2-11 Kadongosi Sector

2-11-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-11)

Kadongosi sector is located in the southern part of Machinga district and in the Liwonde National Park which lies on the east shore of Shire River, having 1.5 Km east-west by 2.5 Km north-south in width. To reach this sector, it takes about 1 hour 40 minutes from Zomba by car.

The topography is a gentle hill of about 90 m high rising from the plain of 500 m elevation.

2-11-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss of the basement and foyaite, breccia and phonolite dykes of the Chilwa alkaline province (Fig. 5-2-11, PL. 2-11).

Foyaite is widely distributed on the northern half of the Kadongosi hill. They are medium-grained, equigranular rocks containing pyroxene. Under the microscope, it mainly consists of plagioclase, orthoclase, aegirine, nepheline and cancrinite with eudialyte, sphene and magnetite (Appendix 5). From the results of the whole rock analysis and norm calculation, it is correspond to juvite (Appendix 4, Appendix 12).

Breccia crops out on the southern flank of the Kadongosi hill. The rocks in the southern side are feldspathic and those in the eastern side are phonolitic to nephelinilic in rock phase.

Phonolitic and nephelinitic breccias consist of the fragments of phonolite, nephelinite and gneiss of the basement. The fragments are a few cm in diameter and subangular to subrounded. The matrix is filled with quartz, feldspar and biotite.

(2) Carbonatite

Carbonatite is not recognized in this sector.

2-12 Mongolwe Sector

2-12-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-12)

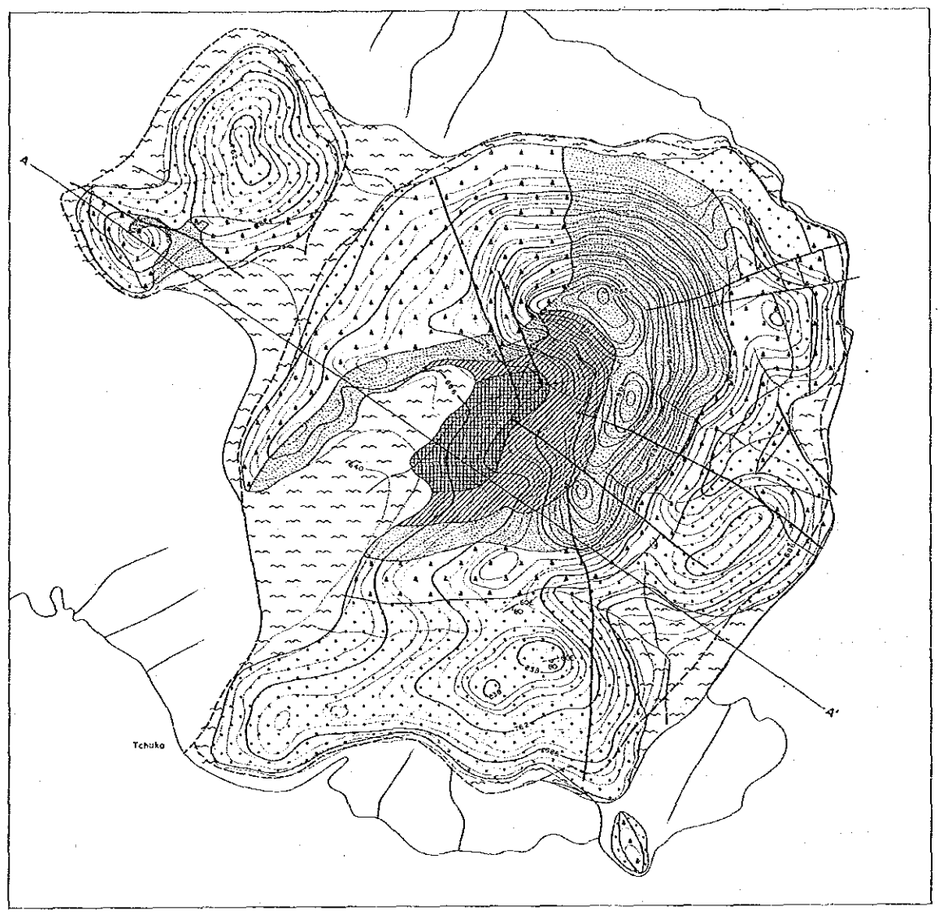
Mongolwe sector is located in the southern part of Machinga district, on the western margin of Mongolwe hills, having 1.5 Km east-west by 1.5 Km north-south in width. To reach this sector, it takes about 1 hour (about 44 Km) from Zomba by car.

The topography is a gentle plain of 580 m elevation which is well cultivated.

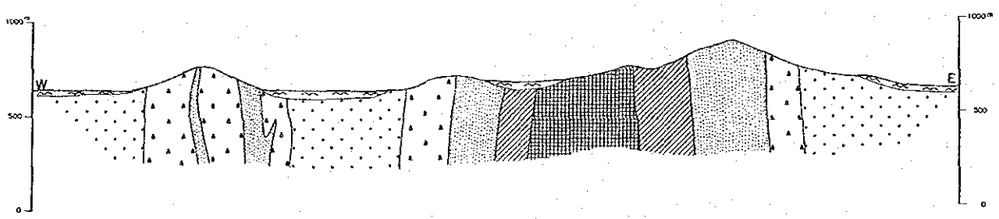
2-12-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss of the basement and nepheline syenite, syenite, feldspathic breccia, phonolitic breccia and sölvsbergite dykes of the Chilwa alkaline province (Fig. 5-2-12, PL. 2-12).

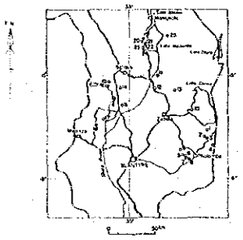


A-A' Section
(N55W)



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE II)

GEOLOGICAL MAP AND PROFILE OF THE Chilwa Island (IO)



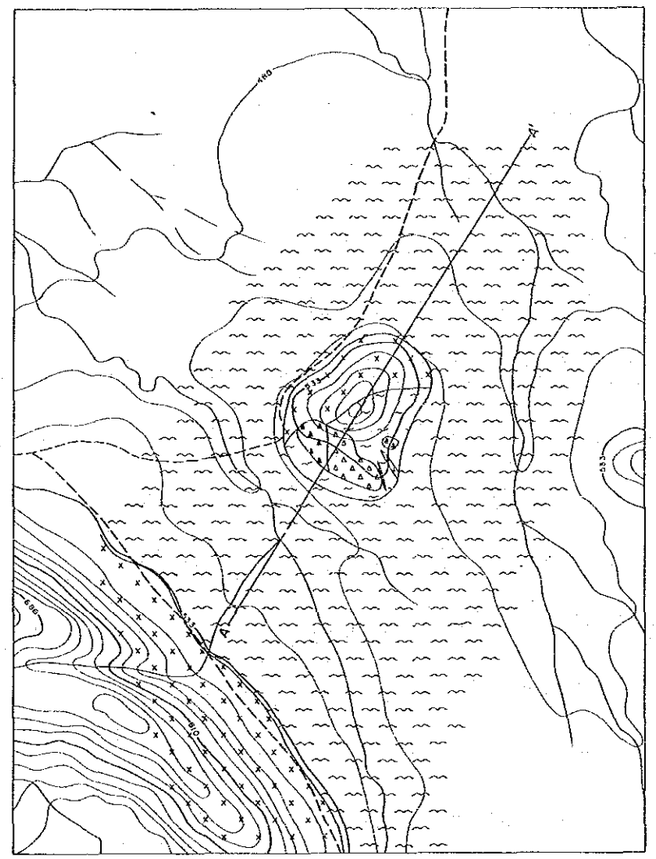
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

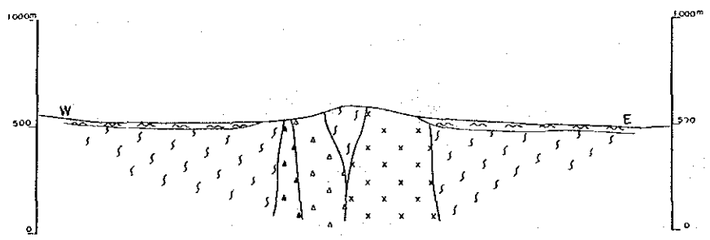
LEGEND

- Drift
- Sciotitic carbonatite
- Aegirinic sovite
- Sovite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Miaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte
  P – Phonolite
  N – Nephelinite
  MF – Microfoyaite
  S – Sölvsbergite
  I – Ijolite
  D – Dolerite
  M – Monchiquite
  A – Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-10 Geological Map and Profile of Chilwa Island Sector

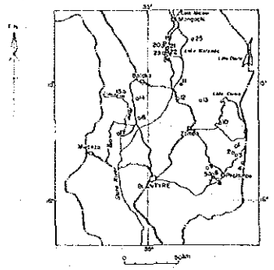


A-A' Section
(N30E)



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

GEOLOGICAL MAP AND PROFILE
OF THE Kadongosi (II)



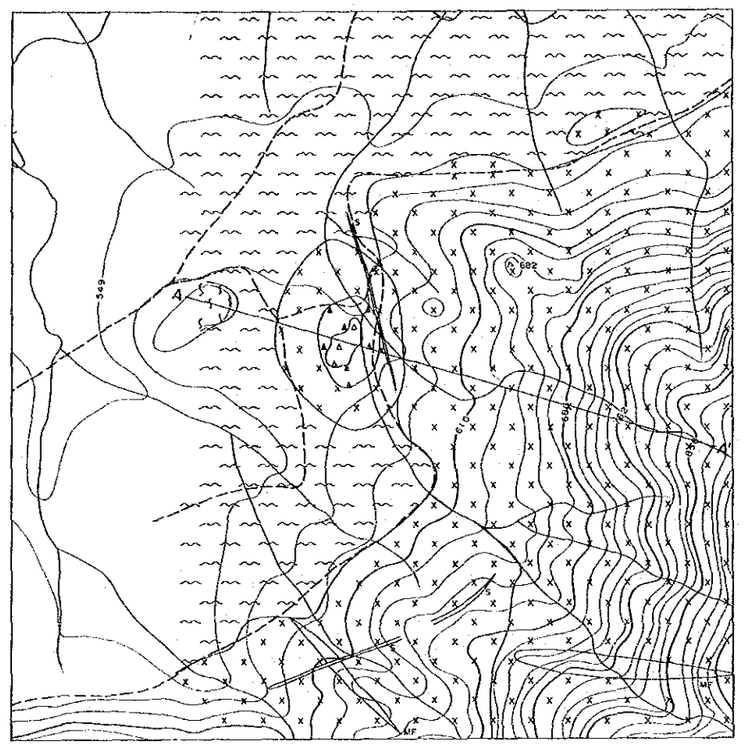
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

LEGEND

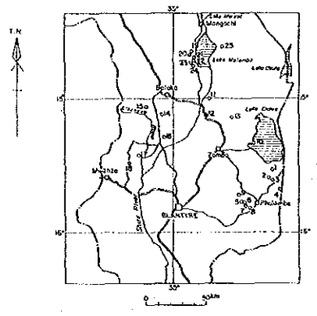
- Drift
- Sideritic carbonatite
- Ankeritic sovite
- Sovite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gabbroic granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Mela conglomerate
- Green pyroxene skarn
- Dykes and plugs T-Trachyte, P-Phonolite, N-Nephelinite, MF-Microfoyaite, S-Sölvsbergite, I-Ijolite, D-Dolerite, M-Monchiquite, A-Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-11 Geological Map and Profile of Kadongosi Sector



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

GEOLOGICAL MAP AND PROFILE OF THE Mongolwe (12)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

LEGEND

- Drift
- Sidentic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T—Trachyte, P—Phonolite, N—Nephelinite, MF—Microfoyaite, S—Sölvsbergite, I—Ijolite, D—Dolerite, M—Monchiquite, A—Aplite
- Fault
- Dip of foliation of gneiss

A—A' Section
(N70W)

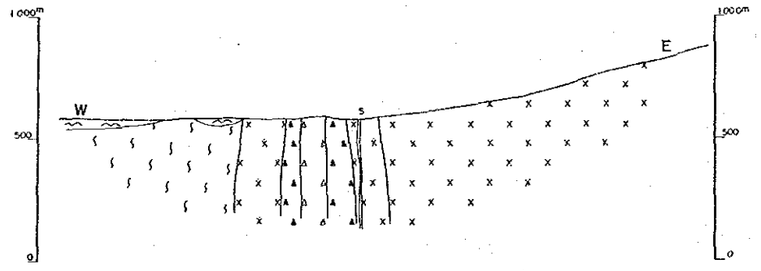


Fig. 5-2-12 Geological Map and Profile of Mongolwe Sector

Nepheline syenite is medium to coarse-grained equigranular rock which is distributed in the eastern part of the sector. Under the microscope, it mainly consists of orthoclase, microperthite, biotite, nepheline and cancrinite with aegirine, plagioclase, sphene, magnetite and apatite (Appendix 5). From the results of the whole rock analysis and norm calculation, it is correspond to foyaite (Appendix 4, Appendix 12).

Syenite is medium-grained equigranular rock which is distributed in the southern part of the sector. Under the microscope, it mainly comprises orthoclase, microperthite, aegirine, nepheline, cancrinite, sodalite and pectolite with plagioclase, biotite, sphene, apatite and calcite (Appendix 5, Appendix 9). From the results of the whole rock analysis and norm calculation, it is correspond to foyaite (Appendix 4, Appendix 12). The result of the age determination is 158.3 - 160.7 Ma showing the time of intrusion is in the later Jurassic period (Appendix 10).

Feldspathic breccia forms an ellipse of 200m x 200m. Weathering is conspicuous in it.

Phonolitic breccia forms an ellipse of 100m x 200m surrounded by feldspathic breccia. This rock is hard and its matrix is compact.

Sölvsbergite is reddish-brown in color and the trachytic feldspar are conspicuous. Under the microscope, it mainly consists of anorthoclase with quartz, biotite and arfvedsonite (Appendix 5, Appendix 9). From the results of the whole rock analysis and norm calculation, it is correspond to trachyte (Appendix 4, Appendix 13).

(2) Carbonatite

Carbonatite is not recognized in this sector.

2-13 Chikala Sector

2-13-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-13)

Chikala sector is located in the southern part of Machinga district, on the southern margin of Chikala hills, having 1.5 Km east-west by 2 Km north-south in width. To reach this sector, it takes about one and half hour (about 45 Km) from Zomba by car.

The topography is a rather steep slope on the middle part of the Chikala hills, having 690 m - 850 m in elevation.

Since this sector is in the Liwonde Forest Reserve, it is widely covered by a thick coniferous forest of pines and ceders.

2-13-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss of the basement and syenite, nepheline syenite, perthosite, breccia and ultrabasic rock of the Chilwa alkaline province (Fig. 5-2-13, PL. 2-13)

Syenite, fine to medium grained granular texture, is widely distributed in the eastern part of the sector. Under the microscope, it mainly consists of microperthite, and aegirine with plagioclase, biotite, nepheline, cancrinite, sphene and apatite (Appendix 5). From the results of the whole rock analysis and norm calculation, it is correspond to pulaskite (Appendix 4, Appendix 12).

Perthosite forms lenses in gneiss and syenite. It is leucocratic and coarse-grained. Under the microscope, it mainly consists of quartz, plagioclase and K-feldspar with biotite, garnet and zircon (Appendix 5, Appendix 9). The result of age determination is 182.8 - 185.5 Ma and shows that the time of intrusion is in the early Jurassic (Appendix 10).

Breccia crops out on the southwestern flank of the Chikala hill distributing 600m in length and 100m in width. The rock is rich in trachyte and partly feldspathized.

Ultrabasic rock crops out on the place apart from 100m to the northwest of breccia, 200m x 200m in width. The rock is fine-grained, drak green in color, and is decided as amphibolite based upon microscopic observation. Under the microscope, it shows granular texture and is mainly composed of hornblende, plagioclose magnetite and sphene.

In this sector a system of N-S trending faults are assumed to be existed and the ultrabasic rock is considered to intrude along them (Garson, 1965).

(2) Carbonatite

Carbonatite is not recognized in this sector.

2-14 Kangankunde Sector

2-14-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-14)

Kangankunde sector is located in the western part of Machinga district. It lies 35 Km to the south-southwest of Balaka, the seat of the sub-district headquarters, having 2 Km east-west by 2.5 Km north-south in width. To reach this sector, it takes about 40 minutes from Balaka by car.

The topography is a hill of about 200 m high rising from the plain of 620 m elevation, partly forming steep slopes. The land at the foothill is used for agriculture.

2-14-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss of the basement and feldspathic breccia, carbonatized feldspathic rock, carbonatite and quartzose rock of the Chilwa alkaline province (Fig. 5-2-14, PL. 2-14).

Gneiss is strongly fenitized and widely distributed in the outer rim of the Kangankunde hill. Biotite and amphibole are recognized as colored minerals.

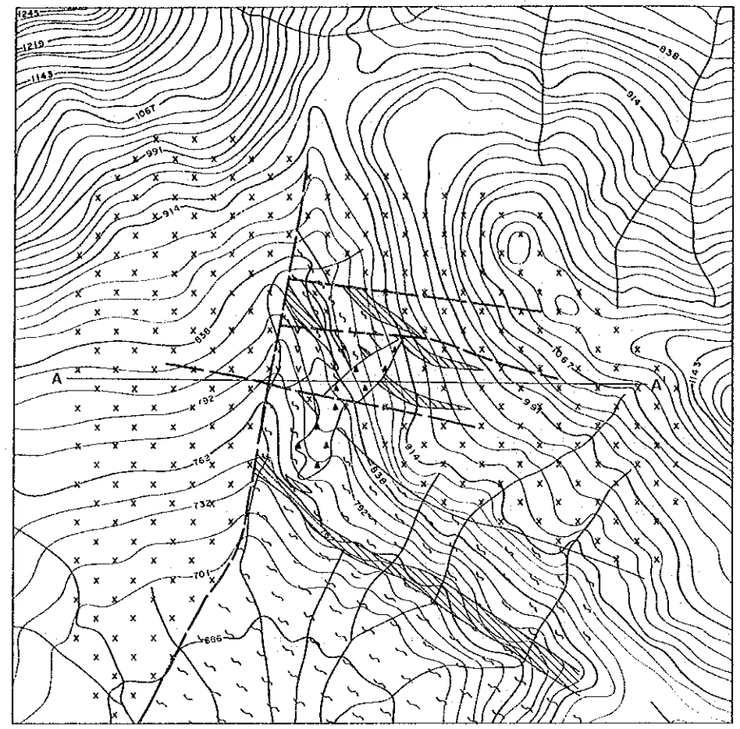
Feldspathic breccia is found along the inner side of the fenitized gneiss. It is pink to reddish-brown in color, vesicular and hard. Some parts of the matrix is filled with carbonatite.

Carbonatized feldspathic rock and carbonatite are distributed along the inner side of the feldspathic breccia. A portion of the body is found intruding into the feldspathized breccia.

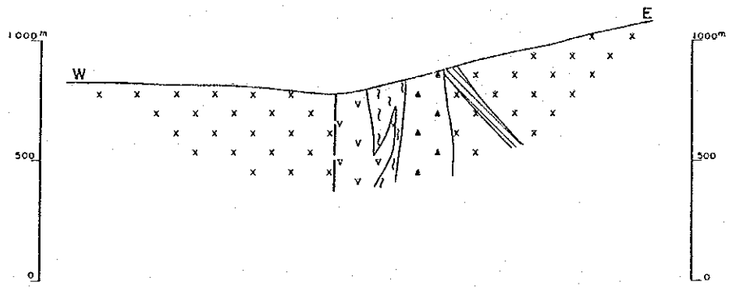
The small quartzose rock bodies are found on the hillock in the northern noll of this sector.

(2) Carbonatite

Carbonatite in the sector is one of the large deposits as those of Tundulu and Chilwa Island in the surveyed area. Carbonatite can be classified as apatite beforsite, carbonatized feldspathic rock, sideritic carbonatite, ankeritic carbonatite and manganese carbonatite.

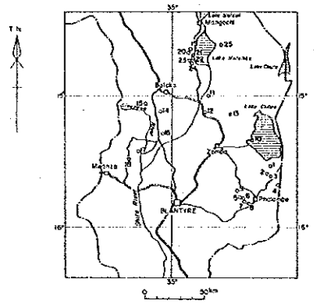


A – A' Section
(W – E)



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

GEOLOGICAL MAP AND PROFILE
OF THE Chikala (13)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1,000m

LEGEND

- Drift
- Sidéritic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, conglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte
  P – Phonolite
  N – Nephelinite
  MF – Microfoyaite
  S – Sölvsbergite
  I – Ijolite
  D – Dolerite
  M – Monchiquite
  A – Aplite
- Fault
- 50° Dip of foliation of gneiss

Fig. 5-2-13 Geological Map and Profile of Chikala Sector

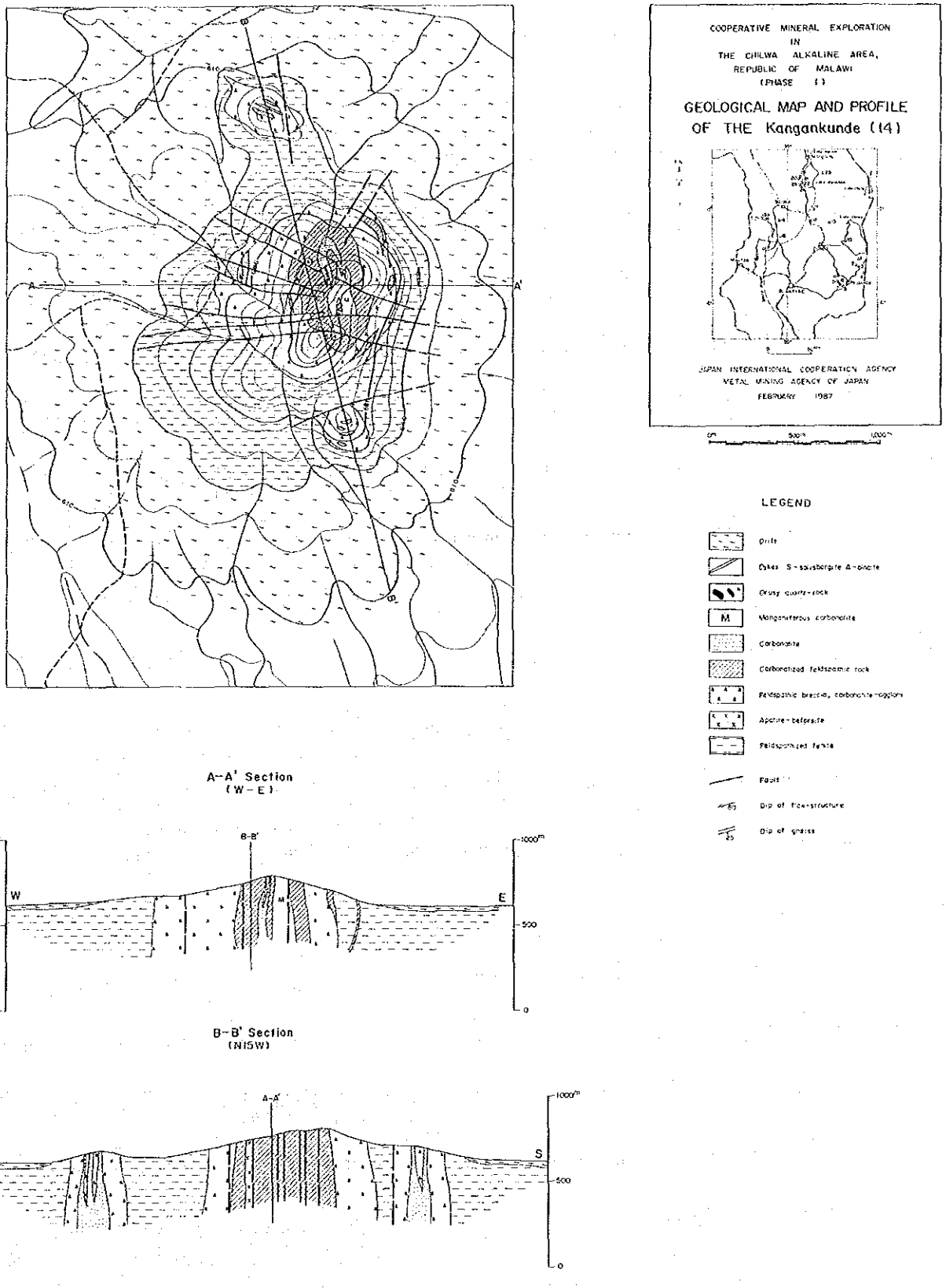


Fig. 5-2-14 Geological Map and Profile of Kangankunde Sector

Apatite beforsite is fine-grained, compact and grayish-white in color. Under the microscope, it shows mosaic or porphyritic texture and is rich in ankerite. It comprises quartz, calcite, apatite, zircon and goethite (Appendix 5, Appendix 9).

Carbonatized feldspathic rock is the rock in which the matrix of the feldspathic rock fragments is filled with carbonatite. It is well carbonatized rock of feldspathized breccia. Under the microscope, it shows mosaic texture. The carbonatite is rich in ankerite and comprise calcite, strontianite, monazite and baryte with rutile and zircon from the results of X-ray diffractive analysis and microscopic observation (Appendix 5, Appendix 7, Appendix 9). EPMA analysis shows that rutile contains a few amount of Nb (Appendix 11).

Sideritic carbonatite is fine-grained and dark brown in color and mostly contain xenoliths of feldspathic rocks.

Ankeritic carbonatite is reddish-brown fine-grained rocks and is rich in green monazite. Under the microscope, it shows mosaic texture and consists of ankerite, quartz, strontianite, monazite and baryte (Appendix 5, Appendix 9). EPMA analysis shows that monazite is abundant in Ce, La with Sr (Appendix 11).

Quartzose rock is vesicular and hard rock. Quartz and sphalerite can be seen by the naked eyes. Under the microscope, it is rich in quartz and iron oxides with monazite, epidote and a minute crystal of rutile (Appendix 7). EPMA analysis shows that monazite is abundant in Ce, La with Sr and rutile contains a few amount of Nb and Sr (Appendix 11).

2-15 Chaumbwi Sector

2-15-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-15)

Chaumbwi sector is located in the southern part of Ntchen district, 28 Km to the west-northwest of Balaka, having 2 Km east-west by 1.5 Km north-south in width. To reach this sector, it takes about 30 minutes (about 28 Km) from Balaka by car.

The topography of the sector is characterized by a gentle slope of approximately 840 m elevation on the flank of Chaumbwi mountain (955 m). The land at the foothill is used for agriculture.

2-15-2 Geology and Ore Deposits

(1) Geology

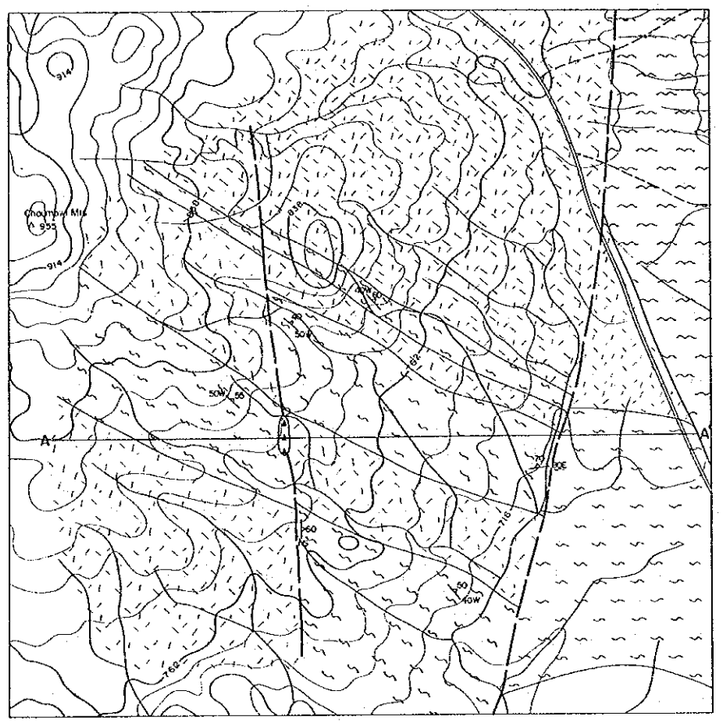
This sector is underlain widespreadly by gneiss and granulite of the basement and small breccia bodies of the Chilwa alkaline province (Fig. 5-2-15, PL. 2-15).

Gneiss comprises hornblende and biotite; and the banded structure is clearly seen. It often contains garnet.

Granulite is leucocratic and rich in quartz and feldspar. Under the microscope, it comprises quartz, plagioclase, muscovite and sericite (Appendix 5).

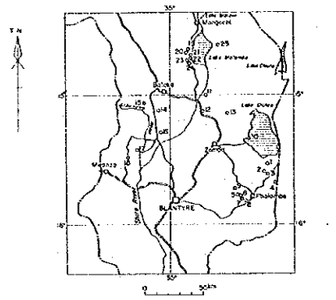
Breccia crops out in an area of 150m x 40m. It is well felspathized and pink in color. Carbonate minerals are observed in some parts of the matrix.

The strike and dip of the basement is generally N40° - 50°W and 45° - 70°N respectively. Breccia is considered to intrude along the N-S trending fault system (Garson, 1965).



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

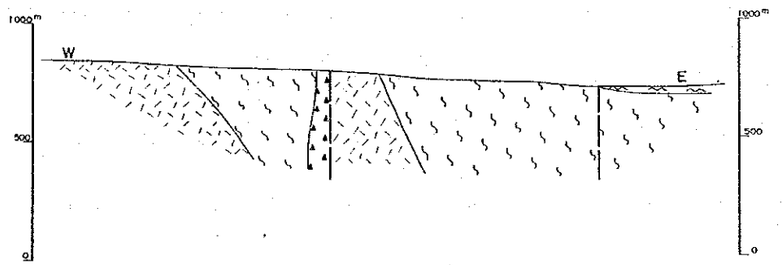
GEOLOGICAL MAP AND PROFILE OF THE Chaumbwi (15)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

A – A Section
(W – E)



LEGEND

- Drift
- Sideritic carbonatite
- Ankeritic sovite
- Sovite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Pertnosite
- Biotite-melapyroxenite, metagabbro & biotitite
- Melo conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte, P – Phonolite, N – Nephelinite, MF – Microfoyaite, S – Sölvsbergite, I – Ijolite, D – Dolerite, M – Monchiquite, A – Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-15 Geological Map and Profile of Chaumbwi Sector

(2) Carbonatite

Carbonatite is not recognized in this sector.

2-16 Kapiri Sector

2-16-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-16)

Kapiri sector is located in the southwestern part of Machinga district, 53 Km to the south of Balaka, having 3 Km east-west by 1.5 Km north-south in width. To reach this sector, it takes about 1 hour (about 53 Km) from Balaka by car.

Topography represents gentle hills of 530 m - 580 m high. A portion of the gentle slopes is used for agriculture.

2-16-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by the gneiss, granulite and marble of the basement and nephelinite and carbonatite of the Chilwa alkaline province (Fig. 5-2-16, PL. 2-16).

Marble consists of medium-grained calcite, and shows white color.

Nephelinite forms dykes and sills. It is brecciated in some places and the matrix is filled variously with carbonatite. From the results of the microscopic observation and X-ray analysis, it comprises ankerite, plagioclase, aegirine, biotite and apatite (Appendix 5, Appendix 9). From the results of the whole rock analysis and norm calculation, it is correspond to melanephelinite (Appendix 4, Appendix 13). The result of age determination of nephelinite is 196 - 213 Ma and shows early Jurassic in age (Appendix 10).

The basement is gently folded, striking N50° - 60°E.

(2) Carbonatite

In this sector 4 carbonatite dikes are observed and carbonatite is also recognized in the brecciated nephelinite.

Carbonatite dykes intruded into marble have about 1m in width and 20m - 100m in length. Lithology is ankeritic and yellowsih-brown in color. It becomes richer in ankeritic towards marble of host rock. Carbonatite dykes are striking N-S and dipping nearly vertical. The contact between carbonatite and the host rock is clear.

Carbonatite in the brecciated nephelinite is dull yellow in color and ankerite.

Monazite, bastnaesite, baryte, apatite and fluorite are reported by Garson (1965).

2-17 Nsengwa Sector

2-17-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-17)

Nsengwa sector is located in the eastern part of Mwanza district. It is situated 5 Km to the northwest of Lisungwe town which lies along the middle part of the tributary of the Shire River, Lisungwe River. This sector has a width of 3 Km east-west by 2 Km north-south. The reach this sector, it takes about 2 hours (about 70 Km) from Mwanza, the seat of the district headquarters, by car.

Topography is represented by an extremely steep mountainous region centering Nsengwa mountain (838 m), having a great difference of about 330 m between the mountain's foot and peak. Cultivation is seen merely in one part of the foothill.

2-17-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss and marble of the basement and syenite, brecciated carbonatite, feldspathic breccia, sölvsbergite and monchiquite of the Chilwa alkaline province (Fig. 5-2-17, PL. 2-17).

Syenite crops out as a stock of 100m x 200m centering the top of the Nsengwa hill. It is fine-grained and grayish-white in color and contains greenish pyroxene and green amphibole. Under the microscope, it consists of anorthoclase, sanidine, plagioclase, arfvedsonite, biotite and apatite (Appendix 5). From the results of the whole rock analysis and norm calculation, it is correspond to pulaskite (Appendix 4, Appendix 12).

Monchiquite forms a dyke of 1m in width which intrudes into the hornblende-biotite gneiss of the basement on the eastern slope of the Nsengwa hill. It is dark green in color, fine-grained and contains phenocrysts of pyroxene and biotite.

Sölvsbergite forms dykes of 1 - 2m, reddish-brown in color and the weathering is conspicuous in it. Trachytic feldspars are often recognized.

Sölvsbergite dykes trend in the direction of ENE-WSW and they coincide with a branch of the graben of this sector.

(2) Carbonatite

In this section carbonatite is found on the northern ridge of the Nsengwa hill. It is ankeritic and brecciated. It contains quartz and siderite. Feldspathic breccia is observed in the southern extension of brecciated carbonatite. The matrix of feldspathic breccia is sometimes filled with carbonatite. Pyrochlore and monazite are reported (Garson, 1965).

2-18 Mlindi Sector

2-18-1 Location, Transportation & Topography (Fig. 1-1-2 & Fig. 5-2-18)

Mlindi sector is located in the center of Mwanza district, to the north of Mlindi mountain (904 m), having 6 Km east-west by 9.5 Km north-south in width. To reach this sector, it takes about 1 hour 20 minutes (about 45 Km) from Mwanza.

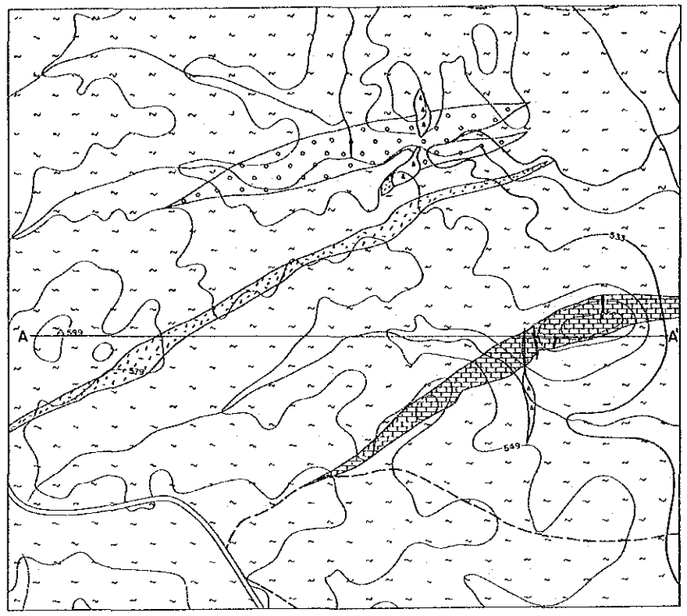
The topography is characterized by a gently rolling plain of about 900 m elevation. Cultivation is widespread over the sector.

2-18-2 Geology and Ore Deposits

(1) Geology

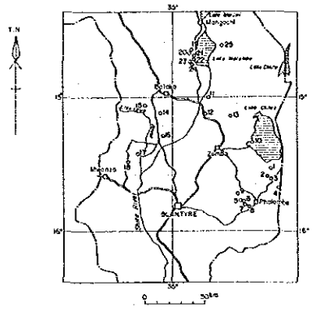
This sector is underlain by gneiss, marble, basic to ultrabic rocks, perthosite and aplite of the basement, and sölvsbergite of the Chilwa alkaline province (Fig. 5-2-18, PL. 2-18).

Basic and ultrabasic rocks are sidely distributed, about 3 Km east-west by 4 Km north-south in width, in the center of this sector. Lithologically they are gabbro and biotite pyroxinite.



