	40.8	5.3	1.910
BR–18–08	30.70 (1.60)	3190	5.20	751	1150	540	14.4	899	0.520	0.78	0.22	183.0	61.6	20.8	23.8	4.2	1.520
BR–18–09	32.30 (0.70)	5400	4.57	1050	740	790	16.9	619	1.120	1.26	0.24	138.0	56.9	24.3	38.3	5.8	2.620
BR–18–10	33.00 (2.50)	4470	3.46	923	1450	640	12.5	703	0.330	0.56	0.25	223.0	65.5	27.2	33.5	4.7	1.120
BR–18–11	35.50 (2.50)	12150	2.58	1550	760	680	13.9	705	0.290	0.46	0.17	187.0	71.9	36.0	34.9	4.9	0.910
BR–18–12	38.00 (1.00)	7570	5.06	1040	910	1100	24.4	1299	0.990	1.29	0.32	249.0	102.1	39.9	37.8	7.2	2.600
BR–18–13	39.00 (0.90)	5310	3.84	573	560	630	22.6	1035	1.030	1.45	0.32	206.0	64.6	27.4	48.5	8.1	2.780
BR–18–14	39.90 (2.25)	8410	4.60	988	710	630	19.5	658	0.540	0.81	0.15	123.0	45.7	17.9	43.1	6.5	1.500
BR–18–15	42.15 42.70	4380	4.61	765	1100	630	16.9	764	0.520	0.79	0.20	187.0	72.1	10.8	30.8	5.0	1.510
BR–18–16	43.90 44.40	5650	3.44	811	1000	990	19.8	1113	0.810	0.80	0.24	287.0	97.5	37.4	42.1	7.6	1.650
BR–18–17	43.90 44.40	5880	3.68	1145	860	1050	19.0	974	0.530	0.96	0.32	266.0	103.4	40.2	51.0	6.8	1.810
BR–18–18	(3.00)	7740	3.34	1145	670	940	17.0	929	0.520	0.80	0.26	262.0	100.8	11.7	39.4	5.6	1.380
BR–18–19	47.40 47.70	12950	3.78	1290	1300	780	20.3	1019	0.500	0.86	0.20	231.0	81.3	10.0	37.4	6.0	1.560
BR–18–20	(2.50)	5860	4.49	950	850	700	17.6	958	0.510	0.72	0.20	213.0	55.3	24.5	32.2	4.6	1.430
BR–18–21	50.20 50.80 (0.70)	4250	2.86	952	990	750	13.5	906	0.320	0.55	0.17	233.0	95.2	30.4	30.9	4.5	1.040

Key: Weathering S:strong M:moderate W:weak F:fresh — Reaction to HCl +:react −:not react — Magnetic test +:magnetic −:non magnetic — Vein V:vein part A:abundant C:common R:rare N:not veined — Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 21 Geological Log of Diamond Drilling Hole, BR-19

DDH No. BR-19 LOCATION (UTM GRID) X : 741,080mE Y : 9,979,397mN ELEVATION : 1,308.0m BEARING : INCLINATION : -90° LENGTH : 50.10m

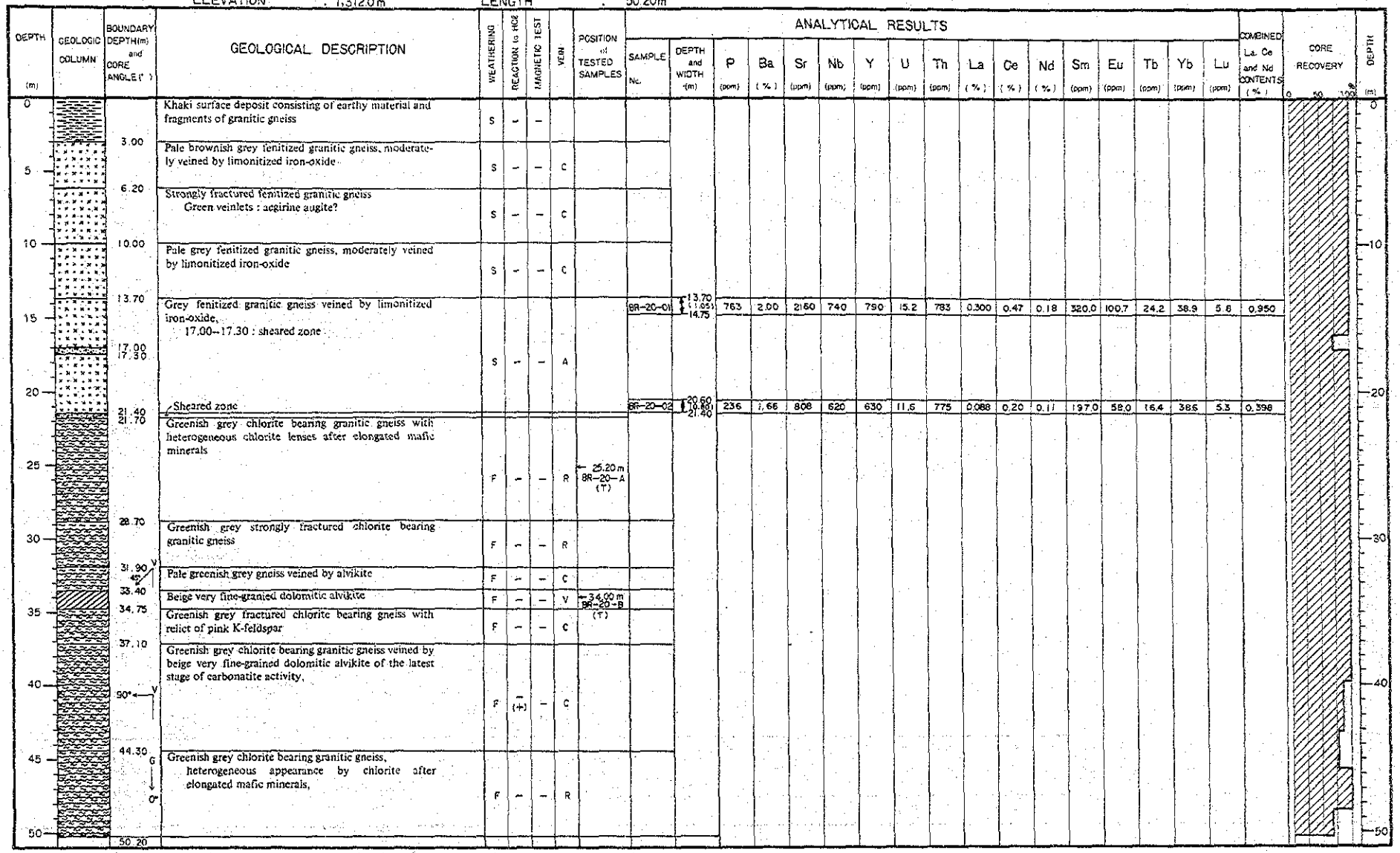


SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
BR-19-01	36.00–37.00	774		4330	410	800	38.8	1460	0.470	0.72	0.22	329.0	110.0	38.4	27.5	5.0	1.410
BR-19-02	37.90–37.95 (0.55m)	708		2770	195	510	20.4	1563	0.600	0.75	0.18	230.0	93.1	31.5	17.8	3.2	1.530

Key: Weathering S:strong M:moderate W:weak F:fresh
Reaction to HCl +:react −:not react
Magnetic test +:magnetic −:non magnetic
Vein V:vein part A:abundant C:common R:rare N:not veined
Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 22 Geological Log of Diamond Drilling Hole, BR-20

DDH No. BR-20 LOCATION (UTM GRID) X : 741.083mE Y : 9,979.266mN ELEVATION : 1,312.0m BEARING : INCLINATION : -90° LENGTH : 50.20m



Key: Weathering S:strong M:moderate W:weak F:fresh — Reaction to HCl +:react −:not react — Magnetic test +:magnetic −:non magnetic — Vein V:vein part A:abundant C:common R:rare N:not veined — Tested Samples WA:whole rock analysis T:thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 23 Geological Log of Diamond Drilling Hole, BR-21

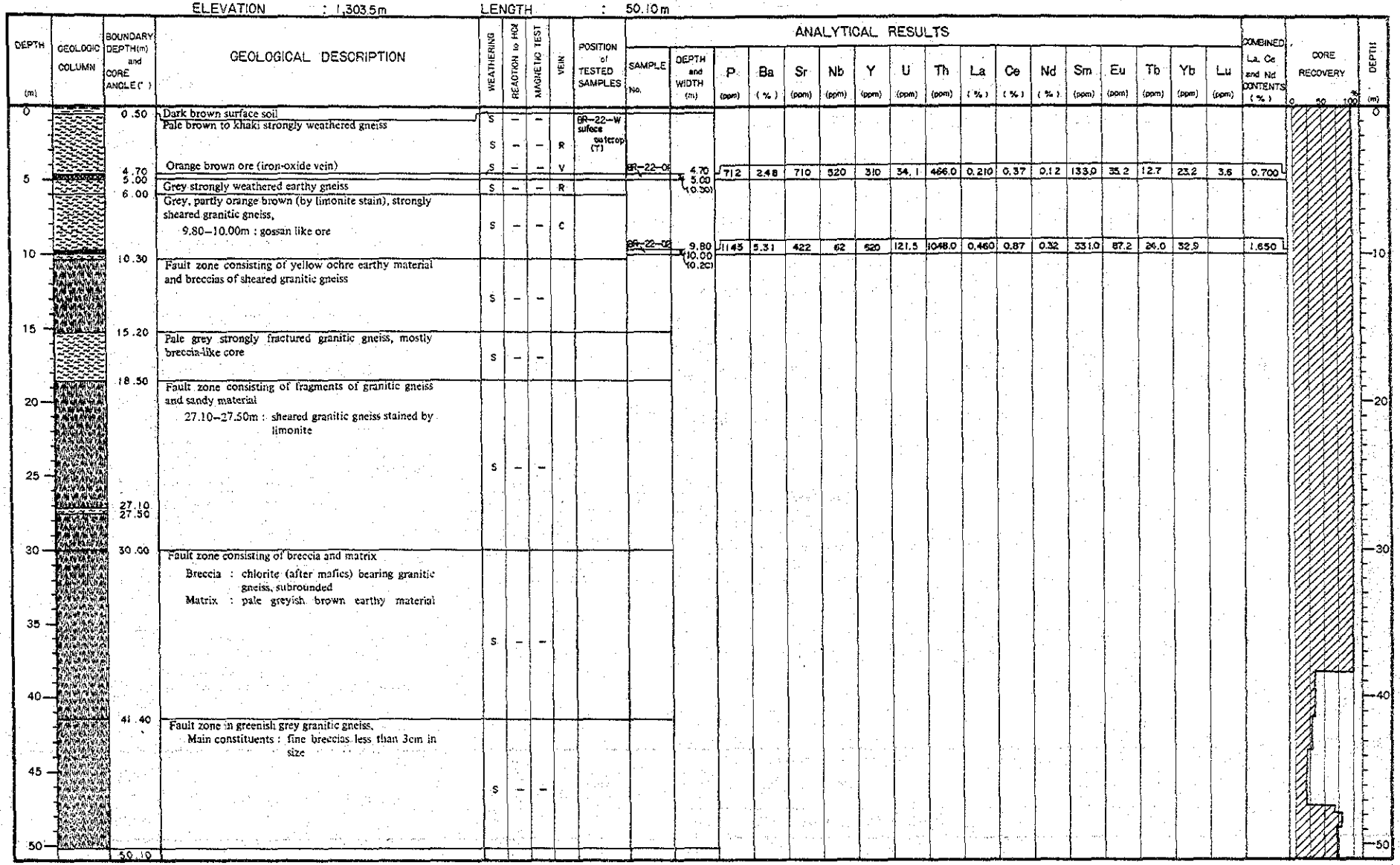
DDH No. BR-21 LOCATION (UTM GRID) X : 740.613mE Y : 9,979.163mN ELEVATION : 1,340.0m BEARING : INCLINATION : −90° LENGTH : 50.10m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE (°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)	CORE RECOVERY (%)	DEPTH (m)
0			Light grey strongly weathered bleached granitic gneiss	S	−	−	R																					0
5		3.80 V 80°	Light grey to white granitic gneiss with small amounts of porphyroclasts of pink K-feldspar Limonitized Fe-oxide vein : 4.50–4.60m, 6.90–7.00m, 9.60–9.70m	W	−	−	R																				5
10		11.45 V 10°	Brown iron irch ore consisting goethite and minor amounts of hematite, containing very minor amounts of xenolith of gneiss	M	−	−	V	13.00 – 15.00m BR-21-M (S)	BR-21-01	11.45 (4.05) 15.50	679	4.92	702	120	520	183	1023	0.300	0.60	0.22	208.0	70.2	17.3	23.6	2.7	1.120		10
15		15.50 V 16.20 V 17.40 V 18.40	Pale grey granitic gneiss	W	−	−	C																				15
			Dark brown manganiferous iron ore	S	−	−	V		BR-21-02	16.20 (1.20) 17.40	2530	3.35	340	180	350	19.3	710	0.140	0.35	0.19	234.0	69.3	17.8	15.2	2.5	0.680		
			Pale grey granitic gneiss (crushed core)	M	−	−	R																				
20		50° 70°	Pale grey schistosed granitic gneiss with very minor amounts of mica seam, veined by thin limonitic vein (0.1 to 1 cm in width). 22.60–22.75m : Fe-oxide vein	W	−	−	C		BR-21-03	(0.15) 22.60 22.75	2660	10.20	2740	270	1250	45.0	1644	1.450	1.78	0.38	224.0	103.4	29.6	40.3	5.5	3.610		20
25		25.10						(WA) BR-21-A 25.30m																			25
		26.20	Brown to dark brown iron ore (vein), partly porous	M	−	−	V		BR-21-04	25.10 (1.10) 26.20	3860	4.60	695	305	380	19.3	571	0.400	0.67	0.16	156.0	42.7	9.3	16.7	2.9	1.230		
		26.80	Granitic gneiss	W	−	−	R																				
			Orange brown, partly dark brown, porous limonitic rock ; possibly carbonatite in origin	M	−	−	V		BR-21-05	26.80 (2.20) 29.00	5550	9.14	1270	235	520	48.2	905	1.490	1.86	0.38	230.0	64.1	17.9	21.2	3.3	3.730		
30		29.00	Dark brown, partly orange brown, earthy goethite rich rock ; possibly carbonatite origin	S	−	−	C		BR-21-06	(3.70) 32.70	5640	7.91	1255	1050	630	37.6	783	0.820	1.32	0.34	237.0	71.6	16.0	26.4	3.7	2.480		30
		32.70	Black manganiferous earthy material (Mn-Fe ore)	S	−	−	V		BR-21-07	(1.10) 33.80	3330	7.16	892	180	380	38.1	496	0.430	0.80	0.27	154.0	47.9	15.6	20.8	2.6	1.500		
		33.80	Dark greyish brown to orange brown strongly weathered earthy rock ; possibly carbonatite/ferrocarbonatite origin, 40.85–40.90 : wet clay i.e. water table	S	−	−	C		BR-21-08	(3.70) 37.50	7240	9.15	1250	1050	680	63.9	735	1.470	2.01	0.50	305.0	79.2	22.6	33.0	4.5	3.980		35
35									BR-21-09	(3.40) 40.90	36500	5.40	3410	1600	730	64.1	447	1.350	1.41	0.30	253.0	62.8	25.3	49.0	13.7	3.060		
		40.90	Orange brown earthy rock ; carbonatite/ferro-carbonatite origin	S	−	−	C		BR-21-10	(2.40) 43.30	11400	5.40	1605	2900	690	60.6	518	1.130	1.34	0.35	335.0	104.3	30.3	35.4	5.4	2.820		
40		43.30	Pale grey earthy material (original rock?)	S	−	−	C		BR-21-11	(1.40) 44.70	19370	4.72	2100	2500	800	59.3	776	0.620	0.97	0.36	393.0	102.7	30.7	50.0	5.9	1.950		40
		44.70 45.00	Brown to dark brown hard siliceous iron ore						BR-21-12	45.00	14440	3.84	1400	760	670	30.2	1064	0.490	0.86	0.30	385.0	109.6	30.1	28.6	5.3	1.650		
			Orange brown iron-rich earthy rock ; (carbonatite origin?)	S	−	−	A or C		BR-21-13	(2.50) 47.50	15500	4.71	1780	1100	600	38.3	678	0.890	1.11	0.23	216.0	69.8	24.8	29.5	5.0	2.230		
45									BR-21-14	(2.60) 50.10	11830	4.41	3080	980	720	36.2	725	0.860	1.16	0.27	220.0	65.1	21.9	32.0	5.3	2.290		45
50		50.10																									50

Key: Weathering S:strong M:moderate W:weak F:fresh — Reaction to HCl +:react −:not react — Magnetic test +:magnetic −:non magnetic — Vein V:vein part A:abundant C:common R:rare N:not veined — Tested Samples WA:whole rock analysis T:thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 24 Geological Log of Diamond Drilling Hole, BR-22

DDH No. BR-22 LOCATION (UTM GRID) X : 741.080mE Y : 9,979.148mN ELEVATION : 1,303.5m BEARING : INCLINATION : -90° LENGTH : 50.10m



Key: Weathering S:strong M:moderate W:weak F:fresh

Reaction to HCl +:react −:not react

Magnetic test +:magnetic −:non magnetic

Vein V:vein part A:abundant C:common R:rare N:not veined

Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 25 Geological Log of Diamond Drilling Hole, BR-23

DDH No. BR-23 LOCATION (UTM GRID) X : 740.520mE Y : 9,979.057mN BEARING : INCLINATION : −90° ELEVATION : 1,328.0m LENGTH : 50.20m

