EASTERN GOLDFIELDS

CORE SAMPLES OF LAMPROPHYRES AND SANUKITOIDS FROM THREE DIAMOND DRILL HOLES

DDH	Terrane	100K sheet	Latitude	Longitude	Length (m)	Dip	Azimuth	Drill by
PGDD15001	Kalgoorlie	KALGOORLIE	30.736245	121.253266	1413	-60	55	Northern Star Resources
CD16056A	Kalgoorlie	LAKE LEFROY	32.102434	121.648632	599	-70	270	St. Ives (Goldfields)
BBRD0056	Kurnalpi	ROE	30.715957	122.568316	270.97	-60	168	Breaker Resources

PGDD15001

The two trays from this DDH show a volcanolithic breccia and/or volcanolithic conglomerate from the Black Flag Group. Hornblende-bearing andesitic to dacitic material forms both a clast population and a matrix component, and likely also a sub-volcanic intrusion into this unit. ALL components in these trays have sanukitoid compoisition – indicating a wide diversity of mineralogical and textural types.

CD16056A

Samples from this DDH are displayed in tray 55 and in the composite tray (see photograph for key)

Tray 55 shows a mineralogical and textural range of intrusive sanukitoid 'porphyries' that intrude the stratigraphy below the Black Flag Group in the Kambalda region. This range includes leucocratic plagioclase-hornblende porphyritic rocks with only minor mafic xenoliths and mesocratic hornblende-porphyritic rocks typically with a larger number of mafic xenoliths. Most of the xenoliths here are sub-angular to sub-rounded but very few can be matched with country-rock lithologies. Most are genetically related to the host itself (i.e. are cognate), reflecting entrained phases of earlier crystallized sanukitoid. Note the hornblende-cumulate xenolith at 1148.59m

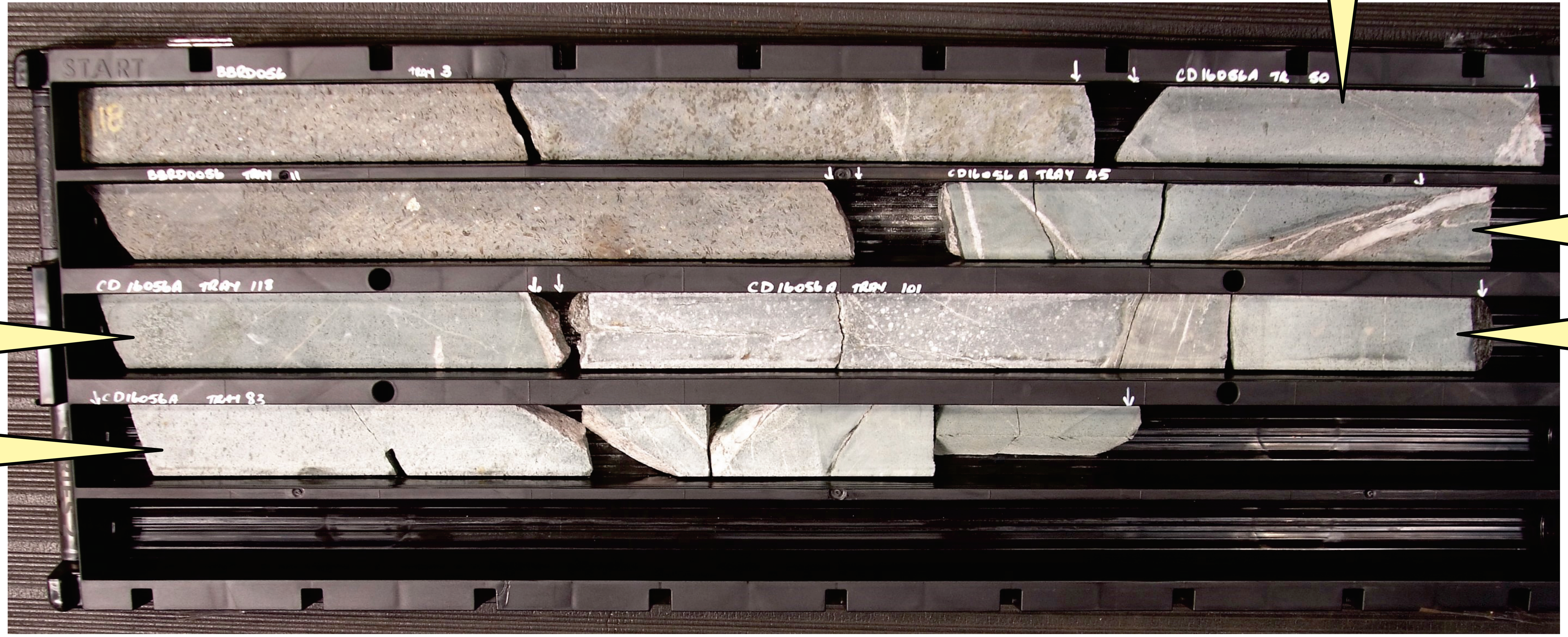
BBRD0056

Composite tray – includes samples of biotite lamprophyres from the Kurnalpi Terrane.

T50
a primitive hornblende- plagioclase porphyritic sanukitoid intrusion

T118
a coarse-grained hornblende cumulate xenolith in a hornblende lamprophyre

T83
a less evolved hornblende porphyritic sanukitoid also intruded by a hornblende lamprophyre



T45
a hornblende lamporophyre intrusion showing a quenched contact against the Lunnon Basalt

T101
a plagioclase porphyritic sanukitoid intrusion itself intruded by a hornblende lamprophyre

An important feature to note is how similar lamprophyres and primitive sanukitoids appear texturally and mineralogically – and this is also reflected in their transitional chemistry.