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

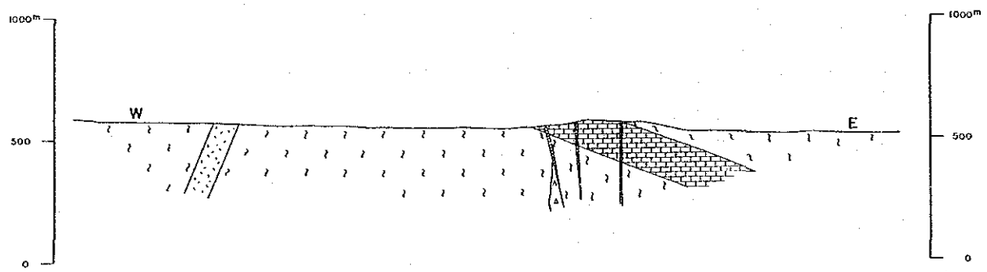
GEOLOGICAL MAP AND PROFILE
OF THE Kapiri (16)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

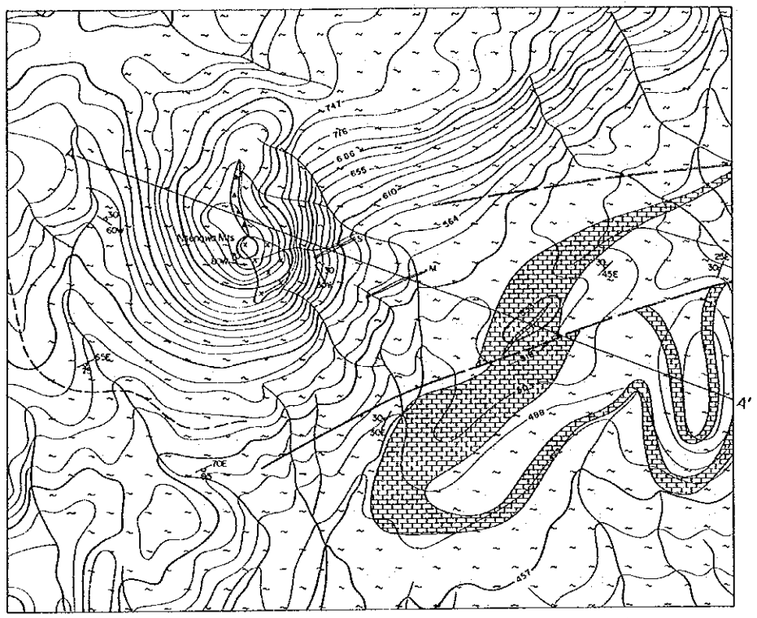
A-A' Section
(W-E)



LEGEND

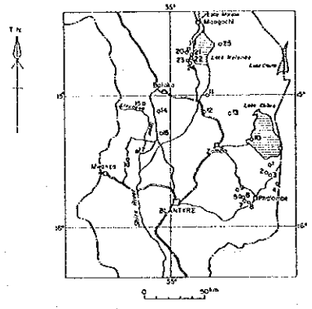
- Drift
- Sidentic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte
  P – Phonolite
  N – Nephelinite
  MF – Microfoyaite
  S – Sölvsbergite
  I – Ijolite
  D – Dolerite
  M – Monchiquite
  A – Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-16 Geological Map and Profile of Kapiri Sector



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

GEOLOGICAL MAP AND PROFILE OF THE Nsengwa (17)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

LEGEND

- Drift
- Sidentic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxanite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte
  P – Phonolite
  N – Nephelinite
  MF – Microfoyaite
  S – Sölvsbergite
  I – Ijolite
  D – Dolerite
  M – Monchiquite
  A – Aplite
- Fault
- Dip of foliation of gneiss

A–A' Section
(N70W)

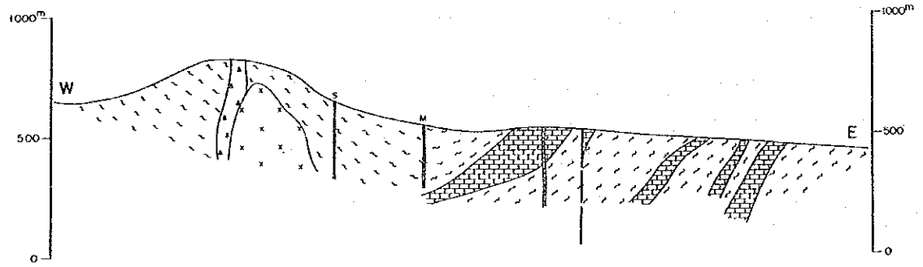
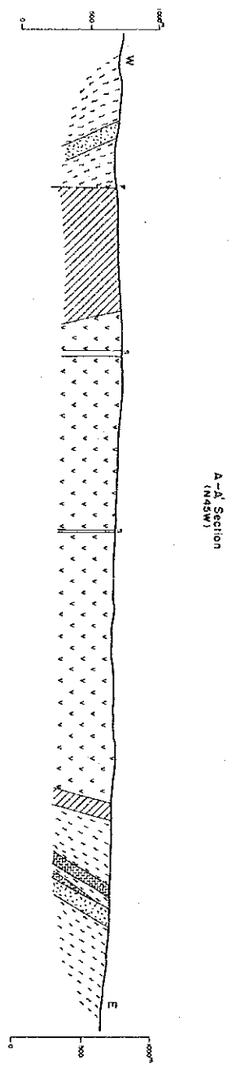
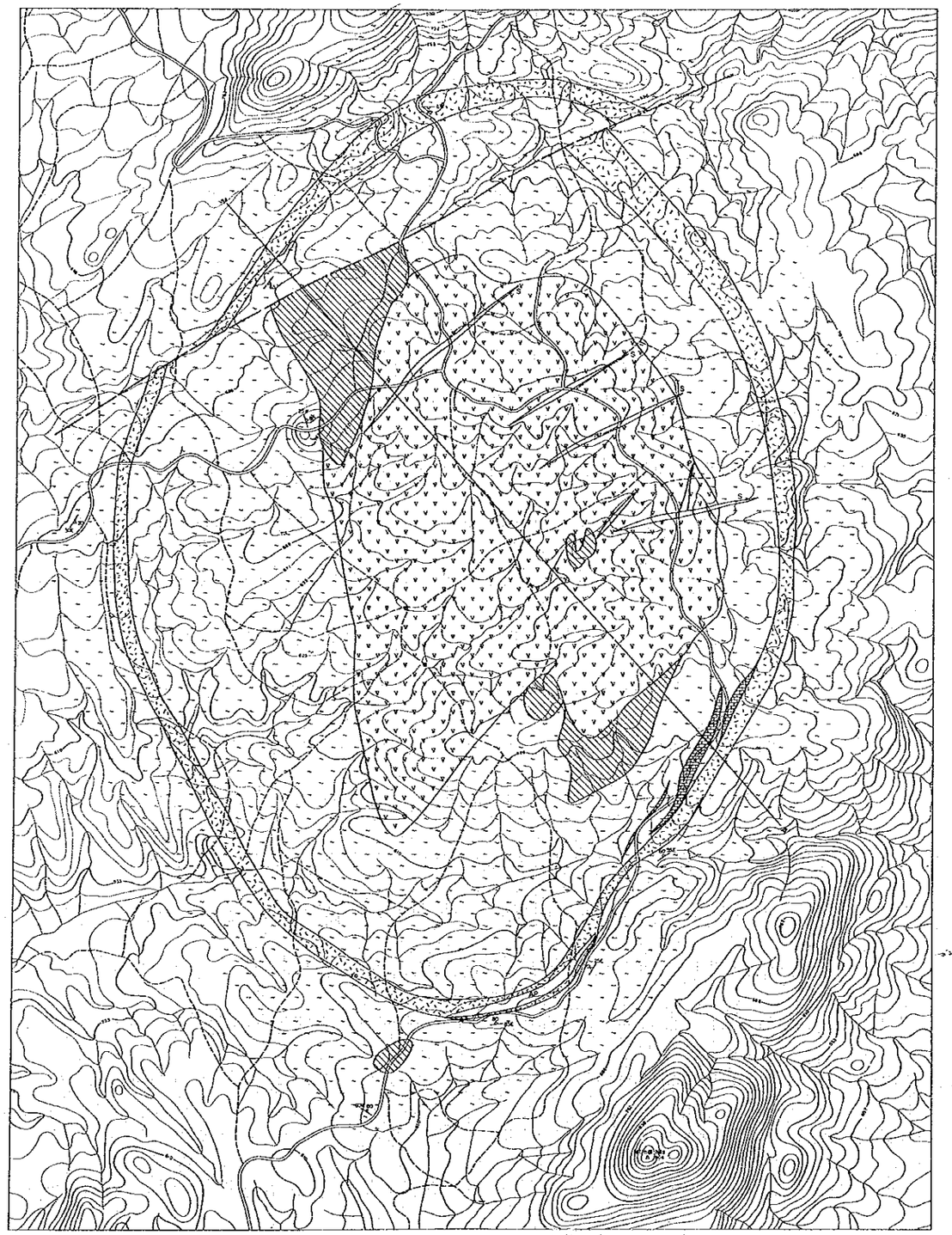


Fig. 5-2-17 Geological Map and Profile of Nsengwa Sector





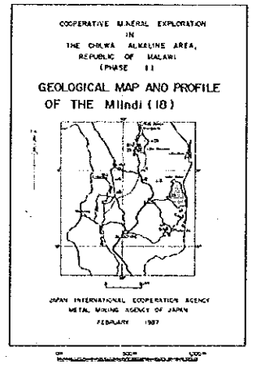


Fig. 5-2-18 Geological Map and Profile of Mlindi Sector

Gabbro is coarse-grained, equigranular and dark green in color; white feldspar, dark green pyroxene and biotite are recognized. Under the microscope, it shows granular texture and is dominant in biotite and clinopyroxene with hornblende, orthopyroxene and apatite (Appendix 5). The result of age determination is 495.8 - 497.8 Ma, it shows that the time is the early Paleozoic (Appendix 10).

Biotite pyroxenite is deep green to dark green in color, medium to coarse-grained equigranular. Pyroxene, biotite and feldspar are recognized by naked eyes. Under the microscope, it mainly consists of phlogopite, clinopyroxene and amphibole with apatite, sphene and calcite (Appendix 5).

Perthosite is occurred as a small body. It is grayish-white, coarse-grained and rich in alkali feldspar.

Sölvsbergite forms a small dyke and is reddish-brown in color and the trachytic texture is conspicuous. Under the microscope, it is composed of anorthoclase with plagioclase and zircon (Appendix 5). Halloysite (?) is recognized by the X-ray diffractive analysis (Appendix 9). From the results of the whole rock analysis and norm calculation, it is correspond to trachyte (Appendix 4, Appendix 13).

The geological structure of this sector is a ring structure of 6 Km - 9 Km in diameter. Gneiss along the outer rim of the ring structure dips 45° - 80° and it decreases innerward. Sölvsbergite dyke trends N60°E and it cuts the Mlindi ring structure.

(2) Carbonatite

Neither carbonatite nor breccia that usually associates carbonatite is recognized in this sector.

2-19 Nsala Sector

2-19-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-19)

Nsala sector is located in the southern part of Mangochi district. Mangochi, the seat of the district headquarters, is situated midway between Lake Malawi and Lake Malombe which lies in the south of Lake Malawi. This sector lies amidst the mountains in the west of Lake Malambe, having 1.5 Km east-west by 1.5 Km north-south in width. It takes about 30 minutes (30 Km) from Mangochi by car, and about 1 hour (about 4 Km) on foot to reach this sector.

As this sector is situated on the edge between a graben and a west horst, the topography is very steep having 760 - 970 m in elevation.

2-19-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss of the basement and nepheline syenite, phonolite and feldspathic breccia of the Chilwa alkaline province that intrude into the basement (Fig. 5-2-19, PL. 2-19).

Nepheline syenite forms a small stock and is gray in color and carries pyroxene. Under the microscope, it consist of orthoclase, augite-aegirine, nepheline, cancrinite and zeolite (Appendix 5). Biotite is also recognized from the X-ray diffractive analysis (Appendix 9). From the results of the whole rock analysis and norm calculation, it is correspond to foyaite (Appendix 4, Appendix 12).

The result of age determination is 113.8 - 114.4 Ma. It shows that the time of intrusion is in the early Cretaceous (Appendix 10).

Feldspathic breccia is found on the southeastern ridge of the Nsala hill; reddish-brown in color and weathering is conspicuous in it. It sometimes contains subrounded gneiss fragments of the base rock. In some places the matrix is filled with carbonate minerals.

(2) Carbonatite

Carbonatite is not observed in this sector.

2-20 Kongwe Sector

2-20-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-20)

Kongwe sector is located in the southern part of Mangochi district, to the south of Nsla sector, having 1 Km east-west by 2 Km north-south in width. It takes about 30 minutes (about 30 Km) from Mangochi by car, and about 1 hour on foot to reach this sector.

The topography is very steep and cultivation is seen merely in parts.

2-20-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss of the basement and feldspathic breccia and phonolite of the Chilwa alkaline province (Fig. 5-2-20, PL. 2-20).

Feldspathic breccia is occurred in an area of 800m x 800m width on the west slope of the Kongwe hill. It is pink to reddish-brown in color and the size and shape of the fragments are variable. The matrix is usually filled with pink feldspar, but in some places with carbonate minerals.

Phonolite is dark gray in color and observed conspicuous biotite phenocrysts.

(2) Carbonatite

Carbonatite is not observed in this sector.

2-21 Liperembe Sector

2-21-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-21)

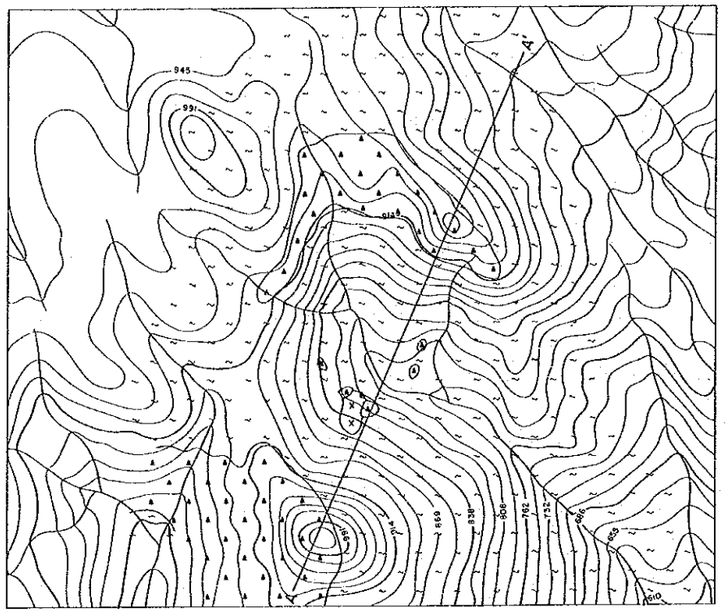
Liperembe Sector is located in the southern part of Mangochi district, 3 Km southeast of Kongwe sector, having 1 Km east-west by 1.5 Km north-south in width. To reach this sector, it takes about 30 minutes (about 31 Km) from Mangochi by car.

The topography is a gentle hill of about 100 m high rising from the plain of 480 m on the shore of the lake. At the foothill cultivation is widespread.

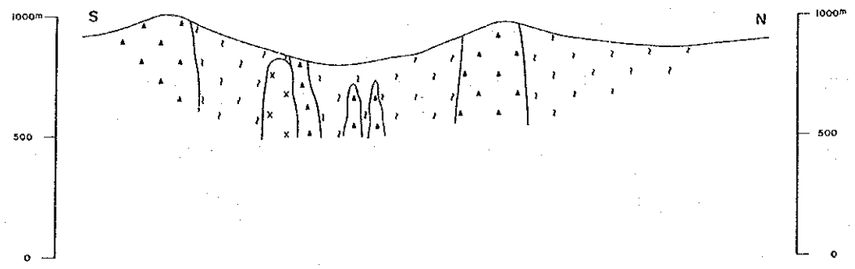
2-21-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss of the basement and feldspathic breccia and nephelinite of the Chilwa alkaline province. (Fig. 5-2-21, PL. 2-21).

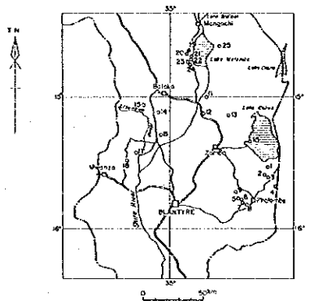


A-A' Section
(N25°E)



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

GEOLOGICAL MAP AND PROFILE OF THE Nsala (19)



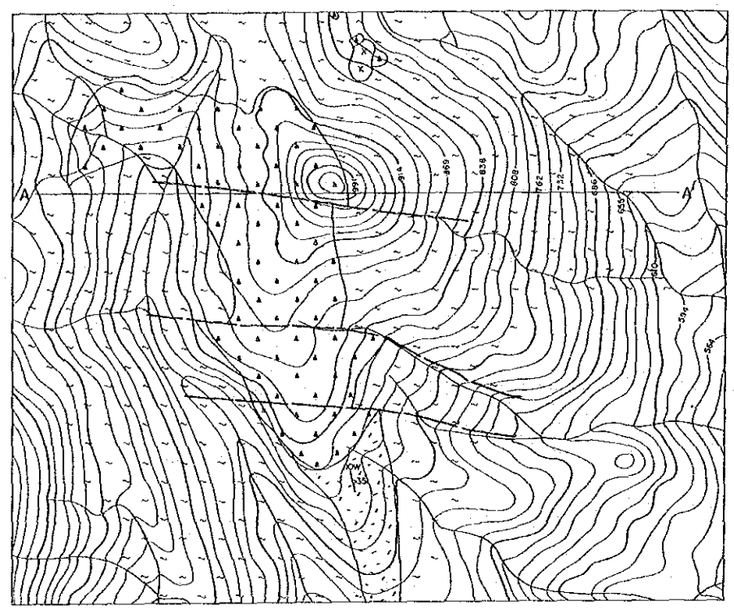
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

LEGEND

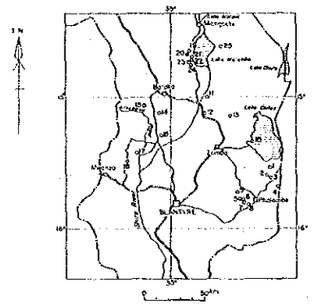
- Drift
- Sidentic carbonatite
- Ankeritic sovite
- Sovite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nephelline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Mafic conglomerate
- Green pyroxene skarn
- Dykes and plugs
  - T - Trachyte
  - P - Phonolite
  - N - Nephelinite
  - MF - Microfoyaite
  - S - Sölvsbergite
  - I - Ijolite
  - D - Dolerite
  - M - Monchiquite
  - A - Aplite
- Fault
- 50° Dip of foliation of gneiss

Fig. 5-2-19 Geological Map and Profile of Nsala Sector



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

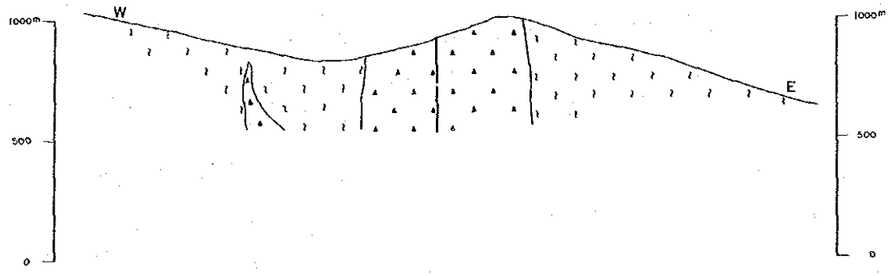
GEOLOGICAL MAP AND PROFILE
OF THE Kongwe (20)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

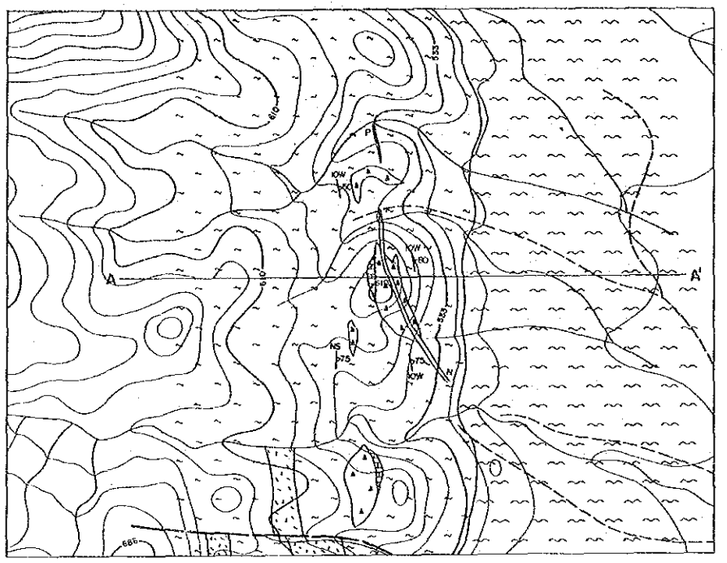
A-A' Section
(W-E)



LEGEND

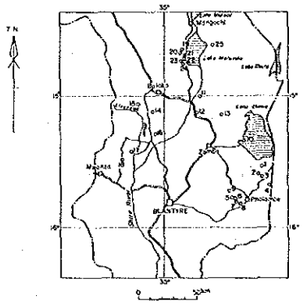
- Drift
- Siderific carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte
  P – Phonolite
  N – Nephelinite
  MF – Microfoyaite
  S – Silvisbergite
  I – Ijolite
  D – Dolerite
  M – Monchiquite
  A – Aplite
- Fault
- 50° Dip of foliation of gneiss

Fig. 5-2-20 Geological Map and Profile of Kongwe Sector



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

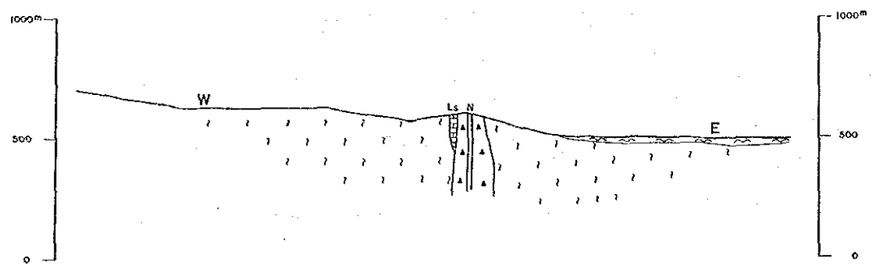
GEOLOGICAL MAP AND PROFILE OF THE Liperembe (21)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

A-A' Section
(W-E)



LEGEND

- Drift
- Sidenitic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte
  P – Phonolite
  N – Nephelinite
  MF – Microfoyaite
  S – Sövsbergite
  I – Ijolite
  D – Dolerite
  M – Monchiquite
  A – Aplite
- Fault
- 50 Dip of foliation of gneiss

Fig. 5-2-21 Geological Map and Profile of Liperembe Sector

Feldspathic breccia forms a lens-shape body trending NNW-SSE in an area of 150m x 400m centering the Liperembe hill. Small bodies expose on the northern and southwestern slopes of the hill.

Nephelinite forms a dyke of 20m in width and 200m in length, intruding into the feldspathic breccia lens. The strike of the dyke is N10° - 30°W. Under the microscope, it shows porphyritic texture and phenocrysts are sanidine, augite, hornblende and sphene, and groundmass comprises plagioclase, anorthoclase, aegirine, apatite, biotite and cancrinite (Appendix 5). From the results of the whole rock analysis and norm calculation, it is correspond to phonolite (Appendix 4, Appendix 13).

The basement strikes N-S - N10°W and dips steeply, 75° - 85°E. The direction of the intrution of nephelinite dyke is nearly the same as the strike of the basement.

(2) Carbonatite

Carbonatite is not recognized in this sector.

2-22 Kawanula Sector

2-22-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-22)

Kawanula sector is located in the southern part of Mangochi district, to the south of Liperembe sector, having 1 Km east-west by 1 Km north-south in width. It takes about 30 minutes (about 32 Km) from Mangochi by car.

The topography is a gentle hill of 100 m high rising from the plain on the lake-shore of 480 m elevation.

2-22-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss and marble of the basement and feldspathic breccia and phonolite (?) of the Chilwa alkaline province (Fig. 5-2-22, PL. 2-22).

Feldspathic breccia is found in an area of 150m x 300m width on the western slope of the Kawanula hill.

A phonolite (?) dyke of 1m width and 100m in length is observed in feldspathic breccia. Under the microscope, it shows porphyritic texture and phenocrysts are of kaersutite, augite and biotite with augite, biotite, anorthoclase, calcite and apatite. From the results of the whole rock analysis and norm calculation, it is correspond to melanephelinite (Appendix 4, Appendix 13).

The structure of the basement in this sector shows that strike is N-S to N10°E with dip 60° - 80°E.

(2) Carbonatite

Carbonatite is not recognized in this sector.

2-23 Aligomba Sector

2-23-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-23)

Aligomba sector is located in the southern part of Mangochi district, to the south of Kawanula sector, having 1 Km east-west by 1 Km north-south in width. To reach this sector, it takes about 30 minutes (about 32 Km) from Mangochi by car.

The topography is a gentle hill of about 150 m high rising from the plain on the lake-shore of 480 m elevation.

2-23-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss, granulite and marble of the basement and phonolitic breccia, feldspathic breccia and phonolite dykes of the Chilwa alkaline province (Fig. 5-2-23, PL. 2-23).

Phonolitic breccia is found in an area of 150m x 300m width on the east slope of the Aligomba hill. The fragments are subangular to sub-rounded and consist of gneiss and phonolite. The matrix is fine-grained, greenish gray and consists of biotite, amphibole and pyroxene, under the microscope.

A small body of feldspathic breccia is exposed near the top of the Aligomba hill. It is pink in color and the weathering is conspicuous in it.

Phonolite dyke is 1 m in width and about 50m in length. Under the microscope, it shows trachytic texture and mainly consists of anorthoclase, plagioclase, cancrinite and augite with apatite and sphene (Appendix 5). From the results of the whole rock analysis and norm calculation, it is correspond to melanephelinite (Appendix 4, Appendix 13).

(2) Carbonatite

Carbonatite is not recognized in this sector.

2-24 Achirundu Sector

2-24-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-24)

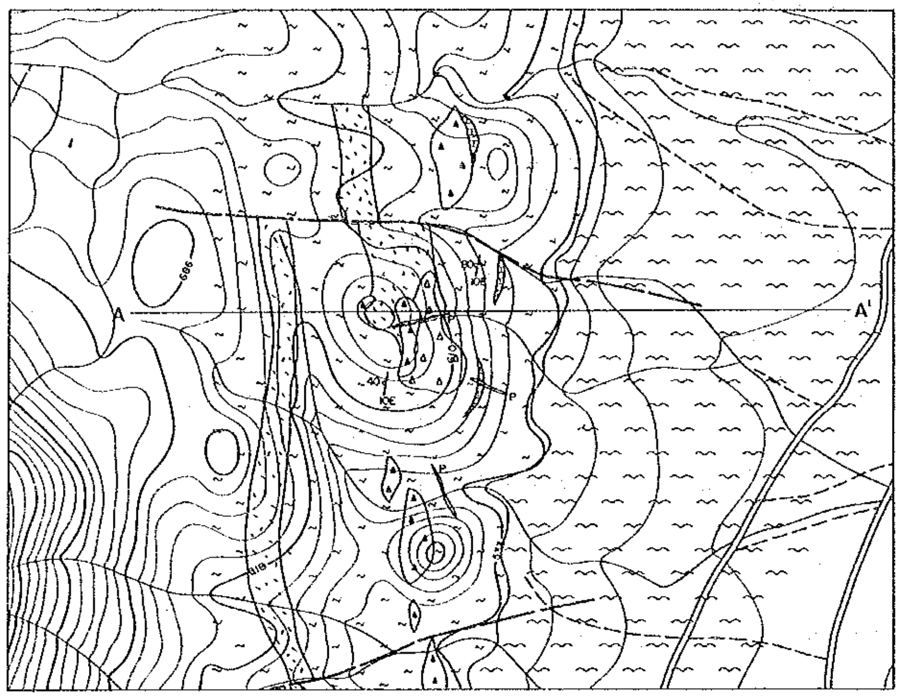
Achirundu sector is located in the southern part of Mangochi district, to the south of Aligomba sector, having 1.5 Km east-west by 1.5 Km north-south in width. To reach this sector, it takes about 30 minutes (about 33 Km) from Mangochi by car.

The topography is a gentle hill of about 150 m high rising from the plain on the lake-shore of 480 m elevation. At the foot-hill cultivation is widespread.

2-24-2 Geology and Ore Deposits

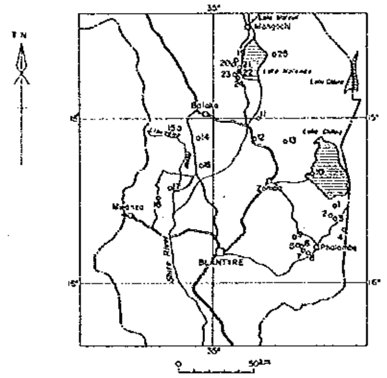
(1) Geology

This sector is underlain by gneiss of the basement and feldspathic breccia and phonolite dyke of the Chilwa alkaline province (Fig. 5-2-24, PL. 2-24).



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

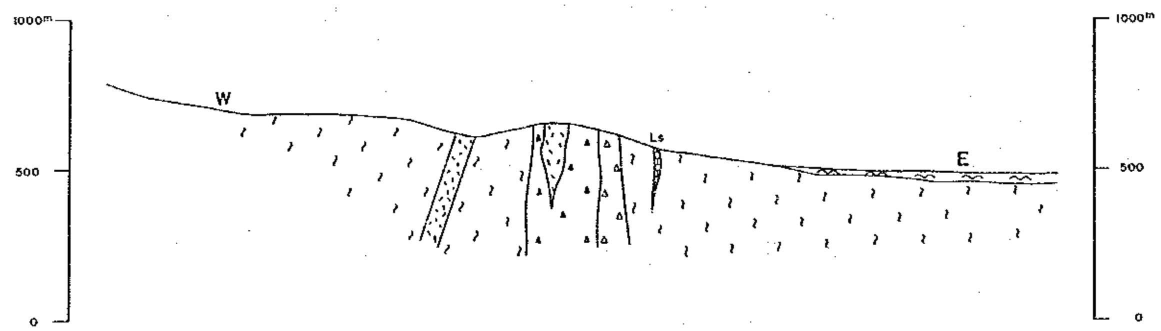
GEOLOGICAL MAP AND PROFILE
OF THE Kawanula (22)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1,000m

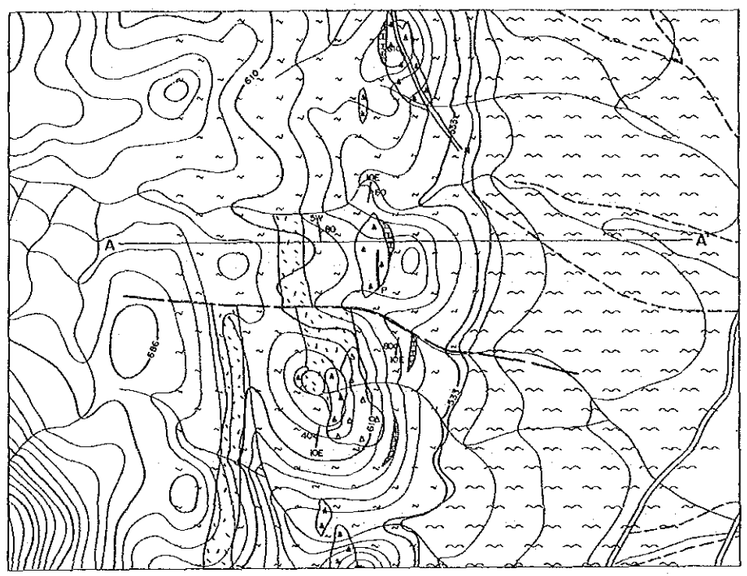
A-A' Section
(W-E)



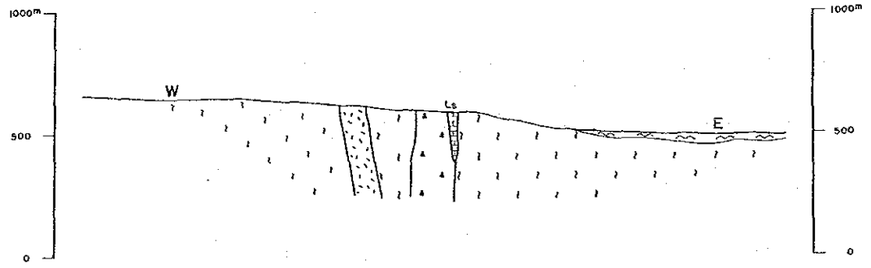
LEGEND

- Drift
- Sideritic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T-Trachyte
  - P-Phonolite
  - N-Nephelinite
  - MF-Microfoyaite
  - S-Sölvsbergite
  - I-Ijolite
  - D-Dolerite
  - M-Monchiquite
  - A-Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-22 Geological Map and Profile of Kawanula Sector

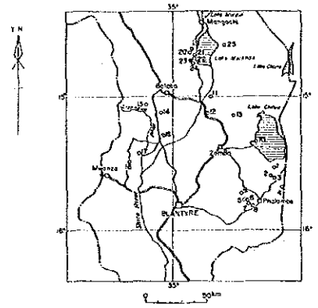


A-A' Section
(W-E)



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

GEOLOGICAL MAP AND PROFILE OF THE Aligomba (23)



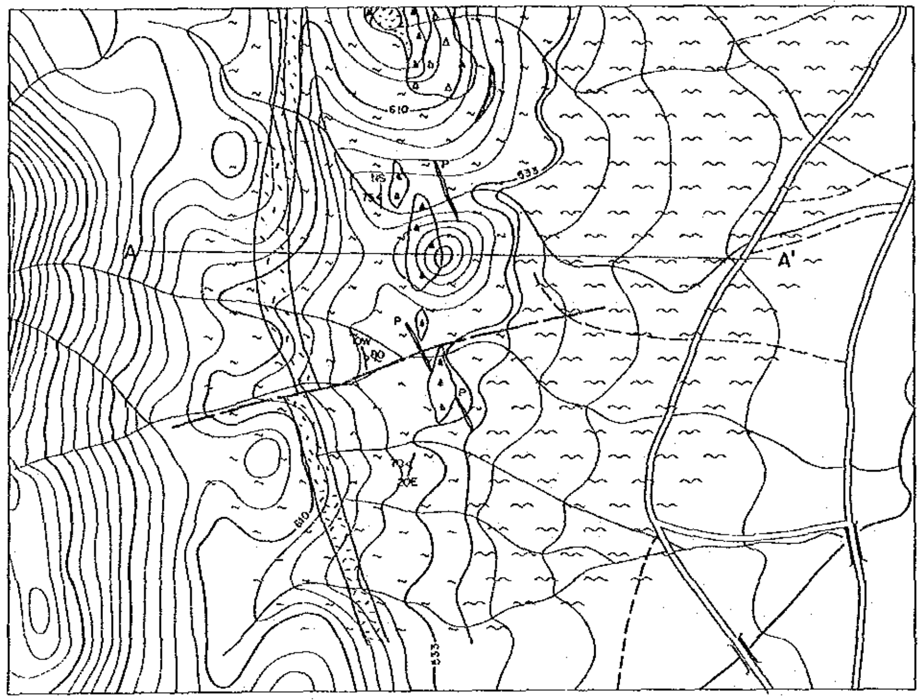
JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

LEGEND

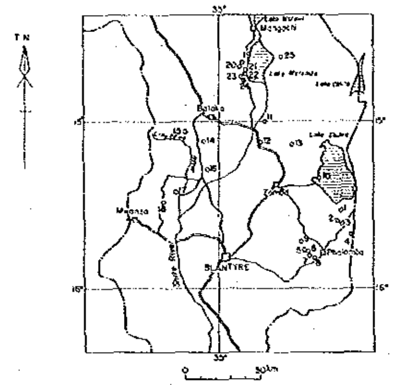
- Drift
- Sidentic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Puloskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metagabbro & biotinite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs
  - T – Trachyte
  - P – Phonolite
  - N – Nephelinite
  - MF – Microfoyaite
  - S – Sövsbergite
  - I – Ijolite
  - D – Dolerite
  - M – Monchiquite
  - A – Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-23 Geological Map and Profile of Aligomba Sector



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

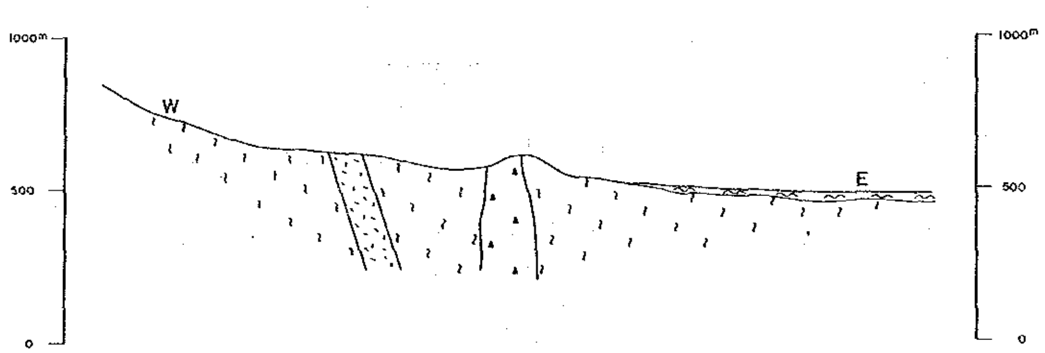
GEOLOGICAL MAP AND PROFILE OF THE Achirundu (24)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1,000m

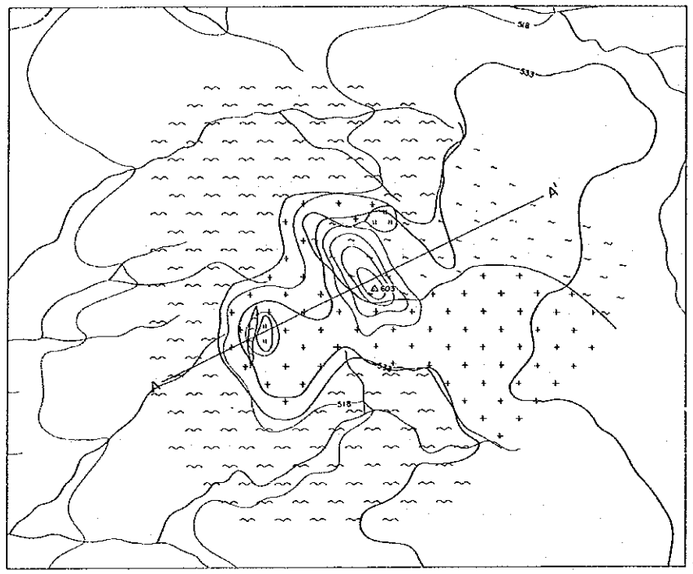
A–A' Section
(W–E)



LEGEND

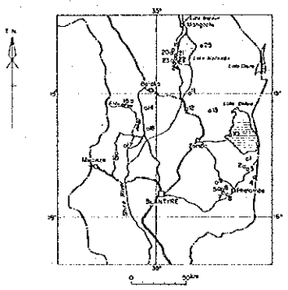
- Drift
- Sideritic carbonatite
- Ankeritic sövite
- Sövite
- Carbonate-Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite-gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite-metapyroxenite, metogabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trochyte
  - P – Phonolite
  - N – Nephelinite
  - MF – Microfoyaite
  - S – Sölvsbergite
  - I – Ijolite
  - D – Dolerite
  - M – Monchiquite
  - A – Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-24 Geological Map and Profile of Achirundu Sector



COOPERATIVE MINERAL EXPLORATION
IN
THE CHILWA ALKALINE AREA,
REPUBLIC OF MALAWI
(PHASE I)

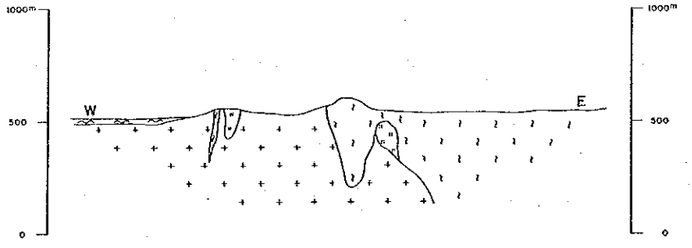
GEOLOGICAL MAP AND PROFILE
OF THE Chiloli (25)



JAPAN INTERNATIONAL COOPERATION AGENCY
METAL MINING AGENCY OF JAPAN
FEBRUARY 1987

0m 500m 1000m

A–A' Section
(N65E)



LEGEND

- Drift
- Sidenitic carbonatite
- Ankeritic sövite
- Sovite
- Carbonate–Silicate rock
- Feldspathic breccia, agglomerate
- Phonolitic breccia
- Fenitized gneiss
- Trachyte
- Phonolite
- Nephelinite
- Syenite (Pulaskite)
- Nepheline syenite (Foyaite)
- Hornblende biotite–gneiss
- Granulite and gneissose granite
- Dolomitic marble
- Dolerite
- Granite
- Perthosite
- Biotite–metapyroxenite, metagabbro & biotitite
- Meta conglomerate
- Green pyroxene skarn
- Dykes and plugs T – Trachyte
  P – Phonolite
  N – Nephelinite
  MF – Microfoyaite
  S – Sölvsbergite
  I – Ijolite
  D – Dolerite
  M – Monchiquite
  A – Aplite
- Fault
- Dip of foliation of gneiss

Fig. 5-2-25 Geological Map and Profile of Chiloli Sector

Feldspathic breccia is found in an area of 100m x 600m width on the west slope of the Achirundu hill. It is pink to reddish-brown in color and consists of subangular to subrounded fragments of feldspathic breccia and gneiss.