DEPTH (m)	BOUNDARY DEPTH(m) and CORE ANGLE (°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION TO HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES
0	0.50	Dark brown soil					
	2.00	Pale brown to brownish grey strongly weathered gneiss	S	−	−	C	
	3.10	Light grey weathered granitic gneiss	S	−	−	C	
	4.40	Pale brown to brown weathered gneiss stained by limonite	S	−	−	C	
5		Pale grey to light grey granitic gneiss with porphyroclasts of pink K-feldspar. Gneissosed structure by thin compositional bands is very common. Brown iron rich veinlets occur sporadically throughout the section. Thickness of the veinlets is 1 to 7cm.	W	−	−	C	
10							
15							
	18.45	Dark brown limonitized vein with banding structure					18.30m
	18.75	Pale grey to light grey strongly banded granitic gneiss, Elongated porphyroclasts of pink K-feldspar are very common with waved banding structure 30.90–21.70m : fractured zone 34.85–34.90m : brown iron rich ore (vein)	F	−	−	R	BR-23-A (T) 20.50m BR-23-B (O)
20							
25							
30	30.90						
	31.70						
35	35.50						
	35.70						
	36.40	Sheared zone consisting of fragments of gneiss	M	−	−	R	
	38.00	Pale brown fractured granitic gneiss weakly stained by limonite	F	−	−	R	
40	41.90						
	42.80	Sheared zone consisting of fragments of gneiss	M	−	−	R	
		Pale grey to white thinly gneissosed granitic gneiss with porphyroclasts of pink K-feldspar and elongated quartz crystals	F	−	−	R	
45							
50	50.20						

ANALYTICAL RESULTS

SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
BR-23-01	18.45 18.75 (0.30)	608	2.66	733	500	1000	86.5	850	0.280	0.45	0.17	2710	88.9	40.6	45.9	7.0	0.900

CORE RECOVERY 0 50 100 %

Key: Weathering S:strong M:moderate W:weak F:fresh
Reaction to HCl +:react −:not react
Magnetic test +:magnetic −:non magnetic
Vein V:vein part A:abundant C:common R:rare N:not veined
Tested Samples WA:whole rock analysis T:thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 26 Geological Log of Diamond Drilling Hole, BR-24

DDH No. BR-24 LOCATION (UTM GRID) X : 740.882mE Y : 9,979.051mN BEARING : INCLINATION : -90° ELEVATION : 1,315.0m LENGTH : 50.50m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)	CORE RECOVERY %	DEPTH (m)
0		1.00	Purplish brown strongly weathered earthy rock	S	-	-	A		BR-24-01	(1.00) 1.00	5830	4.19	1090	1250	550	57.8	657	0.470	0.62	0.17	165.0	54.5	11.0	28.4	8.5	1.260		0
		2.30	Brown to pale brown bleached banded carbonatite	S	-	-	A		BR-24-02	(1.30) 2.30	5620	4.23	123	1600	630	21.2	1462	0.630	0.80	0.20	155.0	43.3	12.7	33.4	4.6	1.630		
		3.80	Light grey bleached thinly banded carbonatite	S	-	-	A		BR-24-03	(1.50) 3.80	1730	2.25	534	960	260	13.7	404	0.160	0.25	0.08	100.0	31.2	5.6	4.6	3.0	0.490		
		4.10	3.80–4.10m : beige finely brecciated gneiss						BR-24-04		728	1.09	226	360	105	5.5	197	0.061	0.10	0.03	42.0	10.9	2.6	6.7	1.1	0.191		
5		5.30	Grey hard compact very fine-grained siliceous iron ore	S	-	-	A		BR-24-05	(1.20) 4.10 5.30	3020	5.21	782	1250	380	10.7	403	0.140	0.23	0.09	129.0	38.1	16.2	25.8	3.5	0.490		5
			Pale grey finely brecciated carbonatite veined by iron-oxide and siliceous iron ore	M	-	-	A		BR-24-06	(2.70)	4940	5.67	982	2600	610	17.4	657	0.250	0.39	0.16	197.0	64.0	26.5	35.2	5.2	0.800		
		8.00	Pale brown strongly limonitized rock with xenolith of gneiss	S	-	-	A			8.00																		
		9.20	Pale brown hard compact siliceous-iron ore	S	-	-	A		BR-24-07	(2.70)	6300	6.59	1375	1900	410	40.3	679	0.800	1.01	0.27	187.0	43.6	19.0	15.4	3.9	2.080		
10		10.70	Brownish grey earthy rock to clay	S	-	-	A		BR-24-08	10.70 (2.50)	8680	10.70	2160	2850	720	103.9	736	1.320	2.02	0.44	231.0	96.9	24.8	21.9	4.1	4.380		10
		13.20	Brown goethite rich rock (carbonatite origin)	S	-	-	A			13.20																		
		14.30	Brown strongly limonitized rock with breccias of gneiss	S	-	-	A		BR-24-09	(2.80)	7080	7.02	1945	1950	530	102.1	499	1.410	1.42	0.28	179.0	56.3	18.3	27.4	3.7	3.110		
15		16.00	Pale brown compact siliceous ore with earthy part	S	-	-	V		BR-24-10	16.00 (1.40)	8050	4.38	1585	900	420	80.0	368	1.650	1.52	0.26	164.0	36.3	11.4	17.1	3.6	3.430		15
		17.40	Pale brown to khaki earthy rock	S	-	-	A		BR-24-11	17.40 (1.10)	6800	6.20	1530	1750	540	46.7	675	1.290	1.26	0.26	189.0	46.9	5.7	23.7	5.3	2.810		
		18.50	Grey to dark grey clay or earthy rock : carbonatite?	S	-	-	A		BR-24-12	18.50 (2.70)	9870	403	1395	1950	420	11.4	513	0.840	0.92	0.20	151.0	35.0	11.1	18.5	3.5	1.960		
20		21.20	Brownish grey earthy, partly clayey rock with dark grey hard siliceous ores in several places	S	-	-	C		BR-24-13	21.20 (3.30)	3240	5.35	823	1450	280	9.2	354	0.470	0.60	0.15	113.0	26.6	3.5	11.6	2.0	1.220		20
									BR-24-14	24.50 (3.10)	6620	6.49	1560	1350	460	16.5	612	1.230	1.22	0.25	181.0	36.5	11.2	27.0	4.4	2.700		
25		27.60	Finely brecciated gneiss with network vein of iron rich ore	S	-	-	A		BR-24-15	27.60	4640	3.00	1195	1150	250	18.2	371	0.480	0.58	0.12	85.9	23.3	8.2	21.6	2.2	1.180		25
		28.20	Brown leached out carbonatite strongly veined by iron-rich ore	S	-	-	A		BR-24-16	28.20 (2.80)	4710	2.47	1960	990	450	58.5	563	0.750	0.94	0.20	167.0	38.7	14.4	25.1	4.1	1.890		
30		31.00	Swarm of ferrocarbonatite dyke into host fractured gneiss	M	+	-	C		BR-24-17	31.00 (1.30)	4610	1.38	1240	580	470	27.4	636	0.330	0.44	0.16	202.0	49.5	14.9	18.5	5.2	0.930		30
		32.30	Dark brown to black porous ferrocarbonatite	M	+	-	R			32.30																		
		33.80	Pale grey banded carbonatite	M	+	-	R		BR-24-18	(1.90)	5580	2.69	3130	760	820	63.8	1031	0.360	1.04	0.42	312.0	68.0	18.9	34.2	9.9	1.820		
		34.20	Dark grey to black, somewhat porous ferrocarbonatite, strongly stained by limonite	M	+	-	R	← 34.50m BR-24-A (E) ← 36.70m BR-24-B	BR-24-19	34.20 (0.25)	2600	2.90	1310	700	600	35.6	950	0.170	0.56	0.33	356.0	107.7	29.5	31.5	4.7	1.060		35
		37.45	Pale reddish brown heterogeneous porous carbonatite	W	+	-		35.80	BR-24-20	37.45 (0.85)	1205	3.27	593	790	650	25.6	810	0.490	0.96	0.45	425.0	118.6	25.3	29.3	8.1	1.900		
		38.30	Pale brownish grey weakly banded fine-grained carbonatite, sometimes cut by very fine-grained alvikite of the latest stage of carbonatite activity	W	+	- (+)	C	37.30m BR-24-M (S)	BR-24-21	38.30 (4.10)	2710	3.74	964	285	420	22.9	799	0.600	0.81	0.28	272.0	69.8	5.0	17.6	2.5	1.690		40
40		42.40	Pale grey to white fine-granined carbonatite with magnetite rich bands	F	+	+	R	← 43.00m BR-24-C (P)	BR-24-22	42.40 (3.50)	9740	4.77	3230	280	340	16.7	450	1.630	1.55	0.24	130.0	66.8	6.6	19.8	3.4	3.420		
		45.90	Pale grey to white fine-grained carbonatite with broad bands of magnetite concentration	F	+	+	N	← 46.50m BR-24-D (P)	BR-24-23	45.90 (2.20)	12380	4.83	2760	455	260	25.1	417	1.170	1.67	0.38	205.0	44.0	7.1	6.3	2.7	3.220		45
		48.10	Dark grey and white banded (compositional) carbonatite	F	+	+	N	← 48.30m	BR-24-24	48.10 (1.10)	13580	1.06	2470	1320	480	27.2	398	0.200	0.31	0.08	90.5	28.6	10.1	34.4	5.3	0.590		
		49.20	Pale grey fine-grained banded carbonatite	F	+	+	N	BR-24-E (E)	BR-24-25	49.20 (1.30) 50.50	5980	4.31	1720	745	360	37.6	491	0.660	1.12	0.33	202.0	52.2	11.0	18.6	5.0	2.130		50

Key: Weathering S:strong M:moderate W:weak F:fresh | Reaction to HCl +:react -:not react | Magnetic test +:magnetic -:non magnetic | Vein V:vein part A:abundant C:common R:rare N:not veined | Tested Samples WA:whole rock analysis T:thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 27 Geological Log of Diamond Drilling Hole, BR–25

DDH No. BR–25 LOCATION (UTM GRID) X : 740.979mE Y : 9,979.061mN ELEVATION : 1,308.0m BEARING : INCLINATION : −90° LENGTH : 50.10 m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES
0		1.00	Dark brown soil	S	−	−		
			Pale grey strongly weathered (bleached) schistosed gneiss with minor chlorite seams.	S	−	−	R	
		4.00 G 55°	Pale grey schistosed granitic gneiss with green chlorite seams and porphyroclasts of pink K-feldsper	M	−	−	R	
		6.70	Pale grey to pale green schistosed granitic gneiss with characteristic thin chlorite seams, sporadically veined by iron rich ore. Main vein part : 6.70–7.00m, 11.60–12.00m 15.60–15.70m,	M	−	−	C	
		G 10 17.00	Pale green chlorite seam rich schistosed granitic gneiss	M	−	−	R	
		G 10° 21.30	Pale grey, mostly stained brown, fractured gneiss veined by limonitized iron rich ore, Main vein parts : 27.35–27.50m, 27.60–27.65m	M	−	−	C	
		G 25° 28.00	Chlorite seam rich fractured granitic gneiss	M	−	−	R	
		29.30	Pale grey finely brecciated chlorite poor granitic gneiss	M	−	−	C	
		31.20 31.60	Dark brown limonitized iron-rich ore	M	−	−	V	BR–25–02
			Fault zone consisting of fine breccias (less than 1cm in size) of gneiss and brown earthy material. Gneiss : pale green chlorite seam bearing granitic gneiss with porphyroclasts of K-feldspar	S	−	−	N	
		38.10 G 40° 42.00	Pale greenish grey fractured gneiss	M	−	−	N	
		G 40°	Fault zone consisting of fine breccias of grantic gneiss and brown earthy material	S	−	−	N	
		46.00 G 30°	Pale grey to white granitic gneiss with porphyroclasts of plagioclase and K-feldspar	F	−	−	N	
50		50.10						

ANALYTICAL RESULTS

SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
BR–25–01	27.35 (0.15) 27.50	665	1.59	1475	200	600	22.3	1384	0.120	0.45	0.29	414.0	131.0	32.8	24.1	4.2	0.86
BR–25–02	31.20 (0.40) 31.60	595	1.70	1315	350	550	17.1	1045	0.120	0.39	0.22	239.0	67.8	17.6	24.5	3.5	0.73

CORE RECOVERY 0 50 100 %

DEPTH (m) 0 10 20 30 40 50

A–39

Key: Weathering S:strong M:moderate W:weak F:fresh

Reaction to HCl +:react −:not react

Magnetic test +:magnetic −:non magnetic

Vein V:vein part A:abundant C:common R:rare N:not veined

Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 28 Geological Log of Diamond Drilling Hole, BR–26

DDH No. BR–26 LOCATION (UTM GRID) X : 740,496 m E Y : 9,978,948 m N ELEVATION : 1,326.0 m BEARING : INCLINATION : −90° LENGTH : 50.40 m

DEPTH (m)	BOUNDARY DEPTH(m) and CORE ANGLE (°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES
0	1.00	Dark brown soil	S	–	–		
	3.00	Pale grey strongly weathered granitic gneiss	S	–	–	R	
5		Pale grey weakly fractured granitic gneiss	W	–	–	R	
	9.00	Pale grey finely fractured granitic gneiss	W	–	–	R	
	9.00	Dark brown limonitized ore					
10	9.30	Light grey to white granitic gneiss with porphyroclasts of pink K-feldspar, Thin veinlets of iron-rich ore occure moderately throughout the section	W	–	–	C	
15	14.80	Light grey strongly fractured gneiss	W	–	–	A	BR–26–01
	17.80	Light grey weakly fractured grantic gneiss with characteristic occurrence of pink K-feldspar, weakly stained by limonite.	W	–	–	R	
20							
25							
	26.90	Light grey to white moderately fractured granitic gneiss without pink K-feldspar	F	–	–	R	
30							
35							
	36.10	Light grey to white strongly fractured granitic gneiss, partly earthy appearence, Pale brown stain is dominant.	F	–	–	R	
40	39.80	Light grey to white granitic gneiss without pink K-feldspar and mafic minerals, Weak mineralization 44.20–44.45m : orange brown vein (width 2cm) 45.20–45.70m : brecciated vein with limonitic vein 47.50–47.70m : orange brown vein	F	–	–	C to R	BR–26–02
45	44.20 60° 44.45 45.20 45.70 60° 47.50 47.70 30°						
50	50.40						

POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
BR–26–01		17.40 – 17.65 (0.25)	269	1.05	748	500	410	8.8	813	0.150	0.37	0.11	150.0	40.6	14.3	24.5	3.5	0.630
BR–26–02		47.45 – 47.55 (0.10)	1315	2.76	754	725	480	15.8	676	0.340	0.57	0.19	197.0	52.5	13.0	22.9	3.7	1.100

CORE RECOVERY 0 50 100 %

DEPTH (m) 0 10 20 30 40 50

Key: Weathering S:strong M:moderate W:weak F:fresh

Reaction to HCl +:react −:not react

Magnetic test +:magnetic −:non magnetic

Vein V:vein part A:abundant C:common R:rare N:not veined

Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 29 Geological Log of Diamond Drilling Hole, BR-27

DDH No. BR-27 LOCATION (UTM GRID) X : 740.678 mE Y : 9,978,946 mN ELEVATION : 1,320.0m BEARING : INCLINATION : −90° LENGTH : 50.50m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)	CORE RECOVERY (%)	DEPTH (m)
0		0.50	Dark brown soil	V	+	−	C																					0
			Brown to dark brown strongly weathered gneiss	S	−	−	C																					
		2.80	Pale brownish grey strongly weathered granitic gneiss	S	−	−	C																					
5		4.10	Strongly brecciated feldspathic gneiss, cemented by brown goethite rich matrix, Goethite occurs also fissure filling veinlets. 12.60–12.90m: goethite rich zone	W	−	−	C																					5
10		12.60																										10
		12.90																										
		13.60	Brown siliceous iron ore containing fine breccias of gneiss	M	−	−		14.30m BR-27-A (F)	BR-27-01	13.60 (2.30) 15.90	293	1.99	313	580	240	5.4	547	0.140	0.23	0.06	109.0	29.8	7.8	10.0	1.5	0.430		
15		15.90	Brown brecciated granitic gneiss cemented by goethite rich matrix	M	−	−	C																					15
		17.90	Grey to brown weakly veined (by goethite) granitic gneiss	M	−	−	C																					
		19.50	Brown siliceous iron ore with small (<0.5cm) breccias of gneiss	M	−	−	C		BR-27-02	19.50 (2.20) 21.70	4250	3.86	856	1090	500	8.4	864	0.500	0.64	0.18	168.0	53.0	10.7	25.3	3.4	1.320		
20		21.70	Pale brown earthy rock (carbonatite origin?)	S	−	−			BR-27-03	(1.40) 23.10	3690	11.80	1095	1050	630	39.6	1471	1.470	1.37	0.34	194.0	76.1	13.3	31.5	6.4	3.180		20
		23.10	Brown goethite rich earthy rock, partly siliceous	S	−	−			BR-27-04	(2.10) 25.20	5390	2.29	731	1550	530	47.4	670	0.520	0.51	0.17	190.0	61.2	14.6	22.9	5.0	1.000		
25		25.20	Brown, partly light brown, strongly weathered earthy rock (possibly carbonatite origin)	S	−	−			BR-27-05	(2.80) 28.00	4260	3.45	624	1060	640	74.8	935	0.410	0.67	0.23	265.0	95.5	29.1	20.1	4.3	1.310		
									BR-27-06	(3.10) 31.10	3800	4.40	705	1030	790	57.2	1209	0.590	0.85	0.27	312.0	124.6	20.3	23.8	3.2	1.710		
30		31.10	Dark greyish brown, partly brown to light brown, strongly weathered earthy rock (possibly cavity filling material)	S	−	−			BR-27-07	(3.90) 35.00	6730	6.87	1920	2520	900	81.5	1253	1.890	1.80	0.57	245.0	105.6	26.0	25.2	7.8	4.060		30
35									BR-27-08	(4.00) 39.00	6230	5.91	1370	1400	720	72.9	862	1.330	1.40	0.32	234.0	79.9	21.8	29.4	4.1	3.050		
		39.00	Greyish brown earthy rock (carbonatite origin)	S	−	−			BR-27-09	(1.10) 40.10	11500	5.65	1655	1120	680	53.3	791	0.950	1.10	0.29	194.0	68.1	29.0	33.3	4.8	2.340		
40		40.10	Strongly weathered granitic rock	M	−	−	C																					40
		41.00	Pale grey weakly fractured granitic gneiss	M	−	−	C																					
45		44.50	Dark brown to orange brown goethite rich ore, partly siliceous	M	−	−	C		BR-27-10	44.50 (2.00) 47.50	2540	4.59	723	620	470	26.3	681	0.320	0.51	0.17	170.0	56.9	13.6	23.1	3.6	1.000		
		47.50	Grey fractured gneiss, weakly veined by limonitic ore	M	−	−	C																					
50		49.50	Brown earthy rock (carbonatite origin?)	S	−	−			BR-27-11	49.50 (1.00) 50.50	2260	5.53	859	445	390	29.5	651	0.300	0.43	0.12	138.0	53.5	10.2	22.1	3.3	0.850		50
		50.50																										

