→ 2nd trip to Cape York & Cooktown area (including samples from Gold Coast & Byron Bay) :

Geological Map (Cape York & Cooktown area) with locations were rock samples were collected

→ **Combination of 10 geological maps** showing the Cape York Peninsula (north-east coast of Australia)

R = 160 km

Center of the assumed Cape York Impact Crater

Base Diameter of the assumed Impact Crater : **approx 320 - 350 km** (Outer Rim Diameter approx **450 km**)

EARLY PERMIAN Cape Melville Granite Cape Melville Supersuite

Pgmc *Mainly white to pale grey, medium to coarse-grained, seriate to moderately porphyritic (hornblende-) biotite adamellite and granite*

2

Ejecta Material ?

Coen

3

4

Large Granite Boulders at Cape Melville probably consist of Impact Breccia and Suevite

Round Hill (Starcke River)

D11

D12

5

6

D13

Cooktown

D14

D15

Map Details D11-D19 with sites where samples were collected (areas marked in green) → NEXT PAGE !

Travel Route (Blue)

7

8

D16

Ejecta Material ?

D17

9

Cairns

D18

10

D19

SCALE 1 : 250 000

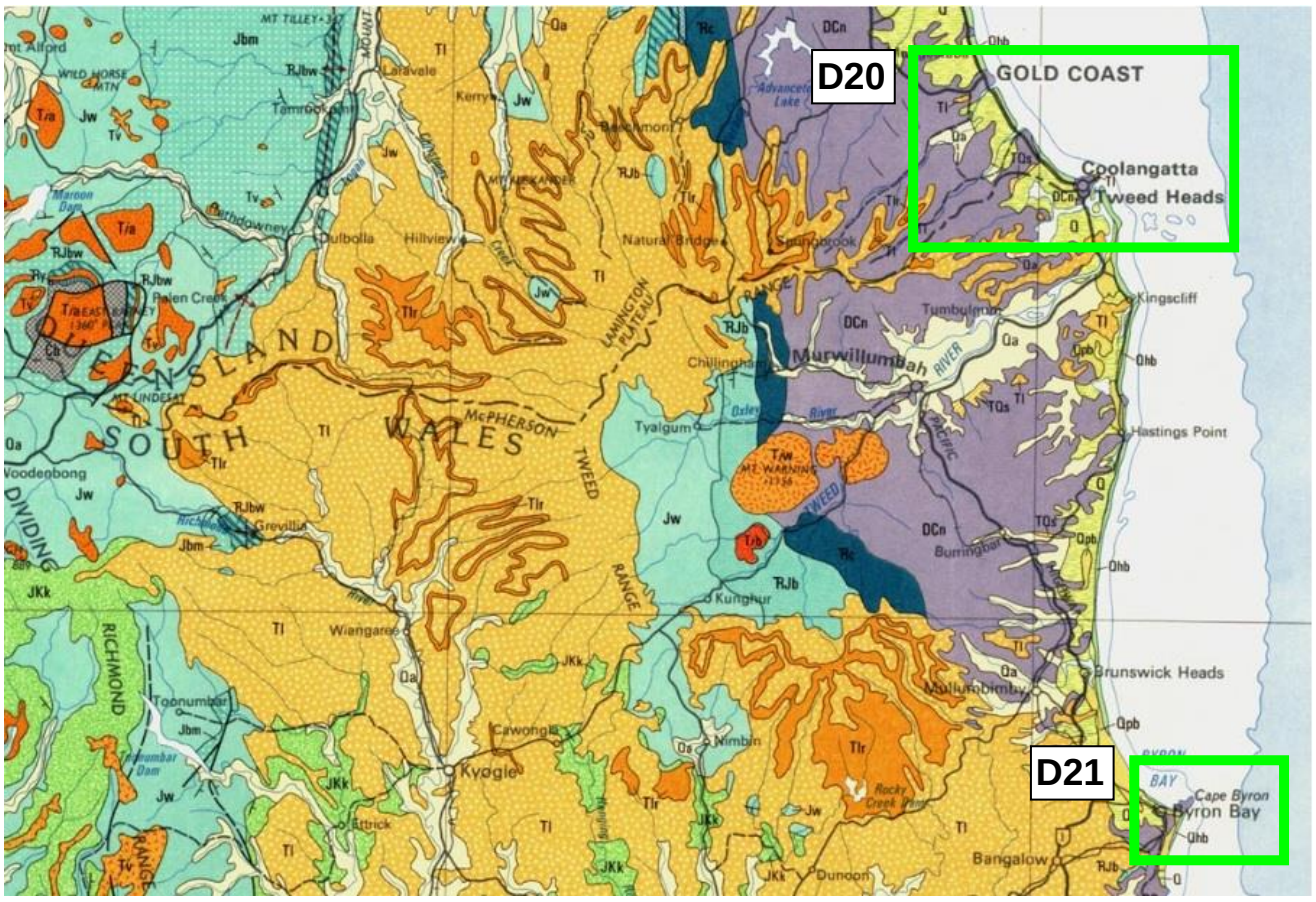
0 50 100 km

Geological Map :

Gold Coast & Byron Bay area

(Moreton Geology)

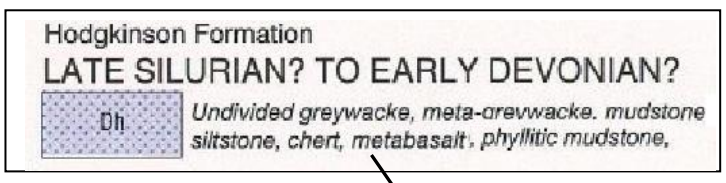
- ➔ **~ 2000 km south of Cape York**
- ➔ **with map Details D20 & D21**

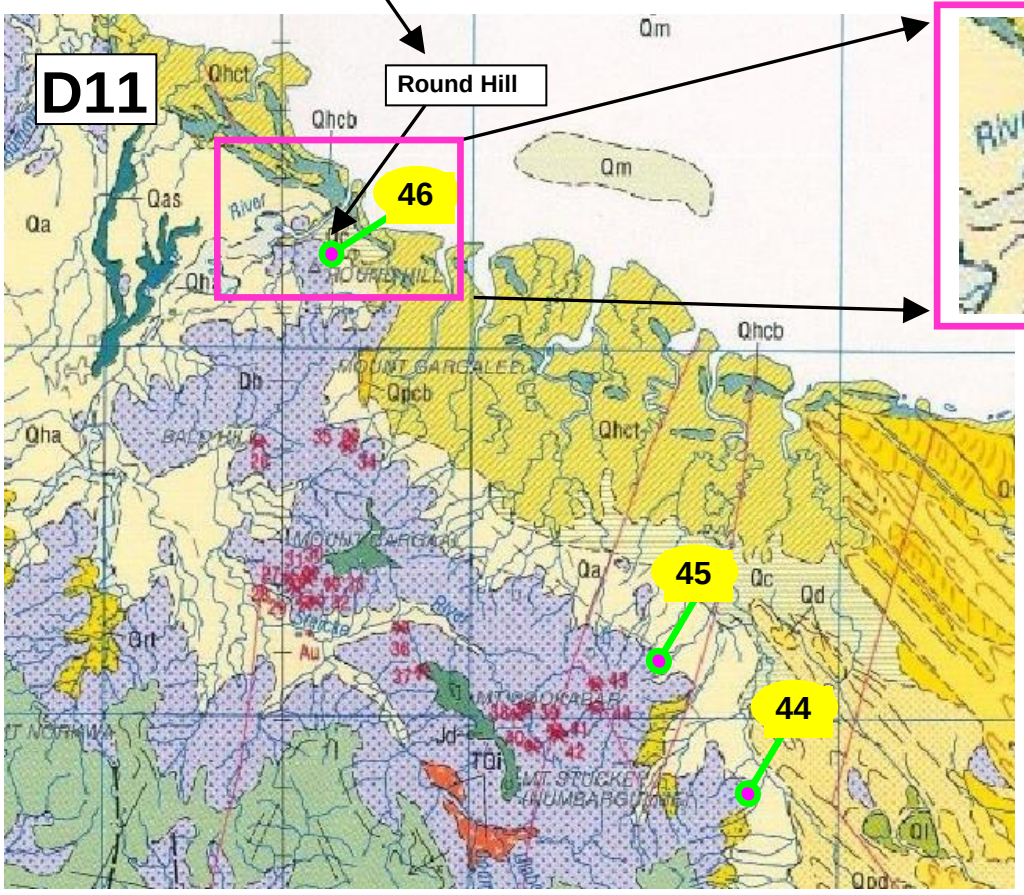


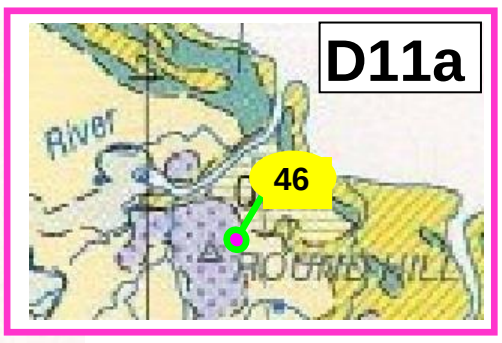
Details D11 - D21 from Map Combination-2 & Map “Moreton Geology” (Brisbane area) with sites (locations) were rock samples were collected :

➔ **Weblinks zu den Geologischen Karten 1 bis 10 :** [weblink to : www.geoscience.gov.au/...]