Phonolite is seen as a small dyke of 1m in width. Under the microscope, it shows porphyritic texture and phenocrysts are of orthoclase, biotite, barkevikite and apatite with plagioclase, augite, aegirine, biotite, magnetite, apatite, anorthoclase and analcine (Appendix 5, Appendix 9). From the results of the whole rock analysis and norm calculation, it is correspond to phonolite (Appendix 4, Appendix 13).

(2) Carbonatite

Carbonatite is not observed in this sector.

2-25 Chiloli Sector

2-25-1 Location, Transportation and Topography (Fig. 1-1-2 & Fig. 5-2-25)

Chiloli sector is located in the southern part of Mangochi, 3 Km from the east bank of Lake Malombe, having 1 Km east-west by 1.5 Km north-south in width. To reach this sector, it takes about 45 minutes (39 Km) from Mangochi by car and 20 minutes on foot.

The topography is a gentle hill of about 100 m high rising from the lake-shore of 500 m elevation. Since this sector is situated in the Liwonde Controlled Area, the land is covered with herbaceous grasses and small low trees, the characteristic plants of savanna.

2-25-2 Geology and Ore Deposits

(1) Geology

This sector is underlain by gneiss and granite of the basement (Fig. 5-2-25, PL. 2-25).

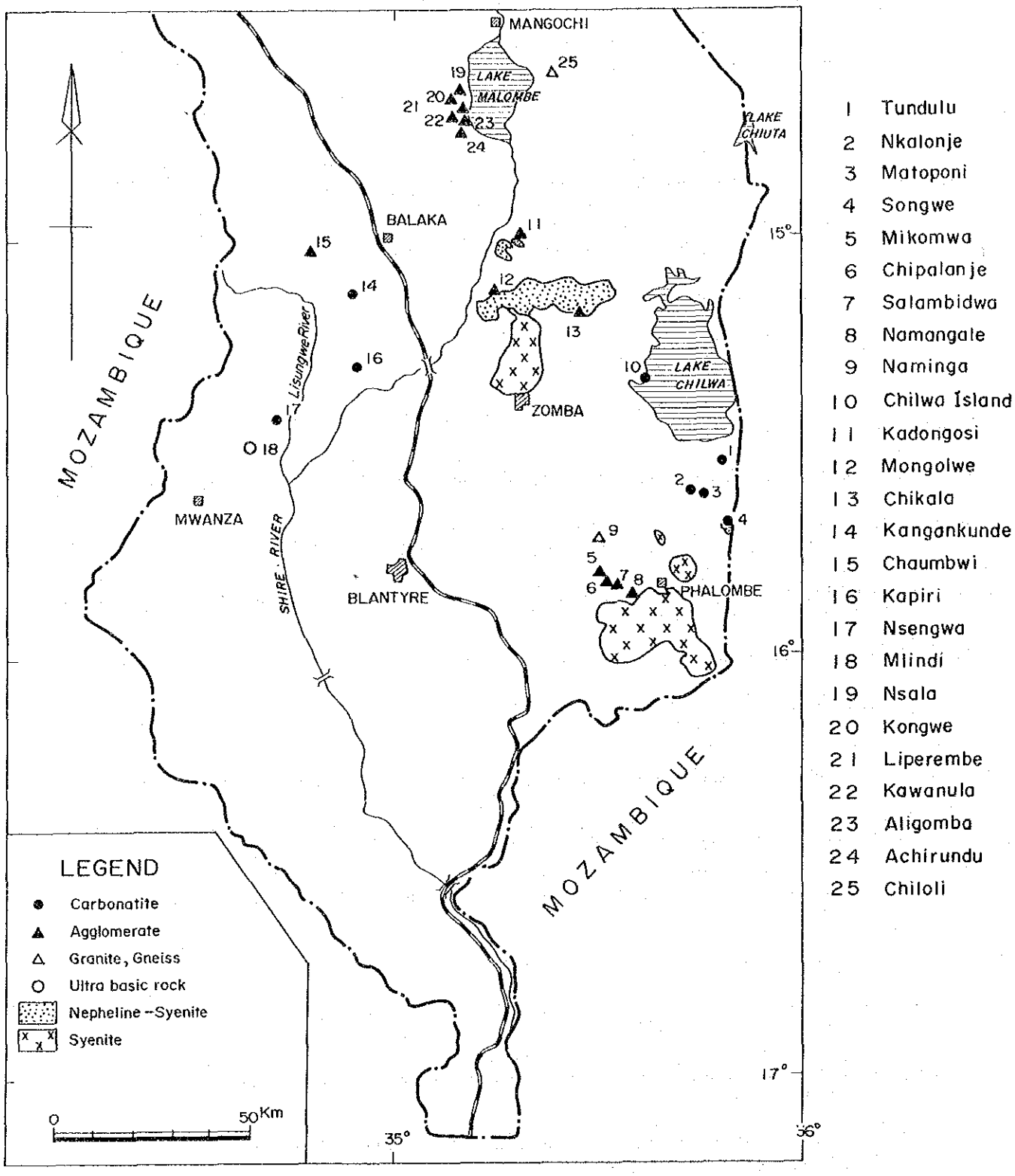
Gneiss is medium to coarse-grained and contains biotite and amphibole. Garnet is also recognized in it.

Granite is divided into leucocratic and and hornblende granite. Leucocratic granite is rich in feldspar. Under the microscope, it shows mosaic texture and comprises microperthite, quartz, plagioclase and zircon. Hornblende granite is relatively small and gradually change into leucocratie granite. In some places it shows gneissose structure.

(2) Carbonatite

Carbonatite is not found in this sector. However, at two places - each 100m x 100m in width of green-colored pyroxene skarns are found in granite and near the contact between granite and gneiss. Pyroxene skarn is wholly composed of clinopyroxene. In some place tremolite skarn is also found. Under the microscope, clinopyroxene and sphene are also recognized (Appendix 5).

The distribution of carbonatites and promising sites in the Chilwa alkaline are shown in Fig. 5-2-26.



1 Tundulu
2 Nkalonje
3 Matoponi
4 Songwe
5 Mikomwa
6 Chipalanje
7 Salambidwa
8 Namangale
9 Naminga
10 Chilwa Island
11 Kadongosi
12 Mongolwe
13 Chikala
14 Kangankunde
15 Chaumbwi
16 Kapiri
17 Nsengwa
18 Mlindi
19 Nsala
20 Kongwe
21 Liperembe
22 Kawanula
23 Aligomba
24 Achirundu
25 Chiloli

Fig. 5-2-26 Location Map of Carbonatites and Promising Sites

PART 3 GEOCHEMICAL SURVEY

Geochemical samples were, as a rule, collected from carbonatites. 1,012 samples were collected and they were analyzed into 60 elements shown in Tab. 5-1-1. The analyzed values are shown in Appendix 1, and the locations of samples are shown in PL. 3-1 to PL. 3-25.

The analyzed values of the geochemical samples show a lognormal distribution in general. When histograms of the analyzed values of this area are examined, most of the elements show the lognormal distributions rather than the normal distributions. Therefore, in the statistical analyses below, the values are changed into logarithmic values and processed by the computer.

3-1 Statistical Value

The statistical values of the analyzed elements of the Chilwa alkaline area are shown in Tab. 5-3-1. The values under the detectable limit were taken as missing values and excluded from the statistical processing.

The following can be said from the number of analyzed value (N) of each element. The elements of which analyzed numbers are less than about 10% of the total samples, ($N < 100$), are B, Br, Hf, Ta and Tl. It can be considered that the extremely smallness of the analyzed number may be resulted from few amount of these 5 elements in carbonatites and related rocks in this area. Therefore, it can be said that they are not good pathfinder elements for the geochemical exploration of carbonatite in this area.

Next, the relation between the crustal abundance of the elements and the mean of the elements in carbonatites of this area will be stated. Tab. 5-3-2 shows this relation comparing with each analyzed element. According to this table, 12 elements that have extremely high mean than the crustal abundance of the elements are Sb, Cd, C, Ce, Eu, La, Mo, Nd, Sm, Se, Te and Tb.

The above fact suggests that these 12 elements can be used effectively as pathfinder elements of the carbonatites in this area.

Statistical values of each element in rock facies are shown in Tab. 5-3-3.

3-2 Correlation of the Elements

Correlation coefficient of each element in this area is shown in Appendix 2. The symbolized correlation based on the correlation coefficients is shown in Tab. 5-3-4.

Symbol A represents extremely strong correlation, correlation coefficient 0.8 and above; Symbol B represents strong correlation, correlation coefficient 0.8 - 0.6; and Symbol C represents weak correlation, correlation coefficient 0.6 - 0.4. Minus sign represents negative correlation.

Since the elements having number of analyzed value less than 100 are considered to have very low reliability in calculation of correlation coefficient, they are excluded in Tab. 5-3-4.

Tab. 5-3-1 Statistical Values of Geochemical Samples in the Chilwa Alkaline Area

VARIABLE	N	MEAN	MAXIMUM VALUE	MINIMUM VALUE	LOGARITHMIC STANDARD DEVIATION
AL	1009	1.14	15.59	0.01	0.82
SB	944	1.35	11.90	0.06	0.31
AS	833	1.66	144.60	0.10	0.65
BA	1012	2256.86	40784.00	4.50	0.52
BE	411	2.34	231.40	0.10	0.53
BI	139	0.65	66.50	0.10	0.47
B	4	38.89	320.00	10.00	0.69
BR	0	0.0	.	.	.
CD	972	4.06	144.40	0.10	0.44
CA	1008	5.69	49.19	0.01	0.89
C	1010	2.35	15.46	0.01	0.81
CE	1010	922.66	44185.00	5.00	0.82
CS	912	5.16	55.00	1.00	0.31
CR	1005	39.69	2293.10	0.60	0.57
CO	995	3.89	51.40	0.10	0.40
CU	1012	12.98	448.00	1.00	0.28
DY	574	16.30	306.00	1.00	0.56
EU	883	11.38	804.00	0.20	0.58
F	1012	1076.90	74826.00	3.00	0.57
GA	1010	2.64	33.90	0.10	0.41
GE	861	0.77	10.26	0.01	0.41
AU	179	2.44	49.00	1.00	0.36
HF	0	0.0	.	.	.
FE	1012	4.22	2753.00	0.14	0.42
LA	1002	493.08	31525.00	1.00	0.87
PB	1004	58.97	1818.00	4.00	0.34
LI	936	4.80	408.00	1.00	0.41
LU	132	1.84	13.00	1.00	0.24
MG	1012	0.47	12.46	0.01	0.74
MN	1012	3622.20	98813.00	2.00	0.81
HG	906	91.14	2629.00	0.33	0.48
MO	751	17.31	1230.00	1.00	0.67
ND	965	325.91	13055.00	1.00	0.81
NI	1011	6.20	330.60	0.20	0.45
NB	975	101.54	61437.00	1.00	0.64
P	1012	2785.65	76014.00	8.00	0.66
K	1007	0.43	10.58	0.01	0.82
RB	815	41.06	1972.20	1.00	0.70
SM	849	45.39	4021.00	0.08	0.77
SC	814	3.58	44.00	1.00	0.38
SE	104	1.22	18.00	1.00	0.23
SI	1012	4.89	44.96	0.02	0.73
AG	696	0.17	2.39	0.01	0.44
NA	988	0.17	8.24	0.01	0.82
SR	1012	2693.04	85684.00	17.00	0.72
S	989	123.24	13596.00	10.00	0.42
TA	42	3.61	65.00	1.00	0.50
TE	224	0.26	2.84	0.05	0.44
TB	620	7.46	58.00	1.00	0.39
TL	17	0.22	0.40	0.20	0.10
TH	984	29.60	1847.20	0.20	0.58
SN	776	1.08	18.70	0.09	0.34
TI	1011	690.73	21029.00	12.00	0.60
W	498	9.27	96.00	1.00	0.44
U	889	10.29	564.40	0.10	0.55
V	962	46.49	666.00	2.00	0.40
YB	837	4.42	71.90	0.10	0.55
Y	1012	57.13	1279.00	1.00	0.56
ZN	1012	307.17	8678.00	4.00	0.59
ZR	277	24.49	6884.00	1.00	0.76

Tab. 5-3-2 Abundance of Elements in Average Crustal Rocks and Mean of Elements in Chilwa Alkaline Area

(unit : ppm)

Element	Mean	Abundance	M >10A	Element	Mean	Abundance	M >10A
Al	11,400	81,000		Hg	0.09	0.02	
Sb	1.4	0.1	○	Mo	17	1.5	○
As	1.7	2		Nd	325	20	○
Ba	2,260	580		Ni	6	75	
Be	2.3	2		Nb	102	20	
Bi	0.6	0.1		P	2,785	900	
B	39	8		K	4,300	25,000	
Br	-	1.8		Rb	41	150	
Cd	4	0.1	○	Sm	45	4	○
Ca	57,000	33,000		Sc	4	13	
C	23,500	230	○	Se	1	0.1	○
Ce	922	81	○	Si	49,000	291,000	
Cs	5	3		Ag	0.17	0.05	
Cr	40	100		Na	1,650	25,000	
Co	3.9	25		Sr	2,690	300	
Cu	13	50		S	123	300	
Dy	16	3		Ta	3.6	2	
Eu	11	0.8	○	Te	0.25	0.002	○
F	1,080	600		Tb	7	0.5	○
Ga	2.6	26		Tl	0.2	0.45	
Ge	0.8	2		Th	30	10	
Au	0.002	0.003		Sn	1	2	
Hf	-	3		Ti	690	4,400	
Fe	42,000	46,500		W	9	1	
La	493	25	○	U	10.3	2.5	
Pb	59	10		V	46	150	
Li	5	30		Yb	4.4	1.8	
Lu	2	0.3		Y	57	38	
Mg	4,700	17,000		Zn	307	80	
Mn	3,600	1,000		Zr	24	150	

Source : Rose, A.W. et al (1979)

Tab. 5-3-3(1) Statistical Values of Geochemical Samples by Rock Facies

VARIABLE	N	MEAN	MAXIMUM VALUE	MINIMUM VALUE	LOGARITHMIC STANDARD DEVIATION
RK='CARBONATITES'					
AL	595	0.34	11.71	0.01	0.61
SB	546	1.28	11.90	0.06	0.35
AS	476	1.63	101.30	0.10	0.59
BA	598	3408.55	40784.00	35.00	0.45
BE	200	2.01	24.60	0.10	0.51
BI	92	0.81	66.50	0.20	0.48
B	0	0.0	.	.	.
BR	0	0.0	.	.	.
CD	595	5.87	144.40	0.20	0.32
CA	598	21.28	49.19	0.10	0.28
C	598	7.48	15.46	0.05	0.26
CE	598	2446.62	44185.00	6.00	0.57
CS	579	6.23	55.00	1.00	0.27
CR	591	21.06	1206.60	0.60	0.46
CO	586	3.77	37.90	0.10	0.37
CU	598	10.92	86.00	2.00	0.23
DY	401	19.08	306.00	1.00	0.52
EU	576	19.35	162.60	0.20	0.43
F	598	1741.68	74826.00	5.01	0.39
GA	596	1.72	33.90	0.10	0.36
GE	461	0.56	10.04	0.01	0.47
AU	118	2.45	46.00	1.00	0.36
HF	0	0.0	.	.	.
FE	598	5.11	50.11	0.31	0.36
LA	598	1342.88	31525.00	2.00	0.58
PB	593	69.45	1818.00	6.00	0.32
LI	551	3.83	166.00	1.00	0.34
LU	79	1.84	8.00	1.00	0.22
MG	598	0.66	10.57	0.02	0.68
MN	598	10195.61	98813.00	61.00	0.44
HG	556	100.17	2629.00	0.33	0.48
MO	494	25.65	636.00	1.00	0.64
ND	591	813.83	13055.00	5.00	0.55
NI	597	4.38	133.10	0.20	0.44
NB	594	139.60	61437.00	1.00	0.56
P	598	4547.99	76014.00	8.00	0.59
K	593	0.15	9.44	0.01	0.66
RB	420	15.43	1389.50	1.00	0.53
SM	580	80.00	4021.00	0.30	0.58
SC	488	3.16	27.00	1.00	0.32
SE	69	1.27	18.00	1.00	0.26
SI	598	1.79	40.98	0.02	0.60
AG	436	0.21	2.39	0.01	0.42
NA	576	0.11	8.24	0.01	0.79
SR	598	6653.68	85684.00	17.00	0.50
S	590	143.97	6547.00	11.00	0.42
TA	28	4.16	65.00	1.00	0.53
TE	112	0.19	1.99	0.05	0.36
TB	454	8.48	58.00	1.00	0.37
TL	15	0.22	0.40	0.20	0.11
TH	572	34.83	1265.90	0.20	0.62
SN	465	1.14	9.90	0.10	0.31
TI	597	424.07	21029.00	12.00	0.58
W	363	11.03	96.00	1.00	0.45
U	561	14.97	564.40	0.10	0.47
V	571	46.75	666.00	2.00	0.35
YB	516	5.86	71.90	0.10	0.55
Y	598	92.77	1279.00	1.00	0.45
ZN	598	540.50	8678.00	16.00	0.49
ZR	120	15.47	1029.00	1.00	0.63

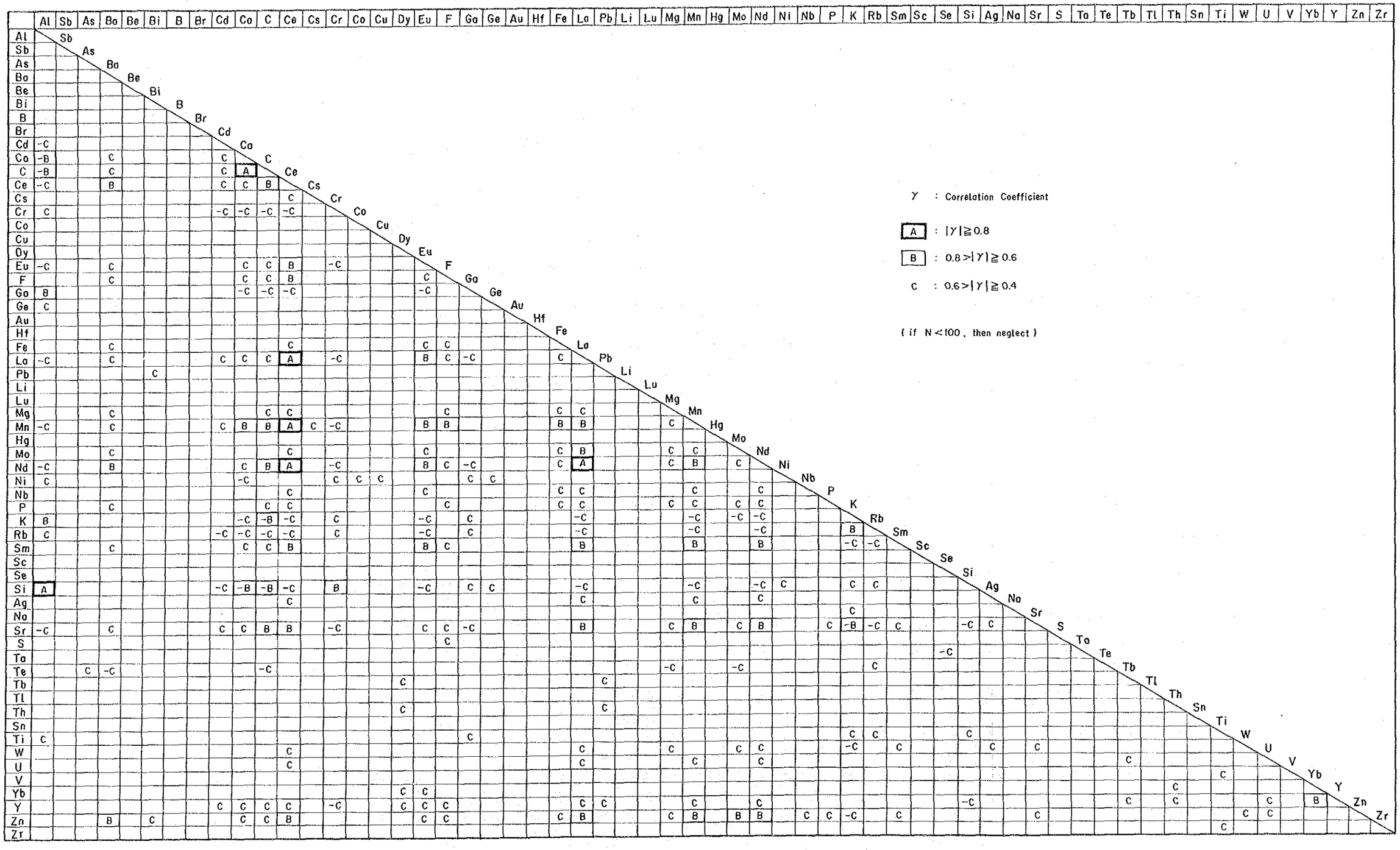
Tab. 5-3-3(2) Statistical Values of Geochemical Samples by Rock Facies

VARIABLE	N	MEAN	MAXIMUM VALUE	MINIMUM VALUE	LOGARITHMIC STANDARD DEVIATION
RK= ALKALINE ROCKS					
AL	325	7.69	15.59	0.07	0.26
SB	309	1.45	9.50	0.10	0.28
AS	283	1.93	144.60	0.10	0.75
BA	325	1185.54	15322.00	4.50	0.46
BE	183	2.87	231.40	0.20	0.54
BI	35	0.39	2.30	0.10	0.37
B	4	38.89	320.00	10.00	0.69
BR	0	0.0	.	.	.
CD	297	2.17	35.30	0.10	0.49
CA	321	0.64	35.39	0.01	0.77
C	323	0.37	11.10	0.01	0.74
CE	325	217.64	12543.00	5.00	0.70
CS	266	3.71	30.00	1.00	0.32
CR	325	97.85	2293.10	2.00	0.46
CO	320	3.97	51.40	0.40	0.41
CU	325	15.83	156.00	1.00	0.27
DY	151	11.84	227.00	1.00	0.59
EU	240	3.83	804.00	0.20	0.55
F	325	498.77	19440.00	6.00	0.59
GA	325	5.49	24.00	0.20	0.27
GE	313	1.10	10.26	0.06	0.28
AU	41	2.38	12.00	1.00	0.32
HF	0	0.0	.	.	.
FE	325	3.33	2753.00	0.23	0.45
LA	320	121.96	18006.00	2.00	0.72
PB	322	46.45	1081.00	4.00	0.35
LI	301	7.23	408.00	1.00	0.47
LU	51	1.77	13.00	1.00	0.26
MG	325	0.23	8.05	0.01	0.71
MN	325	844.29	72325.00	5.00	0.74
HG	276	85.76	1816.00	8.00	0.47
MO	216	7.07	309.00	1.00	0.54
ND	295	71.91	5015.00	1.00	0.70
NI	325	9.46	91.70	1.10	0.33
NB	302	68.35	1716.00	1.00	0.70
P	325	1299.80	37660.00	37.00	0.60
K	325	2.19	10.58	0.02	0.51
RB	309	126.19	1972.20	1.10	0.58
SM	206	10.05	702.10	0.08	0.84
SC	255	3.95	43.00	1.00	0.41
SE	28	1.09	3.00	1.00	0.12
SI	325	23.47	44.96	0.55	0.22
AG	220	0.11	1.39	0.01	0.43
NA	325	0.28	6.77	0.01	0.80
SR	325	751.37	14018.00	33.00	0.55
S	313	94.84	1230.00	10.00	0.38
TA	13	2.79	24.00	1.00	0.44
TE	86	0.42	2.84	0.05	0.48
TB	124	5.10	42.00	1.00	0.42
TL	2	0.20	0.20	0.20	0.00
TH	324	25.23	1847.20	0.20	0.49
SN	248	0.98	18.70	0.10	0.40
TI	325	1505.30	17080.00	53.00	0.44
W	113	5.43	22.00	1.00	0.31
U	262	5.76	82.80	0.10	0.56
V	313	46.05	544.00	2.00	0.43
YB	258	2.85	41.20	0.10	0.48
Y	325	32.54	637.00	1.00	0.52
ZN	325	135.87	5081.00	6.00	0.52
ZR	120	47.49	6884.00	1.00	0.81

Tab. 5-3-3(3) Statistical Values of Geochemical Samples by Rock Facies

VARIABLE	N	MEAN	MAXIMUM VALUE	MINIMUM VALUE	LOGARITHMIC STANDARD DEVIATION
RK=OTHERS					
AL	89	3.45	13.60	0.13	0.50
SB	89	1.48	2.90	0.40	0.15
AS	74	1.03	12.70	0.10	0.61
BA	89	1483.59	17282.00	75.00	0.64
BE	28	1.84	19.30	0.10	0.60
BI	12	0.53	4.50	0.20	0.40
B	0	0.0	.	.	.
BR	0	0.0	.	.	.
CD	80	2.67	26.50	0.40	0.38
CA	89	2.14	36.91	0.02	0.83
C	89	0.84	11.81	0.01	0.90
CE	87	249.63	6637.00	6.00	0.80
CS	67	3.75	23.00	1.00	0.33
CR	89	98.85	1507.90	2.90	0.57
CO	89	4.51	44.20	0.30	0.51
CU	89	20.09	448.00	1.00	0.39
DY	22	8.31	102.00	1.00	0.67
EU	67	5.81	128.80	0.20	0.63
F	89	707.82	26870.00	3.00	0.77
GA	89	3.19	18.50	0.60	0.37
GE	87	1.26	3.79	0.21	0.19
AU	20	2.55	49.00	1.00	0.43
HF	0	0.0	.	.	.
FE	89	2.80	48.47	0.14	0.55
LA	84	80.63	5521.00	1.00	1.16
PB	89	47.00	262.00	10.00	0.24
LI	84	4.86	53.00	1.00	0.37
LU	2	4.24	6.00	3.00	0.21
MG	89	0.66	12.46	0.01	0.90
MN	89	705.92	79156.00	2.00	0.96
HG	74	56.21	566.00	8.00	0.38
MO	41	16.96	1230.00	1.00	0.75
ND	79	97.87	4522.00	1.00	0.90
NI	89	13.81	330.60	0.70	0.49
NB	79	42.07	892.00	1.00	0.68
P	89	1672.56	29450.00	50.00	0.76
K	89	1.36	7.05	0.03	0.57
RB	86	86.65	714.00	3.00	0.55
SM	63	34.06	512.10	0.20	0.74
SC	71	6.04	44.00	1.00	0.52
SE	7	1.22	4.00	1.00	0.23
SI	89	13.83	43.08	0.54	0.45
AG	40	0.14	0.54	0.01	0.46
NA	87	0.33	6.06	0.01	0.79
SR	89	653.59	27518.00	39.00	0.71
S	86	110.02	13596.00	16.00	0.45
TA	1	2.00	2.00	2.00	.
TE	26	0.17	1.60	0.06	0.38
TB	42	5.69	41.00	1.00	0.38
TL	0	0.0	.	.	.
TH	88	18.51	659.10	0.40	0.46
SN	63	1.10	4.10	0.09	0.35
TI	89	1059.40	13987.00	51.00	0.64
W	22	8.30	28.00	2.00	0.37
U	66	4.27	89.50	0.10	0.60
V	78	46.40	354.00	4.00	0.54
YB	63	2.61	39.40	0.20	0.52
Y	89	17.18	516.00	1.00	0.67
ZN	89	135.53	3011.00	4.00	0.63
ZR	37	12.70	231.00	1.00	0.67

Tab. 5-3-4 Correlation of Elements



1770 pairs can be obtained from the correlation among 60 elements. Among them, 6 pairs show extremely strong correlation represented as A; 63 pairs show strong correlation represented as B; and 214 pairs show a weak correlation represented as C.

The 6 pairs that show extremely strong correlation are (Al, Si), (Ca, C), (Ce, La), (Ce, Mn), (Ce, Nd) and (La, Nd).

3-3 Principal Component Analysis

In principal component analysis, the calculation is impossible or the calculated results are biased if there are many missing values in the data. Therefore, the elements used in calculation are aimed at the 42 elements of which the number of analysis have 800 and above.

Eight principal components that have 1 and above eigenvalues, and their proportions are shown in Tab. 5-3-5. The eigenvectors are shown in Tab. 5-3-6.

As it is shown in Tab. 5-3-5, the proportion of the 1st component is 29%, 2nd component is 12% and 3rd to 8th components are 10% and under. This shows that the elements distribute extremely small variation.

At the 1st component in Tab. 5-3-6, the elements of which absolute values of eigenvector have 0.2 and above are as follows,

Elements having positive coefficient - Ca, C, Ce, Eu, La, Mn, Nd and Sr
Elements having negative coefficient - Al, Ga, Rb and Si

Therefore, it appears that most of the elements having positive coefficient are of related to the rare earths or the rare metals and the elements having negative coefficient are of the lithophile elements.

3-4 Surveyed Sectors with anomalous Values

The following methods are used to select the surveyed sectors with geochemical anomalous values.

If M and S are the mean and standard deviation of each element respectively in this area, the thresholds and anomalous values can be defined as:

The first threshold = M + S
The second threshold = M + 2S
The strong anomalous value $\geq$ M + 2S
M + 2S > The anomalous value $\geq$ M + S

It is difficult to mention that these all 60 elements are related to carbonatites because of the description before. Therefore, as elements related to carbonatites, the following 15 elements are selected. They are:

Rare earth elements - Y, La, Ce, Nd, Sm, Eu, Tb, Dy, Yb, Lu
New metal element - Nb
Other elements - P, Sr, Th, U

The thresholds are shown in Tab. 5-3-7. On the basis of these thresholds, it is examined whether there is a strong anomalous value or a anomalous value or not at each sector. The result is shown in Tab. 5-3-8. In this table, symbol ◎ represents the strong anomalous value and symbol ○ represents the anomalous value.

According to Tab. 5-3-8, it is recognized that Tundulu, Songwe and Chilwa Island sectors indicate the anomalous values (including the strong anomalous values) in each of the 15 elements. The elements with the strong anomalous values in Tundulu sector are Dy, Nb, Tb and Y. In Songwe sector they are Dy, Eu, Sm, Tb, Th, U, Yb and Y. In Chilwa Island sector they are Lu, Nb, Th, U and Y.

For sectors which do not indicate the anomalous values in every elements but indicate some strong anomalous values, Nkalonje (strong anomalous values are Lu, P and U), Salambidwa (Th), Kadongosi (Th), Kangankunde (Ce, La, Sr, and U), Aligomba (Th) and Chiloli (Lu) sectors are selected.

For sectors indicating some anomalous values and not indicating the strong anomalous values, Matoponi, Mikomwa, Chipalanje, Namangale, Naminga, Chaumbwi, Kapiri, Nsala, Kongwe and Achirundu sectors are selected.

Finally, Mongolwe, Chikala, Nsengwa, Mlindi, Liperembe and Kawanula sectors are selected as the sectors not indicating the anomalous values.

PART 4 COMPREHENSIVE DISCUSSION

On the basis of the results of the geological and geochemical surveys, the existence, occurrence, scale of carbonatite and the geochemical anomaly are shown in Tab. 5-4-1.

The sectors are evaluated through comprehensive consideration of the scale of carbonatite as a quantitative element of a carbonatite deposit and the geochemical anomaly as a qualitative element.

The sectors that can be considered to be having high potentiality of the carbonatite deposit are:

Tundulu, Songwe, Chilwa Island and Kangankunde sectors

The sectors that can be considered to be having a potentiality of the carbonatite deposit are:

Nkalonje, Matoponi and Kapiri sectors

The sectors where the geochemical anomalies are recognized without the existance of carbonatite are:

Mikomwa, Chipalanje, Salambidwa, Namangale, Naminga, Kadongosi, Chaumbwi, Nsala, Kongwe, Aligomba, Achirundu and Chiloli sectors

Tab. 5-3-5 Eigenvalue and Proportion

	EIGENVALUE	DIFFERENCE	PROPORTION	CUMULATIVE
PRIN1	12.30083	7.43491	0.29288	0.29288
PRIN2	4.86592	1.54526	0.11586	0.40873
PRIN3	3.32066	0.76206	0.07906	0.48780
PRIN4	2.55860	0.71997	0.06092	0.54871
PRIN5	1.83864	0.36654	0.04378	0.59249
PRIN6	1.47210	0.34758	0.03505	0.62754
PRIN7	1.12452	0.03109	0.02677	0.65432
PRIN8	1.09343	.	0.02603	0.68035

Tab. 5-3-6 Eigenvectors

	PRIN1	PRIN2	PRIN3	PRIN4	PRIN5	PRIN6	PRIN7	PRIN8
AL	-.206873	0.011274	0.050898	0.261784	0.103180	0.015638	0.145649	-.084626
SB	-.026810	0.121041	-.037386	-.028849	0.436330	-.105311	0.194765	0.058307
AS	-.056280	-.299474	0.082652	0.191052	-.170798	0.107463	0.105096	-.103965
BA	0.145959	0.167076	0.103856	0.145590	-.009076	-.291997	-.062904	0.173757
CD	0.147377	-.172126	0.063995	0.191772	0.011785	-.040953	0.104472	0.156722
CA	0.207099	0.084557	0.122976	-.215162	-.133462	-.105711	-.012164	-.046243
C	0.200034	0.119705	0.080972	-.193085	-.086776	-.218874	-.023288	-.044727
CE	0.225795	0.093140	0.037753	0.122738	0.111781	0.089901	-.017663	0.083210
CS	0.110144	-.021684	0.079777	-.068794	-.244607	-.006026	0.048473	0.297189
CR	-.175790	0.044015	0.048779	0.193759	0.056011	0.100393	-.180604	0.068817
CO	-.053901	0.284513	0.187102	0.030618	-.101442	0.242390	-.008445	-.020549
CU	-.166537	0.135538	0.093775	-.093525	-.022457	0.160200	-.272268	0.105456
EU	0.232607	0.036273	0.130871	0.010288	0.144724	0.105946	-.019423	0.017014
F	0.083944	0.196034	0.219191	0.104746	-.089573	-.095008	0.207316	-.263093
GA	-.203329	0.006390	0.119184	0.143142	0.077955	-.016002	-.003259	-.189589
GE	-.152868	0.127813	-.014885	0.110999	0.048076	0.291625	-.082198	-.253928
FE	0.048404	0.168574	0.173369	0.149728	-.026730	0.221909	-.346663	0.170423
LA	0.219025	-.047205	-.022913	0.265512	0.073648	0.152024	0.117349	-.019750
PB	0.075592	-.184823	0.179418	0.164421	0.080908	-.264630	-.412673	-.110117
LI	-.171920	0.017455	0.070286	0.088618	0.215373	-.161676	-.202761	0.196276
MG	0.006828	0.330557	0.056116	0.051226	0.091387	-.276136	-.064797	-.177864
MN	0.208365	0.104847	0.105612	0.076140	0.019370	0.132876	-.226462	0.038465
HG	0.045728	-.223996	0.152241	0.112379	-.297030	0.120679	-.038382	0.237570
ND	0.233621	0.137187	0.029379	0.074488	0.127100	0.070139	-.068831	0.012554
NI	-.160164	0.170743	0.206832	0.040996	-.255489	0.037817	-.062162	0.130839
NB	0.078894	-.015340	0.127312	-.006013	0.322895	0.073919	0.287802	0.459394
P	0.108289	0.224970	0.051621	-.124331	-.132642	0.301736	0.262869	-.115411
K	-.193785	-.085194	0.180188	0.078451	0.130272	0.044387	0.065420	0.130032
RB	-.206005	-.035998	0.136791	-.028655	0.057516	0.062148	0.061975	0.102301
SM	0.206823	0.113020	0.094715	0.045287	0.173652	0.071711	0.041064	0.115416
SC	-.102989	0.285484	0.165588	-.161455	0.023378	0.050468	-.059192	-.023159
SI	-.215939	0.063610	0.024151	0.278739	0.023507	0.066971	0.142301	-.064825
NA	-.045784	-.101443	0.304145	-.122191	-.233269	-.076455	0.045648	0.099906
SR	0.225499	0.076367	-.052028	0.076672	-.026793	0.075604	0.167687	-.068076
S	0.013755	0.075427	0.187644	0.310119	-.237534	-.277246	0.225617	-.090128
TH	0.046546	-.220962	0.317177	0.017435	0.158981	-.172399	-.028024	-.150397
TI	-.183623	0.089577	0.237361	-.052385	0.088459	-.026695	0.212592	0.079050
U	0.129673	-.221846	0.120690	0.107169	-.005810	0.216921	0.032720	-.062556
V	-.132365	0.034662	0.293680	-.174836	-.027204	-.119955	0.161373	0.063666
YB	0.058093	-.188830	0.278817	-.248600	0.157371	0.183625	-.036687	-.259383
Y	0.113098	-.191637	0.310988	-.168657	0.194321	0.103962	-.048128	-.217936
ZN	0.167401	0.085410	0.023660	0.324002	-.042695	-.015489	-.019355	-.084983

Tab. 5-3-7 Thresholds of Geochemical Survey

(unit: ppm)

Element	M	M+S	M+2S
Ce	922.7	6,166.0	40,738.0
Dy	16.3	58.9	213.8
Eu	11.4	43.7	166.0
La	493.1	3,630.8	26,915.3
Lu	1.8	3.2	5.5
Nd	325.9	2,089.3	13,489.6
Nb	101.5	446.7	1,949.8
P	2,785.7	12,589.3	57,544.0
Sm	45.4	269.2	1,584.9
Sr	2,693.0	14,125.4	74,131.0
Tb	7.5	18.2	44.7
Th	29.6	112.2	426.5
U	10.3	36.3	128.8
Yb	4.4	15.8	56.2
Y	57.1	208.9	758.6

M: Mean
S: Standard deviation

Tab. 5-3-8 Geochemical Anomaly at Each Sector

Sector	Ce	Dy	Eu	La	Lu	Nd	Nb	P	Sm	Sr	Tb	Th	U	Yb	Y
Tundulu	○	◎	○	○	○	○	◎	○	○	○	◎	○	○	○	◎
Nkalonje	○			○	◎		○	◎	○	○	○	○	◎	○	
Matoponi		○	○			○	○	○				○	○	○	○
Songwe	○	◎	◎	○	○	○	○	○	◎	○	◎	◎	◎	◎	◎
Mikomwa													○		
Chipalanje												○	○	○	○
Salambidwa											○	◎	○	○	○
Namangale			○				○		○		○	○		○	○
Naminga										○					
Chilwa I.	○	○	○	○	◎	○	◎	○	○	○	○	◎	◎	○	◎
Kadongosi							○					◎	○	○	
Mongolwe															
Chikala															
Kangankunde	◎		○	◎		○	○	○	○	◎			◎		
Chaumbwi														○	
Kapiri	○	○	○	○		○		○	○			○			○
Nsengwa															
Mlindi															
Nsala								○				○			
Kongwe								○							
Liperembe															
Kawanula															
Aligomba	○		○				○	○	○			◎		○	
Achirunde					○										
Chiloli					◎										

◎ : Strong anomaly
○ : Anomaly

Tab. 5-4-1 Comprehensive Results of the Surveyed Sectors

Sector	Carbonatite or Geology	Scale of carbonatite	Geochemical anomaly
Tundulu	Carbonatite (massive)	Large	Strong anomaly (Dy, Nb, Tb, Y), Anomaly (Ce, Eu, La, Lu, Nd, P, Sm, Sr, Th, U, Yb)
Nkalonje	Carbonatite (dyke)	Small	Strong anomaly (Lu, P, U), Anomaly (Ce, La, Lu, Nb, Sm, Sr, Tb, Th, Yb)
Matoponi	Carbonatite (dyke)	Small	Anomaly (Dy, Eu, Nd, Nb, P, Th, U, Yb, Y)
Songwe	Carbonatite (massive)	Large	Strong anomaly (Dy, Eu, Sm, Tb, Th, U, Yb, Y), Anomaly (Ce, La, Lu, Nd, Nb, P, Sr)
Mikomwa	Breccia		Anomaly (U)
Chipalanje	Breccia		Anomaly (Th, U, Yb, Y)
Salambidwa	Breccia		Strong anomaly (Th), Anomaly (Tb, U, Yb, Y)
Namangale	Breccia		Anomaly (Eu, Nb, Sm, Tb, Th, Yb, Y)
Naminga	Gneiss, Granite		Anomaly (Sr)
Chilwa I.	Carbonatite (massive)	Large	Strong anomaly (Lu, Nb, Th, U, Y), Anomaly (Ce, Dy, Eu, La, Nd, P, Sm, Sr, Tb, Yb)
Kadongosi	Breccia		Strong anomaly (Th), Anomaly (Nb, U, Yb)
Mongolwe	Breccia		
Chikala	Breccia		
Kangankunde	Carbonatite (massive)	Large	Strong anomaly (Ce, La, Sr, U), Anomaly (Eu, Nd, Nb, P, Sm)
Chaumbwi	Breccia		Anomaly (Yb)
Kapiri	Carbonatite (dyke)	Small	Anomaly (Ce, Dy, Eu, La, Nd, P, Sm, Th, Y)
Nsengwa	Carbonatite (dyke)	Small	
Mlindi	Ultrabasic rock		
Nsala	Breccia		Anomaly (P, Th)
Kongwe	Breccia		Anomaly (P)
Liperembe	Breccia		
Kawanula	Breccia		
Aligomba	Breccia		Strong anomaly (Th), Anomaly (Ce, Eu, Nb, P, Sm, Th, Yb)
Achirundu	Breccia		Anomaly (Lu)
Chiloli	Granite, Gneiss		Strong anomaly (Lu)

CONCLUSIONS AND THE RECOMMENDATION TO THE SECOND YEAR PHASE

CHAPTER VI CONCLUSIONS AND THE RECOMMENDATION TO THE SECOND YEAR PHASE

PART 1 CONCLUSIONS

The followings are the results of the geological and geochemical surveys that have been performed in the surveyed sectors selected by the results of the compilation of previous works and the LANDSAT image interpretation.