A-41

Key: Weathering S:strong M:moderate W:weak F:fresh

Reaction to HCl +:react −:not react

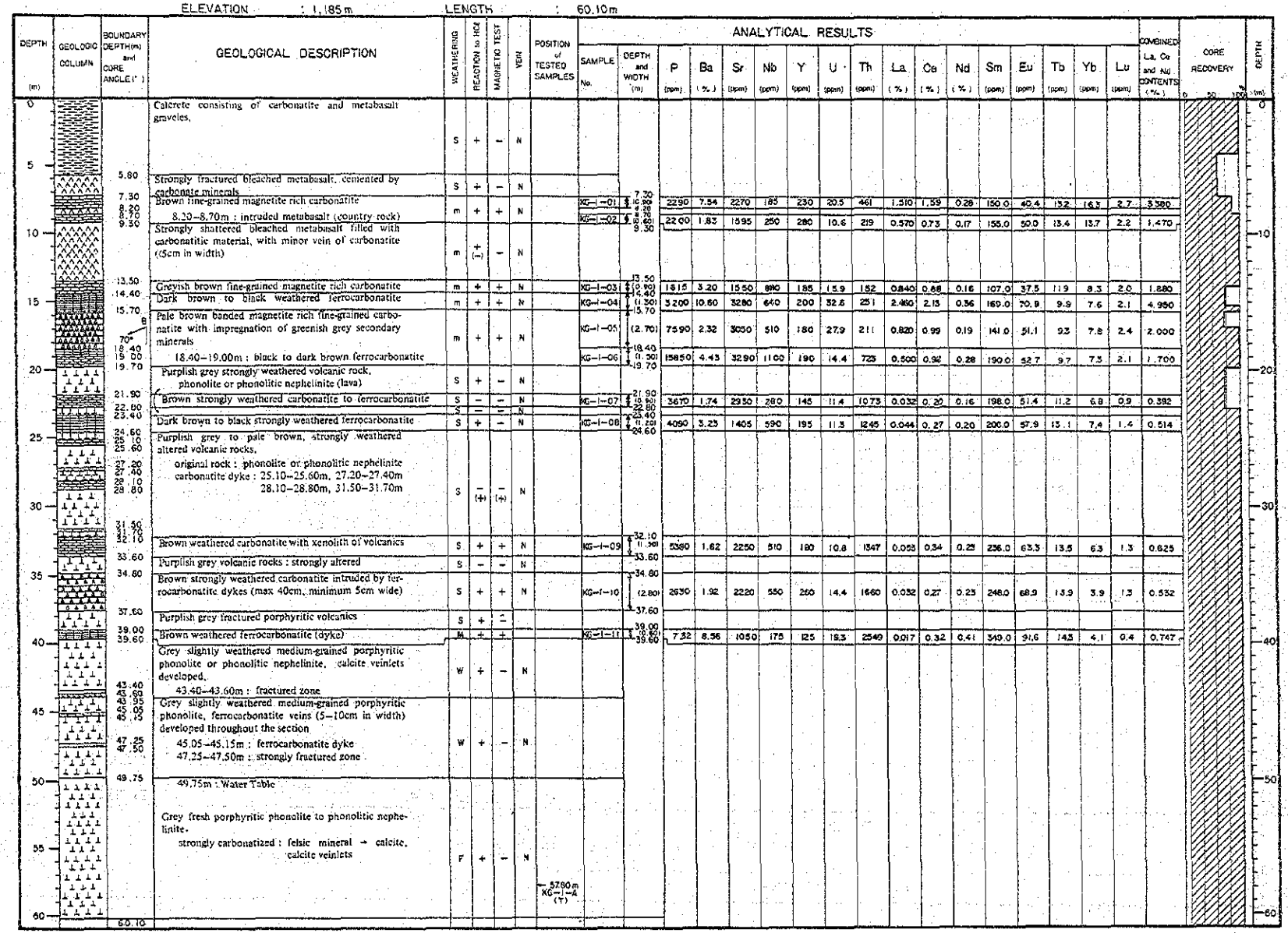
Magnetic test +:magnetic −:non magnetic

Vein V:vein part A:abundant C:common R:rare N:not veined

Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 30 Geological Log of Diamond Drilling Hole, KG-1

DDH No. KG-1 LOCATION (UTM GRID) X : 651,650mE Y : 9,945,895mN ELEVATION : 1,185m BEARING : 40° INCLINATION : -50° LENGTH : 60.10m



DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES
0			Calcrete consisting of carbonatite and metabasalt gravels.	S	+	−	N	
5		5.80	Strongly fractured bleached metabasalt, cemented by carbonate minerals	S	+	−	N	
		7.30	Brown fine-grained magnetite rich carbonatite	m	+	+	N	
		8.20	8.20–8.70m : intruded metabasalt (country rock)					
		8.70						
10		9.30	Strongly shattered bleached metabasalt filled with carbonatitic material, with minor vein of carbonatite (<5cm in width)	m	+ (−)	−	N	
		13.50	Greyish brown fine-grained magnetite rich carbonatite	m	+	+	N	
		14.40	Dark brown to black weathered ferrocarbonatite	m	+	+	N	
15		15.70	Pale brown banded magnetite rich fine-grained carbonatite with impregnation of greenish grey secondary minerals	m	+	+	N	
		18.40	18.40–19.00m : black to dark brown ferrocarbonatite					
		19.00						
20		19.70	Purplish grey strongly weathered volcanic rock, phonolite or phonolitic nephelinite (lava)	S	+	−	N	
		21.90	Brown strongly weathered carbonatite to ferrocarbonatite	S	−	−	N	
		22.80		S	−	−	N	
		23.40	Dark brown to black strongly weathered ferrocarbonatite	S	+	−	N	
		24.60	Purplish grey to pale brown, strongly weathered altered volcanic rocks,					
25		25.10	original rock : phonolite or phonolitic nephelinite					
		25.60	carbonatite dyke : 25.10–25.60m, 27.20–27.40m					
		27.20	28.10–28.80m, 31.50–31.70m					
		27.40						
		28.10		S	− (+)	− (+)	N	
30		28.80						
		31.50						
		31.70						
		32.10	Brown weathered carbonatite with xenolith of volcanics	S	+	+	N	
		33.60	Purplish grey volcanic rocks : strongly altered	S	−	−	N	
35		34.60	Brown strongly weathered carbonatite intruded by ferrocarbonatite dykes (max 40cm, minimum 5cm wide)	S	+	+	N	
		37.60	Purplish grey fractured porphyritic volcanics	S	+	±		
		39.00	Brown weathered ferrocarbonatite (dyke)	M	+	+		
40		39.60	Grey slightly weathered medium-grained porphyritic phonolite or phonolitic nephelinite, calcite veinlets developed,	W	+	−	N	
		43.40	43.40–43.60m : fractured zone					
		43.60						
		43.95	Grey slightly weathered medium-grained porphyritic phonolite, ferrocarbonatite veins (5–10cm in width) developed throughout the section					
45		45.05	45.05–45.15m : ferrocarbonatite dyke	W	+	−	N	
		45.15	47.25–47.50m : strongly fractured zone					
		47.25						
		47.50						
50		49.75	49.75m : Water Table					
			Grey fresh porphyritic phonolite to phonolitic nephelinite,					
55			strongly carbonatized : felsic mineral → calcite, calcite veinlets	F	+	−	N	
								57.80m KG-1-A (T)
60		60.10						

SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
KG-1-01	7.30–8.20 (0.90)	2290	7.54	2270	185	230	20.5	461	1.510	1.59	0.28	150.0	40.4	13.2	16.3	2.7	3.380
KG-1-02	8.70–9.30 (0.60)	2200	1.83	1595	250	280	10.6	219	0.570	0.73	0.17	155.0	50.0	13.4	13.7	2.2	1.470
KG-1-03	13.50–14.40 (0.90)	1815	3.20	1550	890	185	15.9	152	0.840	0.88	0.16	107.0	37.5	11.9	8.3	2.0	1.880
KG-1-04	14.40–15.70 (1.30)	3200	10.60	3280	640	200	32.5	251	2.460	2.13	0.36	160.0	70.9	9.9	7.6	2.1	4.950
KG-1-05	(2.70)	7590	2.32	3050	510	180	27.9	211	0.820	0.99	0.19	141.0	51.1	9.3	7.8	2.4	2.000
KG-1-06	18.40–19.70 (1.30)	15850	4.43	3290	1100	190	14.4	723	0.500	0.92	0.28	190.0	52.7	9.7	7.3	2.1	1.700
KG-1-07	21.90–22.80 (0.90)	3670	1.74	2930	280	145	11.4	1073	0.032	0.20	0.16	198.0	51.4	11.2	6.8	0.9	0.392
KG-1-08	23.40–24.60 (1.20)	4090	3.23	1405	590	195	11.3	1245	0.044	0.27	0.20	200.0	57.9	13.1	7.4	1.4	0.514
KG-1-09	32.10–33.60 (1.50)	5380	1.62	2250	510	180	10.8	1347	0.055	0.34	0.23	236.0	63.3	13.5	6.3	1.3	0.625
KG-1-10	34.80–37.60 (2.80)	2630	1.92	2220	550	260	14.4	1660	0.052	0.27	0.25	248.0	68.9	13.9	3.9	1.3	0.532
KG-1-11	39.00–39.60 (0.60)	7.32	8.56	1050	175	125	19.3	2540	0.017	0.32	0.41	340.0	91.6	14.5	4.1	0.4	0.767

Key: Weathering S:strong M:moderate W:weak F:fresh | Reaction to HCl +:react −:not react | Magnetic test +:magnetic −:non magnetic | Vein V:vein part A:abundant C:common R:rare N:not veined | Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 31 Geological Log of Diamond Drilling Hole, KG–2

DDH No. KG–2 LOCATION (UTM GRID) X : 651,695 mE Y : 9,945,805 mN ELEVATION : 1,185 m BEARING : 70° INCLINATION : −50° LENGTH : 60.10 m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH (m) and CORE ANGLE (°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES
0		1.20	Calcrete consisting of gravels of carbonatite and metabasalt	S				
		2.60	Pale grey to greyish brown fine-grained carbonatite, 2.60–3.00m : slim core	S	+	+	N	
		3.00						
		3.40	Pale grey to greyish brown fractured metabasalt	M				
5		4.50	Brown fine to medium-grained magnetite rich ferro-carbonatite or carbonatite. magnetite→hematite or goethite	M	+	+	N	5.00m KG–2–A (E)
		5.10						
		5.60						
		8.20	Strongly fractured metabasalt with invasion of ferrocarbonatite	M	+	+	N	
		9.10 B 30°	Brown to dark brown, fine to medium-grained ferro-carbonatite rich in talcized metabasalt breccias	M	+	+	N	
10		11.80	Brown to dark brown magnetite rich banded carbonatite	M	+	+	N	
		13.30 B 70°	Brown heterogeneous ferrocarbonatite with metabasalt breccia	M	−	−	N	
		14.30	Pale greenish grey to white altered metabasalt	M	+	+	N	
15		15.10	Brown moderately weathered ferrocarbonatite, strongly fractured and weathered earthy nearby blocks of metabasalt (xenolith), small breccias of metabasalt are sporadically included throughout the section major metabasalt blocks : 16.90–17.10m, 18.30–28.70m, 20.30–20.50m, 22.30–22.50m, 24.70–24.90m, 28.60–28.90m	M	+	+	N	15.20m KG–2–B (T)
		16.90						
		17.10						
		18.30						
		18.70						
20		20.30						
		20.50						
		22.30						
		22.50						
		24.70						
25		24.90						
		28.60						
		28.90	Brown moderately weathered fine-grained massive partly banded ferrocarbonatite metabasalt inclusion : very minor	M	+	+	N	
30								
		36.80						
		37.90	Grey fine-grained porphyritic phonolite (lava) intruded by brown to dark brown carbonatite vein	M	+	(+)	N	
		38.80						
		39.30	Pale grey fine-grained porphyritic phonolite (lava) intruded by ferrocarbonatite dykes dyke : 40.40–40.90m, 41.70–42.00m	M	+	−	N	
40								
		43.60	Brown weathered carbonatite and intruded phonolite	M	+	+	N	
45		45.00	Pale grey fine porphyritic glassy phonolite (lava) ferrocarbonatite dyke : 45.40–45.55m	M	−	−	N	45.30m KG–2–C (P)
		47.50	Purplish grey to grey fractured lapilli tuff to tuff	W	−	−	N	
		49.30						
50		49.60	Brown weathered ferrocarbonatite (dyke)					
			Grey to dark grey lapilli tuff to tuff (phonolitic nephelinite?) strongly veined by carbonate minerals	W	(+)	−	N	
		53.70						
55		54.30	Grey tuff to lapilli tuff (nephelinitic matrix) fractured zone : 53.70–54.30m, 56.00–56.70m	W	(+)	−	N	
		56.00						
		56.70						57.80m KG–2–D (T)
		57.80	Grey to pale purplish grey porphyritic phonolite (lava) weakly veined by carbonate minerals	W	(+)	−	N	
60		60.10						

ANALYTICAL RESULTS

SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
KG–2–01	1.20 (1.40) 2.60	1305	1.36	1060	475	195	7.8	234	0.360	0.47	0.11	121.0	35.7	5.5	12.9	1.4	0.940
KG–2–02	(0.80) 3.40	1065	1.28	1285	530	230	9.0	155	0.530	0.80	0.13	121.0	39.9	10.8	14.3	2.2	1.260
KG–2–03	4.50 (1.70) 6.20	1710	6.46	2150	130	130	11.4	331	1.060	1.15	0.20	116.0	28.4	7.3	4.8	1.5	2.410
KG–2–04	9.10 (2.70) 11.80	2170	232	2360	660	155	12.3	296	1.070	1.12	0.17	1060	334	8.7	6.1	2.3	2.360
KG–2–05	(2.50) 14.30	2110	1.51	1700	440	125	16.8	831	0.610	0.63	0.10	113.0	37.6	9.1	5.9	1.3	1.340
KG–2–06	15.10 (5.20) 18.30	2050	2.58	1470	350	110	11.3	263	0.770	0.80	0.12	86.4	24.6	5.8	4.6	1.5	1.690
KG–2–07	18.10 (3.60) 22.30	3360	4.51	1895	490	160	7.2	437	0.780	0.99	0.18	106.8	37.1	8.5	3.3	1.6	1.950
KG–2–08	22.50 (2.20) 24.70	18.10	6.95	2360	280	160	7.6		1.320	1.39	0.24						2.950
KG–2–09	24.90 (3.70) 28.60	6970	2.41	3250	260	260	20.4	413	0.810	1.07	0.21	153.0	47.0	11.4	16.0	2.4	2.090
KG–2–10	28.90 (4.10) 33.00	12310	5.53	2760	375	370	9.4	527	0.840	1.39	0.34	200.0	62.1	15.9	12.9	1.6	2.570
KG–2–11	(3.80) 36.80	8760	2.33	1775	590	1250	8.9	760	0.970	1.22	0.27	203.0	89.2	43.0	48.5	4.9	2.460
KG–2–12	37.90 (0.90) 38.80	8570	3.69	1470	650	720	11.6	862	0.640	1.13	0.31	213.0	81.8	21.4	23.8	2.9	2.080
KG–2–13	49.30 (0.30) 49.60	4610	1.87	1000	150	280	17.0	2154	0.093	0.28	0.22	293.0	71.1	15.0	12.3	1.2	0.593

CORE RECOVERY 0 20 100 %

DEPTH (m) 0 10 20 30 40 50 60

Key: Weathering S:strong M:moderate W:weak F:fresh
Reaction to HCl +:react −:not react
Magnetic test +:magnetic −:non magnetic
Vein V:vein part A:abundant C:common R:rare N:not veined
Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test C: oxygene isotopes S: size measurement of minerals