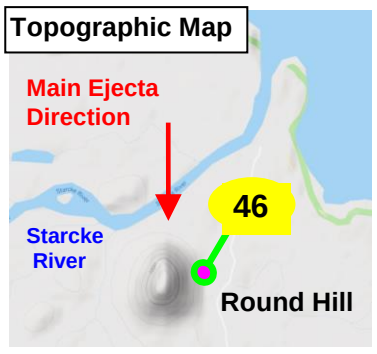
Round Hill represents a hill consisting of Silurian-/Devonian-age rock material which is > **400 million years old** and was directly effected by impact shock waves of the **CYC** Therefore it should contain proof of the Impact



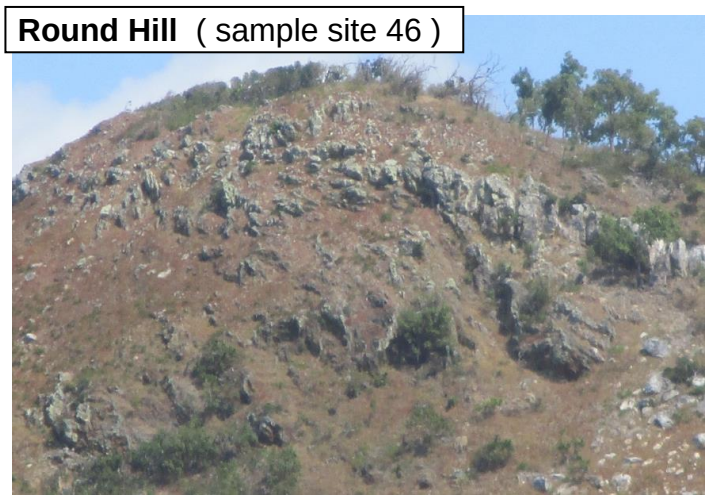




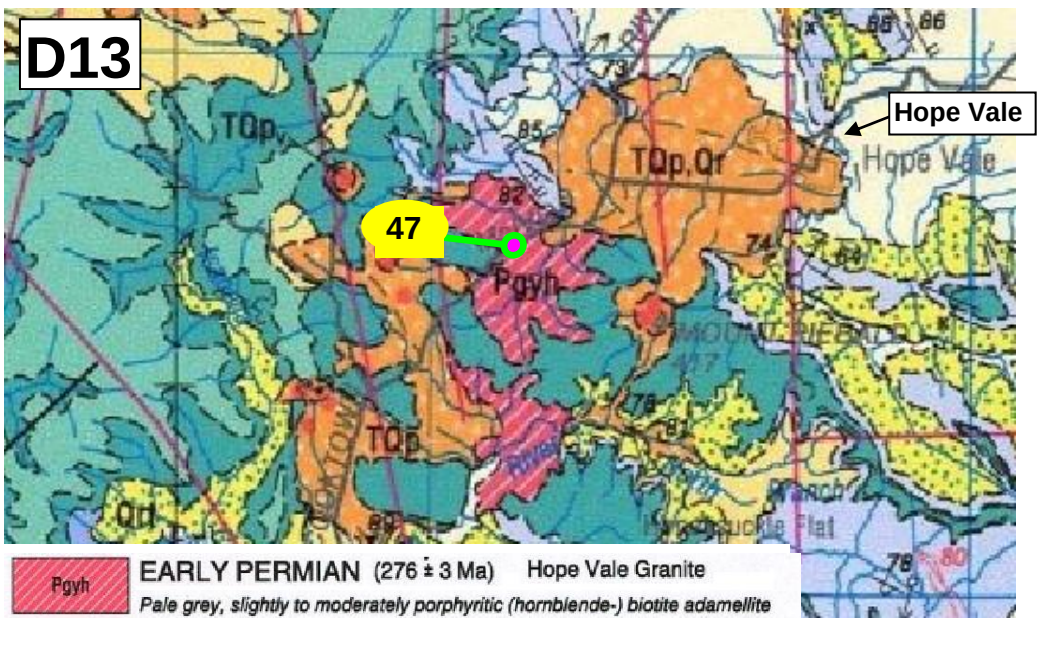
“Round Hill” – Height ~150 m

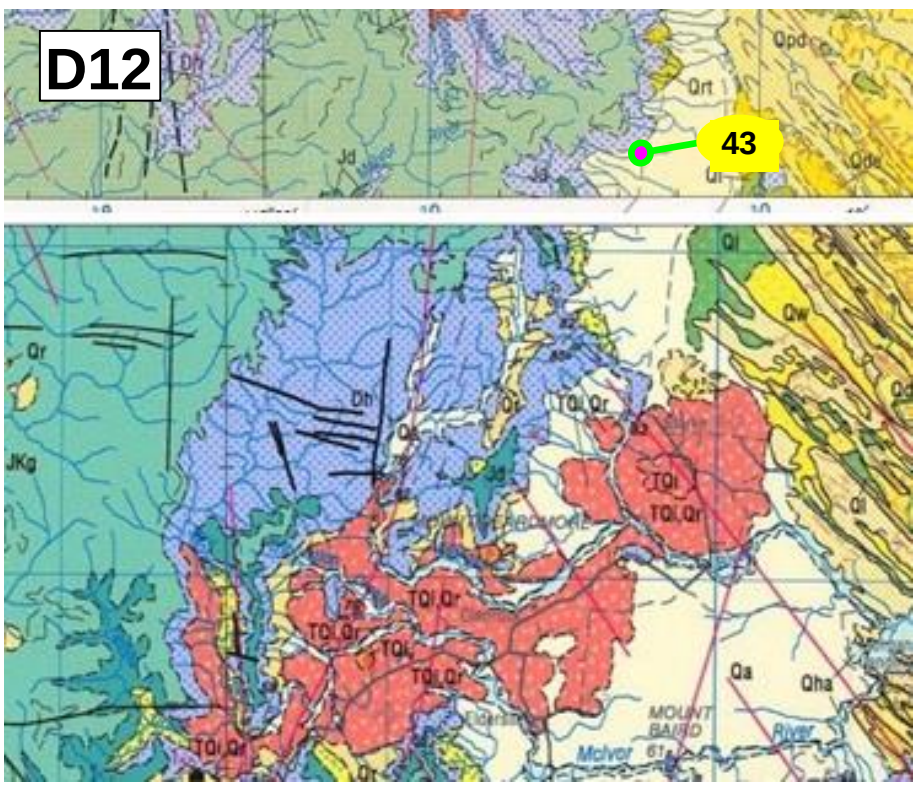


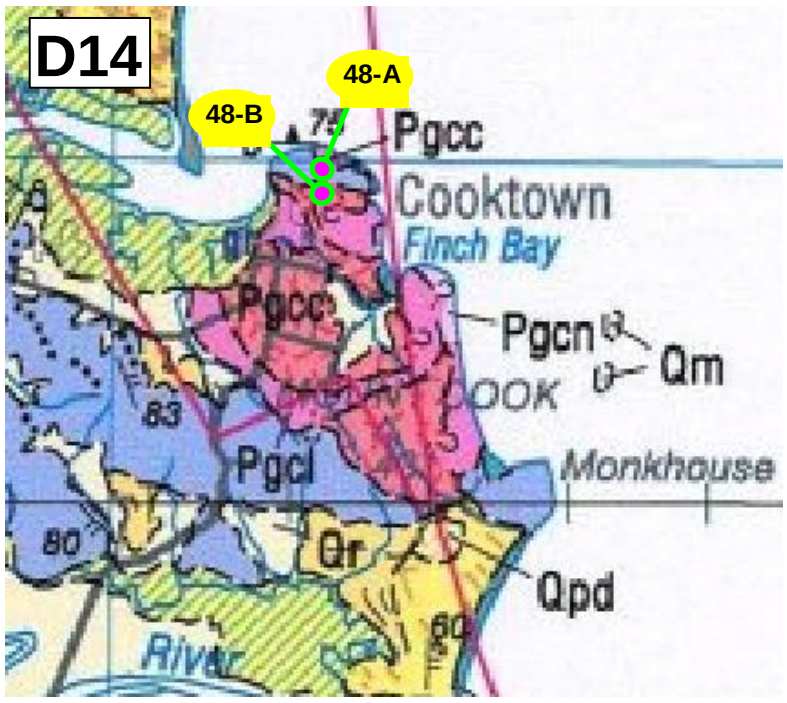
Round Hill (sample site 46)