(1) Compilation of previous works (see Fig. 1-1-2, Tab. 2-2-1)

Carbonatites or prospective sites were recognized in 25 sectors. Among them, those in 16 sectors are the volcanic cones of the complex that associates carbonatite and those in 6 sectors are the volcanic necks. Moreover, those in 2 sectors show thorium anomalies in the arborne radiometric survey and one sector is the promising site of carbonatite intrusion.

(2) LANDSAT image interpretation (see Fig. 3-2-1)

206 places which show circular structures have been picked up by photogeological interpretation technique. They are classified into 4 types: projected ring structure, depressed ring structure, basin structure and cone structure. It becomes obvious that most of the known carbonatites and the prospective sites belong to the projected ring structure.

There is seemingly no special relation between the carbonatites and the linear structures.

(3) Geological survey (see Fig. 5-2-1 to Fig. 5-2-25)

The geology of this area consists of the basement complex of gneisses, granites and syenites of late pre-Cambrian to early Paleozoic in age and the
Jurassic to Cretaceous rocks of the alkaline complex that associate carbonatites of the Chilwa alkaline province.

The alkaline complex forms ring structure by the combinations of cone sheets, volcanic necks, ring dykes and radial dykes. Most of them are associated with breccias and agglomerates. The lithology of carbonatites in this area is mostly sövitic, ankeritic and sideritic, but quartzitic is also recognized in some places.

Among the 25 sectors, the existence of massive carbonatite (large scale) in 4 sectors, and dyke carbonatite (small scale) in 4 sectors has been confirmed.

(4) Geochemical Survey (see Tab. 5-3-8)

Carbonatite samples were collected from the 25 sectors and chemically analyzed into 60 elements. The result of the analyses were statistically processed. 15 elements (Ce, Dy, Eu, La, Lu, Nd, Nb, P, Sm, Sr, Tb, Th, U, Yb and Y) are selected as the elements can be related to carbonatites. It was examined whether each sector has the geochemical anomalous values or not.

As a result of the examination, it is recognized that Tundulu, Songwe and Chilwa Island sectors indicate the anomalous values (including the strong anomalous values) in every 15 elements. Nkalonje, Salambidwa,

Kadongosi, Kangankunde, Aligomba and Chiloli sectors are selected as the sectors not indicating the anomalous values in every elements but indicating some strong anomalous values. Moreover, Matopni, Mikomwa, Chipalanje, Namangale, Naminga, Chaumbwi, Kapiri, Nsala, Kongwe and Achirundu sectors are selected as the sectors indicating some anomalous values and not indicating the strong anomalous values. Finally, Mongolwe, Chikala, Nsengwa, Mlindi, Liperembe and Kawanula sectors are selected as the sectors not indicating the anomalous values.

(5) Comprehensive discussion

As the results of the geological and geochemical surveys, the sectors are evaluated as follows.

The sectors that can be considered as having high potentiality of the carbonatite deposit:

Tundulu, Songwe, Chilwa Island and Kangankunde sectors

The sectors that can be considered as having potentiality of the carbonatite deposit:

Nkalonje, Matoponi and Kapiri sectors

The sectors where the geochemical anomalies are recognized without the existance of carbonatite:

Mikomwa, Chipalanje, Salambidwa, Namangale, Naminga, Kadongosi, Chaumbwi,Nsala, Kongwe, Aligomba, Achirundu and Chiloli sectors

PART 2 RECOMMENDATION TO THE SECOND YEAR PHASE

It is recommended as follow to the second year phase survey in accordance with the results of this year phase survey.

It is desiable to perform the geological and geochemical surveys which are aimed to confirm the dimensions and grades of carbonatites, and to perform the radiometric and trench surveys and the drilling which are aimed to confirm the underground conditions of carbonatites at the prospective sites, in the promising sectors of the carbonatite deposits; Songwe, Chilwa Island, Kangankunde, Tundulu, Nkalonje, Matoponi and Kapiri sectors.

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APPENDICES

Appendix I Values of Geochemical Analysis

Abbrevations

OBS (Serial number)

RS (Rock or Soil)
- = 1: Rock
- = 2: Soil

RK (Rock facies)
- = 1: Carbonatite
- = 2: Alkali rock
- = 3: Others

RK2 (Kinds of carbonatite)
- = 1: unclassified
- = 2: sövitic
- = 3: ankeritic
- = 4: sideritic

ALT (Alteration)
- = 1: fenitized
- = 2: carbonatized
- = 3: feldspathized
- = 4: nephelinized

OCC (Occurrence)
- = 1: massive
- = 2: sheet
- = 3: dyke
- = 4: agglomerate
- = 5: breccia

LCN (Location)
- = 1: inner part
- = 2: outer part

Units

Al	:	%	Hg	:	ppb
Sb	:	ppm	Mo	:	ppm
As	:	ppm	Nd	:	ppm
Ba	:	ppm	Ni	:	ppm
Be	:	ppm	Nb	:	ppm
Bi	:	ppm	P	:	ppm
B	:	ppm	K	:	%
Br	:	ppm	Rb	:	ppm
Cd	:	ppm	Sm	:	ppm
Ca	:	%	Sc	:	ppm
C	:	%	Se	:	ppm
Ce	:	ppm	Si	:	%
Cs	:	ppm	Ag	:	ppm
Cr	:	ppm	Na	:	%
Co	:	ppm	Sr	:	ppm
Cu	:	ppm	S	:	ppm
Dy	:	ppm	Ta	:	ppm
Eu	:	ppm	Te	:	ppm
F	:	ppm	Tb	:	ppm
Ga	:	ppm	Tl	:	ppm
Ge	:	ppm	Th	:	ppm
Au	:	ppb	Sn	:	ppm
Hf	:	ppm	Ti	:	ppm
Fe	:	%	W	:	ppm
La	:	ppm	U	:	ppm
Pb	:	ppm	V	:	ppm
Li	:	ppm	Yb	:	ppm
Lu	:	ppm	Y	:	ppm
Mg	:	%	Zn	:	ppm
Mn	:	ppm	Zr	:	ppm

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
1	6H001	TUNDU	1	1	2		4	2	0.43	0.2	7.4	610	0.3	.	.	.	5.7	33.18	7.23	2287	12	9.5
2	6H002	TUNDU	1	1	2		1	2	0.07	.	0.9	670	2.0	.	.	.	8.2	37.37	11.21	1440	9	.
3	6H003	TUNDU	1	1	2		1	2	0.07	.	2.3	120	2.4	.	.	.	5.9	37.87	11.11	1798	6	.
4	6H004	TUNDU	1	1	2		1	1	0.07	0.4	4.1	850	5.9	.	.	.	6.2	38.13	10.54	1943	2	.
5	6H005	TUNDU	1	1	2		1	1	0.02	0.7	0.3	2260	3.1	.	.	.	10.1	32.21	9.90	7990	8	.
6	6H006	TUNDU	1	1	2		1	1	0.23	.	5.4	3260	13.6	.	.	.	12.4	28.91	7.87	12339	12	4.1
7	6H007	TUNDU	1	1	2		1	2	0.09	.	0.9	2640	5.4	.	.	.	10.4	33.59	10.22	6363	7	0.6
8	6H008	TUNDU	1	1	2		4	1	3.72	.	1.2	650	4.8	.	.	.	9.5	15.07	6.37	500	6	56.9
9	6H009	TUNDU	1	1	2		4	1	0.27	.	5.7	250	4.7	.	.	.	4.2	23.10	8.01	1937	5	72.1
10	6H010	TUNDU	1	1	2		1	2	0.25	0.1	9.0	1110	8.9	.	.	.	7.7	24.26	7.80	10977	8	6.1
11	6H011	TUNDU	1	1	2		1	2	0.09	.	7.2	1550	4.1	.	.	.	5.3	27.38	8.41	5409	15	3.9
12	6H012	TUNDU	1	1	2		1	1	5.28	.	0.5	2210	4.2	.	.	.	4.9	11.38	4.35	1654	10	51.8
13	6H013	TUNDU	1	1	2		1	2	1.14	.	0.5	220	3.5	.	.	.	5.0	19.47	6.33	934	18	20.3
14	6H014	TUNDU	1	1	2		1	2	4.02	.	7.0	2040	5.6	.	.	.	6.1	18.24	5.09	1545	12	21.3
15	6H015	TUNDU	1	1	2		3	1	0.52	0.1	25.8	1390	.	3.4	.	.	10.0	30.47	8.55	2885	13	7.6
16	6H016	TUNDU	1	1	2		1	2	0.27	0.1	5.6	1090	10.1	.	.	.	5.8	34.10	10.32	1428	10	6.4
17	6H017	TUNDU	1	1	2		1	2	0.06	.	0.3	2130	12.9	.	.	.	8.4	34.24	10.65	3698	10	0.6
18	6H018	TUNDU	1	1	2		3	2	0.66	.	31.1	2230	6.4	0.4	.	.	2.9	25.14	8.41	1530	10	35.5
19	6H019	TUNDU	1	1	2		1	1	0.15	0.2	1.8	80	8.8	.	.	.	9.1	22.52	10.38	2876	9	0.6
20	6H020	TUNDU	1	1	2		1	1	0.02	.	0.3	650	5.6	.	.	.	9.6	36.53	11.21	2487	7	4.1
21	6H021	NKALO	1	1			3	2	0.04	.	.	739	.	.	.	.	5.2	35.76	11.72	28	6	6.1
22	6H022	NKALO	1	1			3	1	0.10	.	.	388	0.8	.	.	.	5.1	34.69	11.00	30	6	14.7
23	6H023	NKALO	1	1			3	2	0.18	.	5.0	983	0.4	.	.	.	5.8	30.57	10.06	2212	8	23.2
24	6H024	NKALO	1	1			3	1	0.20	.	2.2	992	.	.	.	.	4.9	32.16	10.27	1433	8	44.2
25	6H025	NKALO	1	1			3	1	0.34	.	10.6	808	.	.	.	.	7.4	29.03	8.48	2130	9	11.3
26	6H026	NKALO	1	1			3	2	0.16	0.9	9.8	1238	0.2	.	.	.	7.9	29.69	10.09	2865	10	65.8
27	6H027	NKALO	1	2			4	1	6.42	0.8	7.4	2298	.	.	.	.	5.8	1.10	0.35	622	13	75.1
28	6H028	NKALO	1	2			4	2	8.02	2.5	19.7	2690	55.1	.	55	.	2.1	0.19	0.06	272	13	38.9
29	6H029	NKALO	1	2			4	1	7.43	1.7	14.3	2428	10.2	.	10	.	2.8	0.18	0.09	785	12	68.1
30	6H030	NKALO	1	2			4	1	9.89	0.9	27.9	3295	0.4	0.7	.	.	1.2	0.12	0.04	413	30	78.2
31	6H031	NKALO	1	2			4	1	10.73	0.2	12.2	1617	.	.	320	.	35.3	0.19	0.06	160	10	147.1
32	6H032	NKALO	1	1			3	2	1.50	0.8	17.2	2132	.	.	.	.	31.3	15.61	4.92	9745	9	125.5
33	6H033	NKALO	1	1			3	1	0.11	.	7.0	1665	0.2	.	.	.	7.5	30.90	10.18	6165	11	11.9
34	6H034	NKALO	1	1			3	2	0.47	.	2.2	852	.	.	.	.	6.1	31.47	9.57	2112	9	17.6
35	6H035	NKALO	1	1			3	2	0.42	.	7.5	588	0.1	.	.	.	6.0	29.37	8.98	1729	10	43.5
36	6H036	NKALO	1	1			3	1	0.02	.	1.4	2594	.	.	.	.	3.7	6.58	3.49	672	11	35.0
37	6H037	NKALO	1	1			3	2	0.20	0.4	3.6	1962	.	.	.	.	7.0	29.63	9.53	4257	11	13.0
38	6H038	NKALO	1	1			3	2	0.02	0.3	0.4	1051	.	.	.	.	8.6	33.65	11.20	2770	8	8.8
39	6H039	NKALO	1	1			3	1	0.10	0.1	0.3	1759	.	.	.	.	8.2	32.33	10.44	5865	9	9.2
40	6H040	NKALO	1	1			3	2	0.12	.	2.8	1671	.	.	.	.	5.8	30.54	10.15	4019	10	15.0
41	6H041	NKALO	1	1			3	2	0.01	.	0.7	1415	.	.	.	.	5.0	36.63	11.82	1665	8	3.5
42	6H042	NKALO	1	1			3	1	8.07	2.6	47.8	935	.	0.5	.	.	2.9	2.58	0.72	2178	7	37.7
43	6H043	NKALO	1	1			3	2	0.04	.	0.2	1587	.	.	.	.	3.8	35.63	11.71	3250	10	5.6
44	6H044	NKALO	1	1			3	1	0.02	0.1	0.8	1989	.	.	.	.	9.3	34.37	11.77	3169	9	6.1
45	6H045	NKALO	1	1			3	1	0.05	.	0.6	1195	.	.	.	.	5.0	36.57	11.74	3212	9	5.9
46	6H046	NKALO	1	1			3	2	0.04	.	0.6	785	0.1	.	.	.	4.1	36.18	11.92	2620	10	9.5
47	6H047	NKALO	1	1			3	2	0.03	.	.	2677	.	.	.	.	3.8	34.47	11.26	2628	6	17.4
48	6H048	NKALO	1	1			3	1	.	.	1.3	1622	0.2	.	.	.	5.5	36.17	12.31	2422	9	2.0
49	6H049	NKALO	1	1			3	2	0.09	0.2	0.1	888	.	.	.	.	9.6	35.58	11.34	2628	10	6.9
50	6H050	NKALO	1	1			3	2	0.03	0.2	.	2580	.	.	.	.	5.8	35.95	11.68	2143	9	5.0
51	6H051	NKALO	1	1			3	1	0.05	0.2	15.9	1277	.	.	.	.	6.1	35.83	11.36	2102	8	5.7
52	6H052	NKALO	1	1			3	2	0.09	.	1.8	735	.	.	.	.	5.8	31.88	10.49	3830	8	43.4
53	6H053	NKALO	1	1			3	1	0.16	3.3	3.6	1683	.	.	.	.	3.2	23.97	0.35	5853	5	443.8
54	6H054	NKALO	1	1			3	1	0.20	.	9.7	2555	.	.	.	.	5.2	27.55	8.21	6230	9	8.7
55	6H055	NKALO	1	1			3	2	0.17	0.1	10.8	2005	.	.	.	.	6.1	33.20	10.04	3701	10	4.1
56	6H056	NKALO	1	1			3	1	0.52	0.1	14.3	1203	.	.	.	.	4.9	31.44	9.27	3551	7	4.4

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
57	6H057	NKALO	1	1			3	1	0.05	.	2.5	733	.	.	.	.	5.8	28.38	8.92	6825	6	48.4
58	6H058	NKALO	1	1			3	2	0.17	.	7.0	1827	.	.	.	.	6.7	32.47	9.96	4036	4	9.6
59	6H059	NKALO	1	1			3	1	0.11	1.6	14.7	1215	.	.	.	.	4.4	23.68	7.21	11830	3	60.2
60	6H060	NKALO	1	1			3	1	0.10	.	6.4	2650	.	.	.	.	8.1	27.59	7.92	9323	9	14.8
61	6H061	NKALO	1	1			3	2	0.05	0.6	8.1	2637	1.2	.	.	.	3.0	31.92	9.82	4493	6	44.3
62	6H062	NKALO	1	1			3	2	0.12	0.4	12.6	1853	.	.	.	.	6.6	24.04	7.20	4958	5	106.1
63	6H063	NKALO	1	1			3	1	0.07	1.4	7.4	1305	.	.	.	.	4.6	24.90	6.60	8962	8	157.0
64	6H064	NKALO	1	1			3	1	0.21	0.2	5.7	992	0.8	.	.	.	3.9	21.97	5.92	14221	8	159.7
65	6H065	NKALO	1	1			3	2	0.07	0.5	5.0	1988	0.4	.	.	.	6.2	26.09	7.63	3946	10	64.2
66	6H066	NKALO	1	1			3	2	0.14	0.3	6.1	1579	.	.	.	.	4.9	28.00	8.55	5498	7	53.0
67	6H067	NKALO	1	2			4	2	9.50	0.2	0.5	1007	2.8	.	.	.	1.3	3.31	1.04	385	4	381.2
68	6H068	NKALO	1	2			4	2	9.47	1.4	11.9	1793	.	.	.	.	2.0	1.08	0.34	642	2	204.4
69	6H069	SALAM	1	2			4	2	5.51	.	1.1	1355	.	.	.	.	17.7	0.91	0.29	102	2	612.3
70	6H070	SALAM	1	2			4	2	7.59	.	0.2	689	.	.	.	.	3.0	0.55	0.17	100	3	398.7
71	6H071	SALAM	1	2			4	1	6.87	.	0.4	953	.	.	.	.	1.3	1.21	0.30	29	1	343.6
72	6H072	SALAM	1	2			4	1	6.84	0.7	0.4	1987	.	.	.	.	4.9	1.42	0.45	96	.	513.2
73	6H073	SALAM	1	2			4	1	6.71	.	.	2675	.	.	.	.	2.0	4.03	1.27	208	4	405.9
74	6H074	SALAM	1	2			4	2	8.06	.	1.1	1222	.	.	.	.	2.6	1.36	0.43	33	3	325.3
75	6H075	SALAM	1	2			4	2	9.03	.	0.2	2057	.	.	.	.	0.3	2.23	0.70	99	2	315.8
76	6H076	SALAM	1	2			4	2	10.59	1.9	59.5	1199	.	.	.	.	3.6	0.70	0.23	402	4	73.8
77	6H077	SALAM	1	2			4	2	8.47	0.9	7.9	1075	.	.	.	.	1.0	0.46	0.14	366	3	95.2
78	6H078	SALAM	1	2			4	1	9.06	1.7	144.6	835	.	.	.	.	1.3	0.31	0.10	156	2	74.6
79	6H079	SALAM	1	2			4	1	10.80	1.1	68.1	920	.	.	.	.	4.6	0.29	0.09	191	6	92.7
80	6H080	SALAM	1	2			4	1	0.16	.	1.1	1399	.	.	13	.	4.9	34.55	11.10	2138	8	26.3
81	6H081	SALAM	1	2			4	1	9.64	0.2	10.9	1533	231.4	.	.	.	2.9	0.41	0.13	1029	3	43.0
82	6H082	SALAM	1	2			1	2	0.27	0.2	3.9	457	3.6	.	.	.	1.9	.	0.05	11	2	2293.1
83	6H083	SALAM	1	2			4	2	7.01	0.2	3.6	1980	21.3	.	.	.	3.9	0.29	0.09	18	2	318.4
84	6H084	SALAM	1	2			4	2	9.35	2.6	20.2	988	56.9	.	.	.	1.3	.	0.05	1411	.	66.3
85	6H085	SALAM	1	2			4	1	9.56	2.4	66.2	1117	.	.	.	.	2.3	0.02	0.10	1958	6	54.1
86	6H086	SALAM	1	2			4	1	10.64	2.8	84.5	1372	11.4	.	.	.	1.9	0.02	0.05	1862	4	36.0
87	6H087	SALAM	1	2			4	1	8.09	0.1	1.8	1573	1.2	.	.	.	1.6	1.12	0.35	16	3	601.3
88	6H088	SALAM	1	2			4	2	9.67	.	28.6	992	.	.	.	.	4.8	0.05	0.02	452	5	58.2
89	6H089	SALAM	1	3			3	1	11.89	0.9	12.7	1005	.	.	.	.	3.5	0.35	0.11	368	4	178.8
90	6H090	CHIPA	1	2			5	2	12.19	.	10.7	398	.	.	.	.	4.5	.	0.04	213	3	26.4
91	6H091	CHIPA	1	2			5	1	9.27	1.1	55.1	756	.	.	.	.	3.8	1.01	0.32	1131	2	139.2
92	6H092	CHIPA	1	2			5	1	9.20	.	14.8	1128	.	.	.	.	1.6	0.54	0.17	498	2	111.9
93	6H093	CHIPA	1	2			5	1	10.80	0.5	6.1	1055	1.2	.	.	.	1.9	0.52	0.16	433	.	75.1
94	6H094	CHIPA	1	2			5	2	12.32	0.3	6.5	1399	.	.	.	.	2.9	.	0.06	90	1	29.8
95	6H095	CHIPA	1	2			5	2	9.55	0.2	28.2	1225	.	.	.	.	3.2	0.35	0.11	188	7	190.4
96	6H096	CHIPA	1	2			5	2	9.94	.	21.6	784	0.8	.	.	.	2.2	0.46	0.14	703	5	100.3
97	6H097	CHIPA	1	2			5	1	9.05	1.8	21.4	983	.	.	.	.	2.9	0.21	0.07	643	4	102.1
98	6H098	CHIPA	1	2			5	1	9.58	0.5	59.3	937	0.3	.	.	.	5.4	0.11	0.04	622	4	166.9
99	6H099	CHIPA	1	2			5	1	8.82	1.9	38.2	1685	16.1	.	.	.	2.9	0.10	0.18	48	6	79.9
100	6H100	CHIPA	1	2			5	1	9.89	1.9	30.5	1790	2.6	.	.	.	6.4	0.58	0.18	42	8	133.2
101	6H101	CHIPA	1	2			5	2	9.71	0.8	58.9	782	21.3	.	.	.	3.6	0.54	0.17	348	4	81.2
102	6H102	CHIPA	1	2			5	2	10.12	2.1	34.6	955	.	.	.	.	4.3	0.02	0.01	461	3	118.2
103	6H103	MIKOM	1	2			5	2	6.43	0.9	6.9	737	.	.	.	.	0.7	0.18	0.06	21	.	143.6
104	6H104	MIKOM	1	2			5	1	6.38	.	1.6	1779	1.6	.	.	.	3.6	0.32	0.08	120	2	139.4
105	6H105	MIKOM	1	2			5	1	6.25	0.1	5.6	1880	.	.	.	.	1.8	0.22	0.07	40	2	151.1
106	6H106	MIKOM	1	2			5	1	7.79	.	7.4	792	.	.	.	.	2.9	1.26	0.40	35	1	127.0
107	6H107	MIKOM	1	2			5	2	8.84	0.6	7.3	1693	.	.	.	.	1.4	0.13	0.04	160	.	125.0
108	6H108	MIKOM	1	2			5	2	12.03	0.3	5.6	1266	.	.	.	.	3.2	0.07	0.02	177	1	115.3
109	6H109	MIKOM	1	2			5	1	11.76	.	3.0	722	0.7	.	.	.	3.2	0.07	0.02	63	1	114.4
110	6H110	MIKOM	1	2			5	1	12.16	.	1.4	1217	.	.	.	.	3.9	0.15	0.06	82	2	94.9
111	6H111	MIKOM	1	2			5	1	10.69	0.6	5.9	1215	.	.	.	.	2.5	0.06	0.02	96	1	103.8
112	6H112	MIKOM	1	2			5	2	6.21	0.6	7.8	800	0.9	.	.	.	1.1	0.06	0.02	39	.	128.4

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
113	6H113	CHILW	1	1			1	1	0.01	.	5.4	1358	.	.	.	.	6.8	35.96	10.00	1147	3	15.2
114	6H114	CHILW	1	1			1	2	0.39	.	6.3	985	.	.	.	.	7.9	33.71	10.03	839	4	37.1
115	6H115	CHILW	1	1			1	1	0.18	.	0.4	1988	.	.	.	.	5.7	26.69	7.73	711	7	27.1
116	6H116	CHILW	1	1			1	1	2.69	1.0	32.0	750	.	.	.	.	6.1	25.06	7.62	576	9	53.4
117	6H117	CHILW	1	1			1	1	0.31	.	3.8	667	.	.	.	.	3.9	34.31	9.65	410	6	41.3
118	6H118	CHILW	1	1			1	1	0.08	0.9	2.2	1055	.	.	.	.	6.8	34.76	10.63	643	7	27.2
119	6H119	CHILW	1	1			1	2	0.19	.	11.2	1275	.	.	.	.	7.2	32.48	10.21	802	4	25.2
120	6H120	CHILW	1	1			1	2	0.10	0.1	0.4	696	.	.	.	.	6.5	34.92	10.54	487	8	17.0
121	6H121	CHILW	1	2			4	2	11.59	1.2	2.8	1381	.	.	.	.	2.5	0.33	0.10	90	7	76.7
122	6H122	CHILW	1	2			4	2	6.85	0.1	4.8	7150	.	.	.	.	3.6	0.47	0.15	274	10	52.8
123	6H123	CHILW	1	2			4	1	8.71	0.4	4.5	1250	0.4	.	.	.	3.6	0.05	0.02	100	8	85.0
124	6H124	CHILW	1	1			1	2	2.88	.	8.7	3995	.	.	.	.	5.6	22.64	6.02	353	4	74.7
125	6H125	CHILW	1	1			1	2	0.47	1.0	7.0	1274	.	.	.	.	7.1	34.31	10.40	512	7	22.6
126	6H126	CHILW	1	1			1	1	0.49	0.2	3.8	2909	.	.	.	.	6.8	34.76	10.65	380	5	27.6
127	6H127	CHILW	1	1			1	1	0.17	0.4	3.4	2057	.	.	.	.	4.3	35.29	10.16	353	2	35.9
128	6H128	CHILW	1	1			1	1	0.08	.	2.0	2575	.	.	.	.	7.5	33.18	9.76	242	7	32.2
129	6H129	CHILW	1	1			1	1	0.16	0.5	0.9	3404	1.8	.	.	.	5.4	34.78	10.35	401	3	23.2
130	6H130	CHILW	1	1			1	1	0.13	0.5	1.6	850	.	.	.	.	5.7	34.97	8.90	311	8	9.1
131	6H131	CHILW	1	1			1	1	0.17	.	0.4	680	.	.	.	.	6.1	34.54	10.23	356	8	14.1
132	6H132	CHILW	1	1			1	1	0.29	0.5	1.1	895	.	.	.	.	7.2	34.24	10.67	433	9	20.6
133	6H133	CHILW	1	1			1	1	0.58	3.5	6.1	1302	.	.	.	.	4.7	31.79	9.58	606	4	35.3
134	6H134	CHILW	1	1			1	1	0.30	0.1	9.5	1125	0.9	.	.	.	7.9	32.95	10.16	703	2	29.4
135	6H135	CHILW	1	1			1	2	0.20	0.1	1.8	207	.	.	.	.	7.6	35.01	10.24	747	7	13.3
136	6H136	CHILW	1	1			1	2	0.11	0.2	0.9	1875	.	.	.	.	17.3	31.78	9.60	627	5	25.9
137	6H137	CHILW	1	1			1	1	0.04	0.4	3.0	1552	.	0.3	.	.	6.8	33.02	9.60	790	5	19.2
138	6H138	CHILW	1	1			1	1	0.06	0.2	1.8	1437	0.2	.	.	.	7.6	34.89	9.94	835	2	23.9
139	6H139	CHILW	1	1			1	1	0.16	1.7	11.3	6484	.	.	.	.	6.1	32.61	8.91	1752	7	17.0
140	6H140	CHILW	1	1			1	1	0.12	0.5	7.0	5535	.	0.5	.	.	10.4	34.47	10.67	650	8	20.7
141	6H141	CHILW	1	1			1	1	0.09	0.8	7.9	8463	.	.	.	.	8.3	33.20	9.40	1996	8	17.4
142	6H142	CHILW	1	1			1	2	0.07	.	4.6	3888	.	.	.	.	0.8	35.18	10.94	1106	10	10.7
143	6H143	CHILW	1	1			1	2	0.40	0.5	4.6	7391	.	.	.	.	3.2	32.32	9.78	1815	9	14.0
144	6H144	CHILW	1	1			1	1	0.15	0.5	2.0	6657	.	.	.	.	4.0	33.40	10.38	230	11	27.1
145	6H145	CHILW	1	1			1	1	0.02	.	9.6	5575	.	.	.	.	5.1	35.46	11.18	1531	7	18.1
146	6H146	CHILW	1	1			1	1	0.09	0.1	2.5	4890	.	.	.	.	6.8	35.46	11.18	20	5	7.2
147	6H147	CHILW	1	1			1	1	0.11	0.5	2.4	6662	.	.	.	.	4.6	34.72	10.23	137	4	12.4
148	6H148	CHILW	1	1	4		1	2	0.04	.	.	7222	.	0.6	.	.	5.4	22.22	6.48	1429	7	13.3
149	6H149	CHILW	1	1	4		1	2	0.52	0.7	14.9	3565	.	3.2	.	.	2.9	22.09	5.76	3835	4	8.0
150	6H150	CHILW	1	1	2		1	2	0.07	0.4	.	6820	.	.	.	.	3.5	35.62	10.61	924	10	15.4
151	6H151	CHILW	1	1	4		1	2	0.28	.	0.6	20581	.	15.9	.	.	1.2	0.73	0.28	6898	8	38.3
152	6H152	CHILW	1	1	2		1	1	0.15	0.1	0.7	2064	.	1.7	.	.	14.6	20.93	10.08	1696	2	195.1
153	6H153	CHILW	1	1	3		1	1	0.31	0.5	20.8	2956	14.2	.	.	.	5.0	13.44	4.22	683	1	179.2
154	6H154	CHILW	1	1	4		1	1	0.06	0.5	0.2	2377	.	2.7	.	.	3.7	18.12	15.46	3097	.	15.5
155	6H155	CHILW	1	1	2		1	1	0.21	0.4	2.3	3337	.	1.0	.	.	9.9	36.38	11.69	924	3	20.5
156	6H156	CHILW	1	1	2		1	1	0.05	0.5	2.0	2522	.	0.7	.	.	8.7	36.41	10.65	821	6	15.9
157	6H157	CHILW	1	1	2		1	1	0.06	.	0.4	2721	.	3.4	.	.	11.3	22.53	9.83	1056	2	10.3
158	6H158	CHILW	1	1	2		1	1	0.27	.	4.5	6007	11.9	0.8	.	.	5.5	19.62	10.71	1088	2	31.4
159	6H159	CHILW	1	1	2		1	1	1.72	0.3	0.6	3134	.	0.2	.	.	3.3	16.82	8.55	1445	1	184.5
160	6H160	CHILW	1	1	2		1	1	0.04	0.2	6.3	3003	.	.	.	.	8.5	35.49	11.05	315	4	24.5
161	6H161	CHILW	1	1	4		1	1	0.39	0.4	.	8605	.	1.7	.	.	2.9	12.39	3.88	4467	12	33.4
162	6H162	CHILW	1	1	4		1	1	0.64	0.3	1.1	4357	0.4	2.1	.	.	8.5	22.70	7.70	1768	16	72.3
163	6H163	CHILW	1	1	4		1	1	0.07	1.4	0.9	6633	.	0.7	.	.	13.3	24.47	7.71	2418	8	18.3
164	6H164	CHILW	1	1	4		1	1	1.63	0.4	.	3345	10.3	1.8	.	.	7.0	21.25	7.18	3443	12	50.0
165	6H165	CHILW	1	1	4		1	1	2.36	0.5	0.9	7250	.	2.1	.	.	3.7	19.20	6.05	3506	10	106.0
166	6H166	CHILW	1	1	3		1	1	1.19	0.3	0.6	2803	2.9	4.8	.	.	5.4	14.61	5.86	4255	7	119.9
167	6H167	CHILW	1	1	3		1	1	0.13	.	4.5	3030	.	.	.	.	3.1	22.56	9.44	3582	4	53.6
168	6H168	CHILW	1	1	3		1	1	0.20	0.6	3.6	7560	.	2.6	.	.	6.3	23.01	7.01	2885	3	101.3