Apx. 32 Geological Log of Diamond Drilling Hole, KG-3

DDH No. KG-3 LOCATION (UTM GRID) X : 651.702mE Y : 9,945.710mN ELEVATION : 1,183m BEARING : 70° INCLINATION : −50° LENGTH : 60.10m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE (°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu* (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Sm CONTENTS (%)	CORE RECOVERY (%)	DEPTH (m)
0			Calcrete consisting of carbonatite and metabasalt breccia	S	+	+	N																						0
		2.10	Pale brown slightly banded fine-grained carbonatite with corroded holes after metabasalt breccia	M	+	+	N		KG-3-01	2.10 (1.20) 3.30	1340	5.34	752	400	165	4.3		0.770	0.86	0.16						1.790		
		3.30	Pale brown slightly banded fine-grained carbonatite with very minor amounts of small metabasalt breccia	M	+	+	N	← 5.30m KG-3-A (E) ← 8.00m KG-3-D (WA)	KG-3-02	(4.40) 7.70	985	4.66	893	570	195	4.8	409	0.910	1.02	0.20	1790	52.2	12.3	10.9	1.6	2.130		
5			70°						KG-3-03	(4.40) 12.10	1400	3.37	1300	405	580	4.9	408	0.870	1.04	0.20	1920	57.7	19.9	23.4	3.7	2.110		
10		11.20	Brown massive ferrocarbonatite	M	+	+	N																						
		12.10	Strongly fractured grey metabasalt	M	+	−	N			13.40																			
		13.40	Brown ferrocarbonatite with fragments of bleached metabasalt	M	+	−	N																						
		14.50	Brown massive ferrocarbonatite containing yellow fine secondary minerals	M	+	−	N	← 14.60m KG-3-B (P)	KG-3-04	(3.00) 16.40	1505	3.19	1315	275	550	5.1	345	0.650	0.92	0.18	1550	38.7	11.5	22.6	3.3	1.750		
15		16.40	Greenish grey fractured metabasalt	M	+	−	N																						
		17.70	Dark brown strongly weathered ferrocarbonatite	M	+	−	N		KG-3-05	(0.70) 17.70 (0.70) 18.40	1050	2.98	872	180	300	3.5	289	0.430	0.60	0.13	1200	400	15.6	29.0	4.6	1.160		
		18.40	Pale grey strongly fractured metabasalt cemented by brown carbonatitic matrix	M	+	−	N																						
20		21.70	Dark brown strongly weathered ferrocarbonatite, partly earthy. 22.50–23.40 : fractured core	S	+	−	N		KG-3-06	(3.30) 21.70	2920	5.62	1675	185	1100	9.2	617	1.180	1.54	0.31	2480	87.3	32.5	65.5	9.5	3.030		
		22.50																										
		23.40																										
		24.00	Brown strongly weathered ferrocarbonatite, half of the section is earthy	S	+	−	N	← 24.60m KG-3-E (WA)	KG-3-07	(2.70) 24.00 (2.70) 26.70	4150	2.94	1205	490	550	13.3	1650	0.430	0.79	0.20	2550	80.2	25.5	37.5	6.1	1.420		
25		26.70	Pale grey carbonatite intruded by ferrocarbonatite vein	M	+	−	N		KG-3-08	(1.40) 28.10	8480	1.42	1130	760	490	10.6	1371	0.380	0.76	0.20	1920	70.0	20.4	18.6	3.0	1.540		
		28.10																										
		29.00	Strongly altered and sheared zone consisting mainly of breccias of metabasalt, partly carbonatitic cementing material	M	+ (−)	−	N																						
		29.60																										
30		32.10	Pale brown weathered heterogeneous carbonatite with small fragments of green metabasalt	S	+	−	N		KG-3-09	(2.80) 32.10	8980	1.22	2090	1150	490	6.8	661	0.340	0.69	0.19	1800	71.8	28.3	16.3	3.0	1.220		
		34.90	Brown to dark brown massive ferrocarbonatite rich in pale green secondary minerals	W	+	+	N	← 37.80	KG-3-10	(3.30) 34.90	10610	3.98	2240	485	500	6.8	755	0.790	1.28	0.30	1750	55.3	16.2	29.4	3.6	2.370		
35		38.20	Strongly weathered pale brown carbonatite rich in yellowish green secondary minerals	S	+	+ (−)	N	KG-3-C (P)	KG-3-11	(2.30) 38.20 (2.30) 40.50	9490	3.86	1860	800	300	8.9	873	0.490	0.87	0.23	1550	48.2	13.9	15.6	2.7	1.690		
		40.50	Green shattered metabasalt : xenolith																									
40		40.80	Pale brown weathered fine-grained carbonatite	M	+	−	N		KG-3-12	(2.35) 43.15	13480	1.27	1590	550	530	10.6	345	0.110	0.25	0.10	1340	43.0	10.7	10.7	1.1	0.460		
		43.15	Pale brownish grey brecciated fine phonolitic rock	W	−	−	N			44.70																			
45		44.70	Brown weathered carbonatite (dyke)							(45.00) 45.00																			
		45.00	Purplish grey porphyritic volcanic rock (phonolite), strongly fractured and cemented by white calcite	M or S	−	−	N			(0.30) 49.30	5470	1.62	1380	205	195	7.5	1057	0.050	0.28	0.18	1380	43.9	6.5	5.6	1.1	0.510		
		49.30	Brown weathered ferrocarbonatite to carbonatite, partly strongly fractured. Blocks of brecciated phonolite are contained in several parts of the section	M	−	−	N		KG-3-14	(2.70) 52.00	9520	4.72	1580	1500	470	7.9	1030	0.520	1.20	0.39	1550	41.5	12.9	10.2	0.9	2.110		
50		50.30							KG-3-15	(3.30) 55.30	6650	4.94	824	920	520	11.0	973	0.260	0.78	0.31	1950	61.7	20.4	17.6	2.7	1.350		
		50.60																										
		54.90																										
55		55.60																										
		55.30	Brown strongly weathered carbonatite to ferrocarbonatite, some parts are earthy	S	−	−	N		KG-3-16	(4.80) 60.10	4440	3.77	1180	1200	360	14.3	1072	0.068	0.47	0.25	1910	54.2	15.7	15.8	1.8	0.808		
60		60.10																										60

Key: Weathering S:strong M:moderate W:weak F:fresh — Reaction to HCl: +:react −:not react — Magnetic test: +:magnetic −:non magnetic — Vein: V:vein part A:abundant C:common R:rare N:not veined — Tested Samples: WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 33 Geological Log of Diamond Drilling Hole, KG–4

DDH No. KG–4 LOCATION (UTM GRID) X : 651.764 mE Y : 9,945.620 mN BEARING : 70° INCLINATION : −50° ELEVATION : 1,180 m LENGTH : 60.10 m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (%)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)	CORE RECOVERY (%)	DEPTH (m)
0		1.70	Calcrete : carbonatite and ferrocarbonatite	S	+	−	N																						0
			Brown massive ferrocarbonatite containing small bleached metabasalt breccia (1 to 2cm in size)	M	+	−	N		KG–4–01	1.70 (3.30)	10820	6.04	3030	30	200	63	455	0.330	0.45	0.12	87.0	25.0	7.1	15.1	1.9	0.900		
		4.00	Strongly fractured zone of ferrocarbonatite							5.00																		
5		5.00	Brown massive ferrocarbonatite same as above.																									
			Specs or spots of black hematite are common.						KG–4–02	(3.00)	4910	4.64	2530	480	220	9.8	676	0.730	0.92	0.20	126.0	33.7	9.5	14.9	2.5	1.850		
			Pale green to white small secondary minerals are impregnated throughout the section							8.00																		
10			Fractured part : 13.30–13.45m, 13.50–13.60m, 13.90–13.95m, 14.25–14.50m, 14.85–14.95m	M	+	−	N		KG–4–03	(3.00)	3650	3.85	1495	740	350	8.1	764	0.630	0.96	0.24	152.0	39.0	11.4	19.7	3.0	1.850		
										11.00																		
								← 13.30m KG–4–A (P)	KG–4–04	(3.00)	3920	3.84	1500	540	330	9.3	943	0.660	0.91	0.21	151.0	41.5	9.3	19.7	2.8	1.760		
15										14.00																		
									KG–4–05	(2.80)	10280	5.04	2510	690	240	9.7	957	0.640	0.79	0.20	149.0	44.0	9.6	13.9	2.4	1.650		
		16.80								16.80																		
		17.70	Grey to white sheared bleached metabasalt	M	−	−	R			17.70																		
			Brown massive heterogeneous ferrocarbonatite same as 5.00–16.80m	M	−	−	N		KG–4–06	(3.00)	3940	2.71	1450	330	110	10.5	1505	0.300	0.52	0.17	188.0	41.7	9.7	7.6	1.1	0.990		
20		20.70								20.70																		
			Brown strongly weathered (porous) carbonatite: leached out facies	M	−	−	N		KG–4–07	(3.00)	7590	2.61	2080	210	300	23.9	2893	0.041	0.21	0.18	330.0	89.1	19.1	13.9	1.9	0.431		
		23.70								23.70																		
			Grey strongly weathered fine porphyritic rock (phonolite) Carbonate minerals (veinlets, replacing) developed.	M	+	−	N																						
25		25.75																										
		26.15	Sheared zone					26.10 KG–4–B (T)		26.15																		
			Pale grey to pale brown (due to limonite stain) calcareous coarse tuff to Papilli tuff, partly tuff breccia						KG–4–08	(3.85)	4190	0.23	860	185	91	1.6	120	0.015	0.04	0.01	19.4	6.6	3.2	6.0	0.9	0.065		
			Possibly effusive facies of carbonatite,							30.00																		
30			Matrix : mainly calcite vein Breccia : grey volcanic rock (phonolite) Fractured zone : 32.90–33.30m, 30.20–30.40m 31.10–31.20m, 34.50–34.60m	M or W	+	−	N		KG–4–09	(3.50)	5260	0.21	675	305	165	2.3	255	0.011	0.03	0.01	34.9	13.3	4.0	7.8	1.2	0.051		
										33.50																		
35									KG–4–10	(3.50)	6480	0.21	1625	375	210	2.7	170	0.012	0.02	0.01	28.0	11.9	4.1	11.0	1.7	0.042		
										37.00																		
									KG–4–11	(2.90)	11830	0.37	1625	415	270	3.9	385	0.008	0.03	0.01	53.2	20.1	5.3	13.1	1.7	0.048		
40		39.90								39.90																		
		40.10 40.50	Brown massive ferrocarbonatite with black spots and black iron concentrated parts. 40.10–40.50 : purplish grey metabasalt	S	− (+)	−	N	← 41.80m KG–4–C (P)	KG–4–12	(3.70)	3700	1.36	1840	78	250	14.1	1701	0.012	0.15	0.16	246.0	68.8	13.3	21.4	1.5	0.312		
		43.60								43.60																		
45			Grey weathered fine porphyritic phonolite, strongly altered : felsic minerals to clay mineral, calcite veinlets	M	− (+)	−	N																						
		47.00								47.00																		
			Grey fine-grained strongly weathered (oxidized) carbonatite, magnetite changed to black iron-oxide						KG–4–13	(2.70)	3160	2.22	1230	455	210	12.8	1253	0.044	0.26	0.20	201.0	52.3	8.0	17.9	1.9	0.504		
50				S	+	−	N			49.70																		
									KG–4–14	(2.55)	1865	2.53	873	350	195	16.9	1681	0.046	0.52	0.27	235.0	54.4	8.6	21.1	1.4	0.836		
		52.25								52.25																		
			Grey strongly weathered earthy carbonatite	S	+	−	N		KG–4–15	(2.45)	3120	4.85	2090	730	390	16.8	1206	0.075	0.46	0.30	203.0	50.4	12.6	24.1	2.4	0.835		
55		54.70								54.70																		
			Brown strongly weathered fine-grained carbonatite, magnetite→hematite or goethite	S	+	−	N		KG–4–16	(3.80)	3820	2.61	1040	1400	350	24.3	917	0.073	0.50	0.28	197.0	46.5	13.4	16.8	1.8	0.853		
		58.50								58.50																		
60			Strongly altered porphyritic phonolite	S	+ (−)	−	N																						60
		60.10																										

Key: Weathering S:strong M:moderate W:weak F:fresh Reaction to HCl +:react −:not react Magnetic test +:magnetic −:non magnetic Vein V:vein part A:abundant C:common R:rare N:not veined Tested Samples WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 34 Geological Log of Diamond Drilling Hole, KG–5

DDH No. KG–5 LOCATION (UTM GRID) X : 651.759mE Y : 9,945.518mN ELEVATION : 1,190 m BEARING : 110° INCLINATION : −50° LENGTH : 60.10 m

DEPTH (m)	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (ppm)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)
0	1.40	Surface gravel zone consisting of carbonatite and sandy matrix	S	+	+	N			1.40																
		Brown fine-grained weathered ferrocarbonatite containing white subrounded breccias of metabasalt metabasalt breccia : 0.5–10cm in size	W	+	+	N		KG–5–01	(3.40) 4.80	1650	328	1260	500	150	8.9	191	0.590	0.75	0.16	66.5	21.9	4.0	5.2	0.9	1.500
								KG–5–02	(3.20) 8.00	1270	269	1095	620	120	4.9	246	0.450	0.59	0.13	89.7	22.4	7.2	4.3	1.0	1.150
								KG–5–03	(3.50) 11.50	972	405	1060	540	150	3.0	221	0.460	0.64	0.15	91.9	22.2	6.0	3.9	1.1	1.230
	11.50	Fractured zone : mainly bleached white metabasalt																							
	12.20	Brown massive fine-grained ferrocarbonatite	W	+	+	N		KG–5–04	(3.00) 15.20	1395	532	1595	445	135	2.9	176	0.520	0.60	0.13	61.2	17.9	6.6	3.3	1.3	1.250
	14.10	Brown ferrocarbonatite rich in small breccias of metabasalt	W	+	+	N																			
	15.20	White talcized metabasalt; as blocks and breccias	W	+	+	N																			
	16.90	Brown ferrocarbonatite rich in small breccias of metabasalt	W	+	+	N		KG–5–05	(1.65) 16.90	3340	1.42	1220	445	71	2.3	147	0.160	0.24	0.05	38.2	9.2	2.6	4.0	0.9	0.450
	16.55	White talcized metabasalt intruded by ferrocarbonatite vein	W	+	+	N			18.55																
	19.80	Brown ferrocarbonatite with minor amounts of metabasalt	W	+	+	N		KG–5–06	19.80																
	20.90	Greenish grey metabasalt; both boundaries are white	W	+	+	N	21.10m		(2.00)	917	1.69	723	740	150	4.0	257	0.280	0.43	0.10	64.8	24.7	5.9	9.8	1.4	0.810
	21.60	Brown massive ferrocarbonatite rich in breccias of metabasalt	W	+	−	N	KG–5–A (P)		22.50																
	22.50	Brown massive fine-grained ferrocarbonatite, composed of carbonate minerals and orange brown iron oxide and including very minor amounts of breccias of white metabasalt	W	+	−	N		KG–5–07	(3.50) 26.00	1165	4.46	1140	630	170	4.3	328	0.600	0.76	0.17	113.5	31.2	8.4	10.9	1.0	1.530
								KG–5–08	(3.00) 29.00	2180	3.71	1730	510	175	3.7	398	0.580	0.75	0.16	108.3	28.0	8.7	11.1	1.5	1.470
							29.40m KG–5–B (E)	KG–5–09	(3.50) 32.50	3130	2.56	1920	680	190	5.4	521	0.570	0.74	0.16	113.7	28.6	8.9	11.1	1.7	1.490
	32.50	Pale brown massive fine-grained carbonatite or ferrocarbonatite (transitional facies). Pale green fine spots (after RE minerals) and black magnetite spots are very common.	W	+	+	N		KG–5–10	(3.20) 35.70	4160	2.06	1680	520	220	7.4	527	0.560	0.72	0.16	118.6	30.5	8.9	13.2	1.9	1.440
							35.50m KG–5–C (P)	KG–5–11	(3.20) 38.90	3710	1.63	1925	520	280	8.4	561	0.450	0.60	0.14	110.2	29.7	9.0	14.1	2.3	1.190
	38.90	Fault : strongly fractured ferrocarbonatite						KG–5–12	39.35	2890	2.15	1600	620	290	11.0	777	0.350	0.64	0.19	132.9	31.8	8.5	21.5	2.9	1.180
	39.35	Brown strongly weathered (by underground water) fragile ferrocarbonatite, partly earthy appearence.	S	+	±	N		KG–5–13	(0.45) (2.95) 42.30	4910	2.63	1365	700	460	15.4	1158	0.360	0.75	0.26	186.8	47.1	18.2	30.6	5.2	1.350
	42.30	Brown to light brown ferrocarbonatite to carbonatite (middle composition), Block spots after magnetite are common.	M W	+	−	N		KG–5–14	(2.40) 44.70	7630	2.69	2300	495	290	16.9	1059	0.310	0.66	0.21	168.2	40.4	10.7	14.5	2.8	1.180
								KG–5–15	(2.30) 47.00	9960	3.42	2650	600	250	18.3	1349	0.310	0.68	0.24	179.2	41.9	9.5	17.8	3.4	1.230
	47.00	Brown to dark brown weathered ferrocarbonatite, fractured like disks	M	+	−	N		KG–5–16	(4.05) 51.05	6210	3.98	4010	560	320	13.5	673	0.120	0.40	0.18	87.0	38.1	10.9	22.8	4.2	0.700
	51.05	Grey fine porphyritic phonolitic rock (may be dyke)	W	±	−	−																			
	53.20	Pale brown to brown strongly weathered carbonatite with strongly leached out parts.	S	±	−	N		KG–5–17	(2.40) 55.60	9120	10.50	3280	370	250	11.8	808	0.460	0.85	0.20	144.0	38.2	8.9	13.4	2.1	1.610
	55.60	Strongly brecciated bleached metabasalt	S	±	−	N																			
	57.00	Brown carbonatite to ferrocarbonatite; black iron specs are very common, partly strongly fractured.	M	+	+	N		KG–5–18	(3.10) 60.10	1506	3.04	1130	375	185	7.1	150	0.670	0.83	0.15	67.3	21.8	5.9	10.1	1.8	1.620
60	60.10																								

Key: Weathering S:strong M:moderate W:weak F:fresh — Reaction to HCl +:react −:not react — Magnetic test +:magnetic −:non magnetic — Vein V:vein part A:abundant C:common R:rare N:not veined — Tested Samples WA:whole rock analysis T:thin section P:polished thin section E:EPMA test O:oxygen isotopes S:size measurement of minerals