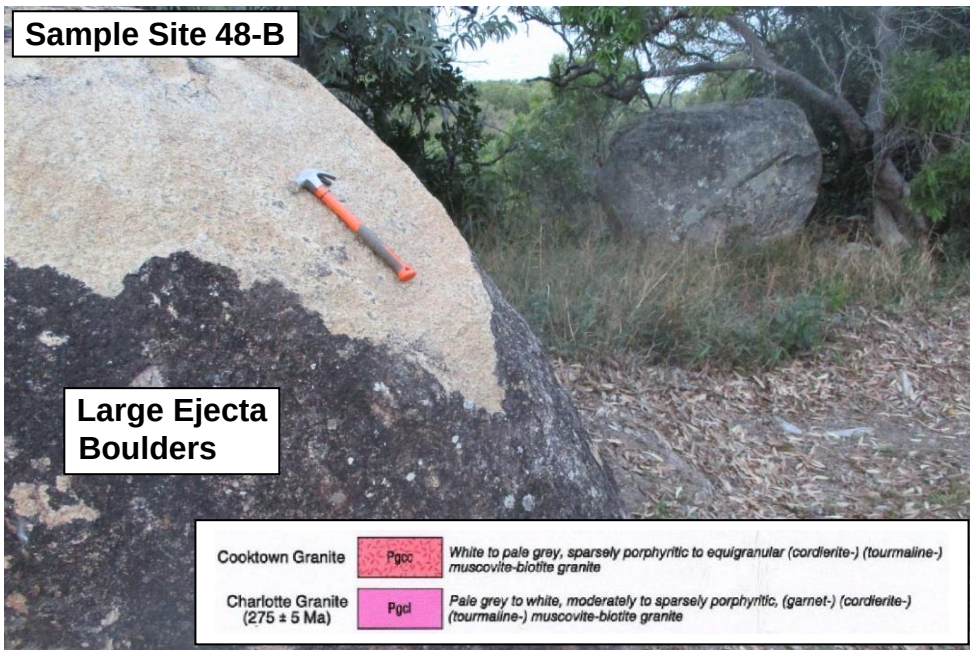


Round Hill - Detail



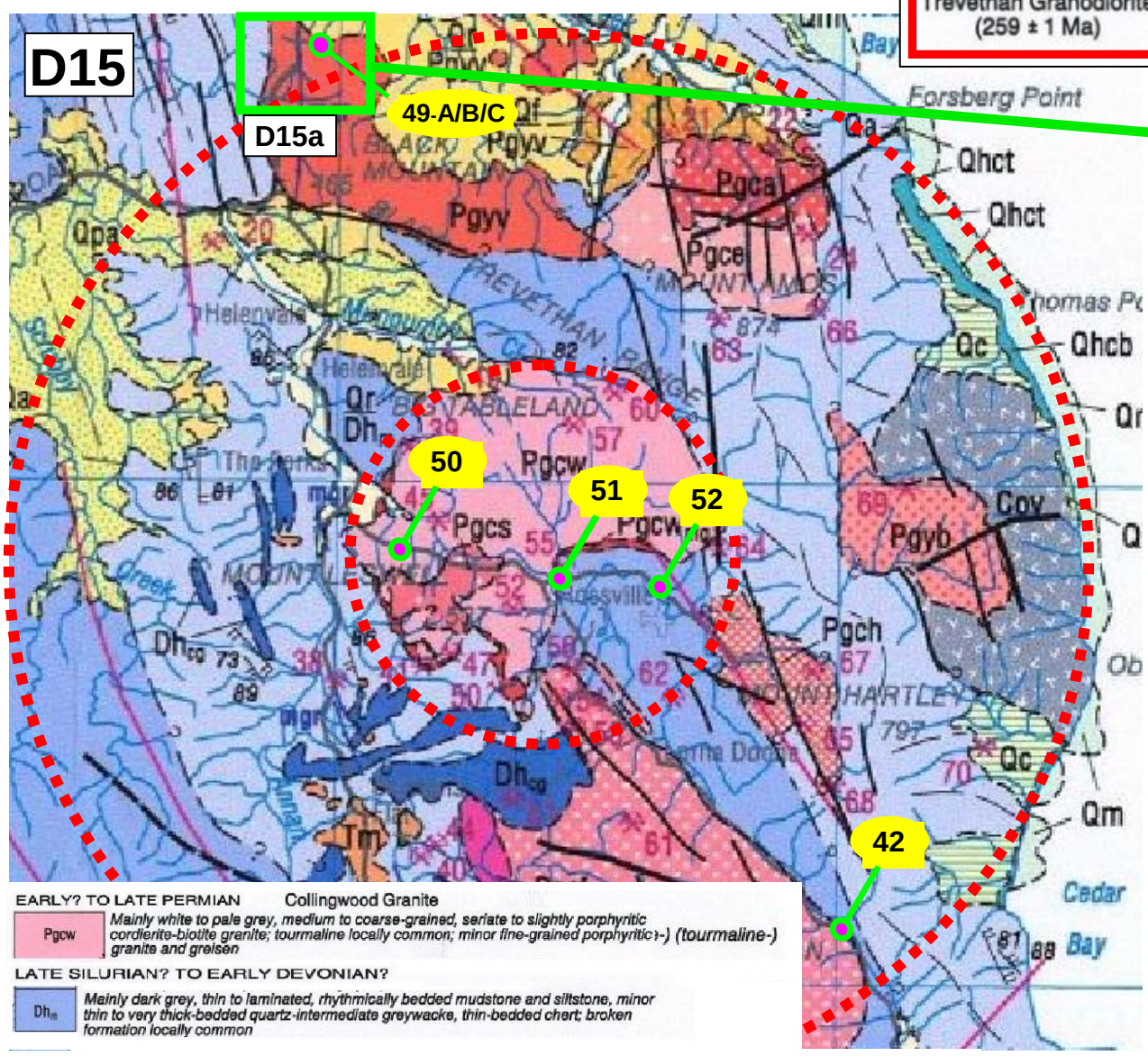


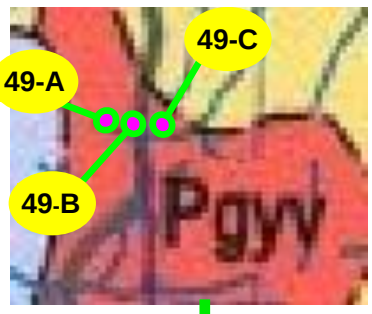




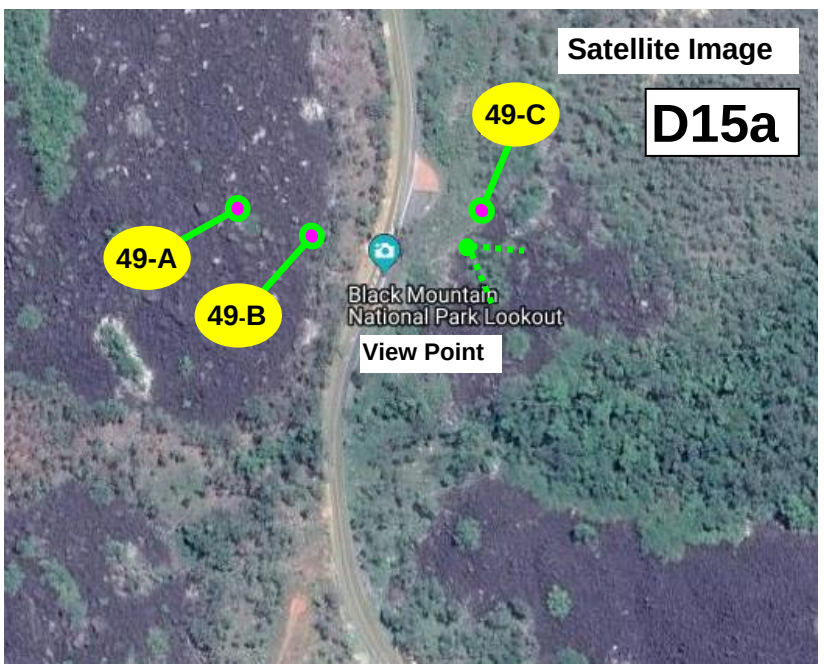
Note the P/T- age of the boulders !!