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
169	6H169	CHILW	1	1	3		1	1	0.73	0.6	0.7	1975.0	.	1.5	.	.	2.8	18.12	9.26	3016	3	100.2
170	6H170	CHILW	1	1	2		1	1	0.07	0.1	4.8	2129.0	.	4.7	.	.	4.1	17.98	10.66	2848	5	92.9
171	6H171	CHILW	1	1			1	1	0.11	0.4	2.0	6678.0	.	1.4	.	.	3.7	21.40	8.70	2993	4	54.7
172	6H172	CHILW	1	1			1	1	0.16	0.5	1.2	4851.0	1.8	1.9	.	.	4.3	15.91	8.98	2230	2	110.6
173	6H173	CHILW	1	1			1	1	0.25	0.8	3.0	3307.0	.	3.5	.	.	4.1	14.74	9.73	2310	3	186.7
174	6H174	CHILW	1	1			1	1	0.24	.	0.6	6780.0	.	.	.	.	3.8	20.23	10.20	1986	2	53.1
175	6H175	CHILW	1	1			1	1	1.70	0.4	8.3	16931.0	.	.	.	.	4.9	13.47	5.57	2650	6	235.6
176	6H176	CHILW	1	1	3		1	2	0.10	0.4	0.7	6021.0	.	12.0	.	.	4.1	19.49	10.56	3810	4	24.1
177	6H177	CHILW	1	1	3		1	2	0.12	0.1	2.9	3991.0	.	.	.	.	5.2	29.40	10.25	1226	5	33.4
178	6H178	CHILW	1	1	3		1	1	0.19	.	3.4	4895.0	.	.	.	.	6.0	32.76	10.18	218	2	17.3
179	6H179	CHILW	1	1	3		1	1	0.06	.	2.5	3649.0	.	.	.	.	5.3	33.87	8.63	566	4	20.4
180	6H180	CHILW	1	1	3		1	1	0.19	0.6	12.5	9001.0	.	.	.	.	10.2	34.79	10.00	1984	8	7.7
181	6H181	CHILW	1	1	3		1	1	0.11	1.8	10.2	7680.0	3.2	.	.	.	9.3	34.32	10.58	1801	11	1.8
182	6H182	CHILW	1	1	3		1	1	0.50	2.0	10.1	7518.0	0.3	.	.	.	9.5	24.73	7.62	1815	16	2.0
183	6H183	CHILW	1	1	3		1	1	0.06	1.7	10.5	7653.0	.	.	.	.	9.0	35.23	10.86	1781	13	3.1
184	6H184	CHILW	1	1	3		1	2	0.13	0.7	4.2	5789.0	.	.	.	.	4.6	33.33	10.49	1655	8	3.9
185	6H185	CHILW	1	1	3		1	2	0.06	2.5	11.4	8218.0	10.8	.	.	.	61.2	35.43	10.18	1836	8	8.5
186	6H186	CHILW	1	1	3		1	1	0.32	2.9	11.5	8587.0	4.6	.	.	.	73.7	34.50	9.91	2159	9	7.1
187	6H187	CHILW	1	1	3		1	1	0.19	0.9	11.3	5472.0	0.8	.	.	.	5.7	35.61	10.44	1659	4	8.2
188	6H188	CHILW	1	1	3		1	1	0.13	1.3	11.5	6215.0	.	.	.	.	4.6	34.34	10.06	1702	5	4.5
189	6H189	CHILW	1	1	3		1	1	0.08	1.9	4.6	5718.0	.	.	.	.	4.0	35.79	10.49	1620	9	7.4
190	6H190	CHILW	1	2			4	1	2.19	1.7	6.2	6014.0	.	.	.	.	4.5	15.80	7.36	1654	4	9.8
191	6H191	CHILW	1	2			4	1	0.07	2.1	4.1	5779.0	2.1	.	.	.	4.4	35.39	10.37	1660	7	17.8
192	6H192	CHILW	1	2			4	1	0.41	1.1	0.1	1584.0	0.4	.	.	.	1.6	25.52	7.14	1618	10	24.2
193	6H193	CHILW	1	1	3		1	1	0.04	0.9	4.5	5475.0	0.2	.	.	.	4.7	35.68	10.61	1513	6	7.2
194	6H194	CHILW	1	1	3		1	1	0.13	1.1	4.1	5018.0	.	.	.	.	4.3	35.85	10.66	1629	9	3.2
195	6H195	CHILW	1	1	3		1	1	0.06	1.1	4.8	5560.0	.	.	.	.	4.8	35.37	10.51	1668	7	12.5
196	6H196	CHILW	1	2			1	1	3.94	2.3	9.3	2976.0	3.6	.	.	.	15.7	20.14	6.09	513	5	49.7
197	6H197	CHILW	1	2			1	1	4.69	2.5	9.0	2818.0	.	.	.	.	15.3	10.24	4.09	521	2	54.2
198	6H198	CHILW	1	2			1	2	8.43	2.4	8.7	2186.0	10.2	.	.	.	2.6	4.21	1.56	938	.	35.5
199	6H199	CHIKA	1	2			4	2	5.79	2.0	8.3	1055.0	.	.	.	.	0.5	0.14	0.28	218	2	59.4
200	6H200	CHIKA	1	2			4	1	3.42	1.9	8.5	310.0	.	.	.	.	0.8	0.04	0.08	134	.	93.6
201	6H201	CHIKA	1	2			4	2	4.65	2.4	8.5	113.0	2.7	.	.	.	0.6	0.07	0.23	156	2	181.2
202	6H202	CHIKA	1	2			4	2	5.76	1.8	8.7	761.0	.	.	.	.	0.4	0.05	0.10	202	4	86.1
203	6H203	CHIKA	1	2			4	1	5.12	1.5	8.3	318.0	.	.	.	.	0.7	0.03	0.06	153	2	122.6
204	6H204	CHIKA	1	2			4	2	6.36	1.9	8.6	1120.0	0.8	.	.	.	1.8	0.02	0.04	225	7	146.2
205	6H205	CHIKA	1	2			4	2	6.75	1.3	7.8	825.0	0.4	.	.	.	1.0	0.03	0.06	168	1	116.3
206	6H206	CHIKA	1	2			4	1	5.83	1.2	8.2	587.0	0.2	.	.	.	2.3	0.75	0.29	241	.	120.6
207	6H207	CHIKA	1	2			4	2	7.51	1.2	7.5	1110.0	.	.	.	.	1.8	0.02	0.04	173	6	48.3
208	6H208	CHIKA	1	2			4	2	6.98	1.9	8.3	507.0	0.2	.	.	.	1.3	0.02	0.04	223	3	95.8
209	6H209	CHIKA	1	2			4	1	8.07	2.1	8.6	1481.0	.	.	.	.	2.2	0.02	0.04	230	3	24.2
210	6H210	CHIKA	1	2			4	2	7.77	2.4	8.1	1066.0	.	.	.	.	1.7	0.06	0.12	200	5	20.0
211	6H211	CHIKA	1	2			4	2	9.50	2.8	7.7	1937.0	7.3	.	.	.	2.3	0.35	0.18	225	2	40.9
212	6H212	CHIKA	1	2			4	1	7.63	2.5	8.2	1076.0	2.6	.	.	.	1.8	0.03	0.06	210	1	56.2
213	6H213	CHIKA	1	2			4	2	8.58	1.9	6.4	905.0	1.2	.	.	.	0.2	0.03	.	10	4	251.4
214	6H214	CHIKA	1	2			4	2	3.85	1.6	0.6	135.0	3.3	.	.	.	.	0.01	0.06	131	3	124.3
215	6H215	CHIKA	1	2			4	1	10.88	1.5	0.3	189.0	.	.	.	.	0.2	0.16	0.15	140	1	172.2
216	6H216	MONGO	1	2			4	2	10.86	1.6	0.1	235.0	0.9	.	.	.	0.5	0.34	0.06	72	6	220.1
217	6H217	MONGO	1	2			4	2	11.02	1.3	0.2	197.0	0.4	.	.	.	0.8	0.38	0.09	80	5	225.8
218	6H218	MONGO	1	2			4	2	11.05	1.5	.	405.0	.	.	.	.	0.4	0.57	0.14	110	2	159.6
219	6H219	MONGO	1	2			4	1	10.64	1.7	.	387.0	.	.	.	.	0.8	0.57	0.14	64	2	274.2
220	6H220	MONGO	1	2			4	1	9.87	1.6	0.4	4.5	1.6	.	.	.	0.5	1.67	0.40	40	3	241.3
221	6H221	MONGO	1	2			4	2	10.43	1.6	.	499.0	4.0	.	.	.	0.9	0.16	0.03	60	2	115.5
222	6H222	MONGO	1	2			4	1	11.17	1.3	.	1200.0	2.1	.	.	.	2.7	0.30	0.03	168	.	140.3
223	6H223	MONGO	1	2			4	1	11.22	1.0	0.1	1350.0	0.8	.	.	.	2.3	0.38	0.06	222	.	77.2
224	6H224	MONGO	1	2			4	2	10.90	1.0	.	1125.0	.	.	.	.	2.8	0.29	0.04	200	.	80.6

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
225	6H225	MONGO	1	2			4	1	9.65	1.1	.	1457	.	.	.	.	2.1	0.32	0.05	210	1	49.8
226	6H226	MONGO	1	2			4	1	11.48	1.6	0.2	1918	3.2	.	.	.	3.5	0.26	0.04	229	2	49.7
227	6H227	MONGO	1	2			4	2	12.35	1.2	.	1881	6.6	.	.	.	2.0	0.24	0.05	201	4	33.5
228	6H228	MONGO	1	2			4	1	11.57	1.2	.	1505	0.2	.	.	.	2.4	0.41	0.06	173	2	67.6
229	6H229	MONGO	1	2			4	1	12.87	1.7	.	1378	.	.	.	.	2.8	0.85	0.13	200	1	89.8
230	6H230	MONGO	1	2			4	1	10.97	1.8	.	1466	.	.	.	.	1.8	0.49	0.66	231	1	55.3
231	6H231	MONGO	1	2			4	1	10.69	1.6	.	1380	2.1	.	.	.	1.7	0.92	0.22	218	4	84.5
232	6H232	MONGO	1	2			4	1	10.53	1.6	.	285	2.4	.	.	.	0.6	1.45	0.33	25	2	192.2
233	6H233	MONGO	1	2			4	1	8.75	1.9	.	341	1.2	.	.	.	0.7	2.33	0.56	30	5	147.6
234	6H234	CHAUM	1	2			4	1	7.01	2.0	7.7	300	11.3	.	.	.	4.8	0.47	0.09	231	4	381.6
235	6H235	CHAUM	1	2			4	2	9.91	2.1	8.1	257	10.6	.	.	.	5.2	1.03	0.20	168	7	368.1
236	6H236	CHAUM	1	2			4	2	9.34	2.3	7.4	138	10.7	.	.	.	3.1	0.31	0.06	138	11	427.8
237	6H237	CHAUM	1	2			4	2	9.31	1.3	4.3	197	10.1	0.4	.	.	2.1	0.47	0.14	173	6	353.1
238	6H238	CHAUM	1	2			4	2	9.05	1.3	3.6	165	3.4	.	.	.	1.4	0.70	0.21	139	8	290.2
239	6H239	CHAUM	1	2			4	1	9.56	1.5	4.1	256	11.3	.	.	.	1.7	0.40	0.12	174	10	422.5
240	6H240	CHAUM	1	2			4	1	6.58	1.6	4.4	259	10.6	0.6	.	.	2.0	0.23	0.07	150	5	380.0
241	6H241	ACHIR	1	2			4	2	8.49	1.9	13.2	782	3.7	.	.	.	0.3	0.66	0.20	20	3	612.7
242	6H242	ACHIR	1	2			4	1	10.10	2.1	0.7	1533	1.0	.	.	.	2.0	0.94	0.28	37	5	177.8
243	6H243	ACHIR	1	2			4	2	7.49	2.0	1.2	1275	0.8	.	.	.	1.7	1.22	0.37	40	1	164.5
244	6H244	ACHIR	1	2			4	2	9.65	1.9	0.1	622	.	.	.	.	0.2	0.67	0.15	10	3	372.2
245	6H245	ACHIR	1	2			4	1	10.99	1.9	0.2	305	.	.	.	.	0.7	0.45	0.10	20	1	210.2
246	6H246	ACHIR	1	2			4	2	9.49	1.5	0.1	676	2.4	.	.	.	0.5	1.46	0.34	10	.	300.4
247	6H247	ACHIR	1	2			4	2	10.20	1.3	0.6	351	.	.	.	.	0.8	1.72	0.51	30	2	310.3
248	6H248	ACHIR	1	2			4	1	10.44	1.7	0.3	708	.	.	.	.	1.3	0.56	0.13	20	.	239.6
249	6H249	ACHIR	1	2			4	2	9.13	1.7	.	412	1.1	.	.	.	0.6	1.11	0.26	10	.	362.2
250	6H250	ACHIR	1	2			4	1	11.09	1.9	0.3	819	.	.	.	.	1.0	0.65	0.15	15	.	380.5
251	6H251	ACHIR	1	2			4	1	8.33	1.7	.	416	3.6	.	.	.	0.6	0.53	0.16	11	.	327.5
252	6H252	ACHIR	1	2			4	2	10.48	1.6	0.2	761	0.6	.	.	.	0.4	0.43	0.10	20	3	270.8
253	6H253	ACHIR	1	2			4	1	10.70	1.5	0.1	634	0.2	.	.	.	0.6	0.05	0.01	10	2	292.1
254	6H254	ACHIR	1	2			4	2	6.72	1.9	0.7	857	.	.	.	.	1.3	5.06	1.53	137	.	94.2
255	6H255	ACHIR	1	2			4	2	9.10	1.3	0.1	1271	0.4	.	.	.	0.2	0.07	0.02	15	4	205.6
256	6H256	ACHIR	1	2			4	1	9.15	1.2	.	1055	0.5	.	.	.	0.4	0.13	0.03	7	2	220.1
257	6H257	ACHIR	1	2			4	2	9.71	1.2	.	1545	2.7	.	.	.	0.7	0.06	0.04	20	2	121.3
258	6H258	ACHIR	1	2			4	2	9.93	1.5	0.2	1374	1.7	.	.	.	0.1	0.07	0.02	15	1	173.6
259	6H259	ACHIR	1	2			4	1	9.41	1.7	0.1	1847	.	.	.	.	0.5	0.12	0.03	10	3	262.3
260	6H260	ACHIR	1	2			4	2	8.94	1.8	.	1215	.	.	.	.	0.3	0.06	0.01	15	.	259.6
261	6H261	ACHIR	1	2			4	2	8.83	1.8	.	2214	1.6	.	.	.	.	0.17	0.06	16	.	489.4
262	6H262	ACHIR	1	2			4	1	9.73	2.0	0.1	1688	.	.	.	.	.	0.08	0.02	10	2	350.6
263	6H263	ACHIR	1	2			4	1	10.53	2.1	0.2	1858	.	.	.	.	.	0.09	0.02	15	3	420.2
264	6H264	ACHIR	1	2			4	2	9.21	1.7	0.1	750	.	.	.	.	0.6	0.05	0.01	10	.	380.4
265	6H265	ACHIR	1	2			4	1	8.58	1.5	0.1	1320	0.3	.	.	.	.	0.18	0.04	20	.	244.1
266	6H266	KONGW	1	2			4	1	6.57	1.5	2.6	485	10.1	.	.	.	2.2	2.41	0.40	218	2	182.2
267	6H267	KONGW	1	2			4	1	6.79	1.7	3.1	712	10.3	.	.	.	2.6	1.08	0.21	255	.	180.6
268	6H268	KONGW	1	2			4	1	7.66	1.3	2.8	605	2.2	.	.	.	1.8	0.52	0.08	246	1	109.3
269	6H269	KONGW	1	2			4	1	4.92	1.3	2.7	1120	.	.	.	.	2.8	5.59	1.74	258	1	120.0
270	6H270	KONGW	1	2			4	1	7.20	1.5	2.6	635	11.8	.	.	.	1.4	1.38	0.50	221	3	98.6
271	6H271	KONGW	1	2			4	1	7.49	1.3	3.2	827	18.7	.	.	.	3.1	3.03	1.54	268	4	75.7
272	6H272	KONGW	1	2			4	1	8.95	1.5	3.0	917	10.0	.	.	.	3.2	2.17	0.63	260	.	120.3
273	6H273	KONGW	1	2			4	1	8.55	1.7	3.5	725	12.2	.	.	.	2.6	4.88	1.62	233	1	247.3
274	6H274	KONGW	1	2			4	1	6.64	1.8	3.8	317	3.1	.	.	.	2.9	4.25	1.17	263	4	253.6
275	6H275	KONGW	1	2			4	1	9.24	1.6	3.2	616	13.0	.	.	.	2.3	4.76	1.48	281	2	188.3
276	6H276	KONGW	1	2			4	1	10.29	2.0	0.6	1106	0.8	.	.	.	0.1	1.79	0.54	143	6	106.5
277	6H277	KONGW	1	2			4	1	8.31	1.5	3.3	347	10.4	0.2	.	.	2.1	4.22	1.23	236	4	138.7
278	6H278	KONGW	1	2			4	1	8.72	1.5	3.6	553	2.4	.	.	.	2.5	4.46	1.47	271	7	137.2
279	6H279	KONGW	1	2			4	1	6.06	1.3	3.2	543	11.1	0.1	.	.	2.3	1.00	1.26	263	2	180.3
280	6H280	KONGW	1	2			4	2	7.45	2.1	0.7	994	1.3	.	.	.	0.2	5.23	1.83	154	11	181.1

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
281	6H281	CHILO	1	3			1	1	8.59	2.1	8.7	284	5.4	.	.	.	2.0	0.89	0.29	10	4	174.3
282	6H282	CHILO	1	3			1	1	8.86	1.9	8.6	289	2.9	0.5	.	.	1.5	0.74	0.02	15	7	173.4
283	6H283	CHILO	1	2			4	1	10.20	2.2	8.8	235	4.7	.	.	.	1.7	1.51	0.03	5	1	241.6
284	6H284	CHILO	1	3			1	1	9.50	2.1	8.5	304	0.8	.	.	.	1.3	1.72	0.06	10	3	280.3
285	6H285	CHILO	1	3			1	1	10.71	2.5	9.2	495	0.2	.	.	.	1.5	2.68	0.90	20	2	215.3
286	6H286	CHILO	1	3			3	1	4.52	2.2	9.7	495	7.2	0.7	.	.	0.6	0.09	0.10	56	.	805.6
287	6H287	CHILO	1	3			1	1	2.32	1.6	0.1	457	2.4	.	.	.	0.4	15.92	9.48	20	.	441.3
288	6H288	CHILO	1	3			1	1	9.21	2.0	.	250	1.3	.	.	.	0.7	0.40	0.09	10	3	373.6
289	6H289	CHILO	1	3			1	1	8.95	1.5	.	208	3.2	0.4	.	.	1.6	3.82	1.12	10	5	223.5
290	6H290	CHILO	1	3			1	1	7.43	1.5	.	256	4.1	.	.	.	1.7	0.54	0.12	11	1	285.5
291	6H291	KAWAN	1	2			4	1	7.43	2.4	0.6	2205	4.6	.	.	.	.	0.44	0.01	10	2	465.8
292	6H292	KAWAN	1	2			4	1	7.14	2.3	0.2	1978	2.7	0.2	.	.	0.1	0.14	.	15	6	400.3
293	6H293	KAWAN	1	2			4	2	7.48	2.4	3.2	445	11.3	0.2	.	.	0.7	1.91	0.54	522	.	473.3
294	6H294	KAWAN	1	3			1	1	0.69	1.6	0.7	1920	2.3	.	.	.	1.7	34.96	10.29	10	.	599.6
295	6H295	KAWAN	1	3			1	1	0.13	1.1	0.5	2151	4.4	.	.	.	1.4	36.91	11.08	6	3	731.1
296	6H296	KAWAN	1	2			4	1	8.45	1.4	.	2082	6.9	.	.	.	2.5	0.38	0.01	36	1	290.7
297	6H297	LIPER	1	2			4	2	7.69	1.3	.	1986	0.7	0.1	.	.	2.3	2.59	0.62	20	.	219.3
298	6H298	LIPER	1	2			4	1	8.77	1.7	.	2009	1.4	.	.	.	2.7	1.09	0.30	30	.	239.8
299	6H299	LIPER	1	2			4	2	7.55	1.2	.	2189	2.9	.	.	.	1.7	1.50	0.32	10	.	154.1
300	6H300	LIPER	1	2			4	2	6.99	1.8	.	1905	10.1	0.3	.	.	1.1	0.92	0.30	15	2	115.3
301	6H301	LIPER	1	2			4	1	7.06	2.1	.	2095	0.3	.	.	.	0.6	0.57	0.02	14	4	260.9
302	6H302	LIPER	1	2			4	1	6.37	2.0	2.6	457	11.4	.	.	.	0.7	1.65	0.45	18	8	285.3
303	6H303	LIPER	1	2	2		4	1	6.02	1.5	0.7	995	2.0	.	.	.	1.8	7.13	2.98	181	1	96.2
304	6H304	NSENG	1	2			5	1	8.18	1.9	12.1	375	0.5	.	.	.	0.1	0.75	0.41	186	7	235.8
305	6H305	NSENG	1	2			5	1	6.51	3.7	10.5	493	2.1	.	.	.	.	0.21	0.11	211	4	161.0
306	6H306	NSENG	1	2			5	1	8.53	9.5	48.2	473	9.3	.	.	.	.	0.09	0.05	210	9	105.1
307	6H307	NSENG	1	2			5	1	8.39	4.1	14.2	457	3.3	.	.	.	0.2	0.26	0.14	211	3	226.1
308	6H308	NSENG	1	2			5	1	8.41	4.9	12.1	600	2.5	.	.	.	0.2	0.29	0.04	149	2	213.6
309	6H309	NSENG	1	2			5	1	7.86	4.3	12.9	719	7.2	.	.	.	.	0.37	0.05	169	.	159.4
310	6H310	NSENG	1	3			1	1	0.25	1.8	0.5	197	1.1	.	.	.	.	33.92	10.27	58	1	310.0
311	6H311	NSENG	1	3			1	1	6.11	1.3	.	153	3.2	.	.	.	.	1.32	0.50	46	3	205.9
312	6H312	NSENG	1	1			1	1	6.25	2.9	0.2	159	0.8	.	.	.	2.3	6.66	7.73	10	6	23.6
313	6H313	NSENG	1	3			1	1	0.21	2.8	.	75	4.1	.	.	.	2.5	15.67	11.81	9	4	19.3
314	6H314	NSENG	1	1			1	1	0.72	0.9	0.7	127	2.0	.	.	.	.	0.10	0.05	6	2	1206.6
315	6H315	NSENG	1	1	3		1	1	5.40	1.1	0.3	5918	1.3	.	.	.	4.7	14.17	4.46	20	7	120.3
316	6H316	NSENG	1	3			1	1	7.55	1.9	3.2	203	0.4	.	.	.	1.6	0.96	0.44	20	.	350.2
317	6H317	NSENG	1	1	3		1	1	0.44	5.1	8.1	143	4.1	.	.	.	2.8	27.27	7.38	17	6	101.6
318	6M001	TUNDU	1	1	4		1	2	0.47	0.7	2.7	31538	2.0	.	.	.	13.9	25.63	7.50	20103	8	24.2
319	6M002	TUNDU	1	1	4	3	1	2	0.72	0.9	0.4	5354	4.1	.	.	.	5.5	28.66	7.95	8911	9	53.1
320	6M003	TUNDU	1	1	2	3	1	1	0.39	0.8	1.1	11150	1.8	0.2	.	.	6.6	29.61	8.21	9355	6	68.4
321	6M004	TUNDU	1	1	4	3	1	1	0.09	0.6	0.2	6732	2.1	.	.	.	4.7	29.61	7.76	7500	3	50.5
322	6M005	TUNDU	1	1	4	3	1	1	0.89	1.4	1.6	2841	0.2	.	.	.	7.8	22.53	4.39	3690	12	93.0
323	6M006	TUNDU	1	1	4	3	1	1	3.93	0.6	7.8	6239	0.4	.	.	.	8.9	19.73	5.47	4751	7	24.5
324	6M007	TUNDU	1	1	4	3	1	2	0.07	0.7	8.5	6356	0.2	.	.	.	9.4	26.80	7.09	3951	13	31.1
325	6M008	TUNDU	1	1	4	3	1	1	0.20	0.4	.	4855	1.4	.	.	.	4.7	25.14	8.05	2602	34	25.5
326	6M009	TUNDU	1	1	1		1	1	2.54	1.4	6.7	7980	2.6	.	.	.	6.9	18.53	5.25	5389	28	19.3
327	6M010	TUNDU	1	1	4		1	1	0.40	1.4	3.4	40784	0.6	0.9	.	.	7.4	9.75	2.38	4553	55	78.1
328	6M011	TUNDU	1	1	4		1	1	1.65	0.5	4.5	2200	0.4	.	.	.	12.0	25.02	7.14	4018	31	24.2
329	6M012	TUNDU	1	1	4		1	2	0.19	1.4	1.1	8973	3.1	.	.	.	8.3	22.03	6.24	3026	18	35.2
330	6M013	TUNDU	1	1	4		1	1	0.35	1.3	0.7	7157	11.9	.	.	.	6.2	27.95	6.62	1576	4	36.1
331	6M014	TUNDU	1	1	4		1	1	7.35	0.5	10.2	4760	2.3	.	.	.	7.6	7.83	2.25	726	16	30.8
332	6M015	TUNDU	1	1	1		1	2	1.45	0.8	101.3	5355	1.8	3.0	.	.	9.1	1.31	0.38	956	33	40.8
333	6M016	TUNDU	1	1	1	3	1	2	7.61	0.4	0.9	12260	0.8	.	.	.	7.5	18.62	5.55	1190	22	24.2
334	6M017	TUNDU	1	1	1	3	1	1	4.77	1.1	11.3	4372	2.0	0.6	.	.	8.8	19.82	6.04	2322	7	20.2
335	6M018	TUNDU	1	1	3	3	1	1	6.38	1.4	10.2	6530	3.4	1.4	.	.	6.2	18.29	5.57	2534	10	40.4
336	6M019	TUNDU	1	1	1		1	1	6.95	0.7	11.7	5258	8.7	.	.	.	6.7	17.87	5.39	2704	4	15.8

OBS	NO	SECTOR	RS	RK	RK2	ALT	DCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
337	6M020	TUNDU	1	1	1	3	1	2	10.07	0.40	.	8530	0.6	.	.	.	8.3	3.09	0.93	2234	8	25.5
338	6M021	TUNDU	1	1	1	3	1	2	1.60	2.20	12.8	2394	10.1	.	.	.	7.9	22.82	0.45	4782	8	37.2
339	6M022	MATOP	1	1	2		2	1	0.26	0.06	1.4	3550	2.4	.	.	.	2.5	34.67	9.88	3788	10	45.5
340	6M023	MATOP	1	1	2		2	2	1.39	0.50	2.5	5832	4.6	.	.	.	3.3	30.99	8.83	3560	14	20.6
341	6M024	MATOP	1	1	2		2	1	0.63	2.90	1.6	3645	2.3	0.3	.	.	7.9	32.34	9.22	1186	7	22.3
342	6M025	MATOP	1	1	2		2	1	0.27	3.10	1.1	5827	0.8	0.2	.	.	8.5	34.49	9.76	1020	12	30.5
343	6M026	MATOP	1	2			2	1	3.48	2.30	1.6	2850	10.3	.	.	.	9.0	18.54	5.11	2351	8	8.6
344	6M027	MATOP	1	1	2		2	1	1.95	2.10	0.7	7852	10.9	.	.	.	13.0	25.27	6.63	985	4	27.6
345	6M028	MATOP	1	1	2		2	1	1.47	2.20	0.4	2775	2.3	.	.	.	10.3	26.94	7.79	2336	7	49.5
346	6M029	MATOP	1	1	2		2	2	0.57	0.40	2.7	5539	11.6	.	.	.	7.3	28.54	8.25	1843	9	25.3
347	6M030	MATOP	1	1	2		2	2	0.23	0.10	.	3557	4.8	.	.	.	7.7	33.53	9.56	3192	4	41.6
348	6M031	MATOP	1	1	2		2	1	1.52	1.10	0.4	2103	2.3	.	.	.	9.0	25.84	6.57	1407	2	7.5
349	6M032	MATOP	1	1	2		2	2	0.56	2.30	4.3	3471	4.6	.	.	.	23.9	33.01	10.01	2017	4	11.2
350	6M033	MATOP	1	1	2		2	1	0.12	1.40	4.6	6047	2.3	.	.	.	12.9	34.29	10.40	3326	11	5.6
351	6M034	MATOP	1	1	2		2	1	0.59	2.50	1.6	3872	1.1	.	.	.	21.2	32.60	9.89	1542	3	10.8
352	6M035	SONGW	1	1	2	3	1	2	0.05	1.90	.	2570	3.9	.	.	.	10.1	35.82	10.72	3190	9	.
353	6M036	SONGW	1	1	2	3	1	1	0.23	1.30	4.1	5988	0.8	.	.	.	8.3	35.51	9.03	2202	9	9.6
354	6M037	SONGW	1	1	2	3	1	2	0.48	1.50	1.1	2794	3.8	.	.	.	7.9	35.43	10.84	2656	5	3.7
355	6M038	SONGW	1	1	2		1	2	0.21	0.60	14.0	6272	2.6	.	.	.	6.7	33.34	9.62	4503	9	23.6
356	6M039	SONGW	1	1	2		1	1	0.60	0.80	4.3	5055	6.3	.	.	.	9.0	34.12	9.85	3723	3	33.6
357	6M040	SONGW	1	1	2		1	2	0.15	2.10	4.8	3885	6.9	.	.	.	9.6	36.80	10.56	4328	2	7.0
358	6M041	SONGW	1	1	2		1	2	0.46	2.60	6.0	7421	5.4	.	.	.	7.1	30.81	9.35	11122	6	.
359	6M042	SONGW	1	1	2		1	1	0.53	2.10	8.9	3250	3.8	.	.	.	4.5	30.74	9.33	8811	14	4.6
360	6M043	SONGW	1	1	2		1	2	0.51	2.50	4.4	5159	3.7	.	.	.	4.7	31.08	9.25	9650	11	2.6
361	6M044	SONGW	1	1	2	3	4	2	0.40	1.10	4.9	4833	8.2	.	.	.	5.3	32.26	9.27	7601	8	1.9
362	6M045	SONGW	1	1	2	3	4	1	0.34	1.50	0.7	6230	4.1	.	.	.	6.7	34.62	9.97	9023	12	2.0
363	6M046	SONGW	1	1	2	3	4	2	0.26	0.70	10.7	5799	2.9	.	.	.	7.7	26.60	8.58	12196	7	3.6
364	6M047	SONGW	1	1	2	3	4	2	0.43	0.50	2.1	4827	2.6	.	.	.	6.2	29.96	8.92	5124	7	5.2
365	6M048	SONGW	1	1	2	3	4	1	0.31	1.20	3.8	3988	0.8	.	.	.	6.7	34.11	9.82	4201	12	3.2
366	6M049	SONGW	1	1	2	3	4	2	0.33	1.60	0.5	7025	1.3	.	.	.	6.5	34.23	10.13	3833	11	2.3
367	6M050	SONGW	1	1	2	3	4	2	0.78	1.50	3.8	2770	1.9	.	.	.	8.3	32.03	9.54	3801	8	13.2
368	6M051	SONGW	1	1	2	3	4	1	0.61	1.70	2.0	3062	4.2	.	.	.	7.5	32.49	9.45	3052	6	5.6
369	6M052	SONGW	1	1	2	3	4	2	0.72	2.00	0.8	2670	8.3	.	.	.	14.8	30.84	8.39	5024	4	3.8
370	6M053	SONGW	1	1	2	3	4	2	1.24	1.70	0.5	4030	6.4	.	.	.	10.5	28.93	8.62	3558	6	5.1
371	6M054	SONGW	1	1	4	3	4	1	0.15	2.10	1.4	6675	2.9	.	.	.	15.8	3.34	0.99	4372	9	4.3
372	6M055	SONGW	1	1	2	3	4	2	1.31	3.90	1.3	5550	1.1	.	.	.	12.5	29.08	8.56	4624	13	2.9
373	6M056	SONGW	1	1	2	3	4	2	0.05	10.10	0.2	7120	5.9	.	.	.	5.2	34.07	10.44	2536	7	3.8
374	6M057	SONGW	1	1	2	3	4	2	0.29	3.40	7.1	11021	9.6	.	.	.	12.6	24.01	7.26	11994	3	3.8
375	6M058	SONGW	1	1	2	3	4	2	0.54	3.70	23.1	6653	0.9	.	.	.	14.7	26.63	7.98	8337	.	7.2
376	6M059	SONGW	1	2		3	4	2	1.49	3.10	3.9	6725	2.1	.	.	.	19.3	4.28	1.28	5524	4	5.1
377	6M060	SONGW	1	1	2	3	4	1	2.94	2.30	44.3	3081	11.8	.	.	.	6.3	5.78	1.75	1731	2	26.1
378	6M061	SONGW	1	2		3	4	2	11.44	1.90	1.1	4610	21.8	.	.	.	7.8	1.38	1.01	1697	8	31.7
379	6M062	SONGW	1	2		3	4	2	12.49	1.20	3.9	4484	17.6	1.2	.	.	3.7	2.75	1.05	2255	11	37.3
380	6M063	SONGW	1	1	2		4	1	0.34	0.90	0.2	6722	10.9	.	.	.	5.5	32.17	10.88	5296	12	11.3
381	6M064	SONGW	1	2		3	4	2	6.92	1.10	4.1	5028	10.1	.	.	.	6.5	10.96	5.45	8623	13	25.2
382	6M065	SONGW	1	2		3	4	2	1.44	1.60	1.6	8468	7.2	1.6	.	.	6.3	9.32	4.06	12543	10	18.7
383	6M066	SONGW	1	1	2	3	4	1	0.64	1.80	0.9	5476	10.6	0.2	.	.	11.8	25.21	7.34	8242	8	13.1
384	6M067	SONGW	1	1	2	3	4	2	0.34	1.10	.	4550	13.2	.	.	.	4.7	31.25	8.51	5788	8	22.1
385	6M068	SONGW	1	1	2	3	4	2	0.87	2.00	.	3946	4.3	.	.	.	7.4	29.93	8.67	2868	4	5.6
386	6M069	SONGW	1	1	2	3	4	1	0.27	0.80	1.1	5233	2.1	.	.	.	8.3	30.40	9.37	4783	15	5.3
387	6M070	SONGW	1	1	2	3	4	2	0.27	0.60	1.2	3025	1.0	.	.	.	9.2	29.93	8.63	4193	11	10.5
388	6M071	SONGW	1	1	2	3	4	2	0.72	1.10	.	4817	3.9	.	.	.	7.3	31.50	9.49	4169	9	3.8
389	6M072	SONGW	1	1	2	3	4	1	0.32	2.00	0.2	3050	0.9	.	.	.	8.0	32.60	9.33	2411	6	11.0
390	6M073	SONGW	1	2		3	4	2	0.17	0.90	0.4	5580	10.2	.	.	.	6.5	18.13	5.19	5413	16	25.3
391	6M074	NAMAN	1	2		3	5	2	7.87	0.30	.	3175	3.6	.	.	.	8.2	1.35	1.17	2006	11	5.6
392	6M075	NAMAN	1	2		3	5	2	7.42	0.40	3.8	4029	10.8	.	.	.	11.5	0.44	1.90	1207	8	21.5

OBS	NO	SECTOR	RS	RK	RK2	ALT	QCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
393	6M076	NAMAN	1	2		3	5	2	11.24	2.5	3.4	3535	4.2	.	.	.	8.6	1.17	2.01	500	11	6.7
394	6M077	NAMAN	1	2			5	2	9.00	1.9	2.7	3626	2.9	.	.	.	7.5	1.58	2.12	1536	5	6.9
395	6M078	NAMAN	1	2			5	2	9.44	0.6	2.0	2828	10.6	.	.	.	18.9	0.48	0.42	2713	9	2.1
396	6M079	NAMAN	1	2			5	2	10.50	0.4	3.4	4139	2.3	.	.	.	20.6	0.58	1.95	290	13	2.0
397	6M080	NAMAN	1	2			5	1	12.19	2.1	3.6	3077	1.2	.	.	.	13.8	0.31	1.40	283	11	15.6
398	6M081	NAMAN	1	2			5	1	10.52	1.8	6.0	1996	5.4	1.6	.	.	3.0	2.17	1.20	272	4	45.0
399	6M082	NAMAN	1	2			5	1	9.96	1.5	3.1	2050	1.3	1.2	.	.	2.5	2.48	1.08	305	6	55.6
400	6M083	NAMAN	1	2			5	2	8.76	2.6	1.3	2619	0.8	.	.	.	7.4	2.91	2.07	421	3	155.5
401	6M084	NAMAN	1	2		3	5	2	9.14	2.2	1.6	3520	4.2	0.6	.	.	8.5	0.37	1.20	487	8	24.5
402	6M085	NAMAN	1	2			5	2	8.57	2.0	8.8	1550	3.9	.	.	.	6.0	1.32	2.56	345	2	14.6
403	6M086	NAMAN	1	2			5	2	11.77	1.2	3.8	4549	1.2	.	.	.	7.5	2.41	3.95	422	2	173.2
404	6M087	NAMAN	1	2			5	2	10.97	2.3	3.3	2028	4.1	.	.	.	7.6	0.11	1.40	361	.	131.1
405	6M088	NAMAN	1	2		3	5	2	9.07	1.9	16.2	5507	4.9	.	.	.	9.6	0.04	2.20	411	3	37.6
406	6M089	NAMAN	1	2		3	5	2	9.01	2.7	2.8	4820	0.9	.	.	.	8.8	0.21	2.80	393	1	64.2
407	6M090	NAMAN	1	2		3	5	1	8.23	2.0	3.2	5500	13.8	0.2	.	.	3.2	0.27	2.48	361	.	245.8
408	6M091	NAMAN	1	2		3	5	2	8.50	2.0	0.6	696	19.2	0.7	.	.	1.8	0.81	1.39	473	3	286.5
409	6M092	NAMAN	1	2		3	5	2	9.64	0.5	12.3	5353	4.4	0.3	.	.	2.0	0.04	0.05	739	1	215.8
410	6M093	NAMAN	1	2		3	5	2	9.26	0.4	18.2	1905	6.9	0.2	.	.	4.4	0.51	0.83	680	4	165.3
411	6M094	NAMAN	1	2		3	5	1	9.39	0.4	10.7	6566	1.2	0.5	.	.	5.5	0.73	1.13	688	3	265.1
412	6M095	NAMAN	1	2		3	5	1	10.66	1.3	6.6	2240	0.8	1.1	.	.	5.1	0.02	1.09	1598	7	235.6
413	6M096	NAMAN	1	2		3	5	2	9.94	0.7	2.7	4991	2.3	1.0	.	.	5.6	0.02	0.57	1206	4	323.7
414	6M097	TUNDU	1	2		3	4	2	8.42	0.2	6.1	1288	3.9	.	.	.	4.3	5.48	3.68	2303	9	5.4
415	6M098	TUNDU	1	2		3	4	1	8.13	.	2.9	4453	0.7	.	.	.	10.5	2.17	4.68	1955	12	30.6
416	6M099	TUNDU	1	2		3	4	2	8.33	1.6	3.8	1555	2.4	.	.	.	17.5	3.27	5.48	2000	4	98.1
417	6M100	TUNDU	1	2		3	4	2	9.15	1.1	4.3	5675	1.2	.	.	.	4.3	10.12	6.86	2478	5	85.6
418	6M101	TUNDU	1	2		3	4	1	6.10	2.2	5.5	2769	1.8	.	.	.	3.5	5.16	5.64	2588	.	449.5
419	6M102	TUNDU	1	2		3	4	2	8.49	0.6	2.4	3622	2.0	.	.	.	11.0	10.07	6.84	2158	4	5.3
420	6M103	TUNDU	1	2		3	4	2	7.71	2.4	2.0	2220	0.8	.	.	.	7.2	12.33	7.76	1483	3	35.6
421	6M104	TUNDU	1	2		3	4	1	7.63	2.7	3.9	3998	4.3	.	.	.	5.3	12.99	6.64	1058	.	64.3
422	6M105	TUNDU	1	2			4	2	4.79	1.5	2.9	2575	5.2	.	.	.	7.5	0.29	0.08	2206	.	7.5
423	6M106	TUNDU	1	2		3	4	2	7.52	0.9	2.1	4015	1.1	.	.	.	9.3	0.14	1.10	1203	.	62.2
424	6M107	TUNDU	1	2		3	4	1	10.15	2.1	1.6	1257	6.3	.	.	.	12.5	0.06	0.04	901	3	112.6
425	6M108	TUNDU	1	2		3	4	2	8.42	0.5	1.0	3018	3.1	.	.	.	7.0	0.50	0.73	593	2	335.1
426	6M109	TUNDU	1	2		3	4	2	8.84	0.6	4.1	2022	2.8	.	.	.	1.8	0.94	1.11	461	.	285.3
427	6M110	TUNDU	1	2		3	4	1	9.45	2.1	1.5	5549	1.8	.	.	.	6.3	2.37	1.11	520	1	245.3
428	6M111	TUNDU	1	2		3	4	2	10.06	2.3	1.1	1347	3.7	.	.	.	2.8	0.15	0.06	647	1	318.4
429	6M112	TUNDU	1	2		3	4	2	10.75	1.9	3.2	5655	0.8	.	.	.	3.7	0.68	0.70	780	2	286.3
430	6M113	TUNDU	1	1	2	3	4	1	2.75	0.1	1.0	2570	4.9	.	.	.	3.0	25.07	7.05	411	.	13.2
431	6M114	TUNDU	1	2		3	4	2	9.70	2.6	2.9	7005	1.1	.	.	.	4.6	0.67	1.48	499	1	83.4
432	6M115	TUNDU	1	2		3	4	2	7.60	0.5	2.4	3790	0.2	.	.	.	1.4	1.22	0.49	467	3	115.6
433	6M116	TUNDU	1	1	2	3	3	1	7.77	3.5	0.7	6937	2.4	.	.	.	2.6	10.33	6.11	535	2	25.5
434	6M117	TUNDU	1	2		3	4	2	8.75	3.4	0.4	2002	0.4	.	.	.	2.5	6.24	4.66	702	.	30.8
435	6M118	TUNDU	1	2		3	4	2	9.71	2.7	1.0	4159	2.4	.	.	.	3.7	3.89	4.92	463	1	80.3
436	6M119	TUNDU	1	2		3	4	1	9.47	3.6	2.8	2755	1.0	.	.	.	7.5	7.66	4.13	680	.	65.1
437	6M120	TUNDU	1	2		3	4	2	11.52	3.3	2.5	544	1.9	.	.	.	3.4	2.72	3.04	951	.	83.2
438	6M121	TUNDU	1	2		3	4	2	15.59	5.1	1.6	3922	6.9	.	.	.	3.5	1.62	2.03	552	7	69.3
439	6M122	TUNDU	1	2		3	4	1	4.91	1.2	0.9	7150	2.1	.	.	.	7.7	18.70	5.71	1753	6	31.5
440	6M123	TUNDU	1	2		3	4	2	12.03	4.0	4.1	9972	1.8	.	.	.	5.7	1.41	3.58	1191	4	14.6
441	6M124	TUNDU	1	2		3	4	2	11.18	0.4	5.1	4328	1.2	0.2	.	.	11.0	3.61	3.06	8341	8	85.3
442	6M125	TUNDU	1	2		3	4	1	10.56	1.6	3.7	15322	4.9	.	.	.	9.0	4.51	3.81	7201	3	76.6
443	6M126	TUNDU	1	2		3	4	2	10.16	0.3	3.8	5559	3.8	0.3	.	.	15.0	6.39	4.69	9553	2	105.3
444	6M127	TUNDU	1	2		3	4	2	11.84	0.8	1.2	8025	1.4	.	.	.	8.5	8.06	4.61	6096	5	15.0
445	6M128	TUNDU	1	2		3	4	2	11.92	0.5	1.6	3833	1.3	.	.	.	3.0	7.42	4.44	7553	4	35.5
446	6M129	CHILW	1	1	3	3	1	2	11.71	2.0	1.1	5505	2.9	.	.	.	5.1	3.58	2.04	5233	.	11.3
447	6M130	CHILW	1	1	3		1	1	2.62	3.2	2.2	6928	0.8	.	.	.	4.2	19.88	5.25	8376	6	18.2
448	6M131	CHILW	1	1	3		1	2	0.89	2.3	3.8	28560	4.3	.	.	.	4.2	25.34	6.31	16785	4	18.8