Apx. 35 Geological Log of Diamond Drilling Hole, KG–6

DDH No. KG–6 LOCATION (UTM GRID) X : 651,735mE Y : 9,945,420mN ELEVATION : 1,184 m BEARING : 90° INCLINATION : −50° LENGTH : 60.10m

DEPTH (m)	GEOLOGIC COLUMN	BOUNDARY DEPTH(m) and CORE ANGLE(°)	GEOLOGICAL DESCRIPTION	WEATHERING	REACTION to HCl	MAGNETIC TEST	VEIN	POSITION of TESTED SAMPLES	SAMPLE No.	DEPTH and WIDTH (m)	P (ppm)	Ba (ppm)	Sr (ppm)	Nb (ppm)	Y (ppm)	U (ppm)	Th (ppm)	La (%)	Ce (%)	Nd (%)	Sm (ppm)	Eu (ppm)	Tb (ppm)	Yb (ppm)	Lu (ppm)	COMBINED La, Ce and Nd CONTENTS (%)	CORE RECOVERY (%)	DEPTH (m)
0		1.00	Calcrete consisting of gravels of metabasalt and calcareous sand	S	+	−	N	KG-6-C																			0
			Strongly weathered fragile carbonatite, with impregnation of biotite and hematite after magnetite	S	+	−	N	Surface (T)	KG-6-01	1.00 (3.00) 4.00	907	1.38	1040	760	125	7.6	81.0	0.110	0.20	0.06	69.7	18.6	6.5	6.0	0.9	0.370		
5		4.00	Pale brown fine-grained mica rich carbonatite mica : phlogopite	W	+	+	N		KG-6-02	(3.60) 7.60	3450	5.34	1415	500	230	4.6	154.0	0.360	0.48	0.13	104.0	33.9	8.8	8.4	1.1	0.970		
		7.60	Pale brown fine-grained carbonatite or ferrocarbonatite containing small fragments of metabasalt						KG-6-03	(2.25) 9.85	2780	3.39	1615	310	185	5.9	155.0	0.590	0.68	0.14	82.8	26.2	5.2	8.3	1.2	1.410		
10		9.85	Mica (phlogopite) is commonly impregnated.	W	+	+	N		KG-6-04	(1.75) 11.60	1245	6.95	1235	300	340	6.2	212.0	0.560	0.79	0.20	96.2	30.8	8.4	12.2	1.7	1.650		
		11.60 8 30°	Brown massive to banded ferrocarbonatite, rich in magnetite. Pale yellow minerals form banding structure.					12.90m KG-6-A	KG-6-05	(2.20) 13.80	1155	6.67	1235	405	400	7.8	226.0	0.910	1.13	0.25	92.5	33.0	7.1	23.7	3.9	2.290		
		13.80 8 14.20 40°	13.80–14.20m : xenolith of metabasalt	W	+	+	N	E	KG-6-06	(1.30) 15.50	1560	6.13	1295	260	260	8.7	794.0	0.220	0.64	0.32	240.0	60.6	12.4	14.0	2.4	1.180		
15		15.50	Fault zone consisting of fractured porphyritic rocks	W	−	−	N																					
		17.00	Strongly fractured metabasalt with calcite veines	W	−	−	N																					
		18.00	White argillized fine-grained porphyritic dyke rock	W	−	−	N																					
		19.05	Greenish grey metabasalt, commonly stained pale brown along fractures. Strongly fractured and cemented by white calcite	W to F	−	−	N																					
20																											20
25																											
30		29.30	Greenish grey weakly fractured metabasalt, weakly stained by iron-oxide	F	−	−	N																					30
		32.00	(Boundary of oxidized and unoxidized zones)																									
35			Greenish grey moderately, partly strongly, fractured metabasalt White calcite veinlets are common in this section. No iron-oxide are observed.	F	(+)	−	N																					
40																											40
		42.85	Fault zone: 42.85–43.40: fractured metabasalt,	W	−	−	N		KG-6-07	43.70 (0.05) 43.75	2790	0.82	1330	440	130	17.5	1767	0.033	0.12	0.08	129.0	35.9	9.1	6.1	1.5	0.233		
		43.40	43.40–43.70: fault breccia, 43.70–43.75: ferrocarbonatite dyke																									
45		43.75	Purplish grey tuff to lapilli tuff, phonolitic rock? strongly replaced by calcite.	W	+	−	N																					
		47.55	Pale grey to pale brown fine porphyritic phonolite. Calcite veines along fractures are common.	W to F	+	−	N	48.70m KG-6-B																				
50																											50
		51.75	Purplish grey fine lapilli tuff, strongly altered (calcite)	W to F	+	−	N																					
55		54.75	Grey to pale brown fine porphyritic phonolite	W	+ −	−	N																					
		56.40	Purplish grey fine lapilli tuff, phonolitic, matrix) lapilli	W to F	+	−	N																					
60		60.10																									60

Key: Weathering: S:strong M:moderate W:weak F:fresh

Reaction to HCl: +:react −:not react

Magnetic test: +:magnetic −:non magnetic

Vein: V:vein part A:abundant C:common R:rare N:not veined

Tested Samples: WA:whole rock analysis T :thin section P:polished thin section E:EPMA test O: oxygene isotopes S: size measurement of minerals

Apx. 36 Drill Operation Details (1)

Rig	THS - 5					YBM - 3ES				
Date	Drilling Hole No.	Shift 1st	Shift 2nd	Drill performed Daily	Drill performed Total	Drilling Hole No.	Shift 1st	Shift 2nd	Drill performed Daily	Drill performed Total
		m	m	m	m		m	m	m	m
7.10	Drilling team members left Tokyo									
12	Drilling team arrived in Nairobi, Kenya via London									
	Courtesy visits to Kenya Governmental Organizations, Embassy of Japan, JICA and MMAJ offices, Nairobi									
13	General discustion with M.G.D.									
14	Drilling team members arrived in Kericho									
15	Courtesy visits to District Commission and County Councillor Kericho.									
16	Started provisional works and construction of access road to drill sites									
18	Mobilization of drill rig and equipments to drill site BRL-2, BR-17.									
19	BRL-2 Mounting									
20	do.									
21		17.40		17.40	17.40	BR-17	Mounting			
22		26.10	10.00	36.10	53.50		do.			
23		36.00	11.00	47.00	100.50		do.			
24		Dismounting					11.10	17.20	28.30	28.30
25	BR-23 Mounting						21.90		21.90	50.20
			11.50	11.50	11.50					
26		23.40	15.30	38.70	50.20		Dismounting			
						BR-21	Mounting			
27		Dismounting					11.50	10.60	22.10	22.10
28	BR-26 Mounting						25.40	3.00	28.40	50.50
			1.70	1.70	1.70					
29		16.10	16.20	32.30	34.00		Dismounting			
30		Holiday					Holiday			
31		9.10	7.30	16.40	50.40	BR-27	Mounting			
								4.10	4.10	4.10
8. 1		Dismounting					8.90	12.10	21.00	25.10
2	BR-21' Mounting						9.00	8.40	17.40	42.50
3		1.30	14.90	16.20	16.20		7.60			
4		7.20	17.50	24.70	40.90		Dismounting			
5		6.90	2.30	9.20	50.10	BR-25	Mounting			
								2.40	2.40	2.40
6		Dismounting					10.80	12.80	23.60	26.00
7	BRL-3 Mounting						9.10	9.40	18.50	44.50
8			4.90	4.90	4.90		5.60		5.60	50.10
9		12.60	39.00	51.60	56.50	BR-20	Dismounting			
10		18.40	17.60	36.00	92.50		Mounting			
11		8.20		8.20	100.70			10.30	10.30	10.30
12		Dismounting					25.10	14.80	39.90	50.20
	BR-24 Mounting									
13		Holiday					Holiday			
14		13.30	8.50	21.80	21.80		Dismounting			
15		9.00	19.70	28.70	50.50	BR-19	Mounting			
							2.30	2.30	2.30	
16		Dismounting					7.40	11.70	19.10	21.40
17	BR-22 Mounting						15.10	9.80	24.90	46.30
18		6.50	8.70	15.20	15.20		3.80		3.80	50.10
19		4.70	3.10	7.80	23.00		Dismounting			
20		0.50	0.80	1.30	24.30	BR-18	Mounting			
21		8.20	6.00	14.20	3 8.50		do.			

Apx. 36 Drill Operation Details (2)

Rig		THS - 5					YBM - 3ES				
Date	Drilling Hole No.	Shift 1st	Shift 2nd	Drill performed Daily	Drill performed Total	Drilling Hole No.	Shift 1st	Shift 2nd	Drill performed Daily	Drill performed Total
		m	m	m	m		m	m	m	m
8.22		11.60		11.60	50.10			4.10	4.10	4.10
23		Dismounting					20.70	14.90	35.60	39.70
24		do.					12.80		12.80	52.50
25		do.					Dismounting			
26		do.					do.			
27		Holiday					Holiday			
28		Packing					Packing			
29		do.					do.			
30		do.					do.			
31		Moving from Buru Hill to Kuge								
9. 1		Provisional work								
2	KG-4	Mounting								
3		do.								
4		4.00		4.00	4.00					
5		15.90		15.90	19.90					
6		7.20		7.20	27.10	KG-5	Mounting			
7		14.90	18.10	33.00	60.10		do.			
8		Dismounting					5.80	27.20	33.00	33.00
9	KG-6	Mounting					9.30	14.90	24.20	57.20
10		Holiday					Holiday			
11		4.40	21.50	25.90	25.90		2.90			60.10
12		13.10	12.80	25.90	51.80		Dismounting			
13		8.30		8.30	60.10	KG-3	Mounting			
14		Dismounting					15.60	18.70	34.30	42.10
15	KG-2	Mounting					16.00	2.00	18.00	60.10
			7.90	7.90	7.90					
16		24.00	19.00	43.00	50.90		Dismounting			
17		9.20		9.20	60.10	KG-1	Mounting			
18		Dismounting					8.50	8.40	16.90	16.90
19		do.					13.50	11.70	25.20	42.10
20		do.					10.80	7.20	18.00	60.10
21		do.					Dismounting			
22		do.					do.			
23		Moving from Kuge to Kisumu, transportation of cores, etc.								
24		Completion work and sampling								
25		do.								
26		do.								
27		do.								
28		Moving from Kisumu to Nairobi								
29										
30		Preparatory works returning to Japan								
10. 1		do.								
2		do.								
3		Reporting, Courtesy visits to Governmental organizations								
4		do.								
5		do.								
6		Preparatory works returning to Japan								
7		do.								
8		Left Nairobi								
9		Arrived in Tokyo								

Apx. 37 Summary of Drilling Results (1)

Item \ Drilling hole No.			Mobilization	BRL-2	BRL-3	BR-17	BR-18
Drilling Deta	Drilling length	(m)		100.50	100.70	50.20	52.50
	Core length	(m)		82.10	92.20	43.15	44.30
	Core recovery	(%)		81.7	91.6	86.0	84.40
	Depth by NQ size	(m)		48.10	100.70	50.20	52.50
	do. BQ size	(m)		52.40	0	0	0
	Casing pipe NW	(m)		4.10	4.10	4.10	4.10
	do. BW	(m)		48.10	0	0	0
	Drilling machine			THS-5	THS-5	YBM-3ES	YBM-3ES
Working Period	Working Period		7.15∿7.18	7.19∿7.24	8.7∿8.12	7.21∿7.26	8.20∿8.25
	Actual Working	(d)	4	6	6	6	6
	No Working	(d)	0	0	0	0	0
	Total	(d)	4	6	6	6	6
	Actual Working Days: Mounting	(d)		2	1	3	2
	Actual Working Days: Drilling	(d) (shifts)		3 (5)	4 (6)	2 (3)	3 (4)
	Actual Working Days: Dismounting	(d)		1	1	1	1
	Actual Working Days: Others	(d)		0	0	0	0
	Actual Working Days: Total	(d)		6	6	6	6
	Drilling length/ Working Period	(m/d)		16.75	16.78	8.36	8.75
	Drilling length/ Drilling days	(m/d)		3.35	25.17	25.1	17.5
	Drilling length/ Drilling shifts	(m/s)		20.1	16.78	16.73	13.21
Working Time	Drilling	(h)		27	30	19	21
	Holsting & lowering rod etc.	(h)		13	8	5	3
	Repairing	(h)		0	0	0	0
	Sub total	(h)		38	38	24	24
	Mounting	(h)		16	8	24	16
	Dismounting	(h)		8	8	8	8
	Others	(h)		0	0	0	0
	Total	(h)		62	54	56	40
	Drilling length/ Drilling hour	(m/h)		3.72	3.35	2.64	2.5
Total Number of Workers	Driller		15	8	8	7	7
	Counterport driller		10	10	12	6	8
	Labor		32	25	24	26	23
	Pump operater		0	20	12	6	8
	Gardman		29	40	24	12	16
	Labor for access construction		16	25	16	8	12
	Total		102	113	96	65	74
	Total drilling workers/ Drilling length	(w/m)		1.12	0.95	1.29	1.40

Apx. 37 Summary of Drilling Results (2)

Item		Drilling hole No.	BR-19	BR-20	BR-21	BR-21*	BR-22
Drilling Data	Drilling length	(m)	50.10	50.20	50.50	50.10	50.10
	Core length	(m)	44.80	48.20	29.50	43.30	42.60
	Core recovery	(%)	89.4	96.0	58.4	86.4	85.0
	Depth by NQ size	(m)	18.10	3.0	2.60	38.00	30.00
	do. BQ size	(m)	32.00	47.20	47.90	12.10	20.10
	Casing pipe NW	(m)	3.10	3.0	2.60	2.60	4.10
	do. BW	(m)	18.10	3.0	4.10	0	30.00
	Drilling machine		YBM-3ES	YBM-3ES	YBM-3ES	THS-5	THS-5
Working Period	Working Period		8.15∿8.19	8.10∿8.14	7.26∿7.29	8.2∿8.6	8.17∿8.23
	Actual Working	(d)	5	4	4	5	7
	No Working	(d)	0	1	0	0	0
	Total	(d)	5	5	4	5	7
	Actual Working Days: Mounting	(d)	1	1	1	1	1
	Actual Working Days: Drilling	(d) (shifts)	4 (6)	2 (3)	2 (4)	3 (6)	5 (9)
	Actual Working Days: Dismounting	(d)	1	1	1	1	1
	Actual Working Days: Others	(d)	0	0	0	0	0
	Actual Working Days: Total	(d)	6	4	4	5	7
	Drilling length/ Working Period	(m/d)	10.02	10.04	12.62	10.02	7.15
	Drilling length/ Drilling days	(m/d)	12.52	25.1	25.25	16.7	10.02
	Drilling length/ Drilling shifts	(m/s)	8.35	16.73	12.82	8.35	5.56
Working Time	Drilling	(h)	33	20	26	28	40
	Hoisting & lowering rod etc.	(h)	18	3	6	7	15
	Repairing	(h)	0	0	0	0	0
	Sub total	(h)	41	23	32	35	55
	Mounting	(h)	8	8	8	8	8
	Dismounting	(h)	8	8	8	8	8
	Others	(h)	0	0	0	0	0
	Total	(h)	57	39	48	51	71
	Drilling length/ Drilling hour	(m/h)	1.51	2.51	1.94	1.78	
Total Number of Workers	Driller		8	5	5	8	11
	Counterport driller		8	6	6	12	18
	Labor		12	16	16	24	28
	Pump operater		22	6	6	12	18
	Gardman		12	12	12	24	36
	Labor for access construction		24	8	8	12	20
	Total		16	53	53	92	131
	Total drilling workers/ Drilling length	(w/m)	0.58	1.05	1.04	1.83	2.61

* Re-drilled hole

Apx. 37 Summary of Drilling Results (3)

Item			Drilling hole No.	BR-23	BR-24	BR-25	BR-26	BR-27
Drilling Deta	Drilling length	(m)		50.20	50.50	50.10	50.40	50.10
	Core length	(m)		48.5	46.60	40.20	41.40	40.20
	Core recovery	(%)		96.6	92.3	80.0	82.1	80.0
	Depth by NQ size	(m)		15.10	50.50	21.10	33.20	50.10
	do. BQ size	(m)		35.10	0	29.00	17.20	0
	Casing pipe NW	(m)		4.10	4.10	4.10	4.10	4.10
	do. BW	(m)		15.10	0	21.10	43.10	0
	Drilling machine			THS-5	THS-5	YBM-3ES	THS-5	YBM-3ES
Working Period	Working Period			7.25∿7.27	8.12∿8.16	8.5∿8.9	7.28∿8.1	7.31∿8.4
	Actual Working	(d)		3	4	5	4	5
	No Working	(d)		0	1	0	1	0
	Total	(d)		3	5	5	5	5
	Actual Working Days	Mounting	(d)	1	1	1	1	1
		Drilling	(d) (shifts)	2 (3)	2 (4)	4 (6)	3 (5)	4 (6)
		Dismounting	(d)	1	1	1	1	1
		Others	(d)	0	0	0	0	0
		Total	(d)	4	4	6	5	5
	Drilling length/ Working Period		(m/d)	16.73	10.1	10.02	10.08	10.02
	Drilling length/ Drilling days		(m/d)	25.1	25.25	12.52	16.8	12.52
	Drilling length/ Drilling shifts		(m/s)	16.73	12.62	8.35	10.08	8.35
Working Time	Drilling		(h)	18	24	34	18	34
	Hoisting & lowering rod etc.		(h)	6	7	10	9	10
	Repairing		(h)	0	0	0	0	0
	Sub total		(h)	24	31	44	27	44
	Mounting		(h)	8	8	8	8	8
	Dismounting		(h)	8	8	8	8	8
	Others		(h)	0	0	0	0	0
	Total		(h)	40	47	60	43	60
	Drilling length/ Drilling hour		(m/h)	2.78	2.1	1.47	2.8	1.47
Total Number of Workers	Driller			5	6	8	7	8
	Counterport driller			6	8	12	10	12
	Labor			16	18	24	20	24
	Pump operater			6	8	12	10	12
	Gardman			12	16	24	20	24
	Labor for access construction			8	8	16	12	16
	Total			53	64	96	79	96
	Total drilling workers/ Drilling length		(w/m)	1.05	1.26	1.91	1.56	