Trevethan Granodiorite (259 ± 1 Ma) — Pgyv — *Mainly white to grey, medium-grained, porphyritic, (orthopyroxene-) (clinopyroxene-) (hornblende-) biotite adamellite and granodiorite, with scattered mafic and gneissic enclaves* — Yates Supersuite





Black Mountains
"Ejecta-Boulder-Mountains"



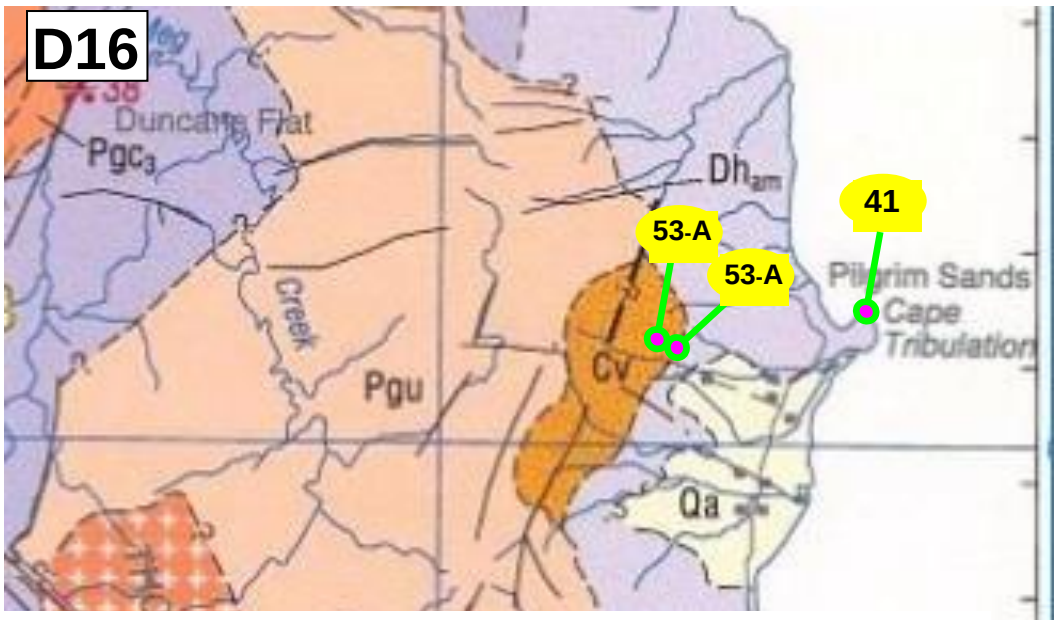
Sample Site 50 : landscape full of Ejecta Boulders

Note the surface of this boulder It has the appearance as it was exposed to an explosive and high-temperature „Blast-Event"

Sample Site 49-C : Ejecta Boulders of the CY-Event

Sample Site 49-C : Mountain consisting of Ejecta-Boulders

D16



LATE CARBONIFEROUS

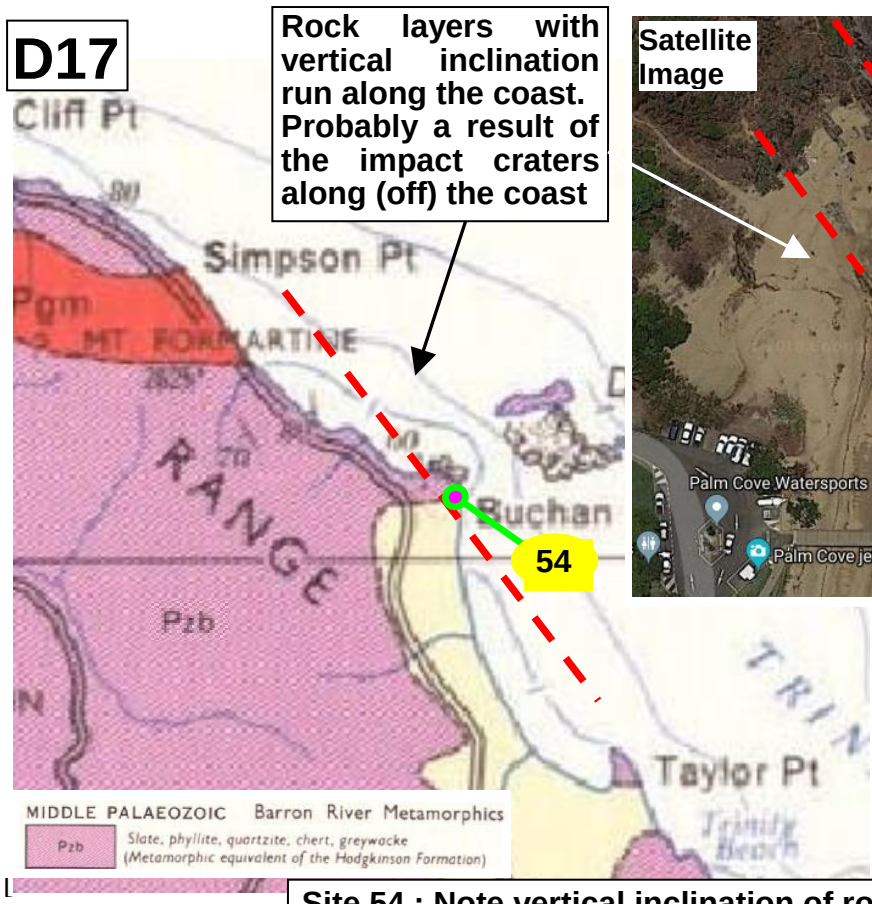
Cv — *Mainly volcanic tuff and breccia; minor argillaceous siltstone*

LATE SILURIAN? - LATE DEVONIAN?

Dh_{am} — *Rhythmically interbedded, fine to medium-grained arenite and mudstone (locally phyllitic); minor chert, metabasalt; rare limestone*

Dh_m — *Dark grey, laminated to thin-bedded mudstone (locally phyllitic); subordinate fine to medium-grained, medium to thick-bedded arenite, siltstone; minor chert, metabasalt; rare limestone*