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
449	6M132	CHILW	1	1	3		1	2	0.38	3.0	4.1	7533	3.1	.	.	.	6.4	25.42	7.81	9236	9	34.6
450	6M133	CHILW	1	1	3		1	1	3.01	0.2	3.7	8227	1.9	.	.	.	9.4	21.10	6.54	8997	8	16.8
451	6M134	CHILW	1	1	3		1	2	0.10	0.9	4.0	4170	1.8	.	.	.	7.1	23.30	2.19	9633	11	2.6
452	6M135	CHILW	1	1	2		1	2	0.24	1.4	3.2	4350	2.4	.	.	.	2.6	36.45	10.58	3516	7	65.0
453	6M136	CHILW	1	1	3		1	1	1.15	1.6	2.3	5852	0.8	.	.	.	11.0	19.32	9.13	5187	4	2.1
454	6M137	CHILW	1	1	2		1	2	0.11	1.1	5.2	2830	0.9	.	.	.	7.1	20.92	10.69	2486	6	81.0
455	6M138	CHILW	1	1	3		1	2	0.07	0.1	2.0	3280	2.1	.	.	.	15.4	21.62	11.10	1658	10	2.3
456	6M139	CHILW	1	1	3		5	1	0.69	0.1	7.8	5573	2.3	.	.	.	8.6	19.27	7.09	2503	6	15.3
457	6M140	CHILW	1	1	3		1	2	0.04	1.4	8.0	6880	1.8	.	.	.	4.4	33.72	9.35	2096	3	9.5
458	6M141	CHILW	1	1	2		1	2	0.11	1.1	6.1	1415	0.8	.	.	.	6.0	38.44	11.16	688	3	1.9
459	6M142	CHILW	1	1	3		1	1	0.12	0.4	2.3	4077	4.3	.	.	.	19.0	3.15	0.91	3753	24	28.6
460	6M143	CHILW	1	1	3		1	1	2.54	0.1	2.0	5488	2.6	.	.	.	11.0	0.47	0.14	3256	6	35.5
461	6M144	CHILW	1	1	3		1	2	0.04	2.1	7.9	7028	6.5	.	.	.	14.0	19.86	10.33	1203	8	7.6
462	6M145	CHILW	1	1	3		1	2	1.16	0.9	6.7	6025	0.8	.	.	.	16.3	16.76	8.53	2436	13	14.3
463	6M146	CHILW	1	1	2		1	2	0.06	1.6	3.1	5757	2.4	.	.	.	20.0	23.91	9.66	893	14	11.3
464	6M147	CHILW	1	1	4		1	2	0.47	3.0	6.1	3233	2.7	.	.	.	26.2	3.12	1.98	5228	8	11.5
465	6M148	CHILW	1	1	4		1	2	0.12	2.8	2.0	3912	0.8	.	.	.	24.8	2.12	0.44	3543	29	26.5
466	6M149	CHILW	1	1	4		1	2	0.48	1.1	6.9	4850	1.2	.	.	.	33.8	6.40	1.99	3233	30	18.4
467	6M150	CHILW	1	1	4		1	2	0.35	2.8	8.1	6748	1.7	.	.	.	144.4	15.19	3.45	4195	18	39.8
468	6M151	CHILW	1	1	4		1	1	0.09	8.4	4.6	7830	3.1	0.7	.	.	29.0	23.60	7.13	6757	14	7.5
469	6M152	CHILW	1	1	4		1	1	0.29	1.6	3.8	14150	8.5	0.2	.	.	9.5	9.72	2.91	17446	26	13.3
470	6M153	CHILW	1	1	4		5	2	1.30	1.5	1.8	33691	14.3	66.5	.	.	16.0	0.58	0.41	17132	25	56.1
471	6M154	CHILW	1	1	4		1	2	0.84	1.7	7.8	7177	2.0	0.2	.	.	22.5	16.92	5.52	6234	12	26.6
472	6M155	CHILW	1	1	4		1	2	0.39	3.0	2.5	21289	1.4	1.3	.	.	31.3	10.37	3.56	4234	19	14.2
473	6M156	CHILW	1	1	3		1	2	0.20	1.6	4.0	5441	4.3	.	.	.	8.3	7.10	2.95	7192	29	25.6
474	6M157	CHILW	1	1	3		1	2	0.28	2.0	2.8	18770	2.6	0.7	.	.	11.0	18.60	9.46	16336	5	5.0
475	6M158	CHILW	1	1	3		1	2	2.17	2.4	4.7	4428	2.5	.	.	.	4.4	24.60	7.08	3423	14	5.3
476	6M159	CHILW	1	1	3		1	2	0.20	1.7	8.1	25020	1.1	0.9	.	.	18.6	11.35	3.33	5620	8	12.1
477	6M160	CHILW	1	1	3		1	1	0.13	0.7	2.0	5009	6.4	1.2	.	.	5.1	19.85	8.20	8458	11	62.2
478	6M161	CHILW	1	1	3		5	1	0.75	1.7	1.4	16658	5.2	1.0	.	.	4.6	12.69	7.36	3023	8	104.7
479	6M162	CHILW	1	1	3		5	2	3.24	0.7	4.7	4099	3.4	.	.	.	7.3	12.18	5.85	1154	16	27.5
480	6M163	CHILW	1	1	2		1	2	0.10	2.6	3.1	7750	1.6	0.8	.	.	8.5	19.74	10.50	1753	9	51.0
481	6M164	CHILW	1	1	2		1	1	0.07	0.8	2.1	6999	1.7	.	.	.	6.0	32.96	8.41	1963	14	26.8
482	6M165	CHILW	1	1	2		1	1	.	2.0	2.2	4575	0.9	.	.	.	5.2	35.89	9.69	3527	11	2.1
483	6M166	CHILW	1	1	2		1	1	0.15	0.5	7.9	3921	1.1	.	.	.	12.5	17.54	7.02	1735	4	30.4
484	6M167	CHILW	1	1	2		1	1	0.07	1.6	2.4	9250	3.0	.	.	.	6.3	36.02	9.29	830	9	42.2
485	6M168	CHILW	1	1	1		3	1	0.12	2.0	6.2	4125	2.7	.	.	.	8.3	25.74	6.60	1301	7	15.3
486	6M169	CHILW	1	1	2		1	1	0.21	0.2	4.0	7029	0.8	.	.	.	15.5	32.93	9.04	611	2	2.1
487	6M170	CHILW	1	1	2		1	1	0.05	2.3	8.3	5550	1.5	.	.	.	2.0	36.72	10.03	1406	8	1.8
488	6M171	CHILW	1	1	3		1	1	1.25	4.0	2.5	1627	2.4	.	.	.	5.3	20.05	7.40	610	4	86.0
489	6M172	CHILW	1	1	2		1	1	0.07	2.1	1.9	7150	1.9	.	.	.	10.5	34.86	9.29	593	3	4.3
490	6M173	CHILW	1	1	2		1	1	0.03	0.1	0.8	5036	1.7	.	.	.	4.0	35.15	9.76	561	4	10.6
491	6M174	CHILW	1	1	3		1	1	1.89	0.4	3.8	4093	1.3	.	.	.	1.3	22.62	6.12	501	9	43.6
492	6M175	CHILW	1	1	2		1	1	0.01	3.4	1.5	3682	0.8	.	.	.	4.9	33.16	8.65	575	13	7.5
493	6M176	CHILW	1	1	1		3	1	1.44	2.8	4.4	3599	6.3	.	.	.	2.5	25.61	6.93	601	6	31.0
494	6M177	CHILW	1	1	2		1	2	0.23	3.5	4.3	4620	2.1	.	.	.	4.5	19.23	5.20	591	3	50.4
495	6M178	CHILW	1	1	2		1	2	3.26	3.2	4.6	6892	2.0	.	.	.	5.8	24.10	8.15	577	4	13.2
496	6M179	CHILW	1	1	2		1	2	0.14	2.8	2.1	5720	1.3	.	.	.	5.2	35.86	9.18	434	7	25.6
497	6M180	CHILW	1	1	2		1	2	0.17	3.2	3.8	702	0.4	.	.	.	6.4	33.92	8.77	533	2	5.6
498	6M181	CHILW	1	2		3	4	2	12.71	1.0	0.6	2904	.	.	.	.	2.3	3.42	1.02	125	4	114.1
499	6M182	CHILW	1	1	2		1	2	0.16	0.7	0.4	1948	.	.	.	.	1.8	36.45	10.10	113	11	21.3
500	6M183	CHILW	1	1	2	3	1	2	0.21	0.9	0.7	2575	.	.	.	.	1.5	37.29	10.34	145	9	20.9
501	6M184	CHILW	1	2		3	4	2	13.91	1.1	0.5	3125	.	.	.	.	2.2	0.67	0.19	118	7	50.3
502	6M185	CHILW	1	1	2	3	4	2	1.08	1.1	0.6	2227	0.5	.	.	.	1.9	24.82	7.81	128	3	77.8
503	6M186	CHILW	1	2		3	4	2	11.83	1.0	0.9	3039	.	.	.	.	2.0	0.14	0.07	152	9	98.2
504	6M187	CHILW	1	2		3	4	2	13.28	2.6	1.2	67	.	.	.	.	0.5	1.45	0.07	166	3	36.4

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CO	CA	C	CE	CS	CR
505	6M188	CHIKA	1	2			4	1	5.79	1.9	1.7	110	.	.	.	.	0.9	0.10	0.58	165	3	27.1
506	6M189	CHIKA	1	2			4	1	6.54	1.9	2.1	153	.	.	.	.	0.2	0.02	0.99	140	4	26.9
507	6M190	CHIKA	1	2			4	1	13.51	1.7	2.3	67	.	.	.	.	0.2	0.03	0.17	171	2	53.2
508	6M191	CHIKA	1	2			4	1	5.95	2.4	4.9	55	.	.	.	.	.	0.02	0.83	162	1	273.9
509	6M192	CHIKA	1	2			4	1	5.41	2.0	5.1	787	.	0.2	.	.	3.4	0.01	1.15	1075	.	8.3
510	6M193	CHIKA	1	2			4	1	5.65	1.9	10.0	202	.	.	.	.	1.0	0.06	0.50	156	3	194.3
511	6M194	CHIKA	1	2			4	1	5.20	1.7	10.5	150	.	.	.	.	1.6	0.02	1.26	152	.	70.1
512	6M195	CHIKA	1	2			4	1	5.98	1.5	11.8	245	.	.	.	.	1.0	0.02	0.50	173	4	92.3
513	6M196	CHIKA	1	2			4	1	5.88	1.5	11.4	58	.	.	.	.	2.0	0.04	0.34	113	8	50.4
514	6M197	CHIKA	1	2			4	1	5.80	1.3	11.3	147	.	.	.	.	1.7	0.01	0.08	152	4	50.3
515	6M198	CHIKA	1	2			4	1	5.67	1.9	5.0	808	.	.	.	.	3.3	0.02	1.26	176	7	17.4
516	6M199	CHIKA	1	2			4	2	7.20	1.8	11.8	105	.	.	.	.	2.6	0.07	1.14	144	11	202.4
517	6M200	CHIKA	1	2			4	2	8.79	2.0	10.8	212	.	.	.	.	2.8	0.03	0.25	139	4	235.2
518	6M201	CHIKA	1	2			4	2	7.63	2.0	11.9	170	.	.	.	.	3.0	0.03	0.16	104	8	198.9
519	6M202	CHIKA	1	2			4	2	8.07	2.7	0.5	1487	0.7	.	.	.	2.8	0.07	0.01	151	2	53.2
520	6M203	CHIKA	1	2			4	2	8.64	3.1	0.9	1250	.	.	.	.	3.2	0.29	0.02	171	4	12.3
521	6M204	CHIKA	1	2			4	2	7.67	3.5	0.7	1547	.	.	.	.	2.8	0.61	0.04	159	5	20.4
522	6M205	MONGO	1	2		3	4	2	10.00	2.0	0.7	966	.	.	.	.	2.9	4.89	3.64	215	9	38.7
523	6M206	MONGO	1	2		3	4	2	12.04	2.6	0.6	2800	4.2	.	.	.	3.2	1.16	0.07	223	3	20.6
524	6M207	MONGO	1	2		3	4	2	10.18	2.7	0.8	954	.	.	.	.	3.5	1.07	0.34	218	3	22.9
525	6M208	MONGO	1	2			4	2	8.54	1.6	0.2	1025	.	.	.	.	3.2	4.39	1.75	133	5	121.4
526	6M209	MONGO	1	2			4	2	9.10	1.9	0.4	1533	.	.	.	.	3.5	5.16	1.81	158	8	113.5
527	6M210	MONGO	1	2			4	2	9.02	1.3	0.2	950	.	.	.	.	3.3	3.29	1.08	176	2	160.2
528	6M211	MONGO	1	2			4	2	5.91	1.5	.	1054	.	.	.	.	3.6	1.85	0.91	148	.	116.3
529	6M212	MONGO	1	2			4	2	9.84	1.3	0.2	903	.	.	.	.	3.7	1.69	0.55	130	4	90.7
530	6M213	MONGO	1	2			4	2	9.38	1.1	0.1	1632	.	.	.	.	3.4	2.97	1.52	162	1	101.3
531	6M214	MONGO	1	2			4	2	9.61	0.7	0.2	998	.	.	.	.	3.7	2.32	1.23	148	.	82.4
532	6M215	MONGO	1	2			4	2	9.72	0.5	0.1	1525	.	.	.	.	3.8	2.41	1.34	198	.	134.9
533	6M216	KANGA	1	1	2	3	1	1	2.05	2.1	0.1	2487	.	.	.	.	3.5	10.24	6.81	2511	4	22.1
534	6M217	KANGA	1	1	2	3	1	2	1.75	1.9	0.1	1933	.	.	.	.	3.6	19.79	8.28	2450	1	21.4
535	6M218	KANGA	1	1	1		1	2	1.64	3.0	0.1	3449	.	.	.	.	4.0	4.02	4.90	2372	3	23.5
536	6M219	KANGA	1	1	1		1	1	0.07	1.1	0.3	3007	.	.	.	.	3.6	5.21	2.47	4016	4	40.6
537	6M220	KANGA	1	1	1		1	2	1.61	1.9	0.1	2445	.	.	.	.	3.3	9.63	6.47	3926	3	13.9
538	6M221	KANGA	1	2		3	1	1	1.05	2.0	.	3281	.	.	.	.	3.6	18.21	7.67	2486	9	75.0
539	6M222	KANGA	1	2		3	1	2	0.78	2.5	0.1	5127	.	.	.	.	3.5	13.35	7.41	3511	17	70.8
540	6M223	KANGA	1	1	1	3	4	2	0.24	2.0	0.2	5949	.	.	.	.	4.0	11.22	7.22	4146	6	83.9
541	6M224	KANGA	1	1	4		4	1	0.68	2.0	0.1	7103	.	.	.	.	3.5	14.59	7.87	4728	2	42.9
542	6M225	KANGA	1	1	4		4	2	1.03	2.1	0.1	5755	.	.	.	.	4.0	15.11	7.70	3933	2	61.3
543	6M226	KANGA	1	2		3	4	1	6.22	1.9	0.1	6124	.	.	.	.	5.0	1.54	0.45	1728	8	84.8
544	6M227	KANGA	1	1	1		1	2	0.10	1.6	0.1	7981	.	.	.	.	4.5	13.01	7.32	4501	13	99.8
545	6M228	KANGA	1	1	1	3	1	2	2.51	2.0	0.1	7025	.	.	.	.	5.5	12.30	6.10	3936	10	32.1
546	6M229	KANGA	1	2		3	1	1	7.67	1.8	0.1	7448	.	.	.	.	4.5	2.20	1.04	1955	9	113.4
547	6M230	KANGA	1	1	4		1	2	0.06	1.9	0.2	6009	.	.	.	.	5.1	17.56	8.03	5122	4	80.4
548	6M231	KANGA	1	2		3	5	1	5.83	1.3	0.1	7050	3.2	.	.	.	5.4	2.66	2.46	5066	2	120.1
549	6M232	KANGA	1	1	2	3	1	2	0.02	1.9	0.1	7005	.	.	.	.	1.8	18.93	10.23	22211	6	95.3
550	6M233	KANGA	1	1	2	3	1	1	1.02	1.9	0.2	7982	.	.	.	.	2.5	14.81	8.64	9650	9	119.7
551	6M234	KANGA	1	1	2		1	1	0.25	2.1	.	6133	.	.	.	.	6.0	18.43	8.03	8453	3	82.4
552	6M235	KANGA	1	1	2		1	1	0.03	2.0	0.1	6576	.	.	.	.	2.4	16.22	8.77	21023	5	49.8
553	6M236	KANGA	1	1	2		1	1	0.04	1.8	0.2	8066	.	.	.	.	6.1	8.59	9.04	9651	8	90.4
554	6M237	KANGA	1	1	4		1	2	0.02	1.8	.	7550	.	.	.	.	3.3	16.56	9.20	17926	11	77.3
555	6M238	KANGA	1	1	4		1	1	0.16	1.9	0.1	8567	.	.	.	.	6.1	13.29	7.38	9831	7	39.4
556	6M239	KANGA	1	1	4		1	2	0.03	2.1	.	7151	.	.	.	.	6.0	20.75	9.62	10370	4	84.3
557	6M240	KANGA	1	1	2		1	2	0.01	2.2	0.1	6257	.	.	.	.	1.5	19.85	11.18	23180	9	61.2
558	6M241	KANGA	1	1	1		4	1	0.06	1.9	.	16572	1.2	.	.	.	6.5	14.79	8.79	20218	6	71.3
559	6M242	KANGA	1	1	2		1	2	0.10	1.7	0.1	7257	.	.	.	.	6.1	14.60	9.64	2157	11	52.4
560	6M243	KANGA	1	1	2		1	2	0.16	1.7	0.3	8125	.	.	.	.	6.4	12.72	6.02	19812	8	78.9

OBS	NO	SECTOR	RS	RK	RK2	ALT	DCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
561	6M244	KANGA	1	1	1		1	1	2.67	1.6	0.3	7117	.	.	.	.	6.6	16.21	9.58	2221.0	2	70.1
562	6M245	KANGA	1	2			3	2	5.02	1.8	0.4	5989	.	.	.	.	6.3	2.54	3.93	5106.0	.	87.4
563	6M246	KANGA	1	1	2		1	2	0.05	2.0	0.5	3106	.	.	.	.	6.5	16.68	10.08	24670.0	3	88.2
564	6M247	KANGA	1	2			4	2	5.67	1.5	5.0	1545	.	0.1	.	.	5.5	0.23	0.17	2658.0	4	43.1
565	6M248	KANGA	1	2			4	2	5.76	1.5	.	759	3.0	.	.	.	1.6	0.95	0.17	3075.0	7	161.4
566	6M249	KANGA	1	2			4	2	7.26	1.5	.	1539	5.2	.	.	.	3.6	1.06	0.78	2730.0	11	49.9
567	6M250	KANGA	1	2			4	2	6.43	1.7	1.5	1028	.	.	.	.	3.2	0.17	0.05	1070.0	4	13.5
568	6M251	KANGA	1	1	2		2	1	0.15	2.0	0.5	8129	.	.	.	.	5.0	17.99	10.29	35417.0	2	22.2
569	6M252	KANGA	1	1	4		2	2	0.04	1.9	0.3	7255	.	.	.	.	4.5	17.49	9.57	275.2	6	12.4
570	6M253	KANGA	1	1	4		2	2	0.04	1.8	0.1	7974	.	.	.	.	6.5	16.26	8.82	19876.0	4	33.4
571	6M254	KANGA	1	1	4		2	1	0.04	1.5	0.4	20087	.	.	.	.	7.5	15.16	8.22	9930.0	13	39.6
572	6M255	KANGA	1	1	4		2	2	0.24	1.9	0.3	14319	.	.	.	.	7.3	16.45	8.91	8920.0	8	19.7
573	6M256	KANGA	1	1	4		2	2	0.24	1.8	0.7	9156	.	.	.	.	5.8	15.36	7.89	13511.0	7	13.4
574	6M257	KANGA	1	3			1	2	0.34	1.7	0.5	13755	.	.	.	.	6.1	0.84	0.42	2342.0	2	45.4
575	6M258	KANGA	1	3			1	1	0.55	1.9	0.3	9558	.	.	.	.	5.8	0.13	0.07	127.0	.	27.9
576	6M259	KANGA	1	1	4		2	2	0.20	2.0	0.4	19982	.	.	.	.	8.2	15.71	8.20	3418.0	5	20.1
577	6M260	KANGA	1	1	4		2	1	0.15	2.3	0.1	9554	.	.	.	.	6.5	21.85	10.94	29832.0	3	36.7
578	6M261	KANGA	1	1	4		2	1	0.29	2.2	0.2	22247	8.1	.	.	.	10.4	5.18	3.25	5500.0	9	27.7
579	6M262	KANGA	1	1	4	3	2	2	0.79	2.0	0.5	12155	.	.	.	.	5.1	15.11	7.56	10013.0	13	14.3
580	6M263	KAPIR	1	1	3		3	2	1.47	1.9	0.6	8559	.	.	.	.	7.6	17.40	8.71	12136.0	7	5.7
581	6M264	KAPIR	1	1	3		3	2	1.10	2.5	0.2	1575	.	.	.	.	3.3	24.18	6.48	1071.0	2	25.3
582	6M265	KAPIR	1	1	3		3	1	1.79	2.0	0.9	1005	.	.	.	.	4.8	19.22	7.38	14270.0	8	17.4
583	6M266	KAPIR	1	1	3		3	2	0.62	1.7	0.7	1258	.	.	.	.	6.9	28.20	10.83	10500.0	9	16.9
584	6M267	KAPIR	1	1	3		3	2	1.04	1.9	0.5	1954	.	.	.	.	6.1	21.95	8.43	9973.0	3	41.5
585	6M268	KAPIR	1	1	3		3	1	1.52	2.0	0.6	750	.	.	.	.	3.9	20.05	7.70	11033.0	.	3.1
586	6M269	KAPIR	1	1	3		3	2	1.01	1.9	0.7	1166	8.4	.	.	.	3.2	23.78	6.37	957.0	3	20.3
587	6M270	KAPIR	1	1	3		3	2	3.22	2.0	2.4	2451	.	.	.	.	3.7	14.92	4.74	800.0	1	109.7
588	6M271	KAPIR	1	1	3		3	1	2.55	1.5	2.5	1969	4.0	0.4	.	.	3.6	16.45	6.05	761.0	5	90.6
589	6M272	KAPIR	1	1	3		3	1	2.16	1.7	2.0	1545	.	.	.	.	3.3	18.91	6.01	732.0	6	90.3
590	6M273	KAPIR	1	1	3		3	1	2.57	1.8	2.2	1985	.	0.6	.	.	2.0	15.36	6.24	853.0	8	121.4
591	6M274	KAPIR	1	1	3		3	1	3.41	1.7	2.4	2551	0.7	0.3	.	.	0.2	13.80	4.39	830.0	10	125.8
592	6M275	NSALA	1	1	3	3	4	1	2.55	2.1	0.1	2122	.	.	.	.	.	26.80	7.79	920.0	3	72.1
593	6M276	NSALA	1	2			4	2	6.66	2.2	2.0	1619	5.2	0.7	.	.	1.0	3.19	1.57	936.0	11	131.2
594	6M277	NSALA	1	2		3	4	2	6.84	1.9	0.1	1125	.	.	.	.	0.5	3.15	2.48	855.0	7	29.3
595	6M278	KONGW	1	2		3	4	2	10.14	2.3	0.2	1987	.	0.3	.	.	.	1.19	0.93	70.0	4	181.2
596	6M279	KONGW	1	2		3	4	2	9.37	1.8	0.1	1234	.	0.5	.	.	0.1	1.48	0.28	81.0	2	200.1
597	6M280	KONGW	1	2		3	4	2	9.08	2.1	0.1	2132	.	0.1	.	.	.	0.11	0.07	69.0	.	122.4
598	6M281	KONGW	1	2		3	4	1	6.35	2.3	.	1472	.	.	.	.	.	0.12	0.62	88.0	.	525.0
599	6M282	KONGW	1	2		3	4	1	9.23	1.9	0.9	725	.	.	.	.	2.5	0.14	1.12	350.0	2	63.5
600	6M283	KONGW	1	2		3	4	1	6.38	1.8	0.1	637	.	.	.	.	0.1	1.72	0.57	42.0	6	54.8
601	6M284	KONGW	1	2		3	4	1	7.65	2.1	.	460	3.1	.	.	.	.	1.30	0.56	30.0	1	502.8
602	6M285	KONGW	1	2		3	4	1	10.08	1.7	0.1	598	0.6	.	.	.	.	0.68	0.42	55.0	.	89.5
603	6M286	KONGW	1	2		3	4	1	9.01	1.8	.	708	6.8	0.3	.	.	.	0.38	0.16	345.0	4	151.6
604	6M287	KONGW	1	2		3	4	1	7.31	2.0	0.1	754	.	0.5	.	.	.	0.21	0.15	333.0	7	163.2
605	6M288	KONGW	1	2		3	4	2	5.54	1.7	0.1	725	.	0.3	.	.	.	1.02	0.37	342.0	4	119.7
606	6M289	KONGW	1	2		3	4	2	7.38	2.1	0.1	2435	.	.	.	.	.	1.12	0.27	25.0	.	163.4
607	6M290	KONGW	1	2		3	5	2	7.29	1.9	.	776	.	.	.	.	2.7	1.83	1.50	295.0	3	82.9
608	6M291	KONGW	1	2		3	4	1	8.49	2.0	.	3326	3.3	.	.	.	.	0.33	0.08	18.0	.	275.4
609	6M292	KONGW	1	2		3	4	1	6.48	2.3	0.1	2646	.	.	.	.	.	0.10	0.02	21.0	.	243.2
610	6M293	ALIGO	1	2		3	4	2	6.36	1.7	5.4	822	.	.	.	.	0.5	4.41	2.50	273.0	2	49.3
611	6M294	ALIGO	1	1	1		4	1	4.22	1.6	5.4	761	8.1	.	.	.	0.6	11.22	4.39	297.0	7	66.2
612	6M295	ALIGO	1	2		3	4	2	6.31	1.9	5.6	813	.	.	.	.	0.4	0.17	1.42	299.0	11	38.4
613	6M296	ALIGO	1	2		3	4	2	8.58	1.9	.	4042	2.0	.	.	.	0.3	1.02	1.13	45.0	2	362.9
614	6M297	ALIGO	1	2		3	4	2	8.55	2.1	0.2	3756	.	.	.	.	0.5	0.27	0.96	20.0	1	289.4
615	6M298	ALIGO	1	2		3	4	2	4.92	3.1	0.3	955	.	.	.	.	0.6	9.23	5.70	11106.0	8	104.5
616	6M299	ALIGO	1	2		3	4	2	5.10	1.9	1.0	660	2.4	.	.	.	2.9	6.74	3.00	663.0	5	83.2

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
617	6M300	ALIGO	1	2		3	4	2	6.46	1.7	0.1	370	.	.	.	.	.	6.69	4.57	10	4	369.9
618	6M301	ALIGO	1	2		3	4	2	5.33	1.4	0.2	245	.	.	.	.	.	0.06	0.04	24	7	552.0
619	6M302	ALIGO	1	2		3	4	2	8.76	1.0	.	483	.	.	.	.	2.6	0.40	0.13	14	9	268.4
620	6M303	ALIGO	1	2		3	4	1	8.53	1.3	0.1	412	0.6	.	.	.	2.5	0.12	0.04	30	3	171.4
621	6M304	ALIGO	1	2		3	4	2	2.55	1.9	0.2	703	.	.	.	.	.	0.11	0.03	15	.	68.3
622	6M305	ALIGO	1	1	1		4	1	4.22	2.8	0.1	945	.	.	.	.	1.5	21.15	7.50	2800	4	131.4
623	6M306	KADON	1	2		3	4	2	7.79	2.6	.	1059	5.2	.	.	.	1.3	1.03	1.97	1792	7	107.8
624	6M307	KADON	1	2			5	2	7.25	2.5	0.5	397	3.6	.	.	.	0.3	0.40	1.65	869	4	22.7
625	6M308	KADON	1	2			5	2	9.05	1.7	0.1	512	.	.	.	.	0.1	0.86	1.66	35	3	68.2
626	6M309	KADON	1	2			5	2	9.76	1.6	0.2	556	.	.	.	.	0.2	0.46	0.62	122	3	51.3
627	6M310	KADON	1	2			5	2	7.80	1.7	0.1	468	.	.	.	.	0.4	1.18	1.23	326	9	29.7
628	6M311	KADON	1	2			5	2	8.49	2.3	.	535	17.1	.	.	.	0.6	0.29	0.10	1170	8	56.7
629	6M312	KADON	1	2			4	2	1.96	1.1	0.9	803	.	.	.	.	2.6	0.80	1.20	671	13	46.3
630	6M313	KADON	1	2			1	2	11.17	0.9	0.1	2215	10.3	.	.	.	0.4	0.71	1.07	105	6	62.4
631	6M314	KADON	1	2			1	2	10.64	0.8	0.1	1192	.	.	.	.	0.1	1.02	0.35	21	11	89.3
632	6M315	MLIND	1	2			3	2	11.18	1.5	0.1	6078	.	.	.	.	.	0.70	1.37	263	8	126.7
633	6M316	MLIND	1	3			1	2	8.16	1.6	.	6970	.	.	.	.	.	0.51	1.38	279	.	102.1
634	6M317	MLIND	1	2			3	2	5.29	1.2	0.1	7129	.	.	.	.	.	0.26	1.48	273	.	158.4
635	6M318	MLIND	1	3			3	2	0.25	1.8	0.7	175	.	.	.	.	3.2	22.00	11.12	.	3	15.1
636	6M319	MLIND	1	3			3	2	0.30	1.8	0.7	255	.	.	.	.	3.1	23.17	11.48	.	.	40.3
637	6M320	MLIND	1	2			3	1	10.23	0.7	1.4	814	2.1	.	.	.	.	1.27	0.97	180	2	78.2
638	6M321	MLIND	1	3			1	1	4.22	1.4	.	7518	.	.	.	.	.	3.59	0.50	207	8	72.4
639	6M322	MLIND	1	3			1	1	3.45	1.0	0.1	7118	.	.	.	.	1.0	12.40	7.08	310	13	39.4
640	6M323	MLIND	1	3			1	1	5.26	1.0	0.2	8871	.	.	.	.	1.4	6.78	2.88	283	4	53.2
641	6M324	MLIND	1	3			1	1	3.63	1.0	0.1	8155	0.8	.	.	.	1.1	10.37	6.03	332	7	54.3
642	6M325	MLIND	1	3			1	1	4.60	1.4	0.1	6914	0.4	.	.	.	0.8	8.19	5.63	311	9	17.8
643	6M326	MLIND	1	3			1	1	4.85	1.9	0.2	7544	.	.	.	.	0.6	6.87	2.78	269	2	11.4
644	6M327	MLIND	1	3			1	1	3.83	2.7	0.1	8475	.	.	.	.	1.1	9.89	7.04	446	.	33.7
645	6M328	MLIND	1	3			1	2	8.69	1.1	0.2	8135	.	.	.	.	1.2	1.62	2.76	402	3	60.4
646	6M329	MLIND	1	3			1	2	3.61	1.3	0.1	8025	.	.	.	.	1.0	10.29	7.05	492	7	19.3
647	6M330	MLIND	1	3			3	1	8.42	0.9	0.2	6915	.	.	.	.	1.5	0.96	2.21	452	.	9.7
648	6M331	MLIND	1	3			1	1	5.72	1.5	.	8094	.	.	.	.	1.3	8.56	4.11	547	6	63.0
649	6M332	MLIND	1	3			1	1	6.23	1.5	0.2	7646	0.2	.	.	.	1.3	6.35	4.50	469	5	122.4
650	6M333	MLIND	1	3			1	2	3.32	1.5	0.1	7914	.	.	.	.	1.3	11.64	7.64	526	14	53.2
651	6M334	MLIND	1	3			1	2	9.61	2.1	.	5730	.	.	.	.	1.6	0.74	2.22	80	8	713.7
652	6M335	MLIND	1	3			1	2	6.56	2.9	.	14921	.	.	.	.	0.9	10.62	0.45	152	11	1507.9
653	6Y001	TUNDU	1	1	2		1	2	0.17	2.0	0.3	260	.	.	.	.	8.6	33.19	8.55	1281	4	7.6
654	6Y002	TUNDU	1	1	2		1	2	0.17	1.6	.	525	.	.	.	.	2.7	35.88	9.24	752	9	11.3
655	6Y003	TUNDU	1	1	2		1	2	0.33	2.0	.	264	.	.	.	.	7.5	31.61	9.29	891	8	3.8
656	6Y004	TUNDU	1	1	1		1	2	0.33	1.6	0.2	670	.	.	.	.	5.2	16.44	4.88	1400	11	37.7
657	6Y005	TUNDU	1	1	2		1	2	0.13	1.4	0.9	573	1.2	0.3	.	.	9.5	36.29	9.35	921	6	22.0
658	6Y006	TUNDU	1	1	1		1	2	4.49	1.9	0.2	795	.	.	.	.	4.5	9.57	2.94	442	9	45.3
659	6Y007	TUNDU	1	1	2		1	2	0.39	1.6	3.4	597	.	.	.	.	6.7	30.67	7.22	1662	4	37.7
660	6Y008	TUNDU	1	1	2		1	2	0.07	1.8	1.6	833	0.7	.	.	.	6.0	36.81	9.39	828	3	42.6
661	6Y009	TUNDU	1	1	2		1	1	0.22	2.1	3.4	625	.	.	.	.	8.4	36.35	9.76	499	8	26.7
662	6Y010	TUNDU	1	1	2		1	1	0.19	1.9	2.2	519	.	.	.	.	3.0	34.91	9.38	1002	10	15.3
663	6Y011	TUNDU	1	1	2		1	2	0.14	1.4	0.3	657	.	0.2	.	.	5.1	36.01	10.82	909	3	5.7
664	6Y012	TUNDU	1	1	2		3	1	0.67	1.2	2.5	820	.	.	.	.	7.0	34.93	9.38	1505	2	3.1
665	6Y013	TUNDU	1	1	2		1	2	0.19	0.8	1.3	687	2.1	.	.	.	16.3	30.16	8.57	1098	6	11.2
666	6Y014	TUNDU	1	1	2		4	2	0.29	2.0	0.7	697	.	.	.	.	24.3	35.62	9.56	1202	.	9.4
667	6Y015	TUNDU	1	1	2		2	2	0.44	2.1	0.2	873	.	.	.	.	17.3	35.94	10.21	1892	4	20.4
668	6Y016	TUNDU	1	1	2		1	1	0.01	1.8	1.3	932	.	.	.	.	5.2	37.12	11.02	3612	9	3.8
669	6Y017	TUNDU	1	1	2		4	1	0.19	1.6	1.8	1511	.	.	.	.	14.2	31.61	9.41	3129	5	11.3
670	6Y018	TUNDU	1	1	5		4	1	0.16	1.6	1.7	35	.	0.2	.	.	6.0	38.30	11.89	47	8	5.7
671	6Y019	TUNDU	1	1	2		4	1	0.18	1.8	7.3	10456	.	0.6	.	.	10.0	31.60	9.51	3983	6	5.7
672	6Y020	TUNDU	1	2		3	3	1	9.84	1.6	1.0	2076	.	0.2	.	.	3.3	4.09	1.25	156	5	233.4