Apx. 37 Summary of Drilling Results (4)

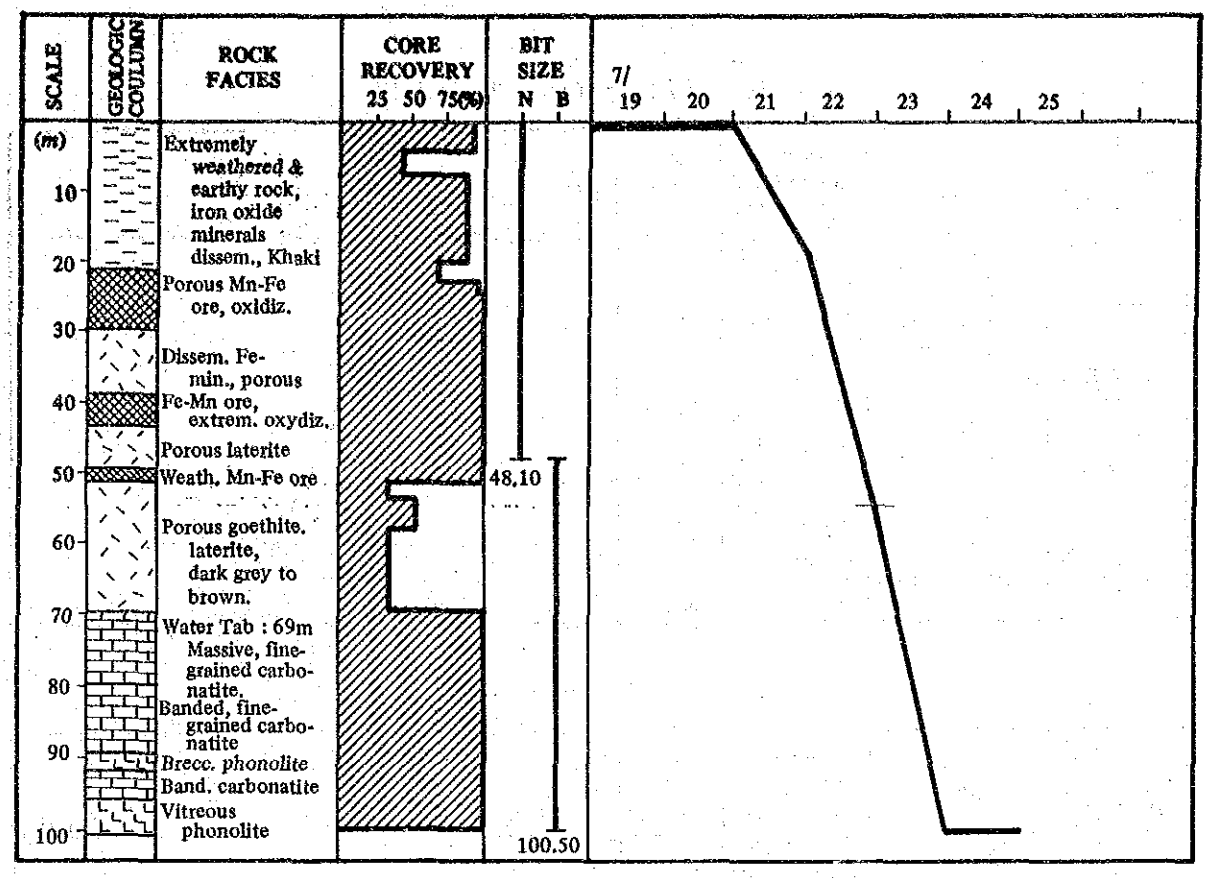
Item		Drilling hole No.	Moving	KG-1	KG-2	KG-3	KG-4
Drilling Deta	Drilling length	(m)		60.10	60.10	60.10	60.10
	Core length	(m)		57.30	58.90	54.00	56.20
	Core recovery	(%)		95.3	98.0	89.9	93.5
	Depth by NQ size	(m)		42.10	45.00	42.10	39.80
	do. BQ size	(m)		18.00	15.10	18.00	20.30
	Casing pipe NW	(m)		4.10	4.50	4.10	4.00
	do. BW	(m)		42.10	45.00	42.10	42.00
	Drilling machine			YBM-3ES	THS-5	YBM-3ES	THS-5
Working Period	Working Period		8.24∿9.1	9.17∿9.22	9.15∿9.20	9.13∿9.16	9.2∿9.8
	Actual Working	(d)	8	6	6	4	7
	No Working	(d)	1	0	0	0	0
	Total	(d)	9	6	6	4	7
	Actual Working Days: Mounting	(d)		1	1	1	2
	Actual Working Days: Drilling	(d) (shifts)		3 (6)	3 (4)	2 (4)	4 (5)
	Actual Working Days: Dismounting	(d)		2	3	1	1
	Actual Working Days: Others	(d)		0	0	0	0
	Actual Working Days: Total	(d)		6	7	4	7
	Drilling length/ Working Period	(m/d)		10.01	10.01	15.02	8.58
	Drilling length/ Drilling days	(m/d)		20.03	20.03	30.05	15.02
	Drilling length/ Drilling shifts	(m/s)		10.01	15.02	15.02	12.02
Working Time	Drilling	(h)		30	24	23	25
	Hoisting & lowering rod etc.	(h)		9	5	8	8
	Repairing	(h)		0	0	0	0
	Sub total	(h)		39	29	31	35
	Mounting	(h)		8	8	8	16
	Dismounting	(h)		16	24	8	8
	Others	(h)		0	0	0	0
	Total	(h)		70	62	49	64
	Drilling length/ Drilling hour	(m/h)		2.0	2.5	2.61	2.4
Total Number of Workers	Driller		44	9	10	6	8
	Counterport driller		28	14	14	8	10
	Labor		52	31	42	18	25
	Pump operater		0	12	8	8	10
	Gardman		54	24	16	16	20
	Labor for access construction		30	12	12	10	16
	Total		208	102	102	66	83
	Total drilling workers/ Drilling length	(w/m)		1.69	1.69	1.09	1.38

Apx. 37 Summary of Drilling Results (5)

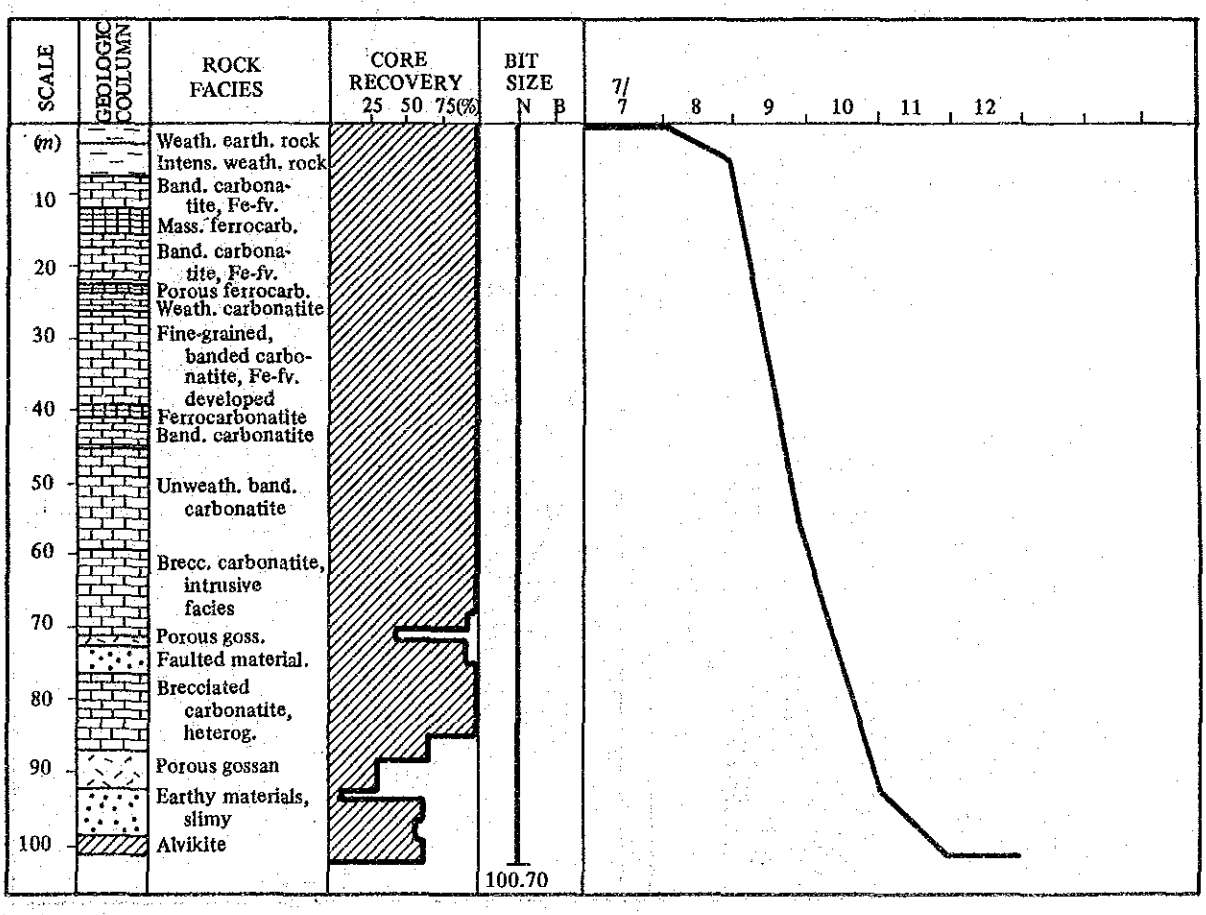
Item \ Drilling hole No.			KG-5	KG-6	Demobilization	Total	
Drilling Deta	Drilling length	(m)	60.10	60.10		1,116.30 (1,166.80)*	
	Core length	(m)	56.60	59.70		1,000.25 (1,029.75)*	
	Core recovery	(%)	94.20	99.30		89.60 (88.25)*	
	Depth by NQ size	(m)	42.50	39.00		763.70	
	do. BQ size	(m)	17.60	21.10		403.10	
	Casing pipe NW	(m)	4.00	4.40		77.40	
	do. BW	(m)	45.00	39.00		437.80	
	Drilling machine		YBM-3ES	THS-5			
Working Period	Working Period		9.4∿9.12	9.9∿9.14	9.20∿9.27		
	Actual Working	(d)	8	5	6	124	
	No Working	(d)	1	1	1	7	
	Total	(d)	9	6	7	131	
	Actual Working Days: Mounting	(d)	4	1		28	
	Actual Working Days: Drilling	(d) (shifts)	3 (5)	3 (5)		61 (99)	
	Actual Working Days: Dismounting	(d)	1	1		23	
	Actual Working Days: Others	(d)	0	0		0	
	Actual Working Days: Total	(d)	8	5		111	
	Drilling length/ Working Period	(m/d)	6.67	10.01			
	Drilling length/ Drilling days	(m/d)	20.03	20.03			
	Drilling length/ Drilling shifts	(m/s)	12.02	12.02			
Working Time	Drilling	(h)	23	24		519	
	Holsting & lowering rod etc.	(h)	10	8		168	
	Repairing	(h)	0	0		0	
	Sub total	(h)	33	30		677	
	Mounting	(h)	32	8		224	
	Dismounting	(h)	8	8		184	
	Others	(h)	0	0		0	
	Total	(h)	75	48		1,096	
	Drilling length/ Drilling hour	(m/h)	2.61	2.50			
Total Number of Workers	Driller		10	7	9	219	
	Counterport driller		10	10	19	257	
	Labor		35	20	19	570	
	Pump operater		10	10	0	216	
	Gardman		20	20	36	519	
	Labor for access construction		12	12	0	315	
	Total		97	79	83	2,096	
	Total drilling workers/ Drilling length	(w/m)	1.61	1.31			

* Figures including BR-21 (abandoned hole)

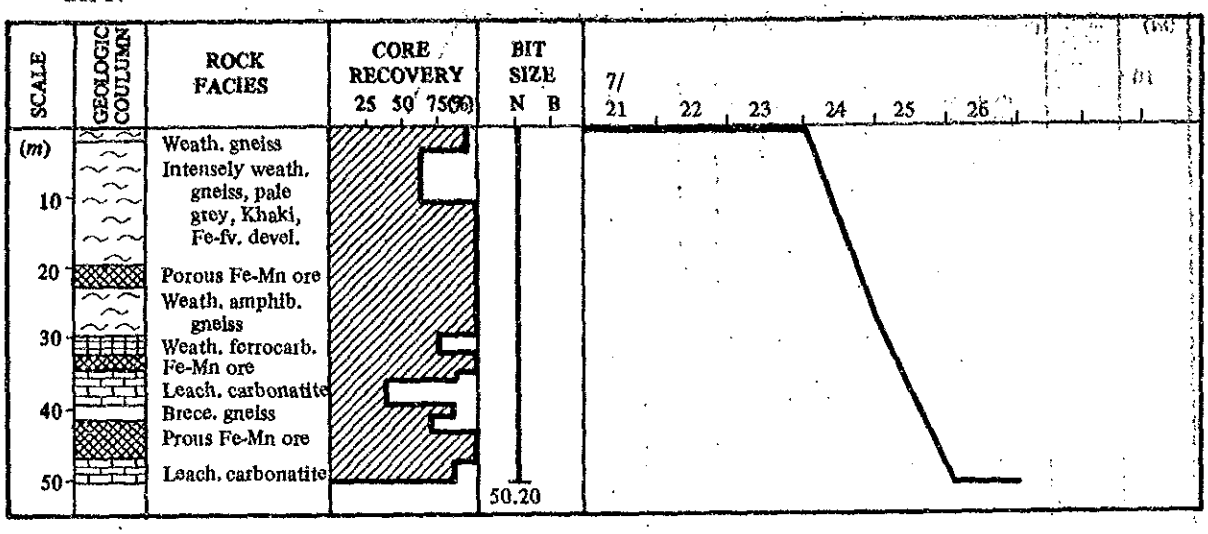
BRL-2 Apx. 38 Drilling Progress by Hole (1)