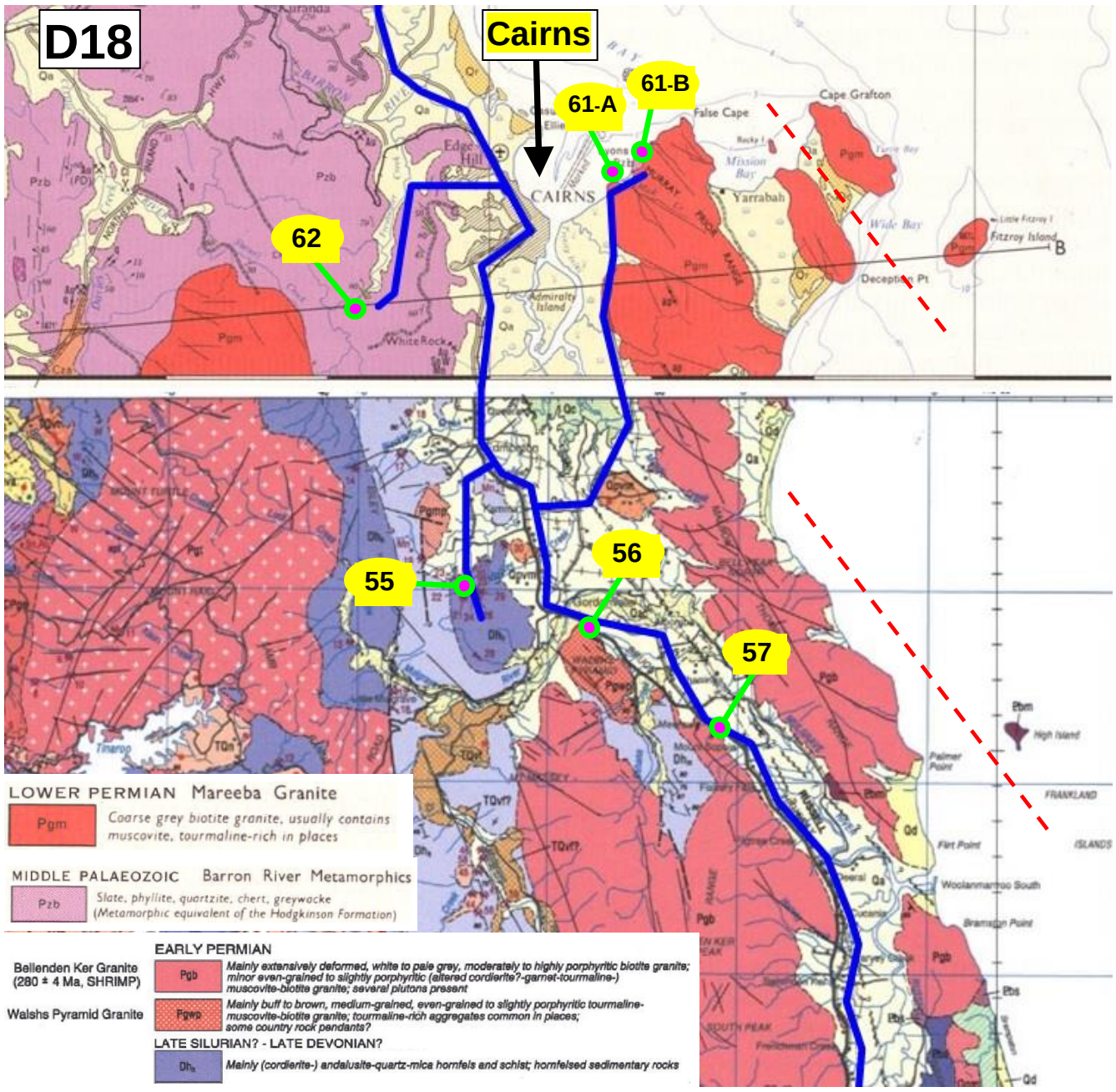
D17



Rock layers with vertical inclination run along the coast. Probably a result of the impact craters along (off) the coast

Site 54 : Note vertical inclination of rock layers

D18



LOWER PERMIAN Mareeba Granite

Pgm — *Coarse grey biotite granite, usually contains muscovite, tourmaline-rich in places*

MIDDLE PALAEOZOIC Barron River Metamorphics

Pzb — *Slate, phyllite, quartzite, chert, greywacke (Metamorphic equivalent of the Hodgkinson Formation)*

EARLY PERMIAN

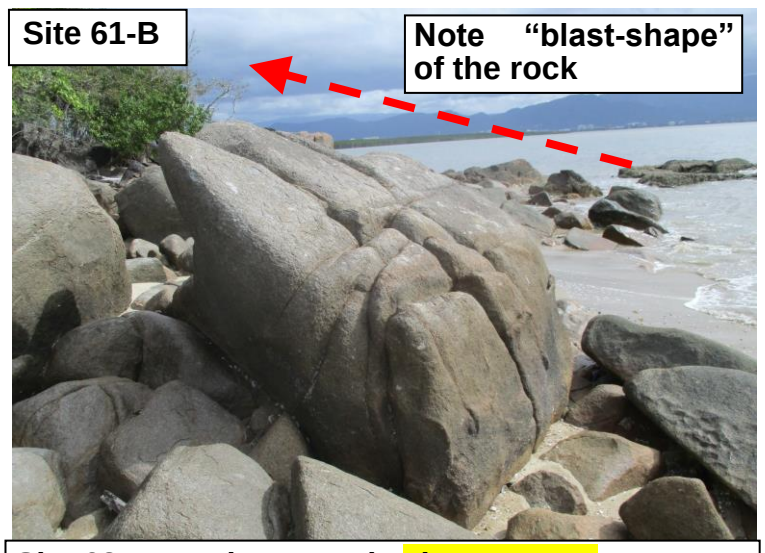
Bellenden Ker Granite (280 ± 4 Ma, SHRIMP) — Pgb — *Mainly extensively deformed, white to pale grey, moderately to highly porphyritic biotite granite; minor even-grained to slightly porphyritic (altered cordierite?-garnet-tourmaline-) muscovite-biotite granite; several plutons present*

Walshs Pyramid Granite — Pgwp — *Mainly buff to brown, medium-grained, even-grained to slightly porphyritic tourmaline-muscovite-biotite granite; tourmaline-rich aggregates common in places; some country rock pendants?*

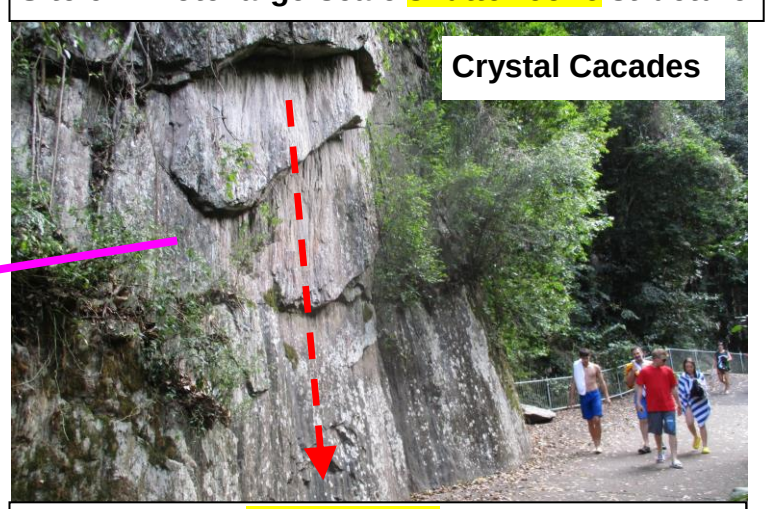
LATE SILURIAN? - LATE DEVONIAN?

Dh_s — *Mainly (cordierite-) andalusite-quartz-mica hornfels and schist; hornfelsed sedimentary rocks*

Site 61-B

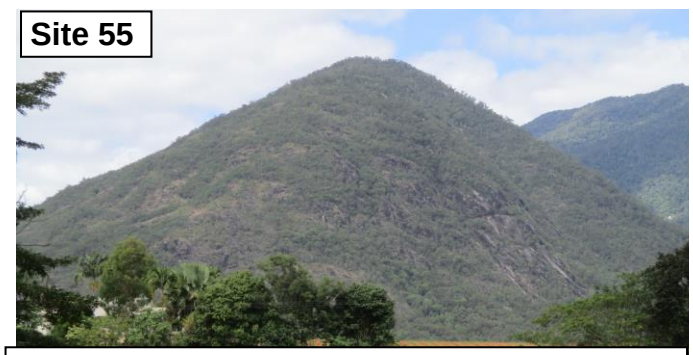


Site 62 : Note large-scale shutter-cone structure



Note the large drop-shaped impact structure !

Site 55

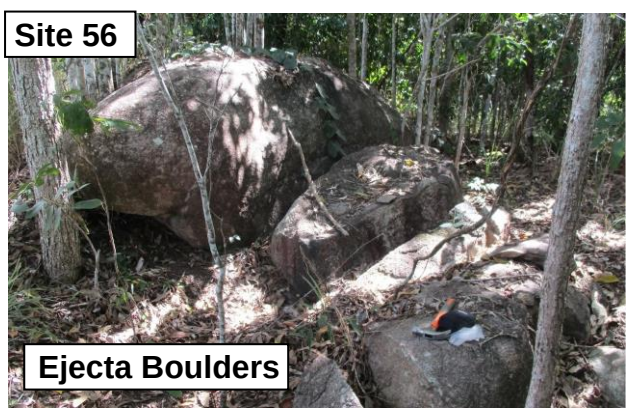


Mountain consist of Silurian/Devonian rock that probably was effected by the CY- Impact Event