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
673	6Y021	TUNDU	1	1	2		1	2	0.03	1.7	0.2	820	.	.	.	.	4.4	35.72	10.47	535	3	5.6
674	6Y022	TUNDU	1	1	2		1	2	0.05	2.4	0.8	1405	1.6	.	.	.	8.7	36.05	11.06	918	8	11.3
675	6Y023	TUNDU	1	1	2		1	2	.	2.8	.	891	0.2	.	.	.	4.1	37.19	11.95	753	9	.
676	6Y024	TUNDU	1	1	2		1	2	0.11	1.5	.	1250	.	.	.	.	11.3	37.06	11.37	401	4	7.1
677	6Y025	TUNDU	1	1	2		1	1	0.16	0.9	.	850	.	0.3	.	.	12.7	36.52	11.20	622	7	13.5
678	6Y026	TUNDU	1	1	2		1	1	0.04	1.2	.	788	.	.	.	.	6.1	37.24	11.42	707	7	26.9
679	6Y027	TUNDU	1	1	2		1	1	0.11	1.3	.	825	.	.	.	.	4.1	34.89	10.68	786	3	13.0
680	6Y028	TUNDU	1	1	2		1	2	0.06	1.6	.	1057	.	0.4	.	.	6.0	36.64	11.24	822	4	9.0
681	6Y029	TUNDU	1	1	2		1	2	2.22	1.8	2.7	1882	.	.	.	.	1.6	30.55	8.31	180	3	14.6
682	6Y030	SONGW	1	1	2		2	2	0.31	2.1	0.7	2275	.	.	.	.	9.8	35.60	9.70	282	8	103.5
683	6Y031	SONGW	1	1	2		4	2	0.45	2.6	7.9	16076	.	9.6	.	.	9.3	30.30	8.96	5958	9	13.0
684	6Y032	SONGW	1	1	2		4	2	0.17	2.2	7.0	885	0.8	0.8	.	.	13.4	34.91	10.39	3255	3	8.1
685	6Y033	SONGW	1	2			4	1	9.57	1.4	8.5	1668	1.6	0.3	.	.	9.0	10.58	3.70	4006	6	16.8
686	6Y034	SONGW	1	3			2	1	13.60	2.4	5.3	10935	.	4.5	.	.	10.5	5.06	2.68	2220	2	8.7
687	6Y035	SONGW	1	1	1		2	2	0.19	1.8	1.5	1793	.	0.2	.	.	10.6	32.97	10.28	3120	9	11.7
688	6Y036	SONGW	1	1	1		2	2	0.05	1.9	0.8	4233	.	.	.	.	8.9	34.19	11.07	4568	4	13.0
689	6Y037	SONGW	1	1	1		2	2	0.17	1.4	2.1	2852	0.9	.	.	.	2.4	33.53	10.45	2590	10	23.6
690	6Y038	SONGW	1	1	1		2	2	0.17	1.6	0.2	3291	.	0.3	.	.	8.4	32.59	10.11	2830	6	22.1
691	6Y039	SONGW	1	2			4	2	12.06	2.0	9.2	4309	10.8	.	.	.	3.0	3.31	1.34	1615	7	33.4
692	6Y040	SONGW	1	1	1		4	2	0.13	1.8	.	2583	5.2	0.7	.	.	5.3	33.80	10.74	2500	9	13.2
693	6Y041	SONGW	1	1	1		4	2	0.28	2.4	0.5	3797	.	.	.	.	10.2	31.69	10.72	4731	7	11.1
694	6Y042	SONGW	1	1	1		4	2	0.09	1.9	0.5	3012	.	.	.	.	7.2	33.39	10.61	3596	11	14.8
695	6Y043	SONGW	1	1	1		4	2	0.12	1.3	1.1	3550	.	.	.	.	8.3	34.58	10.44	3000	4	11.0
696	6Y044	SONGW	1	1	1		4	2	0.53	2.1	0.6	2889	.	0.4	.	.	5.4	33.84	10.75	4121	7	21.5
697	6Y045	SONGW	1	1	2		4	2	0.18	1.9	0.2	1900	.	0.5	.	.	5.2	32.71	10.90	6084	9	3.7
698	6Y046	SONGW	1	2			4	2	9.09	1.7	20.1	8161	47.1	2.3	.	.	4.1	0.90	0.33	3581	5	86.0
699	6Y047	SONGW	1	1	2		2	2	0.36	2.3	0.6	2745	16.2	1.2	.	.	4.5	37.79	8.59	2876	8	13.0
700	6Y048	SONGW	1	1	2		2	2	0.41	1.9	1.2	4237	.	.	.	.	1.6	31.73	9.33	552	3	22.5
701	6Y049	SONGW	1	1	2		2	2	0.59	2.2	0.6	5438	.	.	.	.	3.9	29.65	8.72	322	5	31.6
702	6Y050	SONGW	1	1	2		4	2	0.31	1.9	1.2	6029	1.8	1.0	.	.	3.5	31.83	9.36	898	7	14.3
703	6Y051	SONGW	1	1	2		4	2	0.40	1.4	2.1	7095	.	.	.	.	13.4	33.23	9.43	4343	10	9.3
704	6Y052	SONGW	1	1	2		4	2	0.49	0.9	1.9	4850	.	0.8	.	.	10.0	29.29	8.05	3788	8	13.0
705	6Y053	SONGW	1	3			4	2	1.15	2.1	1.4	4351	.	.	.	.	19.6	25.23	7.42	2892	6	23.5
706	6Y054	SONGW	1	1	2		4	2	0.60	1.4	3.6	7035	.	0.4	.	.	13.3	29.14	8.57	4900	9	11.1
707	6Y055	SONGW	1	1	2		4	2	1.88	1.8	1.1	6885	.	.	.	.	33.1	22.21	0.53	5462	11	11.0
708	6Y056	SONGW	1	1	2		4	2	0.41	2.2	2.5	7453	.	.	.	.	7.1	32.22	9.30	5753	7	9.3
709	6Y057	SONGW	1	1	2		4	2	1.16	2.1	2.2	10955	0.2	.	.	.	28.4	22.45	6.60	2468	8	3.2
710	6Y058	SONGW	1	3			4	2	3.10	1.3	6.9	14404	.	.	.	.	5.6	21.57	6.45	4600	3	14.9
711	6Y059	SONGW	1	1	2	6	4	2	0.95	2.0	1.3	10916	.	0.5	.	.	4.5	28.19	8.90	7531	9	9.3
712	6Y060	SONGW	1	1	2		4	2	0.30	1.8	1.6	8937	.	.	.	.	6.8	30.60	9.66	7556	8	5.6
713	6Y061	SONGW	1	1	2		1	2	0.28	2.0	2.8	6332	2.1	.	.	.	6.3	25.82	7.37	9780	4	11.2
714	6Y062	SONGW	1	1	2		1	2	0.15	1.4	2.7	4069	0.3	.	.	.	6.3	32.27	10.68	4811	6	11.2
715	6Y063	SONGW	1	1	2		1	2	0.40	1.0	3.2	5907	.	.	.	.	5.7	31.20	10.33	3896	14	5.3
716	6Y064	SONGW	1	1	2		1	2	0.25	1.6	2.3	8952	.	.	.	.	6.7	31.27	9.44	8469	8	7.4
717	6Y065	SONGW	1	1	2		1	1	0.51	1.8	3.2	5912	.	0.2	.	.	2.7	27.39	8.27	7015	6	15.6
718	6Y066	SONGW	1	1	2		1	1	0.51	2.2	4.8	6146	.	.	.	.	4.9	31.98	9.29	5360	9	9.3
719	6Y067	SONGW	1	1	2		1	1	0.31	2.1	4.0	7530	.	.	.	.	7.5	30.84	8.96	4775	11	7.1
720	6Y068	SONGW	1	1	2		1	1	0.18	0.9	2.7	8107	.	.	.	.	40.7	32.69	9.47	7612	5	11.2
721	6Y069	SONGW	1	1	2		1	2	0.15	0.9	4.7	4239	.	.	.	.	14.4	33.48	9.71	3953	4	24.8
722	6Y070	SONGW	1	3			4		1.74	1.3	6.3	4873	19.3	.	.	.	4.1	0.28	0.23	2271	3	18.6
723	6Y071	SONGW	1	1	2		1	1	0.49	1.0	2.2	4756	.	.	.	.	108.1	31.81	10.15	6285	7	5.6
724	6Y072	SONGW	1	1	2		1	1	1.23	1.2	4.3	8956	24.6	.	.	.	18.7	27.09	7.73	4996	7	18.9
725	6Y073	SONGW	1	1	2		1	1	0.15	4.0	1.1	3730	.	0.3	.	.	11.6	33.09	9.88	6026	9	7.6
726	6Y074	SONGW	1	1	2		1	1	0.21	2.0	2.3	3940	.	.	.	.	9.4	30.09	7.70	7467	6	11.4
727	6Y075	SONGW	1	1	2		1	1	0.18	2.4	0.8	4521	.	.	.	.	17.8	32.02	8.88	5355	3	56.0
728	6Y076	SONGW	1	1	2		1	2	0.18	3.1	1.1	3910	0.7	.	.	.	5.3	30.29	8.40	5648	2	16.9

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CO	CA	C	CE	CS	CR
729	6Y077	SONGW	1	1	2		1	2	0.14	1.4	0.5	2980	.	0.4	.	.	9.2	33.32	9.24	4724	8	10.0
730	6Y078	SONGW	1	1	2		1	2	0.18	2.1	1.8	3125	.	.	.	.	6.3	28.63	8.65	6558	12	58.5
731	6Y079	SONGW	1	1	2		1	2	0.11	1.8	.	3823	.	.	.	.	3.4	31.64	9.76	6859	4	7.6
732	6Y080	NAMAN	1	2			5	2	10.64	1.4	1.2	1115	.	.	.	.	4.1	5.23	1.66	85	9	36.1
733	6Y081	NAMAN	1	2			5	2	9.54	1.4	1.4	860	.	.	.	.	3.0	0.74	0.90	150	4	179.6
734	6Y082	NAMAN	1	2			5	1	10.86	2.0	2.4	1238	.	.	.	.	15.4	2.65	0.88	545	2	26.5
735	6Y083	NAMAN	1	2			5	1	10.61	1.1	1.6	1095	.	.	.	.	18.9	2.29	1.53	242	.	22.2
736	6Y084	NAMAN	1	2			5	1	11.67	2.1	2.9	933	.	.	.	.	7.5	1.45	0.97	138	1	56.7
737	6Y085	NAMAN	1	2			5	3	11.44	1.5	2.3	515	.	.	.	.	12.3	2.23	1.08	200	.	16.7
738	6Y086	NAMAN	1	3			5		5.80	0.9	2.2	149	.	.	.	.	3.7	0.09	0.06	214	.	656.0
739	6Y087	NAMAN	1	2			5	1	11.15	1.1	1.3	983	.	.	.	.	7.8	2.33	0.67	410	.	51.3
740	6Y088	NAMAN	1	2			5	1	11.13	1.8	1.5	775	.	.	.	.	12.2	2.20	0.84	220	3	111.7
741	6Y089	NAMAN	1	2			1	1	11.56	2.1	2.2	484	.	.	.	.	5.5	1.37	0.78	618	.	150.6
742	6Y090	NAMAN	1	2			5	1	10.88	1.3	0.6	699	0.7	.	.	.	3.3	1.11	0.44	116	.	140.0
743	6Y091	NAMAN	1	2			5	1	6.73	1.1	1.8	1344	20.9	.	.	.	.	4.28	1.20	267	.	156.9
744	6Y092	NAMAN	1	1	2		5	1	7.22	1.5	1.0	550	.	0.8	.	.	1.2	0.81	1.51	120	.	165.7
745	6Y093	NAMIN	1	3			1	1	0.81	2.1	1.4	725	.	.	.	.	6.4	34.41	9.88	30	3	180.3
746	6Y094	NAMIN	1	3			3	2	0.78	1.3	0.8	575	0.1	0.6	.	.	.	0.02	0.01	100	1	129.3
747	6Y095	NAMIN	1	3			3	2	0.62	1.1	1.2	902	.	.	.	.	9.8	0.06	0.02	260	.	159.1
748	6Y096	NAMIN	1	3			1	1	7.14	1.1	.	460	.	2.2	.	.	.	4.88	1.41	99	2	521.8
749	6Y097	NAMIN	1	3			1	1	7.95	1.4	0.2	820	.	.	.	.	5.3	2.86	1.04	364	2	193.4
750	6Y098	NAMIN	2	3					7.64	2.1	2.2	405	.	.	.	.	.	2.45	0.64	138	.	220.5
751	6Y099	NAMIN	1	3			1	1	9.06	2.2	2.8	435	.	0.4	.	.	1.2	0.84	0.20	191	2	153.6
752	6Y100	NAMIN	1	3			1	1	9.42	1.4	0.8	393	.	.	.	.	16.4	2.12	0.21	522	.	141.9
753	6Y101	NAMIN	1	3			1	1	3.75	1.8	.	722	.	.	.	.	5.8	0.16	0.05	31	.	548.2
754	6Y102	NAMIN	1	3			1	1	3.01	1.7	.	404	.	.	.	.	6.7	0.13	0.04	20	1	363.7
755	6Y103	NAMIN	1	3			1	1	7.37	2.1	0.3	573	.	0.2	.	.	11.5	0.62	0.19	221	.	293.9
756	6Y104	NAMIN	2	3					1.24	1.4	0.4	309	.	0.4	.	.	1.9	0.10	0.03	133	3	133.4
757	6Y105	NAMIN	1	3			1	1	7.07	1.5	0.3	220	1.5	0.3	.	.	0.7	0.58	0.18	350	.	128.6
758	6Y106	NAMIN	1	3			1	1	9.40	1.8	0.7	578	0.9	.	.	.	10.7	0.54	0.17	196	.	151.1
759	6Y107	NAMIN	1	3			1	1	10.46	2.1	0.5	450	.	.	.	.	.	0.14	0.04	118	.	57.7
760	6Y108	NAMIN	1	3			1	1	5.49	1.3	1.2	302	.	.	.	.	.	0.28	0.25	81	1	1066.2
761	6Y109	NAMIN	1	3			1	1	3.99	1.6	1.0	488	.	.	.	.	15.8	0.37	0.11	230	1	183.3
762	6Y110	NAMIN	1	3			1	1	5.39	2.1	0.8	309	.	.	.	.	26.5	0.18	0.05	200	2	393.7
763	6Y111	NAMIN	1	3			1	1	8.76	1.8	0.6	275	.	0.2	.	.	12.7	0.66	0.02	25	.	353.5
764	6Y112	NAMIN	1	3			1	1	8.67	0.9	1.1	359	.	0.3	.	.	2.8	0.59	0.18	174	.	481.6
765	6Y113	NAMIN	1	3			1	1	7.96	1.3	0.9	404	.	.	.	.	1.6	0.55	0.50	55	3	355.0
766	6Y114	NAMIN	1	3			3	2	0.40	1.6	0.6	577	.	.	.	.	6.2	0.03	0.01	384	1	177.6
767	6Y115	TUNDU	1	1	2		1	2	0.05	2.4	0.3	782	.	.	.	.	11.1	36.11	10.37	643	4	92.6
768	6Y116	TUNDU	1	1	2		1	2	0.10	2.1	0.4	404	.	.	.	.	5.1	36.32	10.43	597	3	15.3
769	6Y117	TUNDU	1	1	2		1	1	0.12	2.0	0.9	340	.	.	.	.	22.6	35.32	9.82	657	1	7.7
770	6Y118	TUNDU	1	1	2		1	2	0.09	1.8	.	326	.	0.8	.	.	4.8	35.99	10.37	992	7	9.6
771	6Y119	TUNDU	1	1	2		1	2	0.30	1.2	1.8	452	.	0.5	.	.	5.1	35.88	11.17	637	.	9.6
772	6Y120	TUNDU	1	1	2		1	2	0.08	1.5	0.6	557	.	.	.	.	10.0	35.95	10.85	388	3	16.3
773	6Y121	TUNDU	1	1	2		2	2	0.13	2.0	2.3	319	.	.	.	.	71.7	35.44	10.35	597	6	5.8
774	6Y122	TUNDU	1	1	2		2	2	0.05	2.2	2.1	873	.	0.5	.	.	5.0	34.19	10.31	750	10	23.1
775	6Y123	TUNDU	1	1	2		2	2	0.10	2.4	.	1288	.	0.3	.	.	3.2	36.71	11.07	1133	2	26.0
776	6Y124	TUNDU	1	1	2		2	2	0.12	1.9	1.1	538	.	.	.	.	17.6	32.28	9.80	663	4	16.2
777	6Y125	TUNDU	1	1	2		2	2	0.19	3.0	2.5	1835	.	.	.	.	16.7	33.19	10.07	2183	3	11.1
778	6Y126	TUNDU	1	1	2		2	2	0.13	3.9	3.0	3282	2.3	.	.	.	13.7	30.80	9.35	2093	7	19.1
779	6Y127	TUNDU	1	1	2		2	2	0.01	1.8	.	459	.	.	.	.	4.8	36.69	11.83	672	2	3.8
780	6Y128	TUNDU	1	1	2		2	2	0.05	2.1	0.3	693	0.7	.	.	.	7.0	34.81	10.60	521	9	7.5
781	6Y129	TUNDU	1	1	2		2	2	0.15	0.9	0.6	534	.	0.4	.	.	.	35.85	10.92	352	4	10.6
782	6Y130	TUNDU	1	1	2		2	2	0.05	1.5	0.4	427	.	.	.	.	23.0	33.54	10.21	300	2	23.1
783	6Y131	TUNDU	1	1	2		2	2	0.06	2.1	.	655	.	0.5	.	.	1.0	37.10	11.30	726	7	3.8
784	6Y132	TUNDU	1	1	2		2	2	0.04	11.9	0.2	478	.	1.0	.	.	5.7	37.07	11.44	559	5	5.8

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
785	6Y133	TUNDU	1	1	2		2	1	0.05	2.4	0.5	605	.	.	.	.	10.6	34.98	10.00	210	2	64.5
786	6Y134	TUNDU	1	1	2		2	2	0.12	1.5	0.3	808	.	.	.	.	2.8	35.44	10.13	98	6	38.2
787	6Y135	TUNDU	1	1	2		2	1	0.05	2.3	0.5	888	.	.	.	.	9.1	35.02	10.01	390	.	40.5
788	6Y136	TUNDU	1	1	2		4	2	5.77	1.8	0.9	1139	.	1.8	.	.	19.1	6.15	3.44	123	3	76.4
789	6Y137	TUNDU	1	1	2		4	2	6.81	1.4	1.6	505	.	1.0	.	.	22.3	4.79	1.49	172	4	70.1
790	6Y138	TUNDU	1	1	2		2	2	0.25	1.2	0.2	775	.	.	.	.	5.5	34.01	9.35	647	.	35.6
791	6Y139	TUNDU	1	1	2		2	2	0.10	1.9	.	1050	.	.	.	.	5.7	36.53	11.01	395	1	10.9
792	6Y140	TUNDU	1	1	2		2	1	0.87	2.1	0.6	920	.	.	.	.	26.3	33.74	10.27	422	.	14.2
793	6Y141	TUNDU	1	1	2		2	1	0.04	2.4	.	650	.	.	.	.	11.9	37.56	11.61	561	4	5.8
794	6Y142	TUNDU	1	1	2		2	2	0.20	1.9	0.7	720	.	.	.	.	6.4	35.80	10.90	434	7	20.9
795	6Y143	TUNDU	1	1	2		2	2	0.13	2.3	.	463	.	.	.	.	3.4	34.44	10.13	553	2	5.8
796	6Y144	TUNDU	1	1	2		2	1	0.12	10.4	.	395	.	3.1	.	.	5.0	37.66	10.66	741	1	5.8
797	6Y145	TUNDU	1	1	2		2	2	0.19	4.1	.	4820	.	0.8	.	.	6.9	36.22	10.25	702	6	11.3
798	6Y146	CHILW	1	1	3		1	2	8.54	1.8	1.4	12137	12.6	1.7	.	.	1.3	1.30	0.20	2788	4	63.4
799	6Y147	CHILW	1	1	3		1	1	1.66	2.3	2.3	24349	.	.	.	.	15.7	24.43	7.04	776	4	50.7
800	6Y148	CHILW	1	1	3		1	1	6.64	1.8	1.0	7890	.	1.0	.	.	3.5	5.24	1.34	618	2	36.2
801	6Y149	CHILW	1	1	3		1	1	6.81	1.5	1.4	20505	.	0.8	.	.	6.0	7.03	2.11	464	8	29.3
802	6Y150	CHILW	1	1	3		1	1	7.25	2.1	1.0	15020	.	1.5	.	.	7.6	5.01	1.34	539	6	41.5
803	6Y151	CHILW	1	3			3	2	0.81	1.8	2.0	17282	.	.	.	.	3.1	3.54	0.35	945	23	29.0
804	6Y152	CHILW	1	1	2		1	2	1.88	2.1	0.3	7991	.	0.3	.	.	4.8	20.31	8.75	981	3	16.7
805	6Y153	CHILW	1	1	2		1	2	0.16	1.4	0.2	10530	.	.	.	.	1.6	36.06	10.92	850	3	22.9
806	6Y154	CHILW	1	1	2		1	1	0.17	1.9	1.6	3484	.	.	.	.	3.4	32.69	10.09	573	6	29.0
807	6Y155	CHILW	1	1	2		1	1	0.26	2.4	0.7	19730	.	0.3	.	.	13.3	36.03	10.91	1620	8	46.6
808	6Y156	CHILW	1	1	2		1	1	0.42	3.0	0.3	20509	.	0.2	.	.	5.2	30.92	9.01	2412	4	29.9
809	6Y157	CHILW	1	1	2		1	1	0.64	1.8	1.2	10228	.	.	.	.	1.3	21.50	6.51	1788	8	33.5
810	6Y158	CHILW	1	1	2		1	1	0.08	4.9	0.2	35772	.	.	.	.	4.1	32.48	10.02	2550	11	25.4
811	6Y159	CHILW	1	1	2		1	1	0.34	2.1	0.3	4881	.	.	.	.	11.4	35.34	10.70	2815	8	27.1
812	6Y160	CHILW	1	1	2		1	1	0.47	2.5	6.2	23235	.	0.2	.	.	19.8	29.12	8.26	516	4	12.3
813	6Y161	CHILW	1	1	2		1	1	0.87	1.8	21.6	17850	.	.	.	.	33.3	32.97	9.90	1087	11	18.1
814	6Y162	CHILW	1	1	2		1	1	0.23	1.9	9.4	9350	.	.	.	.	26.1	33.04	9.90	718	12	23.7
815	6Y163	CHILW	1	1	2		1	1	0.23	1.1	7.2	2187	.	.	.	.	18.3	35.23	10.00	513	3	21.1
816	6Y164	CHILW	1	1	2		1	1	0.21	2.2	5.0	5855	.	.	.	.	20.0	35.16	9.98	322	5	35.9
817	6Y165	CHILW	1	1	2		1	1	0.20	2.4	8.2	1859	.	.	.	.	26.3	35.53	10.08	586	1	33.7
818	6Y166	CHILW	1	1	2		1	1	0.10	2.8	1.2	5073	.	.	.	.	21.4	37.56	10.38	98	6	42.2
819	6Y167	CHILW	1	1	2		1	1	1.67	1.2	5.5	2055	.	.	.	.	29.3	24.42	9.26	683	8	24.8
820	6Y168	CHILW	1	1	2		1	1	0.64	1.3	3.7	1880	.	.	.	.	16.3	33.12	9.90	260	.	13.3
821	6Y169	CHILW	1	1	2		1	1	0.31	1.8	5.5	2757	.	0.3	.	.	20.5	34.15	9.69	485	7	56.7
822	6Y170	CHILW	1	1	2		1	1	0.22	2.2	4.9	3851	.	.	.	.	29.3	36.37	10.32	522	6	29.3
823	6Y171	CHILW	1	1	2		1	1	0.14	1.1	10.6	2550	.	.	.	.	25.0	36.15	10.27	475	9	21.7
824	6Y172	CHILW	1	1	2		1	1	1.09	1.9	13.8	1401	.	.	.	.	5.3	29.35	9.01	490	5	29.0
825	6Y173	CHILW	1	1	2		1	1	8.26	3.0	3.4	1720	.	.	.	.	6.2	7.40	1.94	650	9	22.5
826	6Y174	CHILW	1	1	2		1	1	0.16	6.8	2.3	1862	.	.	.	.	5.0	35.96	9.40	176	4	34.4
827	6Y175	CHILW	1	1	2		1	1	0.15	2.1	2.8	2057	.	.	.	.	1.3	32.76	8.56	561	8	26.3
828	6Y176	CHILW	1	1	2		1	1	0.17	1.4	11.9	1972	.	.	.	.	8.0	35.72	10.40	950	4	32.7
829	6Y177	CHILW	1	1	2		1	1	0.09	2.4	2.5	1807	.	.	.	.	3.4	35.98	10.48	605	3	28.5
830	6Y178	CHILW	1	1	2		1	1	0.09	1.6	3.0	2369	.	.	.	.	6.6	37.77	11.18	462	.	29.0
831	6Y179	CHILW	1	1	2		1	1	0.73	1.8	4.6	3077	.	.	.	.	17.8	31.87	9.53	783	4	32.3
832	6Y180	CHILW	1	1	2		1	1	0.12	2.1	10.7	3566	.	0.6	.	.	11.3	36.01	10.32	1359	5	14.5
833	6Y181	CHILW	1	1	2		1	1	0.05	1.7	2.0	1983	.	.	.	.	4.7	34.74	9.95	1856	6	28.6
834	6Y182	CHILW	1	1	2		1	1	0.03	1.5	1.5	1250	.	.	.	.	4.5	31.58	9.71	1334	11	6.9
835	6Y183	CHILW	1	1	2		1	1	0.09	1.0	2.8	1537	.	.	.	.	4.2	37.32	10.83	1591	4	15.0
836	6Y184	CHILW	1	1	2		1	1	0.21	0.9	1.4	967	.	.	.	.	4.7	38.28	10.83	1123	9	11.3
837	6Y185	CHILW	1	1	2		1	1	0.23	2.6	2.3	996	.	.	.	.	4.4	25.08	7.28	509	3	14.9
838	6Y186	CHILW	1	1	2		1	1	0.05	3.0	2.0	950	.	.	.	.	5.6	32.90	9.55	456	.	10.7
839	6Y187	CHILW	1	1	2		1	1	0.03	3.4	2.2	940	.	.	.	.	5.3	31.33	10.92	656	2	17.9
840	6Y188	CHILW	1	1	2		1	1	0.06	3.1	2.4	1047	.	.	.	.	5.3	31.58	9.17	471	.	14.0

OBS	NO	SECTOR	RS	RK	RK2	ALT	DCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
841	6Y189	CHILW	1	1	2		1	1	0.02	1.5	4.6	1513	.	.	.	.	4.3	22.99	10.54	719	2	27.3
842	6Y190	CHILW	1	1	2		1	1	0.14	1.4	1.3	2894	.	.	.	.	4.1	49.19	10.38	411	2	17.9
843	6Y191	CHILW	1	1	2		1	2	0.43	2.4	14.5	2019	.	.	.	.	3.8	32.60	8.66	894	4	28.6
844	6Y192	CHILW	1	1	2		1	2	0.20	1.7	2.5	850	.	.	.	.	4.1	35.85	9.52	317	3	23.1
845	6Y193	CHILW	1	1	2		1	2	0.10	1.3	1.4	556	.	.	.	.	4.4	35.70	10.47	580	8	11.0
846	6Y194	CHILW	1	1	2		1	1	0.05	1.6	0.6	519	.	.	.	.	4.1	38.50	11.29	542	4	5.4
847	6Y195	CHILW	1	1	2		1	1	1.59	1.1	2.7	551	0.6	.	.	.	3.8	28.74	8.55	899	.	11.5
848	6Y196	CHILW	1	1	2		1	1	0.13	1.6	1.7	505	.	.	.	.	4.1	36.62	10.74	867	9	7.3
849	6Y197	CHIKA	1	2			3	1	9.70	1.8	.	2836	.	.	.	.	1.9	10.39	0.11	132	4	180.4
850	6Y198	CHIKA	1	3			1	1	6.73	2.0	0.3	2017	.	.	.	.	2.3	9.51	2.90	75	5	154.1
851	6Y199	MONGO	1	2			4	1	10.29	1.9	0.2	380	.	.	.	.	1.9	5.27	1.48	11	3	9.0
852	6Y200	MONGO	1	2			4	2	9.87	2.1	0.4	3120	.	.	.	.	1.5	6.22	1.93	1885	1	105.9
853	6Y201	KANGA	1	1	3		1	1	0.31	1.5	0.4	7123	.	.	.	.	3.8	12.68	6.23	10408	12	53.6
854	6Y202	KANGA	1	1	3		1	1	1.29	1.1	.	1207	.	.	.	.	6.1	15.73	6.98	9130	14	33.8
855	6Y203	KANGA	1	1	3		1	1	0.69	1.9	.	6918	.	.	.	.	5.4	16.36	8.40	10870	8	54.1
856	6Y204	KANGA	1	1	3		1	1	0.91	2.3	.	6235	.	.	.	.	4.4	15.09	7.75	8375	4	56.6
857	6Y205	KANGA	1	1	3		1	1	1.19	1.5	.	6485	.	.	.	.	6.5	15.67	8.04	8850	9	49.0
858	6Y206	KANGA	1	1	3		1	1	1.19	1.3	0.3	5515	.	.	.	.	5.0	13.79	6.84	8021	3	2.3
859	6Y207	KANGA	1	1	3		1	1	0.59	1.3	.	6018	.	.	.	.	6.1	15.24	7.83	9110	8	22.6
860	6Y208	KANGA	1	1	3		1	1	0.57	1.5	.	6025	.	.	.	.	8.2	17.11	8.79	7308	4	29.7
861	6Y209	KANGA	1	1	3		1	1	1.77	1.7	.	5459	.	.	.	.	6.0	16.55	7.67	11000	5	24.3
862	6Y210	KANGA	1	1	3		1	1	1.12	1.4	.	4458	.	.	.	.	10.1	17.64	8.94	9271	9	14.7
863	6Y211	KANGA	1	1	3		1	1	0.87	1.4	.	4385	.	.	.	.	8.5	15.49	8.84	9701	5	37.5
864	6Y212	KANGA	1	1	3		1	1	1.00	1.2	.	5418	.	.	.	.	9.2	15.25	7.74	7491	6	42.3
865	6Y213	KANGA	1	1	3		1	1	0.81	1.2	.	5587	0.2	.	.	.	8.6	14.53	7.46	8300	4	46.5
866	6Y214	KANGA	1	1	3		1	1	0.65	1.9	.	6019	.	.	.	.	8.2	14.54	6.00	5585	8	40.0
867	6Y215	KANGA	1	1	3		1	1	0.82	1.6	.	5458	.	.	.	.	8.4	15.08	7.74	7381	2	11.3
868	6Y216	KANGA	1	1	3		1	1	0.68	2.1	.	4987	.	.	.	.	7.6	14.67	5.26	8407	2	2.9
869	6Y217	KANGA	1	1	3		1	1	1.41	2.0	0.3	6550	.	.	.	.	4.8	14.89	7.63	4832	.	17.2
870	6Y218	KANGA	1	1	3		1	1	1.02	1.5	.	6125	.	.	.	.	6.1	17.61	8.23	6073	3	21.5
871	6Y219	KANGA	1	1	3		1	1	1.67	1.0	.	6453	.	.	.	.	6.7	15.15	7.70	3722	.	12.0
872	6Y220	KANGA	1	1	3		1	1	0.56	1.2	0.5	6016	.	.	.	.	6.3	18.64	9.57	5789	.	2.0
873	6Y221	KANGA	1	1	3		1	1	3.90	1.0	.	7120	.	.	.	.	4.6	10.89	6.02	5787	8	26.8
874	6Y222	KANGA	1	1	3		1	1	1.09	2.1	.	7135	.	.	.	.	5.3	14.15	7.26	6320	16	21.1
875	6Y223	KANGA	1	1	3		1	1	0.04	2.1	.	7484	.	.	.	.	5.2	14.73	7.56	7070	9	13.8
876	6Y224	KANGA	1	1	3		1	1	0.09	2.0	.	6514	.	.	.	.	6.1	11.35	5.83	6116	6	25.7
877	6Y225	KANGA	1	1	3		1	1	0.17	1.3	.	6016	.	.	.	.	6.6	11.96	6.31	8973	8	7.1
878	6Y226	KANGA	1	1	3		1	1	1.19	0.8	.	6419	.	.	.	.	5.2	11.63	6.37	8287	9	37.6
879	6Y227	KANGA	1	1	3		1	1	3.37	0.7	0.3	7085	.	.	.	.	3.9	12.13	6.41	13461	10	11.5
880	6Y228	KANGA	1	1	3		1	1	1.10	1.1	.	6135	.	.	.	.	4.9	15.05	7.28	6792	4	44.3
881	6Y229	KANGA	1	1	3		1	1	2.25	2.1	.	7025	.	.	.	.	5.4	13.13	6.74	9874	13	54.3
882	6Y230	KANGA	1	1	3		1	1	0.10	2.0	.	7953	.	.	.	.	4.4	17.07	8.77	13954	9	33.6
883	6Y231	KANGA	1	1	3		1	1	0.69	1.8	.	8874	.	.	.	.	4.8	12.82	8.11	26598	8	75.0
884	6Y232	KANGA	1	1	3		1	1	0.76	1.4	.	6816	0.1	.	.	.	4.5	14.00	7.19	18670	5	55.1
885	6Y233	KANGA	1	1	3		1	1	1.28	1.9	1.6	9989	.	.	.	.	2.7	4.31	2.21	21006	14	72.9
886	6Y234	KANGA	1	1	3		1	1	0.54	1.1	.	14170	.	.	.	.	4.1	17.85	8.43	9562	6	58.3
887	6Y235	KANGA	1	1	3		1	1	1.42	1.9	1.2	10153	.	.	.	.	2.8	3.37	3.30	26380	15	87.7
888	6Y236	KANGA	1	1	3		1	1	1.32	1.5	.	13957	.	.	.	.	1.6	14.61	8.39	10613	18	76.0
889	6Y237	KANGA	1	1	3		1	1	1.48	1.4	.	14855	.	.	.	.	1.1	12.69	7.79	11680	9	27.6
890	6Y238	KANGA	1	1	3		1	1	0.41	1.1	0.4	10059	.	.	.	.	1.3	13.59	7.80	9756	4	48.1
891	6Y239	KANGA	1	1	3		1	1	1.34	1.8	.	10598	.	.	.	.	2.6	14.47	8.31	10010	4	34.3
892	6Y240	KANGA	1	1	3		1	1	2.10	2.0	0.5	9535	.	.	.	.	1.0	11.61	6.67	8225	8	53.9
893	6Y241	KANGA	1	1	3		1	1	0.61	2.5	.	15651	.	.	.	.	1.0	8.10	5.50	8558	11	323.5
894	6Y242	KANGA	1	1	3		1	1	0.95	1.8	.	9894	.	.	.	.	3.3	13.09	7.52	10211	18	67.1
895	6Y243	KANGA	1	1	3		1	1	0.96	1.8	.	14980	.	.	.	.	2.8	13.34	7.66	11180	13	58.6
896	6Y244	KANGA	1	1	3		1	1	0.76	2.1	.	12284	.	.	.	.	4.6	14.85	7.68	8967	14	61.2

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
897	6Y245	KANGA	1	1	3		1	1	0.56	2.0	.	15891	.	.	.	.	3.1	12.21	7.01	11205	8	51.9
898	6Y246	KANGA	1	1	3		1	1	2.50	1.8	2.0	12131	.	.	.	.	6.1	5.36	2.06	17987	9	97.5
899	6Y247	KANGA	1	1	3		1	1	1.60	1.8	2.7	11475	.	.	.	.	6.5	6.69	2.00	18472	4	96.0
900	6Y248	KANGA	1	1	3		1	1	1.77	1.8	0.2	21670	.	.	.	.	4.4	11.46	7.87	44185	6	26.3
901	6Y249	KANGA	1	1	3		1	1	0.72	1.5	.	12857	.	.	.	.	8.2	12.90	7.36	12561	8	82.3
902	6Y250	KANGA	1	1	3		1	1	0.67	1.5	.	15170	.	.	.	.	11.6	11.72	6.68	12070	9	75.5
903	6Y251	KANGA	1	1	3		1	1	0.57	1.7	.	10725	.	.	.	.	44.7	12.62	7.15	13984	11	86.7
904	6Y252	KANGA	1	1	3		1	1	0.05	1.3	.	14127	.	.	.	.	7.5	16.34	9.32	12273	6	90.0
905	6Y253	KANGA	1	1	3		1	1	1.56	1.8	1.9	9893	.	.	.	.	3.3	8.31	2.64	19355	12	106.7
906	6Y254	KANGA	1	1	3		1	1	0.79	1.1	.	8125	.	.	.	.	6.4	15.14	8.42	14191	6	73.4
907	6Y255	KANGA	1	1	3		1	1	1.38	1.2	.	9203	.	.	.	.	5.1	13.51	7.52	12925	8	82.1
908	6Y256	KANGA	1	1	3		1	1	0.67	1.1	.	8511	.	.	.	.	5.3	11.01	7.56	11783	12	80.7
909	6Y257	KANGA	1	1	3		1	1	1.10	1.2	.	9805	.	.	.	.	4.7	14.79	7.69	10513	4	92.5
910	6Y258	KANGA	1	1	3		1	1	0.87	1.9	.	9514	.	.	.	.	3.4	14.69	8.18	11121	6	96.7
911	6Y259	KANGA	1	1	3		1	1	0.10	1.6	.	9017	.	.	.	.	4.0	17.38	9.67	15415	9	86.3
912	6Y260	KANGA	1	1	3		1	1	1.52	1.1	.	8005	.	.	.	.	5.2	16.52	8.15	14505	4	68.2
913	6Y261	KANGA	1	1	3		1	1	0.70	1.5	.	9116	.	.	.	.	4.4	15.69	7.73	21402	9	88.2
914	6Y262	KANGA	1	1	1		1	1	0.44	1.9	.	9918	.	.	.	.	4.2	20.40	8.62	17233	11	94.4
915	6Y263	KANGA	1	1	1		1	1	0.44	1.6	.	8494	.	.	.	.	4.6	15.26	8.49	14639	4	104.8
916	6Y264	KANGA	1	1	1		1	1	0.70	2.0	.	8918	.	.	.	.	2.6	14.73	8.20	9127	8	73.3
917	6Y265	KANGA	1	1	1		1	1	0.58	1.3	.	7317	.	.	.	.	3.3	15.72	7.88	11078	4	51.6
918	6Y266	KANGA	1	1	1		1	1	0.81	1.0	.	8316	.	.	.	.	3.0	15.34	9.37	7426	3	75.0
919	6Y267	KANGA	1	1	1		1	1	0.18	0.7	.	8750	.	.	.	.	1.9	6.43	4.87	9690	2	58.5
920	6Y268	KANGA	1	1	1		1	1	1.24	0.5	.	7734	.	.	.	.	2.3	16.17	8.20	9193	9	74.3
921	6Y269	KANGA	1	1	3		1	1	2.61	1.1	.	9850	.	.	.	.	1.5	14.01	7.04	7635	11	81.1
922	6Y270	KANGA	1	1	3		1	1	0.87	1.2	.	8451	.	.	.	.	2.0	15.60	8.68	10386	9	38.0
923	6Y271	KANGA	1	1	3		1	1	0.72	1.8	.	8085	.	.	.	.	1.7	18.16	7.30	7329	9	27.9
924	6Y272	KANGA	1	1	1		1	1	0.97	1.6	.	8715	.	.	.	.	2.9	14.72	8.19	8761	7	32.7
925	6Y273	KANGA	1	1	1		1	1	1.17	1.5	.	8231	.	.	.	.	2.2	15.27	7.70	6182	7	42.3
926	6Y274	KANGA	1	1	1		1	1	1.61	1.9	.	7203	.	.	.	.	2.8	14.68	8.17	7332	6	36.5
927	6Y275	KANGA	1	1	1		1	1	2.25	1.8	.	8135	.	.	.	.	2.3	12.66	6.40	5127	4	30.0
928	6Y276	KANGA	1	1	1		1	1	1.16	1.9	6.4	7515	.	.	.	.	3.3	15.65	7.55	6345	12	5.7
929	6Y277	KANGA	1	1	3		1	1	0.76	1.6	.	6851	.	.	.	.	2.9	17.74	5.37	12219	3	21.1
930	6Y278	KANGA	1	1	3		1	1	2.25	1.6	0.4	7220	.	.	.	.	2.6	11.94	5.78	5752	4	13.5
931	6Y279	KANGA	1	1	3		1	1	2.15	1.1	0.5	6139	.	.	.	.	1.8	10.36	6.00	4837	2	28.4
932	6Y280	KANGA	1	1	3		1	1	0.63	1.3	0.3	6438	.	.	.	.	2.1	16.60	8.03	5182	4	25.0
933	6Y281	KANGA	1	1	3		1	1	0.92	1.7	0.6	6788	.	.	.	.	2.4	16.90	6.66	3749	16	24.8
934	6Y282	KANGA	1	1	3		1	1	1.84	1.8	0.2	7455	.	.	.	.	3.5	14.09	5.51	3541	21	17.2
935	6Y283	KANGA	1	3			1	2	1.17	1.1	.	7251	.	.	.	.	2.7	19.85	7.76	3305	9	18.1
936	6Y284	KANGA	1	3			1	1	1.12	1.5	0.6	6119	.	.	.	.	1.7	18.45	7.22	4286	4	32.3
937	6Y285	KANGA	1	3			1	1	1.02	1.2	0.9	4366	0.3	.	.	.	3.2	22.62	6.78	6187	8	24.8
938	6Y286	KANGA	1	3			1	1	1.17	1.5	0.5	7125	.	.	.	.	2.2	17.45	5.31	5721	3	3.3
939	6Y287	KANGA	1	3			1	1	1.04	0.9	0.5	6351	.	.	.	.	4.1	21.01	6.27	5065	2	41.6
940	6Y288	KANGA	1	3			1	1	1.38	1.1	1.0	6413	.	.	.	.	1.5	17.20	7.87	5779	6	52.7
941	6Y289	KANGA	1	3			1	1	1.01	0.8	0.4	6005	.	.	.	.	4.4	23.01	7.29	5387	7	31.5
942	6Y290	KANGA	1	3			1	1	1.23	1.6	.	6978	.	.	.	.	5.3	18.79	6.98	5833	6	30.9
943	6Y291	KANGA	1	3			1	1	0.73	1.8	0.5	6636	.	.	.	.	4.5	15.90	8.75	6405	9	18.6
944	6Y292	KANGA	1	3			1	2	1.09	1.9	1.1	6018	.	.	.	.	3.8	16.88	8.17	6637	5	2.9
945	6Y293	KANGA	1	1	3		1	1	0.57	0.9	0.3	6405	.	.	.	.	3.0	18.80	8.06	6385	6	14.1
946	6Y294	KANGA	1	1	3		1	1	0.69	2.1	1.3	7008	.	.	.	.	2.7	17.20	8.32	6939	8	10.0
947	6Y295	KANGA	1	1	3		1	1	1.23	1.1	0.2	6550	.	.	.	.	3.5	14.34	6.94	6122	4	2.7
948	6Y296	KANGA	1	1	3		1	1	2.60	1.1	0.7	5091	.	.	.	.	3.1	12.75	7.06	5443	4	10.0
949	6Y297	KANGA	1	1	3		1	1	2.05	1.9	0.3	5984	.	.	.	.	4.7	12.22	6.91	3676	9	21.7
950	6Y298	KANGA	1	1	3		1	1	0.68	2.3	0.6	4919	.	.	.	.	3.7	17.64	8.53	5015	3	3.1
951	6Y299	KANGA	1	1	3		1	1	1.19	1.7	0.9	5515	.	.	.	.	5.6	12.64	6.41	4291	5	28.8
952	6Y300	KANGA	1	1	3		1	1	1.83	1.7	0.7	4598	.	.	.	.	4.7	14.10	6.82	4863	8	40.0