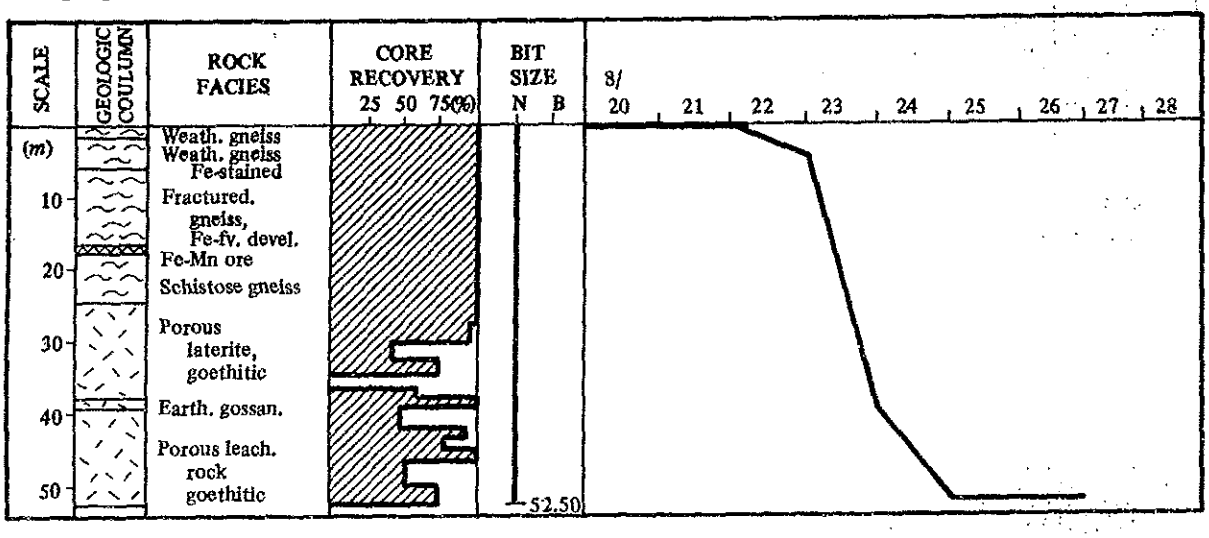
BRL-3



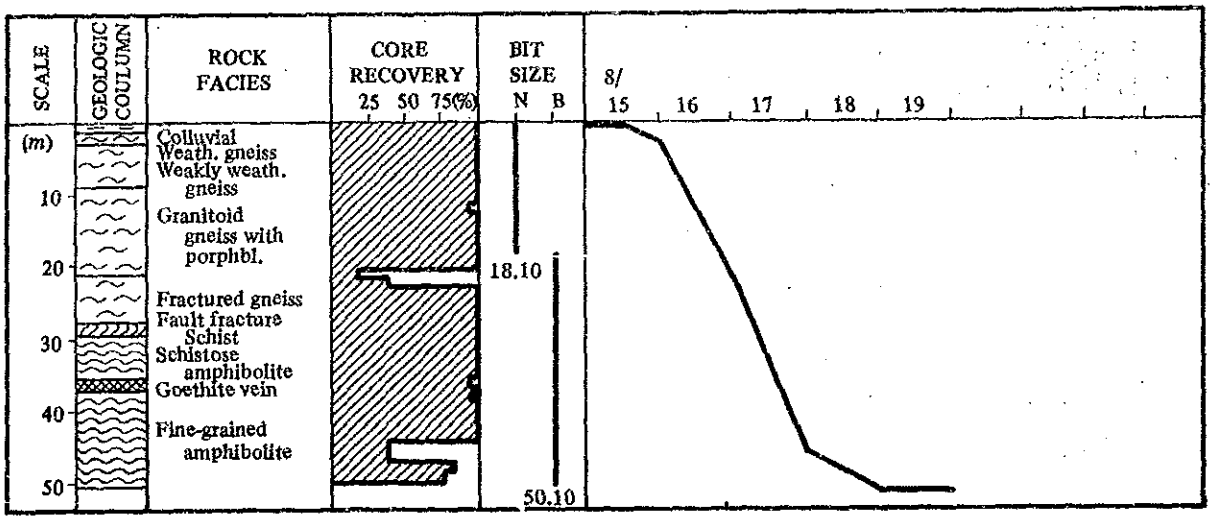
BR-17



BR-18

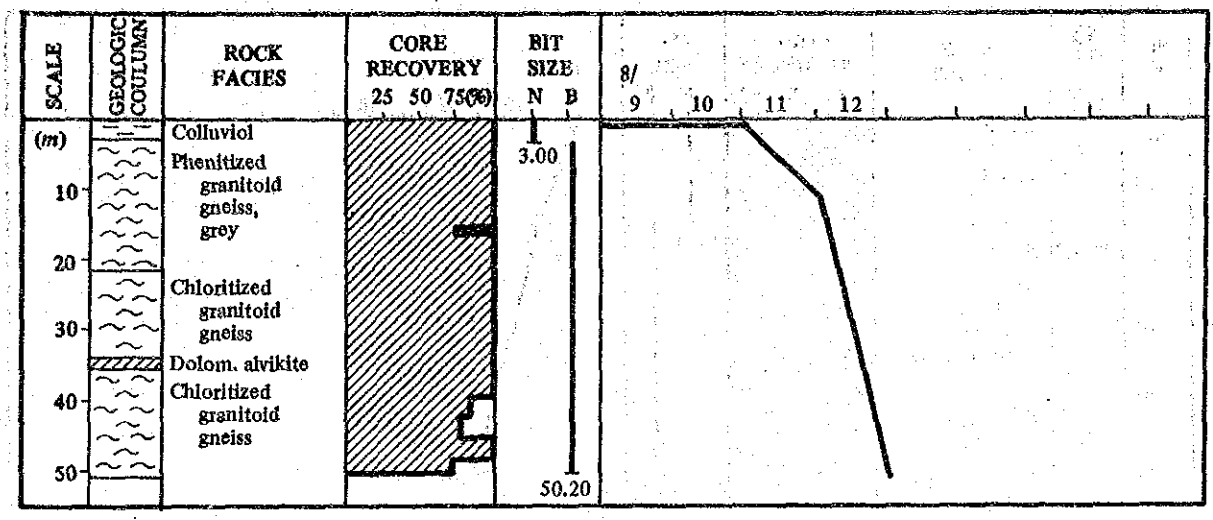


BR-19

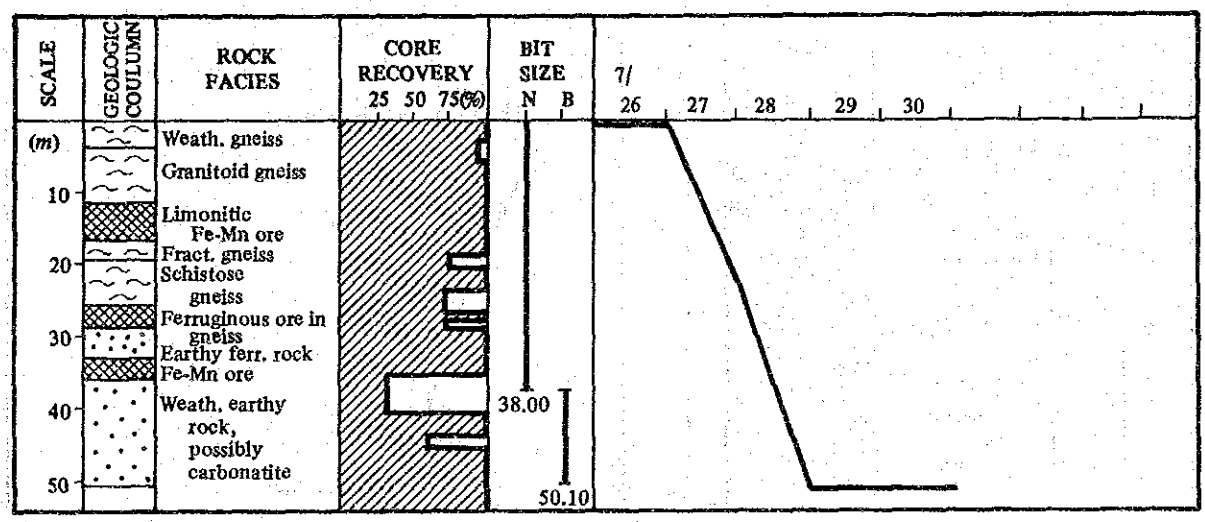


Apx. 38 Drilling Progress by Hole (3)

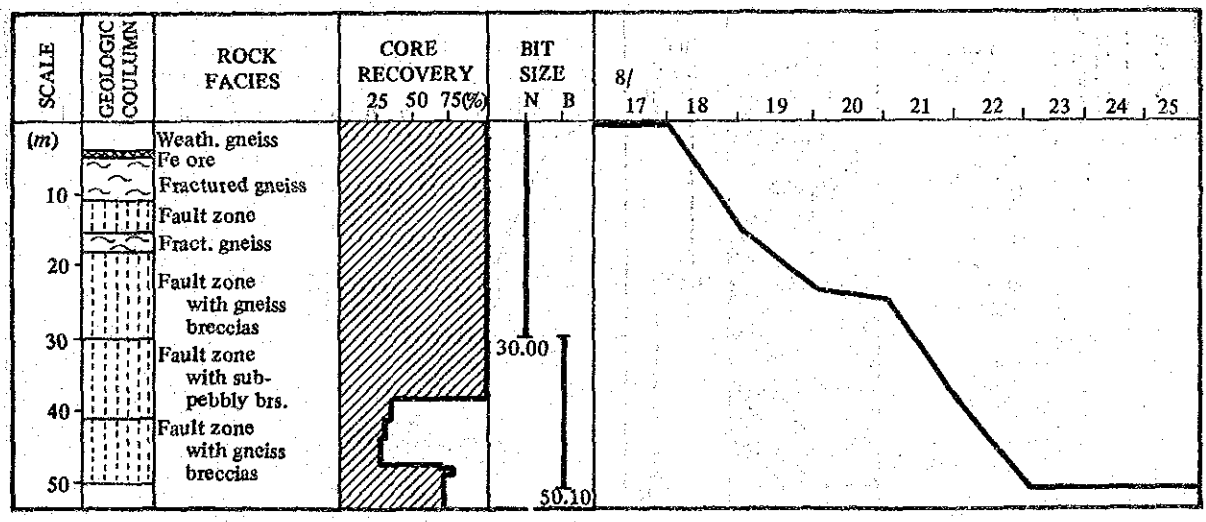
BR-20



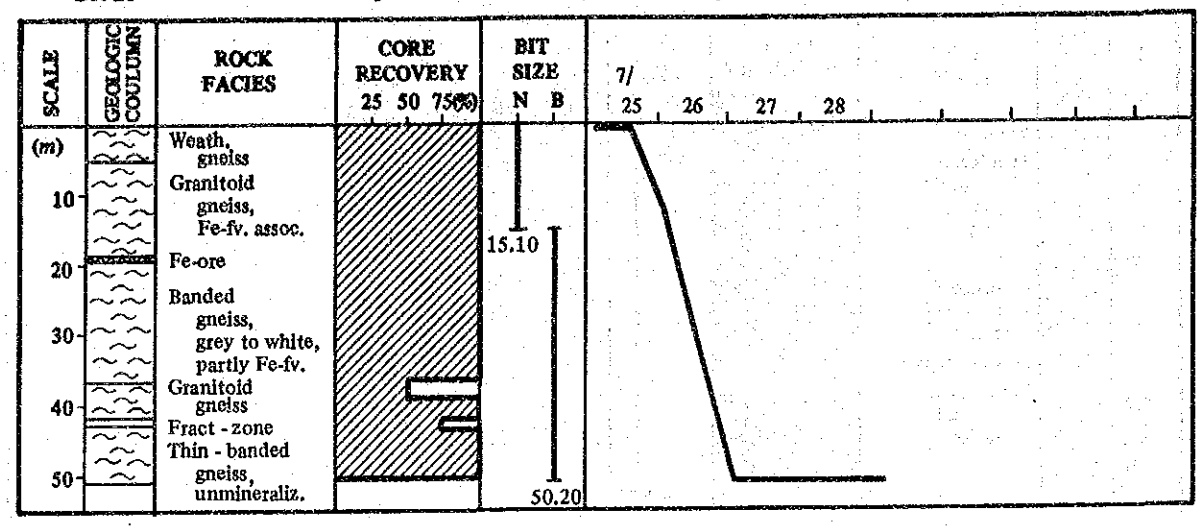
BR-21



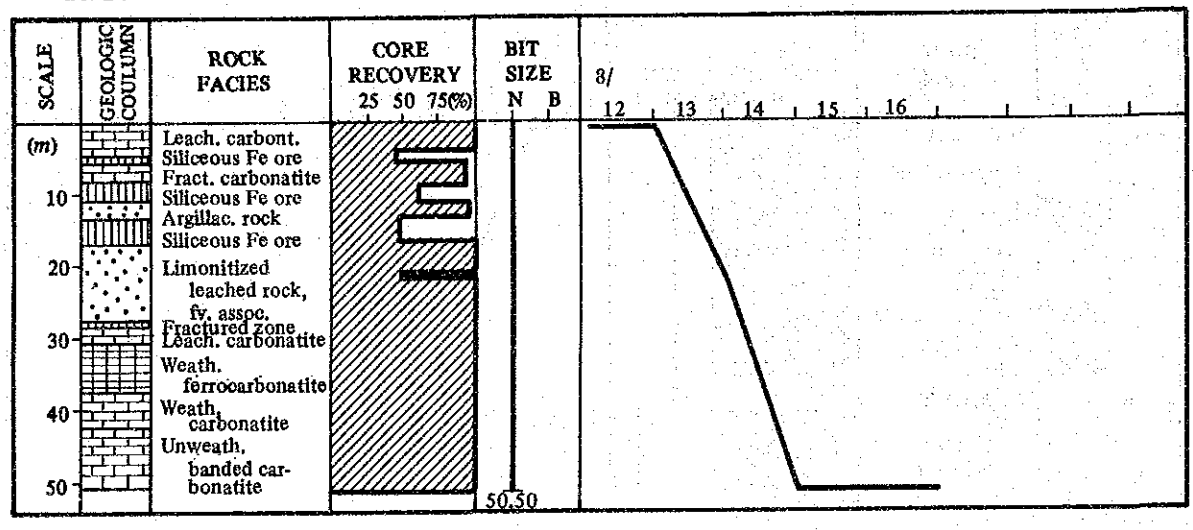
BR-22



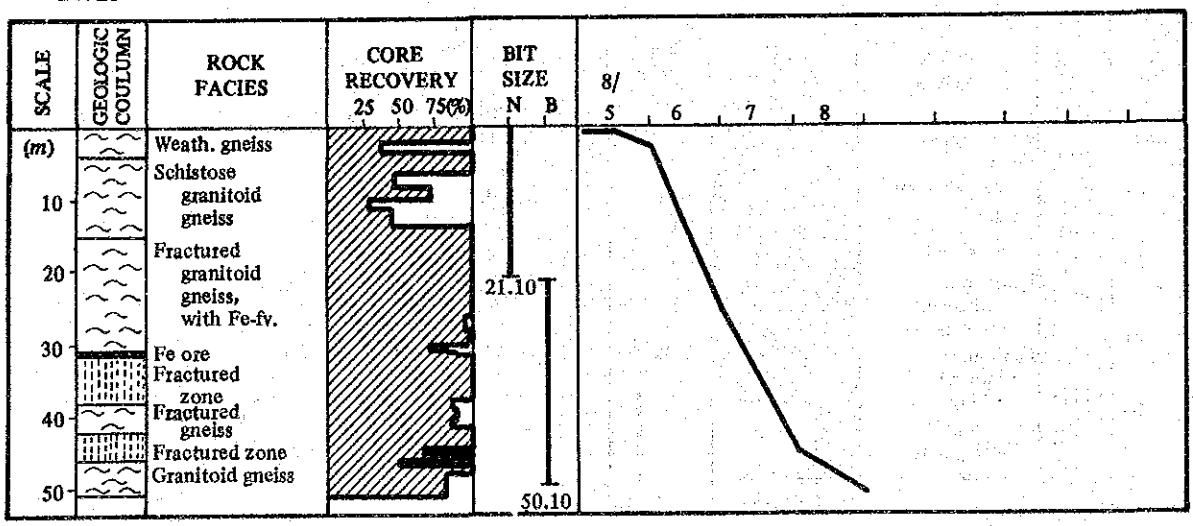
BR-23 Apx. 38 Drilling Progress by Hole (4)



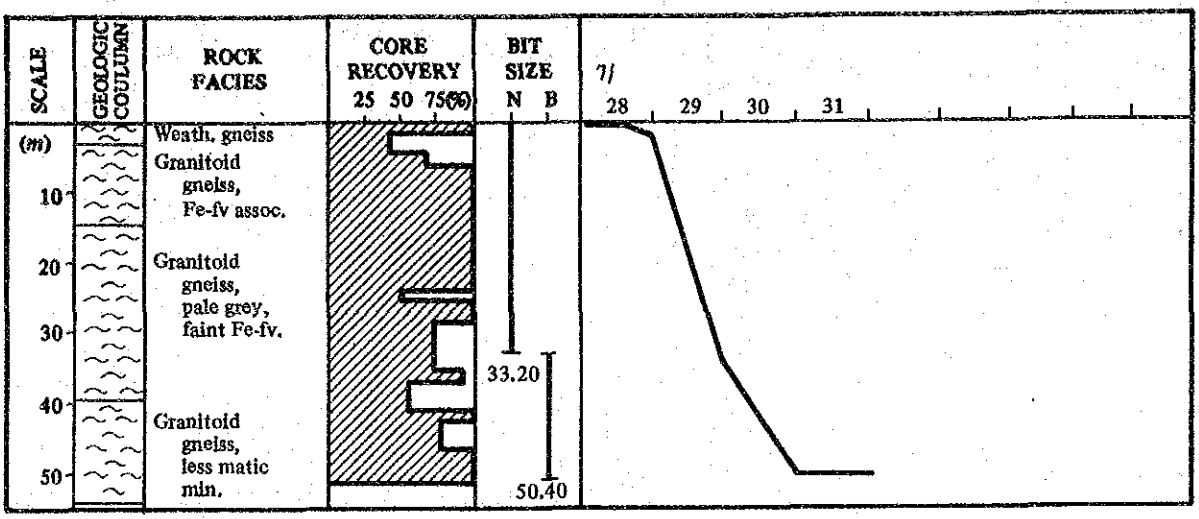
BR-24



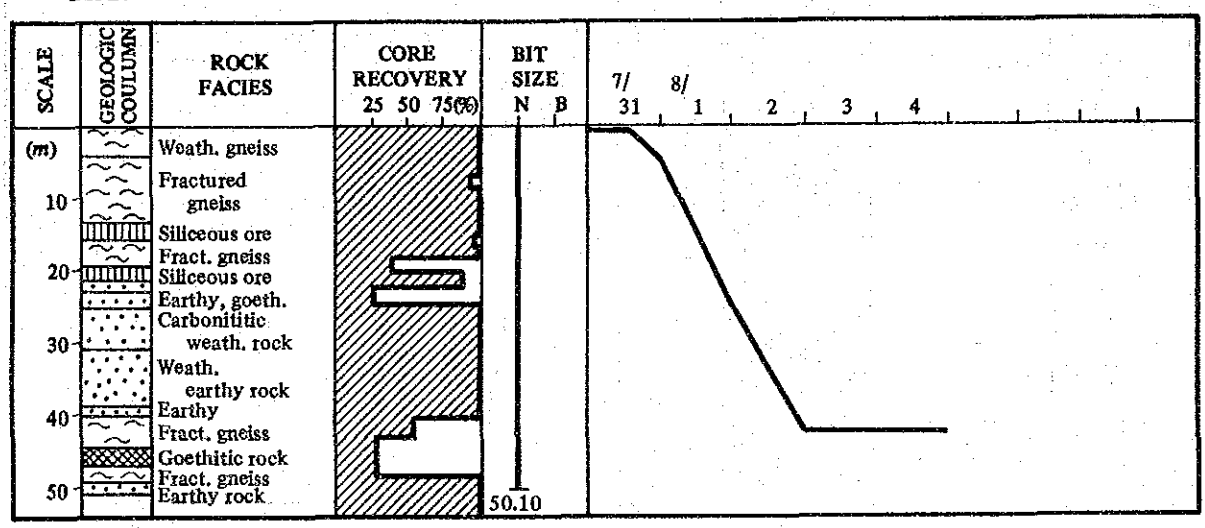
BR-25



BR-26 Apx. 38 Drilling Progress by Hole (5)