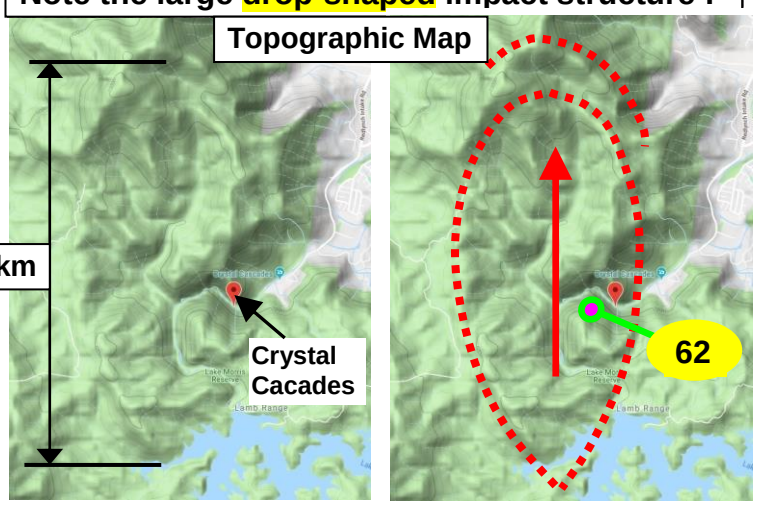
Site 62

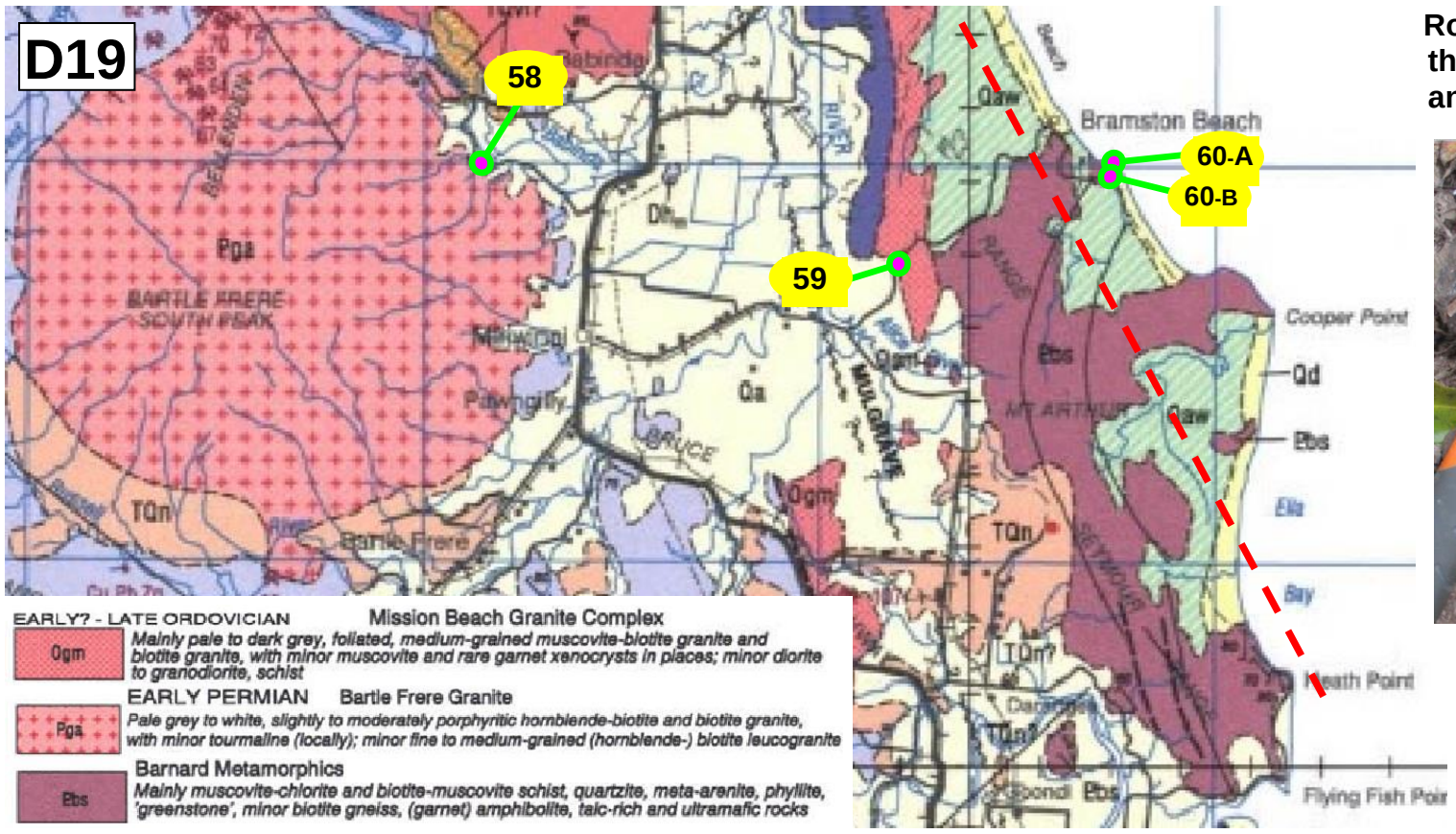
Site 57 : Ejecta Boulders

Site 56



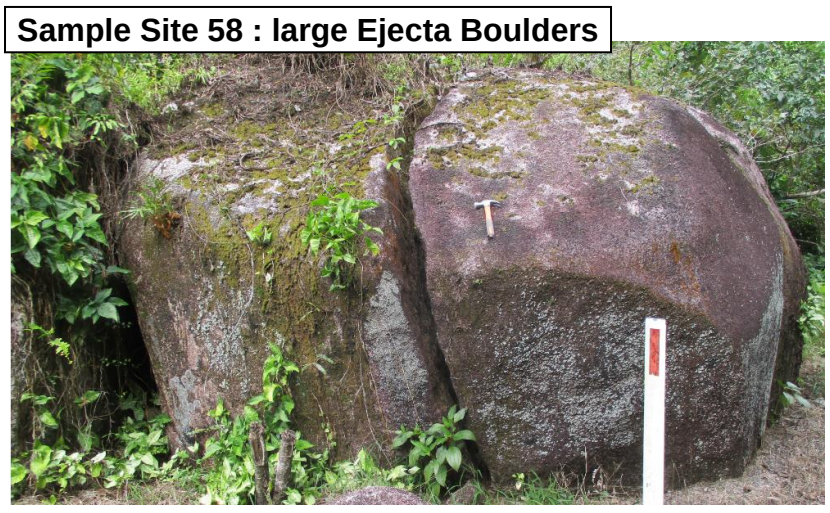
Topographic Map





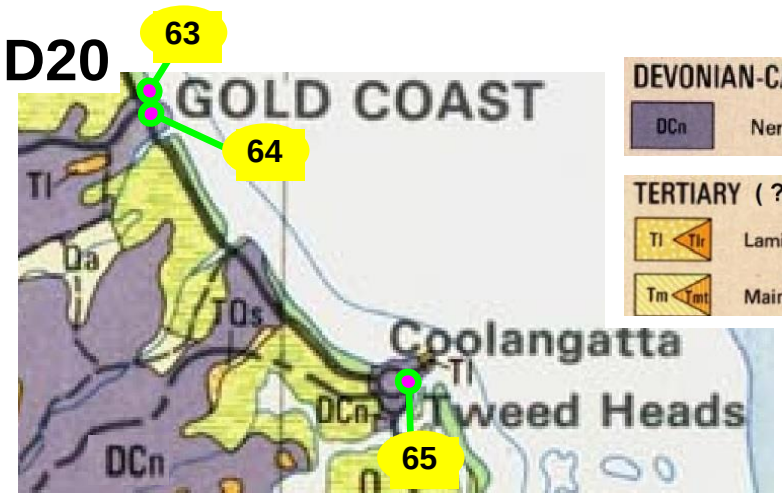
Rock from Sample Site 55 : It seems that this rock was effected by an explosive and high-temperature „Blast-Event“