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
953	6Y301	KANGA	1	1	3		1	1	0.31	1.7	1.1	5033	.	.	.	.	4.4	19.40	7.86	3886	9	27.9
954	6Y302	KANGA	1	1	3		1	1	0.77	1.6	1.4	5585	.	.	.	.	3.2	16.14	7.81	3827	16	55.3
955	6Y303	KANGA	1	1	1		1	1	0.94	1.6	0.6	5108	.	.	.	.	3.9	15.76	7.62	3561	6	26.2
956	6Y304	KANGA	1	1	1		1	1	1.24	1.8	1.0	5791	.	.	.	.	2.6	15.31	7.53	3309	4	20.7
957	6Y305	KANGA	1	1	3		1	1	1.01	1.5	0.3	5687	.	.	.	.	3.3	15.17	6.81	2492	8	48.8
958	6Y306	KANGA	1	1	3		1	1	0.03	1.2	.	5771	.	.	.	.	2.6	17.63	9.27	2398	4	61.7
959	6Y307	KANGA	1	1	3		1	1	1.53	0.9	.	5066	.	.	.	.	1.1	15.74	7.50	6545	6	44.5
960	6Y308	KANGA	1	1	3		1	1	1.13	1.0	.	5294	.	.	.	.	1.4	16.73	5.94	6136	7	46.4
961	6Y309	KANGA	1	1	3		1	1	0.80	1.7	.	6416	.	.	.	.	4.2	16.02	8.14	5138	9	22.5
962	6Y310	KANGA	1	1	3		1	1	0.85	1.5	.	5518	.	.	.	.	49.8	17.09	8.72	8721	6	28.0
963	6Y311	KANGA	1	1	1		1	1	0.10	1.7	.	6395	.	.	.	.	60.9	15.84	9.24	11217	3	27.6
964	6Y312	KANGA	1	1	1		1	1	0.58	0.9	.	5541	.	.	.	.	38.8	16.58	7.84	7367	7	18.7
965	6Y313	KANGA	1	1	3		1	1	1.21	1.7	.	5988	.	.	.	.	5.8	14.54	7.31	8411	5	24.3
966	6Y314	KANGA	1	1	3		1	1	1.11	1.8	.	5545	.	.	.	.	4.9	16.60	8.03	7257	4	11.4
967	6Y315	KANGA	1	1	3		1	1	0.67	0.9	.	5819	.	.	.	.	1.1	16.27	8.09	6470	3	34.7
968	6Y316	KANGA	1	1	3		1	1	0.66	1.1	.	5546	.	.	.	.	2.3	14.18	7.73	6301	6	20.9
969	6Y317	KANGA	1	1	3		1	1	2.15	0.8	4.9	3816	.	.	.	.	4.7	14.89	6.96	7827	2	48.3
970	6Y318	KANGA	1	1	3		1	1	0.74	1.5	.	4918	.	.	.	.	2.5	14.91	9.06	6600	4	30.7
971	6Y319	KANGA	1	1	3		1	1	0.44	1.8	.	5485	.	.	.	.	2.2	16.23	7.97	5231	7	11.8
972	6Y320	KANGA	1	1	3		1	1	1.67	1.9	.	4543	.	.	.	.	2.5	17.69	8.68	6093	7	56.7
973	6Y321	KANGA	1	1	3		1	1	1.10	2.0	.	4125	.	.	.	.	1.6	19.97	7.47	6714	6	30.7
974	6Y322	KANGA	1	1	3		1	1	0.71	2.0	.	4450	.	.	.	.	3.1	19.96	7.47	5778	7	26.3
975	6Y323	KANGA	1	1	3		1	1	0.92	1.8	.	4815	.	.	.	.	2.7	18.33	7.42	5127	2	13.5
976	6Y324	KANGA	1	1	3		1	1	1.27	1.5	6.3	4105	.	.	.	.	2.3	24.28	5.76	9105	7	18.4
977	6Y325	KANGA	1	1	3		1	1	1.50	1.8	.	4813	.	.	.	.	3.5	13.57	6.92	5111	5	19.9
978	6Y326	KANGA	1	1	3		1	1	1.20	1.7	.	3945	.	.	.	.	3.1	16.69	6.99	5827	8	11.7
979	6Y327	KANGA	1	1	3		1	1	1.72	1.2	0.2	4815	.	.	.	.	2.2	15.42	7.39	5313	9	25.6
980	6Y328	KANGA	1	1	3		1	1	0.89	1.6	0.1	4436	.	.	.	.	3.4	14.42	6.60	3806	6	34.3
981	6Y329	KANGA	1	1	3		1	1	1.31	1.1	0.5	4817	.	.	.	.	2.6	15.41	6.40	7531	8	28.7
982	6Y330	KANGA	1	1	3		1	1	1.29	1.8	0.2	5409	.	.	.	.	3.7	15.55	7.12	5063	3	18.7
983	6Y331	KANGA	1	1	3		1	1	0.69	1.5	0.2	5060	0.3	.	.	.	3.0	16.90	4.57	5852	4	50.6
984	6Y332	KANGA	1	1	3		1	1	0.91	1.5	0.3	4550	.	.	.	.	1.8	14.49	7.02	6361	10	42.7
985	6Y333	KANGA	1	1	3		1	1	1.36	1.3	0.2	4975	0.5	.	.	.	2.2	16.17	7.90	5437	7	57.0
986	6Y334	KANGA	1	1	3		1	1	1.35	1.6	0.2	4674	.	.	.	.	2.6	16.46	7.55	4518	4	10.8
987	6Y335	KANGA	1	1	3		1	1	0.72	1.6	0.3	4003	.	.	.	.	3.1	16.61	7.34	5327	9	30.3
988	6Y336	KANGA	1	1	3		1	1	0.88	1.7	0.2	5123	.	.	.	.	2.9	16.16	7.56	3571	7	24.7
989	6Y337	KANGA	1	1	3		1	1	1.38	1.3	9.2	5036	0.8	.	.	.	4.1	15.58	6.19	8267	9	17.5
990	6Y338	KANGA	1	1	3		1	1	1.09	1.3	.	4541	0.2	.	.	.	3.3	15.09	7.18	2383	3	35.6
991	6Y339	KAPIR	1	3			3	1	6.00	1.5	9.1	5016	.	.	.	.	2.3	3.84	4.11	915	3	102.3
992	6Y340	KAPIR	1	3			3	1	6.30	1.5	10.4	931	.	.	.	.	1.9	4.22	4.76	322	6	65.6
993	6Y341	KAPIR	1	1	1		3	1	4.63	1.5	14.7	861	.	.	.	.	1.8	11.84	3.41	348	4	108.9
994	6Y342	KAPIR	1	1	1		3	1	1.10	1.6	.	4120	.	.	.	.	3.0	24.28	6.99	4775	6	41.3
995	6Y343	KAPIR	1	2			5	1	7.02	1.7	7.3	3618	.	.	.	.	2.1	1.58	0.34	680	9	122.5
996	6Y344	KAPIR	1	2			5	1	5.38	1.5	.	3976	.	.	.	.	3.4	8.24	2.62	1841	7	175.1
997	6Y345	KAPIR	1	2			5	1	5.30	1.6	1.4	3155	.	.	.	.	1.5	6.78	4.48	2210	10	176.3
998	6Y346	KAPIR	1	2			5	1	5.52	1.5	3.4	839	10.7	.	.	.	2.3	3.71	0.81	286	8	204.0
999	6Y347	KAPIR	1	2			5	1	9.98	1.3	3.2	1663	16.3	.	.	.	3.0	4.02	1.45	375	3	107.4
1000	6Y348	NSALA	1	3			5	1	9.70	1.6	5.9	1556	11.3	.	.	.	3.7	5.53	2.57	273	7	92.3
1001	6Y349	NSALA	1	3			5	1	4.92	1.3	4.7	918	12.2	.	.	.	1.7	2.70	3.98	705	9	153.4
1002	6Y350	NSALA	1	3			5	1	8.15	1.2	1.8	835	5.1	.	.	.	2.6	4.89	4.15	1251	6	67.7
1003	6Y351	NSALA	1	3			5	1	9.18	0.6	10.9	3638	.	.	.	.	1.3	0.54	0.92	267	1	148.8
1004	6Y352	NSALA	1	3			5	1	9.70	0.4	11.6	4018	1.6	.	.	.	2.0	0.57	0.11	656	4	143.2
1005	6Y353	NSALA	1	3			5	1	9.46	1.1	2.2	835	11.0	.	.	.	3.9	0.45	0.13	817	.	103.3
1006	6Y354	NSALA	1	3			5	1	9.99	1.7	1.8	1917	.	.	.	.	3.2	16.54	6.92	1634	5	41.1
1007	6Y355	NSALA	1	3			5	1	9.07	1.2	2.9	918	.	.	.	.	4.5	0.82	0.10	827	1	113.7
1008	6Y356	NSALA	1	2			3	1	11.37	2.3	2.3	1471	.	.	.	.	12.2	1.20	0.45	201	3	251.5

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	AL	SB	AS	BA	BE	BI	B	BR	CD	CA	C	CE	CS	CR
1009	6Y357	NSALA	1	3			5	1	7.75	0.9	1.4	3151	.	.	.	.	4.3	0.17	0.08	418	9	48.7
1010	6Y358	NSALA	1	3			5	1	10.12	1.1	2.1	837	.	.	.	.	3.7	2.86	0.62	300	3	170.5
1011	6Y359	NSALA	1	3			5	1	8.97	1.1	2.6	915	.	.	.	.	3.1	0.89	2.29	309	8	128.1
1012	6Y360	NSALA	1	3			1	1	8.20	1.7	2.3	1315	.	.	.	.	3.3	0.30	0.08	165	.	369.6

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	CO	CU	DY	EU	F	GA	GE	AU	HF	FE	LA	PB	LI	LU	MG
1	6H001	TUNDU	1	1	2		4	2	1.4	11	20	25.3	1700	1.2	0.63	.	.	3.17	947	22	3	2	0.10
2	6H002	TUNDU	1	1	2		1	2	0.1	11	10	14.4	480	0.4	.	.	.	0.83	673	11	4	1	0.09
3	6H003	TUNDU	1	1	2		1	2	0.8	11	13	18.8	394	0.2	.	.	.	0.85	893	11	2	2	0.09
4	6H004	TUNDU	1	1	2		1	1	0.8	10	4	20.1	491	0.5	.	.	.	1.68	1008	.	.	2	0.08
5	6H005	TUNDU	1	1	2		1	1	2.3	8	24	73.0	556	0.5	0.06	.	.	4.29	4969	29	6	2	1.56
6	6H006	TUNDU	1	1	2		1	1	4.0	14	74	112.6	589	2.3	.	.	.	9.74	5500	11	6	3	0.52
7	6H007	TUNDU	1	1	2		1	2	1.1	11	49	91.1	341	0.5	.	.	.	4.06	2990	.	3	2	0.81
8	6H008	TUNDU	1	1	2		4	1	2.3	14	7	6.1	329	2.1	2.12	.	.	4.14	257	6	2	2	4.58
9	6H009	TUNDU	1	1	2		4	1	3.9	9	21	27.0	386	1.2	1.45	1	.	5.56	925	11	3	3	4.80
10	6H010	TUNDU	1	1	2		1	2	3.0	16	30	50.3	1751	1.3	0.32	.	.	8.63	7136	39	14	3	3.04
11	6H011	TUNDU	1	1	2		1	2	8.2	9	20	40.4	1215	1.8	.	.	.	11.81	2679	23	4	2	1.55
12	6H012	TUNDU	1	1	2		1	1	3.9	21	13	29.1	377	1.6	0.76	.	.	7.41	808	.	2	2	1.25
13	6H013	TUNDU	1	1	2		1	2	3.9	6	10	13.8	553	1.0	.	.	.	17.40	495	.	.	2	2.21
14	6H014	TUNDU	1	1	2		1	2	5.6	24	10	20.2	702	1.0	0.47	.	.	7.12	821	291	1	2	0.17
15	6H015	TUNDU	1	1	2		3	1	8.8	28	8	18.6	492	0.7	.	.	.	8.44	1536	97	2	1	0.43
16	6H016	TUNDU	1	1	2		1	2	6.8	13	20	23.1	344	1.3	6.01	.	.	3.58	667	29	1	2	0.14
17	6H017	TUNDU	1	1	2		1	2	2.2	11	25	71.9	641	0.5	.	.	.	4.27	1514	29	2	1	0.16
18	6H018	TUNDU	1	1	2		3	2	11.4	24	40	28.6	662	0.5	0.40	.	.	6.07	726	79	2	.	-4.52
19	6H019	TUNDU	1	1	2		1	1	2.6	16	31	18.6	479	0.4	.	.	.	7.17	1517	34	3	1	6.82
20	6H020	TUNDU	1	1	2		1	1	1.2	7	5	27.0	323	0.5	.	.	.	2.36	1224	.	2	1	0.14
21	6H021	NKALO	1	1			3	2	.	8	29	0.3	26	0.9	0.32	.	.	0.44	7	39	1	1	0.09
22	6H022	NKALO	1	1			3	1	.	9	23	.	43	1.4	.	.	.	0.50	5	156	3	.	0.15
23	6H023	NKALO	1	1			3	2	3.1	5	15	0.2	520	1.6	0.71	.	.	3.05	1182	62	6	2	0.22
24	6H024	NKALO	1	1			3	1	2.5	6	16	0.2	1223	1.0	.	.	.	2.43	786	53	5	2	0.25
25	6H025	NKALO	1	1			3	1	6.9	9	25	.	3394	1.5	0.08	.	.	4.47	1143	59	6	1	0.29
26	6H026	NKALO	1	1			3	2	3.7	7	22	4.1	451	2.0	.	.	.	2.11	1657	64	5	.	0.20
27	6H027	NKALO	1	2			4	1	13.5	27	12	.	1358	4.1	0.94	.	.	14.03	277	27	.	4	0.09
28	6H028	NKALO	1	2			4	2	27.2	23	10	3.0	15	4.7	1.39	.	.	12.27	131	80	.	13	0.02
29	6H029	NKALO	1	2			4	1	15.9	28	13	0.3	9295	7.1	2.06	.	.	11.37	410	39	.	3	0.12
30	6H030	NKALO	1	2			4	1	13.5	26	3	3.6	575	1.4	2.73	.	.	6.01	194	53	.	4	0.64
31	6H031	NKALO	1	2			4	1	6.8	36	16	4.1	300	2.8	2.94	.	.	4.57	87	85	6	3	0.03
32	6H032	NKALO	1	1			3	2	21.6	32	10	6.3	1896	1.5	1.23	.	.	10.56	5840	51	6	1	0.07
33	6H033	NKALO	1	1			3	1	8.3	28	20	7.1	2569	1.7	0.57	.	.	4.28	4128	83	7	.	0.11
34	6H034	NKALO	1	1			3	2	4.6	11	28	4.4	6097	2.9	.	.	.	3.12	1298	62	9	.	0.17
35	6H035	NKALO	1	1			3	2	13.0	15	12	6.3	1767	3.2	3.66	.	.	5.16	955	55	5	1	0.16
36	6H036	NKALO	1	1			3	1	2.5	8	17	11.8	5446	7.4	0.85	.	.	0.46	374	25	55	.	0.03
37	6H037	NKALO	1	1			3	2	2.8	10	13	8.3	2622	1.1	.	5	.	3.68	2307	104	7	2	0.22
38	6H038	NKALO	1	1			3	2	0.5	7	16	5.6	984	0.3	0.47	.	.	1.10	1719	63	5	.	0.15
39	6H039	NKALO	1	1			3	1	1.3	8	20	8.2	1206	0.4	0.06	.	.	2.44	4005	78	8	.	0.19
40	6H040	NKALO	1	1			3	2	1.8	8	19	15.2	2452	0.7	0.01	.	.	3.46	2225	88	6	2	0.23
41	6H041	NKALO	1	1			3	2	.	8	21	15.6	636	0.2	.	.	.	0.75	954	70	4	.	0.10
42	6H042	NKALO	1	1			3	1	3.6	29	12	12.1	486	1.4	1.77	.	.	5.00	831	197	.	.	0.15
43	6H043	NKALO	1	1			3	2	0.6	13	28	16.3	787	0.3	3.77	.	.	0.97	1215	42	5	.	0.20
44	6H044	NKALO	1	1			3	1	0.5	16	21	17.8	1150	.	0.23	.	.	1.37	1195	66	4	.	0.22
45	6H045	NKALO	1	1			3	1	.	16	12	11.4	484	0.3	.	.	.	0.99	953	75	2	.	0.18
46	6H046	NKALO	1	1			3	2	.	17	26	14.4	904	0.1	5.76	.	.	0.73	918	47	4	.	0.23
47	6H047	NKALO	1	1			3	2	.	13	22	19.3	611	0.2	4.91	.	.	0.95	1233	52	4	.	0.25
48	6H048	NKALO	1	1			3	1	0.6	14	27	14.6	5	.	.	.	.	0.54	1058	56	4	.	0.11
49	6H049	NKALO	1	1			3	2	.	9	13	12.7	899	0.4	6.00	.	.	1.08	1246	61	2	.	0.15
50	6H050	NKALO	1	1			3	2	0.8	10	18	11.7	664	0.1	.	.	.	1.41	853	47	3	.	0.17
51	6H051	NKALO	1	1			3	1	3.0	9	10	18.0	591	0.3	0.42	.	.	1.81	1238	70	3	.	0.24
52	6H052	NKALO	1	1			3	2	1.0	9	22	16.4	1834	0.3	0.51	.	.	1.70	1124	46	8	.	0.18
53	6H053	NKALO	1	1			3	1	2.5	16	16	14.3	18707	1.6	1.14	.	.	2.72	1415	70	23	.	0.09
54	6H054	NKALO	1	1			3	1	8.9	13	25	19.1	9803	1.4	.	.	.	8.43	1256	97	4	.	0.23
55	6H055	NKALO	1	1			3	2	4.5	8	23	12.1	10025	1.0	0.04	.	.	3.11	1636	56	4	.	0.21
56	6H056	NKALO	1	1			3	1	11.6	11	37	18.3	6606	2.4	0.46	.	.	5.52	1122	42	4	.	0.17

OBS	NO	SECTOR	RS	RK	RK2	ALT	DCC	LCN	CO	CU	DY	EU	F	GA	GE	AU	HF	FE	LA	PB	LI	LU	MG
57	6H057	NKALO	1	1			3	1	1.4	9	31	12.4	1775	1.0	0.88	1	.	2.11	1856	19	6	.	0.15
58	6H058	NKALO	1	1			3	2	6.0	10	42	17.0	9969	1.2	.	5	.	3.96	1624	88	3	.	0.13
59	6H059	NKALO	1	1			3	1	14.4	12	41	12.0	5155	1.0	0.02	.	.	5.31	2122	93	8	.	0.20
60	6H060	NKALO	1	1			3	1	6.0	13	45	11.5	5446	0.7	0.06	.	.	4.46	1731	65	8	.	0.21
61	6H061	NKALO	1	1			3	2	2.4	5	37	15.6	1680	0.3	.	12	.	2.34	2928	48	5	.	0.13
62	6H062	NKALO	1	1			3	2	9.7	14	28	15.5	3205	0.5	.	.	.	4.34	1256	48	7	.	0.17
63	6H063	NKALO	1	1			3	1	5.5	8	36	14.3	4775	0.3	0.27	.	.	2.94	1733	33	8	.	0.11
64	6H064	NKALO	1	1			3	1	4.8	13	27	12.8	3648	0.4	0.03	.	.	2.97	1256	29	8	.	0.15
65	6H065	NKALO	1	1			3	2	0.9	24	30	5.4	3549	0.5	0.01	2	.	2.59	842	24	9	.	0.18
66	6H066	NKALO	1	1			3	2	3.1	12	19	13.9	4819	0.5	.	.	.	2.51	953	52	17	.	0.12
67	6H067	NKALO	1	2			4	2	7.5	9	16	4.6	1795	8.7	1.55	.	.	6.69	551	14	37	.	0.09
68	6H068	NKALO	1	2			4	2	8.6	70	10	8.2	883	2.6	1.48	.	.	3.96	342	81	.	.	0.07
69	6H069	SALAM	1	2			4	2	2.0	27	13	10.1	170	2.0	0.51	.	.	0.63	648	29	6	.	0.05
70	6H070	SALAM	1	2			4	2	1.0	113	2	3.4	248	1.7	0.80	.	.	0.69	43	57	3	.	0.09
71	6H071	SALAM	1	2			4	1	1.7	9	10	1.9	219	2.6	0.85	.	.	0.43	19	.	5	.	0.05
72	6H072	SALAM	1	2			4	1	1.1	20	6	0.6	592	2.4	0.96	.	.	0.60	296	.	3	.	0.07
73	6H073	SALAM	1	2			4	1	9.4	27	10	1.2	1693	5.2	1.79	.	.	6.85	42	5	4	.	0.10
74	6H074	SALAM	1	2			4	2	1.9	9	15	1.8	123	2.5	0.82	.	.	1.10	101	19	3	.	0.08
75	6H075	SALAM	1	2			4	2	2.6	11	3	3.2	192	2.3	1.04	.	.	1.78	150	.	2	.	0.11
76	6H076	SALAM	1	2			4	2	8.0	21	17	2.6	107	2.4	1.93	.	.	3.71	331	319	.	.	0.09
77	6H077	SALAM	1	2			4	2	3.0	56	13	5.3	537	3.7	1.51	.	.	4.92	136	29	3	.	0.13
78	6H078	SALAM	1	2			4	1	5.0	22	2	1.3	1134	4.9	1.26	.	.	4.10	434	86	.	.	0.15
79	6H079	SALAM	1	2			4	1	5.0	21	16	4.6	421	1.7	1.38	.	.	4.95	362	52	.	.	0.17
80	6H080	SALAM	1	2			4	1	0.8	13	12	6.9	604	0.2	.	.	.	0.95	286	33	5	.	0.20
81	6H081	SALAM	1	2			4	1	9.4	15	13	3.4	2089	6.9	0.91	.	.	4.92	568	69	7	.	0.12
82	6H082	SALAM	1	2			1	2	2.7	27	16	3.3	9	1.4	1.02	.	.	1.08	501	10	11	.	0.02
83	6H083	SALAM	1	2			4	2	1.5	14	1	3.5	78	2.9	1.83	4	.	0.55	622	25	.	.	0.03
84	6H084	SALAM	1	2			4	2	17.6	23	13	5.1	176	4.4	1.95	.	.	6.25	511	109	1	.	0.10
85	6H085	SALAM	1	2			4	1	8.0	20	21	3.6	823	10.4	1.86	1	.	6.24	502	109	9	.	0.10
86	6H086	SALAM	1	2			4	1	15.3	27	23	6.9	518	7.4	3.44	.	.	5.50	641	138	6	.	0.11
87	6H087	SALAM	1	2			4	1	1.9	11	18	7.2	143	5.7	1.13	.	.	0.55	482	15	4	.	0.03
88	6H088	SALAM	1	2			4	2	8.8	25	12	6.3	464	8.5	2.00	.	.	6.19	622	104	6	.	0.20
89	6H089	SALAM	1	3			3	1	0.8	13	.	4.9	2311	18.5	2.35	.	.	2.03	523	69	5	.	0.18
90	6H090	CHIPA	1	2			5	2	3.7	10	2	5.2	312	10.4	1.04	.	.	4.21	621	15	5	.	0.22
91	6H091	CHIPA	1	2			5	1	16.1	26	16	6.3	1248	7.5	2.44	.	.	7.79	578	98	29	.	0.27
92	6H092	CHIPA	1	2			5	1	1.9	11	17	5.4	5657	11.0	2.06	.	.	3.49	463	44	14	.	0.19
93	6H093	CHIPA	1	2			5	1	7.2	17	22	8.2	1669	10.8	1.85	.	.	5.05	593	34	71	.	0.22
94	6H094	CHIPA	1	2			5	2	1.4	8	26	2.1	498	15.1	2.67	.	.	3.47	534	29	22	.	0.13
95	6H095	CHIPA	1	2			5	2	5.3	13	1	8.4	409	2.2	0.42	.	.	4.45	223	20	.	.	0.15
96	6H096	CHIPA	1	2			5	2	8.0	21	12	6.3	2300	7.0	0.65	.	.	5.99	316	49	7	.	0.15
97	6H097	CHIPA	1	2			5	1	20.6	31	.	3.2	272	11.4	.	2	.	9.55	397	74	2	.	0.20
98	6H098	CHIPA	1	2			5	1	1.3	17	22	0.2	808	3.5	0.31	.	.	2.91	208	44	5	.	0.09
99	6H099	CHIPA	1	2			5	1	6.0	33	43	.	391	17.9	.	.	.	11.18	132	59	.	.	0.10
100	6H100	CHIPA	1	2			5	1	3.8	18	16	.	232	8.4	0.36	.	.	5.58	265	59	1	.	0.15
101	6H101	CHIPA	1	2			5	2	1.3	19	15	1.2	3359	5.2	4.62	.	.	2.94	174	50	2	.	0.03
102	6H102	CHIPA	1	2			5	2	8.4	11	.	.	154	7.3	.	.	.	4.21	73	84	3	.	0.09
103	6H103	MIKOM	1	2			5	2	2.3	19	22	0.8	122	5.9	0.18	.	.	2.10	188	22	6	.	0.02
104	6H104	MIKOM	1	2			5	1	1.2	12	17	1.2	176	4.3	.	.	.	1.32	96	22	2	.	0.01
105	6H105	MIKOM	1	2			5	1	1.3	13	.	1.9	286	5.8	.	.	.	1.55	193	50	.	.	0.03
106	6H106	MIKOM	1	2			5	1	24.2	54	18	0.6	623	8.1	1.44	2	.	6.68	153	34	2	.	0.04
107	6H107	MIKOM	1	2			5	2	17.4	34	24	.	186	6.0	0.52	.	.	5.59	144	39	1	.	0.02
108	6H108	MIKOM	1	2			5	2	1.9	13	21	.	323	2.8	0.66	6	.	2.31	58	22	.	.	0.05
109	6H109	MIKOM	1	2			5	1	1.1	11	28	1.0	370	5.2	1.11	.	.	2.29	56	17	.	.	0.05
110	6H110	MIKOM	1	2			5	1	1.5	10	.	.	402	3.0	1.20	.	.	2.31	133	11	.	.	0.05
111	6H111	MIKOM	1	2			5	1	6.5	12	22	.	151	2.9	1.19	.	.	2.84	66	22	1	.	0.06
112	6H112	MIKOM	1	2			5	2	2.3	13	.	0.7	145	3.8	.	.	.	1.47	97	28	.	.	0.01

OBS	NO	SECTOR	RS	RK	RK2	ALT	OCC	LCN	CO	CU	DY	EU	F	GA	GE	AU	HF	FE	LA	PB	LI	LU	MG
113	6H113	CHILW	1	1			1	1	1.4	9	13	0.3	3020	2.8	.	15	.	2.66	63	72	3	.	0.09
114	6H114	CHILW	1	1			1	2	2.6	10	35	.	2015	3.4	.	.	.	2.82	143	127	3	.	0.12
115	6H115	CHILW	1	1			1	1	2.2	11	48	2.1	934	1.0	.	.	.	12.67	62	155	1	.	0.20
116	6H116	CHILW	1	1			1	1	8.8	17	53	.	2160	4.3	0.02	.	.	6.85	121	77	.	.	0.13
117	6H117	CHILW	1	1			1	1	0.9	9	33	.	1980	3.4	0.06	5	.	2.82	102	61	1	.	0.10
118	6H118	CHILW	1	1			1	1	0.7	9	28	0.4	619	1.0	0.01	.	.	2.38	76	77	.	.	0.15
119	6H119	CHILW	1	1			1	2	1.8	7	32	1.3	1401	3.8	0.04	.	.	4.39	150	61	2	.	0.22
120	6H120	CHILW	1	1			1	2	1.0	8	2	0.7	1286	1.7	0.03	.	.	2.50	62	66	.	.	0.17
121	6H121	CHILW	1	2			4	2	12.1	5	.	.	125	2.6	1.13	.	.	2.21	50	27	1	.	0.02
122	6H122	CHILW	1	2			4	2	9.3	8	.	0.3	2731	10.5	0.06	.	.	8.88	101	60	4	.	0.05
123	6H123	CHILW	1	2			4	1	17.3	9	17	.	59	3.8	0.96	.	.	2.74	100	54	6	.	0.01
124	6H124	CHILW	1	1			1	2	8.0	7	33	2.6	2589	3.0	0.78	.	.	3.65	121	54	4	.	0.03
125	6H125	CHILW	1	1			1	2	2.6	12	3	2.3	1245	1.5	0.35	9	.	1.74	173	76	4	.	0.04
126	6H126	CHILW	1	1			1	1	3.4	7	18	.	765	0.8	0.52	.	.	1.58	162	54	1	.	0.03
127	6H127	CHILW	1	1			1	1	4.1	11	.	2.9	1853	1.4	0.91	3	.	2.37	205	43	2	.	0.02
128	6H128	CHILW	1	1			1	1	3.0	6	12	2.4	1539	1.9	0.14	.	.	6.67	113	60	.	.	0.07
129	6H129	CHILW	1	1			1	1	4.4	8	1	3.3	1231	1.5	0.32	2	.	3.14	126	54	.	.	0.03
130	6H130	CHILW	1	1			1	1	1.8	3	.	3.1	4333	2.3	0.36	5	.	3.13	222	60	.	.	0.10
131	6H131	CHILW	1	1			1	1	3.6	20	13	4.0	1809	2.6	0.16	4	.	3.86	214	61	3	.	0.04
132	6H132	CHILW	1	1			1	1	4.1	7	16	2.0	634	1.0	.	.	.	2.15	365	61	2	.	0.03
133	6H133	CHILW	1	1			1	1	2.4	7	20	4.3	1554	1.5	0.22	.	.	2.66	320	155	4	.	0.08
134	6H134	CHILW	1	1			1	1	2.4	8	17	3.5	534	0.8	0.10	.	.	3.49	356	133	.	.	0.10
135	6H135	CHILW	1	1			1	2	2.4	6	.	5.9	518	0.8	0.26	.	.	1.40	276	55	.	.	0.03
136	6H136	CHILW	1	1			1	2	3.2	7	14	7.8	1362	3.4	0.21	5	.	6.11	552	61	2	.	0.05
137	6H137	CHILW	1	1			1	1	1.3	7	1	6.4	1529	1.8	0.49	.	.	7.20	513	110	.	.	0.08
138	6H138	CHILW	1	1			1	1	3.5	4	.	9.3	1770	1.8	0.36	6	.	3.04	521	88	.	.	0.10
139	6H139	CHILW	1	1			1	1	2.8	8	14	14.2	4056	3.7	0.46	.	.	5.52	1089	94	1	.	0.17
140	6H140	CHILW	1	1			1	1	2.1	4	12	16.3	1829	1.6	0.47	.	.	2.87	722	133	1	.	0.10
141	6H141	CHILW	1	1			1	1	1.5	11	15	15.0	2775	2.2	0.68	.	.	6.64	1181	111	3	.	0.47
142	6H142	CHILW	1	1			1	2	1.6	8	22	12.1	867	0.6	0.81	.	.	2.35	743	115	3	.	0.36
143	6H143	CHILW	1	1			1	2	2.0	9	13	17.6	876	2.1	0.59	.	.	4.18	860	106	2	.	0.22
144	6H144	CHILW	1	1			1	1	4.3	11	16	13.9	448	1.3	0.28	.	.	4.73	663	123	4	.	0.35
145	6H145	CHILW	1	1			1	1	2.5	6	11	13.1	714	1.1	.	.	.	3.63	562	105	2	.	0.44
146	6H146	CHILW	1	1			1	1	2.5	10	21	19.3	1112	2.0	0.33	.	.	3.06	624	86	1	.	0.20
147	6H147	CHILW	1	1			1	1	2.3	6	24	15.6	1121	1.5	0.10	.	.	2.84	750	80	.	.	0.27
148	6H148	CHILW	1	1	4		1	2	3.9	8	8	18.9	1724	1.6	.	.	.	2.01	613	85	.	.	0.94
149	6H149	CHILW	1	1	4		1	2	10.2	17	12	10.4	27832	1.5	0.16	.	.	8.13	582	69	2	.	1.10
150	6H150	CHILW	1	1	2		1	2	2.9	9	15	10.9	922	3.3	0.12	.	.	2.45	415	78	.	.	0.10
151	6H151	CHILW	1	1	4		1	2	15.6	22	6	44.1	930	1.6	0.14	.	.	41.63	2702	895	3	.	0.20
152	6H152	CHILW	1	1	2		1	1	2.3	12	29	29.3	2420	1.3	0.41	.	.	3.94	787	131	1	.	7.41
153	6H153	CHILW	1	1	3		1	1	20.8	45	2	9.2	6508	18.9	2.67	.	.	8.91	366	150	107	.	3.37
154	6H154	CHILW	1	1	4		1	1	6.5	7	2	22.1	1037	0.8	.	.	.	12.56	1608	412	1	.	5.71
155	6H155	CHILW	1	1	2		1	1	2.8	12	42	27.4	2292	3.9	0.30	.	.	1.40	528	101	1	.	0.10
156	6H156	CHILW	1	1	2		1	1	2.6	10	51	22.9	1072	0.9	.	.	.	1.93	703	124	.	.	0.58
157	6H157	CHILW	1	1	2		1	1	2.3	30	37	23.6	2266	0.5	1.45	.	.	4.37	736	90	1	.	0.93
158	6H158	CHILW	1	1	2		1	1	2.1	13	15	18.4	726	2.7	0.50	.	.	6.80	626	138	3	.	0.56
159	6H159	CHILW	1	1	2		1	1	18.4	44	19	13.5	1403	8.4	0.66	.	.	7.07	805	105	39	.	5.18
160	6H160	CHILW	1	1	2		1	1	3.1	35	14	7.5	568	2.6	.	.	.	1.07	174	122	1	.	6.96
161	6H161	CHILW	1	1	4		1	1	12.6	12	1	25.9	1933	1.9	0.03	.	.	29.42	2156	268	2	.	1.43
162	6H162	CHILW	1	1	4		1	1	19.1	13	.	25.3	1922	2.0	0.45	.	.	9.25	1856	281	2	.	0.98
163	6H163	CHILW	1	1	4		1	1	15.3	9	13	26.1	1079	0.4	0.69	.	.	10.36	2022	230	3	.	1.15
164	6H164	CHILW	1	1	4		1	1	19.3	8	.	36.3	3502	3.7	0.32	.	.	8.77	2252	188	3	.	2.02
165	6H165	CHILW	1	1	4		1	1	14.6	16	15	33.1	1825	6.0	0.87	.	.	9.93	1850	193	1	.	1.88
166	6H166	CHILW	1	1	3		1	1	12.1	12	53	50.4	1324	2.1	0.64	.	.	11.79	2195	124	3	.	3.26
167	6H167	CHILW	1	1	3		1	1	8.8	17	19	51.3	4977	0.9	0.92	.	.	5.98	1722	114	1	.	4.10
168	6H168	CHILW	1	1	3		1	1	6.3	25	2	41.2	74826	0.9	1.66	.	.	8.90	1530	289	.	.	1.25