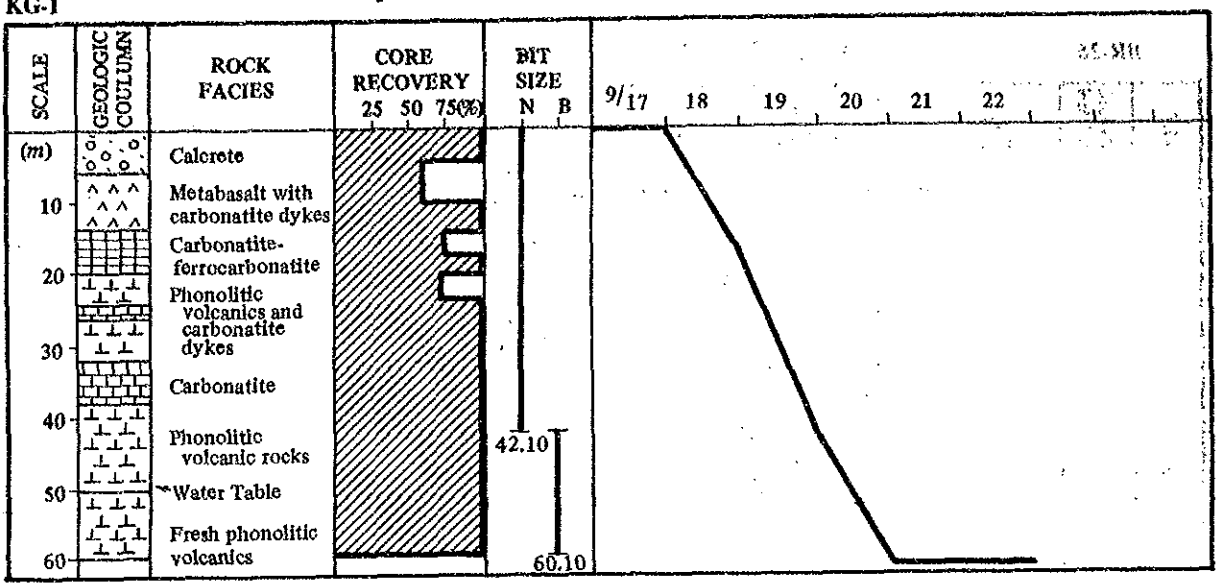


BR-27

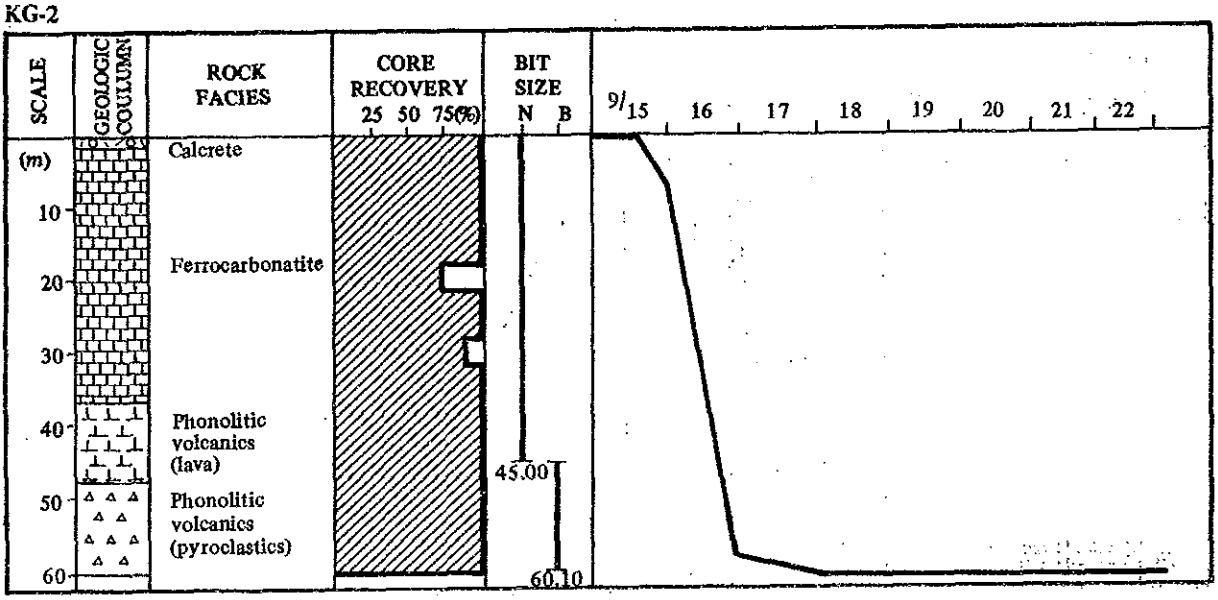


Apx. 38 Drilling Progress by Hole (6)

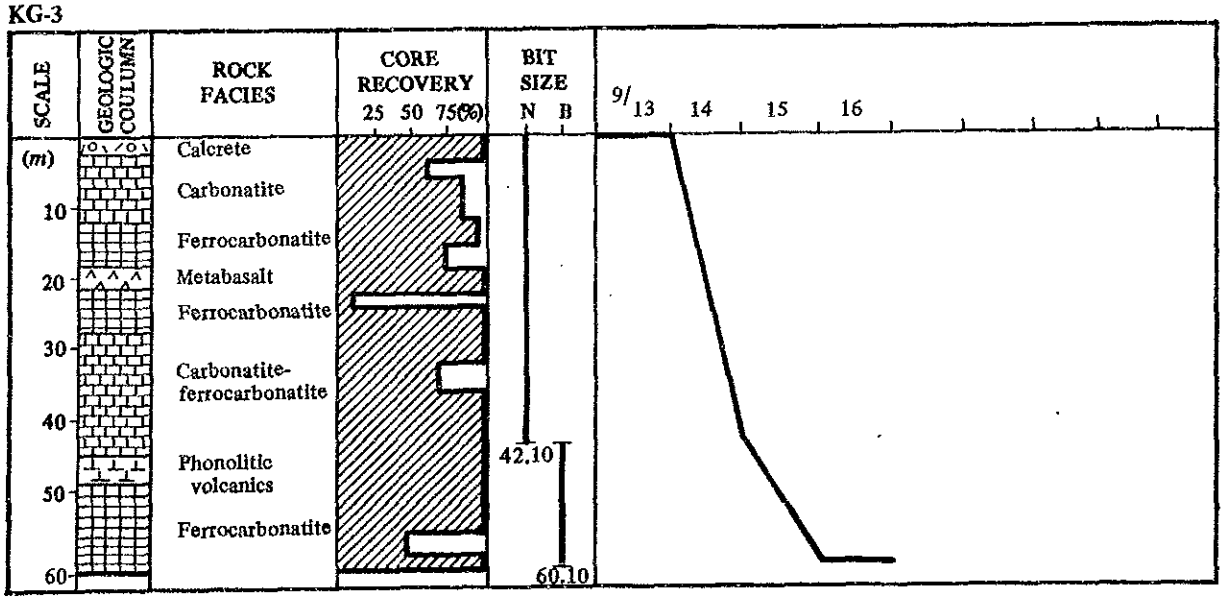
KG-1



KG-2

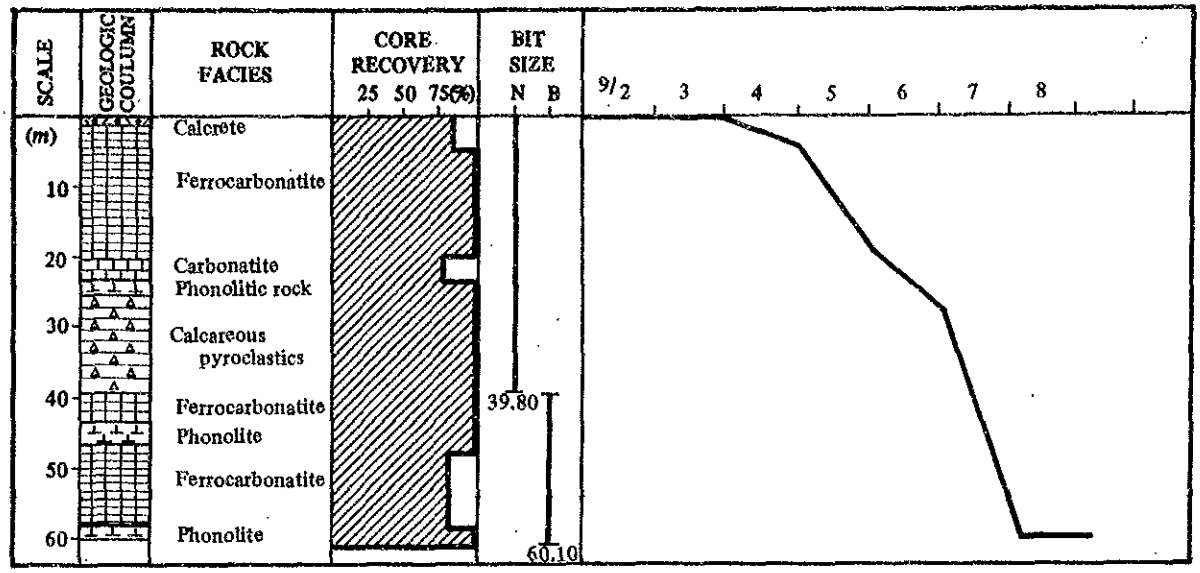


KG-3

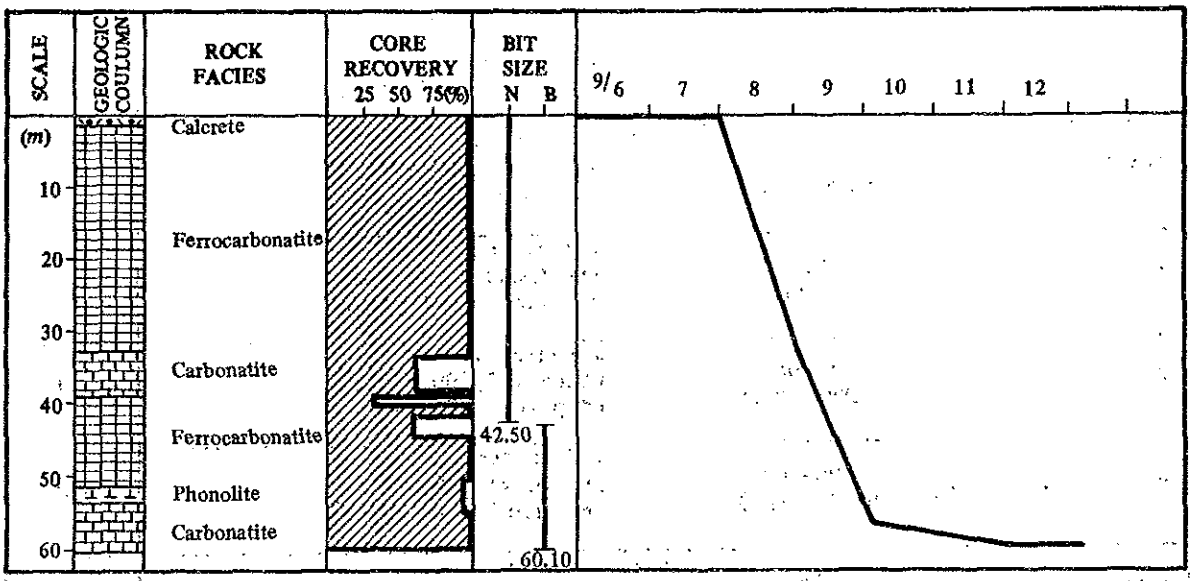


Apx. 38 Drilling Progress by Hole (7)

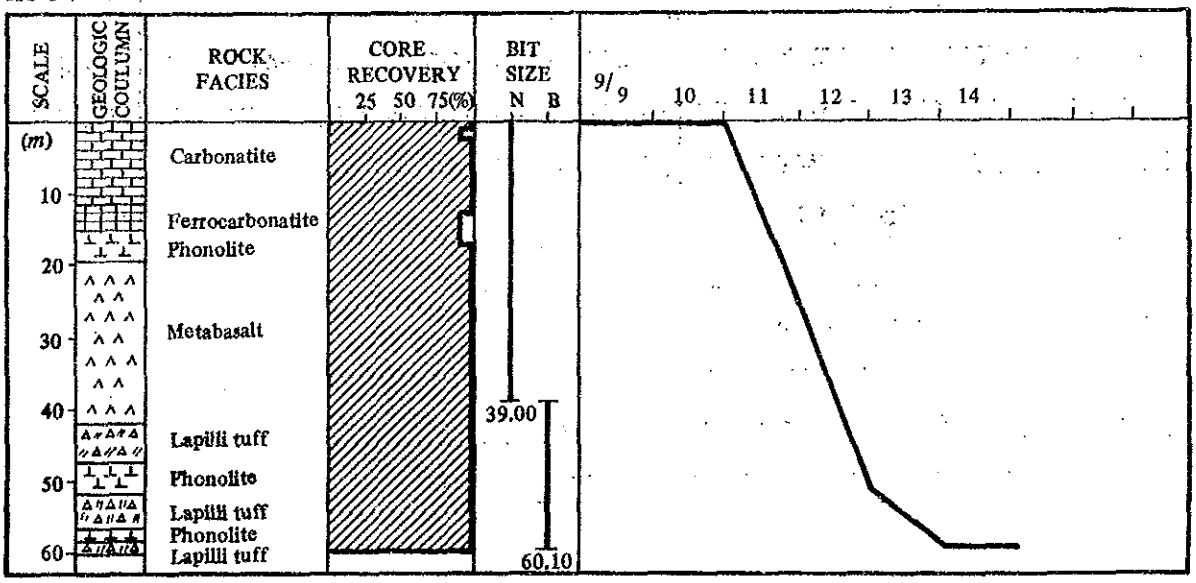
KG-4



KG-5



KG-6



Apx. 39 Drilling Equipments

Article	Model	Specification	Quantity
Drilling machine	THS-5 (TONE BORING)	Capacity : BQWL 290m Inner diameter of spindle : 80mm Spindle speed : 125, 250, 500 r.p.m Weight : 950kg	1 set
Motor	F2L912 (MITSUI-DEUTZ)	Diesel engine : Revolution : 2,500 r.p.m Related power : 30 p.s	1 set
Drilling machine	YBM-3ES (YOSHIDA BORING)	Capacity : BQWL 240m Inner diameter of spindle : 93mm Spindle speed : 125,250,500,750 r.p.m Weight : 650kg	1 set
Motor	NF-110EX (YANMAR DIESEL)	Diesel engine : Revolution : 2,400 r.p.m Related power : 11 p.s	1 set
Drilling pump	NAS-3B (TONE BORING)	Type : 2 piston Capacity (max) : 130 /min Pressure (max) : 26 kg/cm^2	1 set
Motor	NS-90C (YANMAR DIESEL)	Diesel engine : Revolution : 2,400 r.p.m Related power : 9 p.s	1 set
Drilling pump	NES-100 (TONE BORING)	Type : 2 piston Capacity (max) : 100 /min Pressure (max) : 30 kg/cm^2	1 set
Motor	NF-90K (YANMAR DIESEL)	Diesel engine : Revolution : 2,400 r.p.m Related power : 9 p.s	1 set
Water supply pump	MS-703 (DELTA ALAT)	Type : 2 piston Capacity (max) : 80 /min Pressure (max) : 40 kg/cm^2	1 set
Motor	E70-N (KUBOTA)	Diesel engine : Revolution : 3,000 r.p.m Related power : 7 p.s	1 set
wire line hoist	For THS	Attached to drilling machine 300m	1 set
Derrick	DRP-6	Pipe structual derrick 6.0m	2 sets
Inclined Derrick	DRP-6S	Pipe structual derrick 6.0m	1 set
Generator	EB 1500X (HONDA)	Gasoline engine : 1.5 kva	1 set
Drill rod	Wire line rod	NQWL x 3m BQWL x 3m	80 pcs 70 pcs
Water tank		2m^3	6 sets
Water supply pipe		25mm polyvinyl pipes	1500m

Apx. 40 Amount of Consumed Materials and Diamond Bits (1)

Article	Unit	BRL-2	BRL-3	BR-17	BR-18	BR-19	BR-20	BR-21	BR-22	BR-23	BR-24
Diamond bit (NQ)	Pcs	1	1	1	1	1				1	1
do. (BQ)	Pcs	1				1	2	1	1	1	
Diamond reaming shell (NQ)	Pcs	1	1	1		1				1	
do. (BQ)	Pcs	1				1			1	1	
Metal crown (NX.BX)	Pcs		1	1	1	1	1	2	1	1	1
Core lifter (NQ)	Pcs	1	1	1	1	1				1	1
do. (BQ)	Pcs	1				1			1		
Core lifter case (NQ)	Pcs	1		1		1			1		1
do. (BQ)	Pcs	1				1			1		
Core box (NQ)	Pcs	7	14	6	7	3	1	6	5	3	8
do. (BQ)	Pcs	4				3	5	2	2	4	
Cutting Oil (Detergent powder)	Dz	10	6	3	6	4	3	13	6	3	4
Diesel	ℓ	60	65	35	70	70	35	105	90	30	50
Gasoline	"	20	10	10	15	15	10	26	20	10	10
Engine oil	"										
Grease	kg										

Apx. 40 Amount of Consumed Materials and Diamond Bits (2)

Article	Unit	BR-25	BR-26	BR-27	KG-1	KG-2	KG-3	KG-4	KG-5	KG-6	Total
Diamond bit (NQ)	Pcs		1		1		1	1	1	1	13
do. (BQ)	Pcs	1	1		1	1	1	1	1	1	15
Diamond reaming shell (NQ)	Pcs		1		1			1		1	9
do. (BQ)	Pcs	1			1		1			1	8
Metal crown (NX.BX)	Pcs	1	1	1	1	1	1	1	1	1	8
Core lifter (NQ)	Pcs		1		1		1	1	1	1	13
do. (BQ)	Pcs	1			1			1		1	7
Core lifter case (NQ)	Pcs		1		1		1		1	1	10
do. (BQ)	Pcs	1					1		1		6
Core box (NQ)	Pcs	3	3	7	6	7	6	6	6	6	110
do. (BQ)	Pcs	5	3		1	2	2	2	2	3	40
Cutting Oil (Detergent powder)	Dz	4	3	3	2	2	2	2	2	2	80
Diesel	ℓ	70	35	60	70	35	60	60	60	50	1,110
Gasoline	"	15	5	15	20	10	20	15	15	15	276
Engine oil	"										
Grease	kg