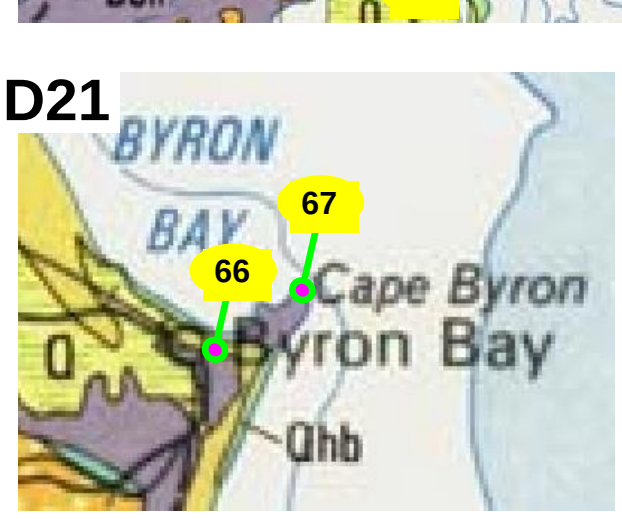
Sample Site 58 : large Ejecta Boulders

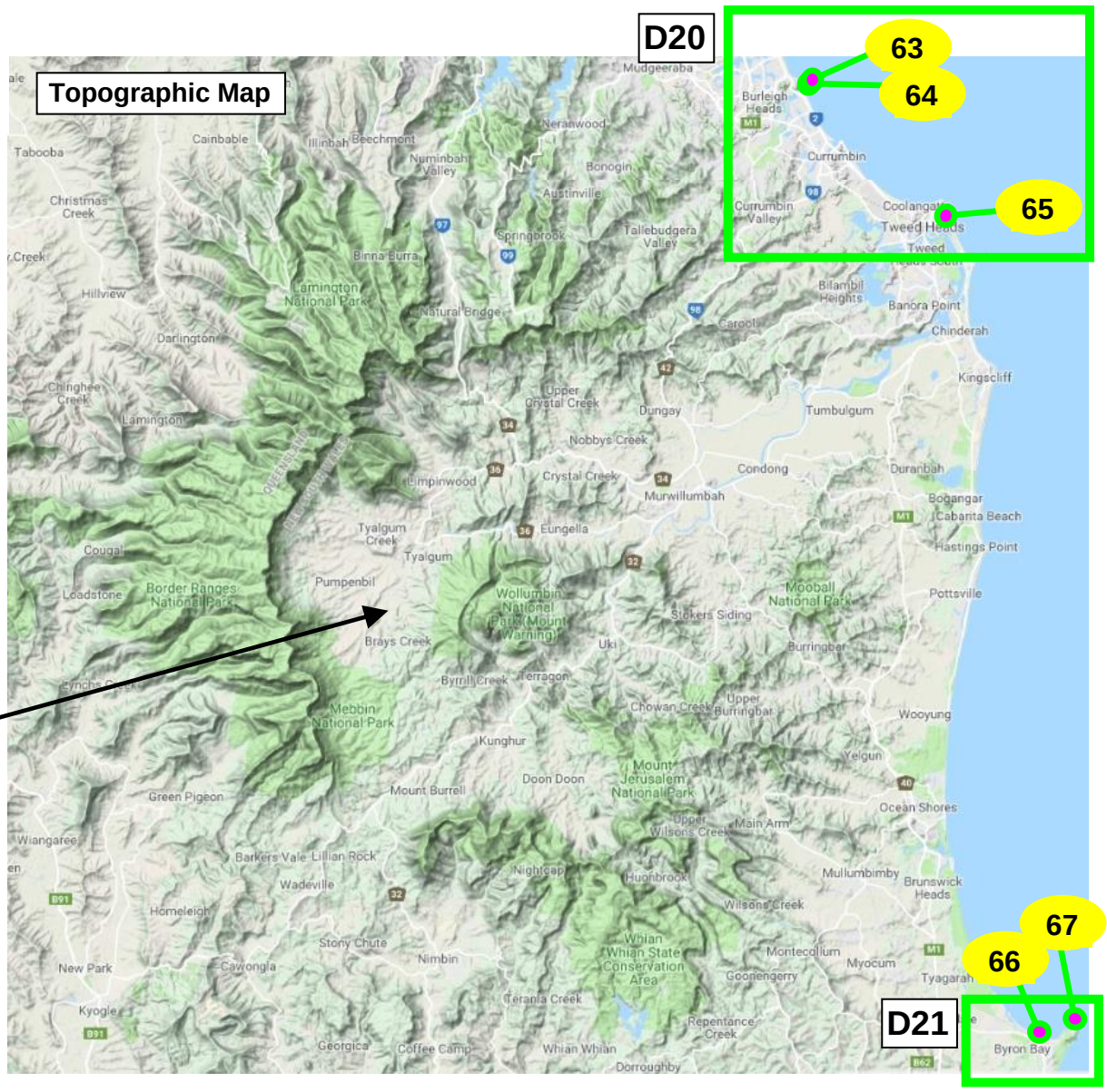


Sample Site 60-B : base rock : partly melted ejecta

Samples from Gold Coast & Byron Bay area (~2000 km south of Cape York)







The Ø 30 km crater-like area with Mount Warning in the center probably is the result of a large secondary impact caused by the Cape York Impact Event. And it is not the rest of an erroded shield-volcano as currently believed !

The secondary impactor probably caused cracks in Earth's crust which caused post impact volcanism for a certain time and a volcano growing on top of the impact crater which later erroded.

Sample Site 63 : large Ejecta Boulders form the headland Burleigh Heads. Note the "coating of the boulders with a layer of rock-material that was once melted, probably during the Cape York Impact Event, and then solidified again.
All boulders here have this kind of burned & melted surface

Sample Site 64 : The whole headland of Burleigh consists of Ejecta Boulders from the Cape York Impact Event

Sample Site 65 :

Sample Site 65 : The rocks show internal shutter-structures
This indicates that the rock-material represents CYC-Ejecta

Sample Site 67 : Note the strong inclination of the rock layers along the coast. Inclination is around 60-70° to the horizontal plane. This probably is a result of powerful "Mount Warning" Secondary Impact Event caused by the CY- Impact

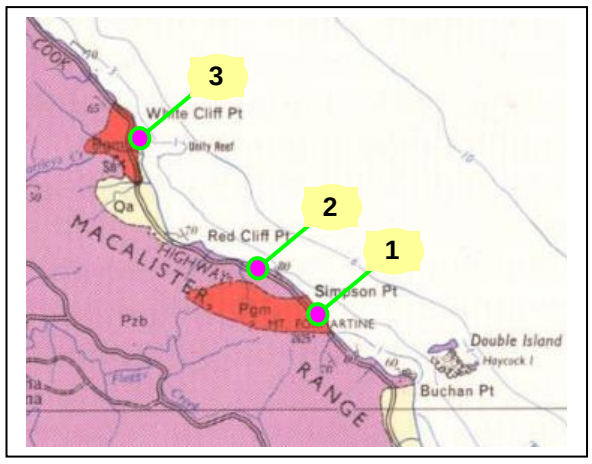
Cape Byron

Sample Site 67 : rock layers with an inclination of around 60-70° to the horizontal plane.

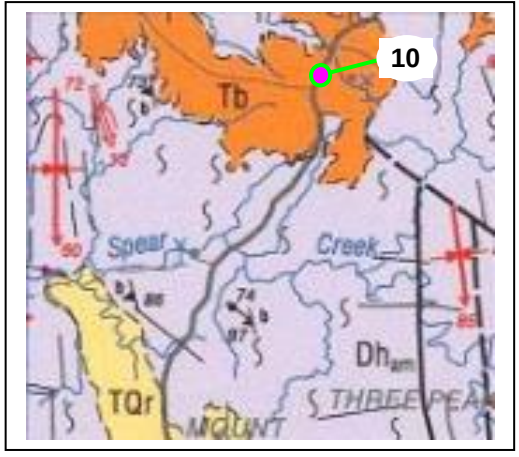
For comparison :

→ Here the sample site areas from the 1st trip to Cape York & Cooktown area

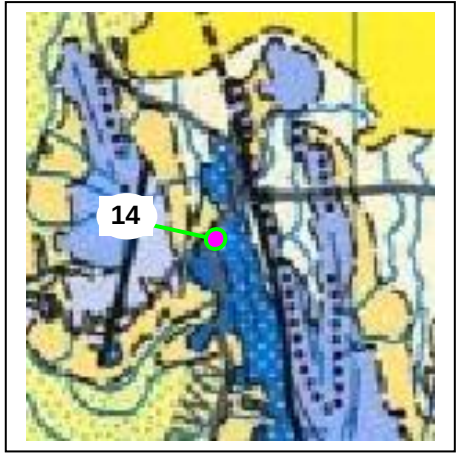
D1



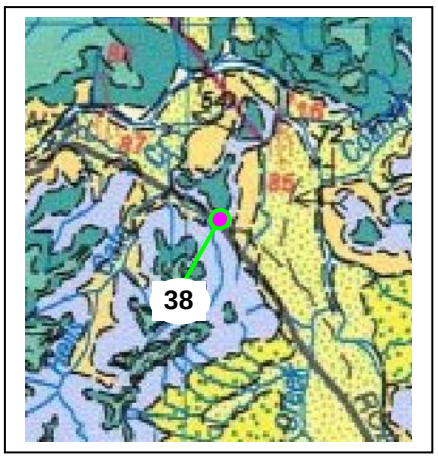
D3



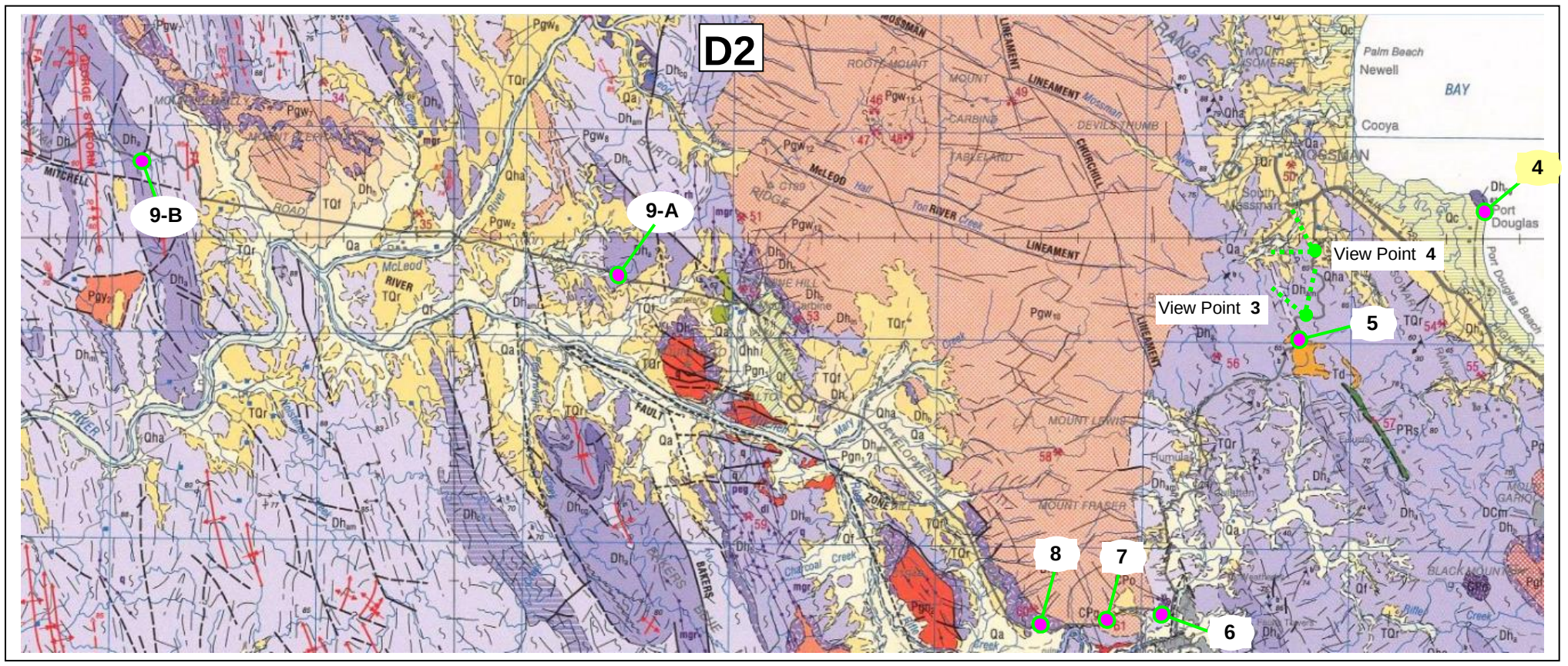
D5



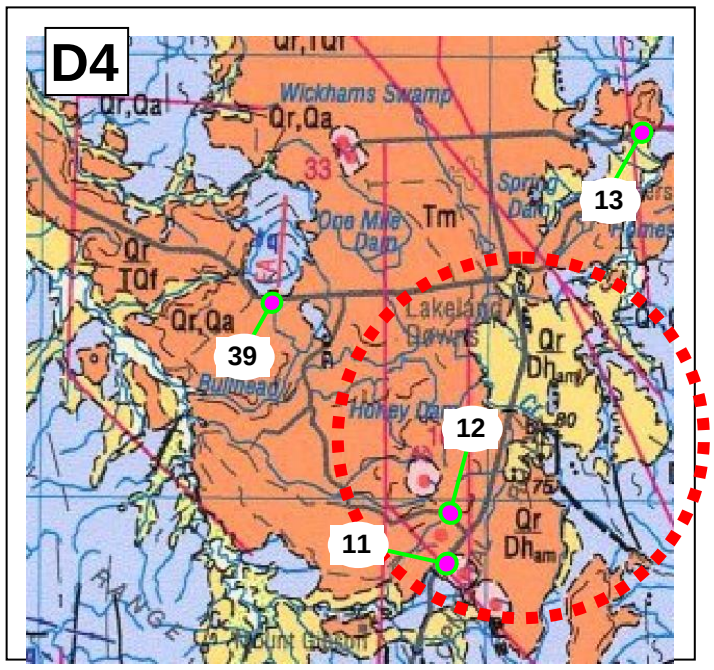
D8



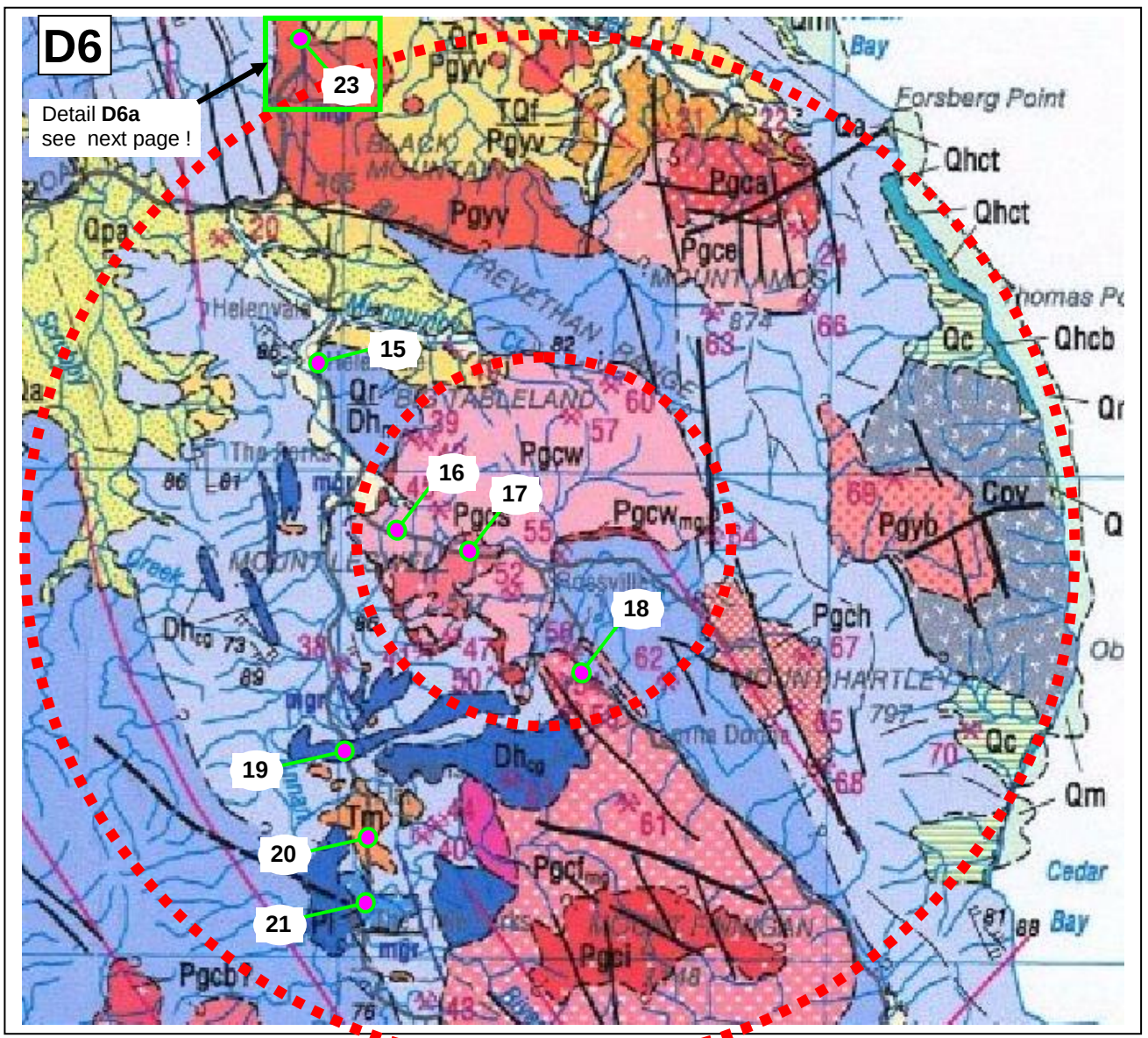
D2

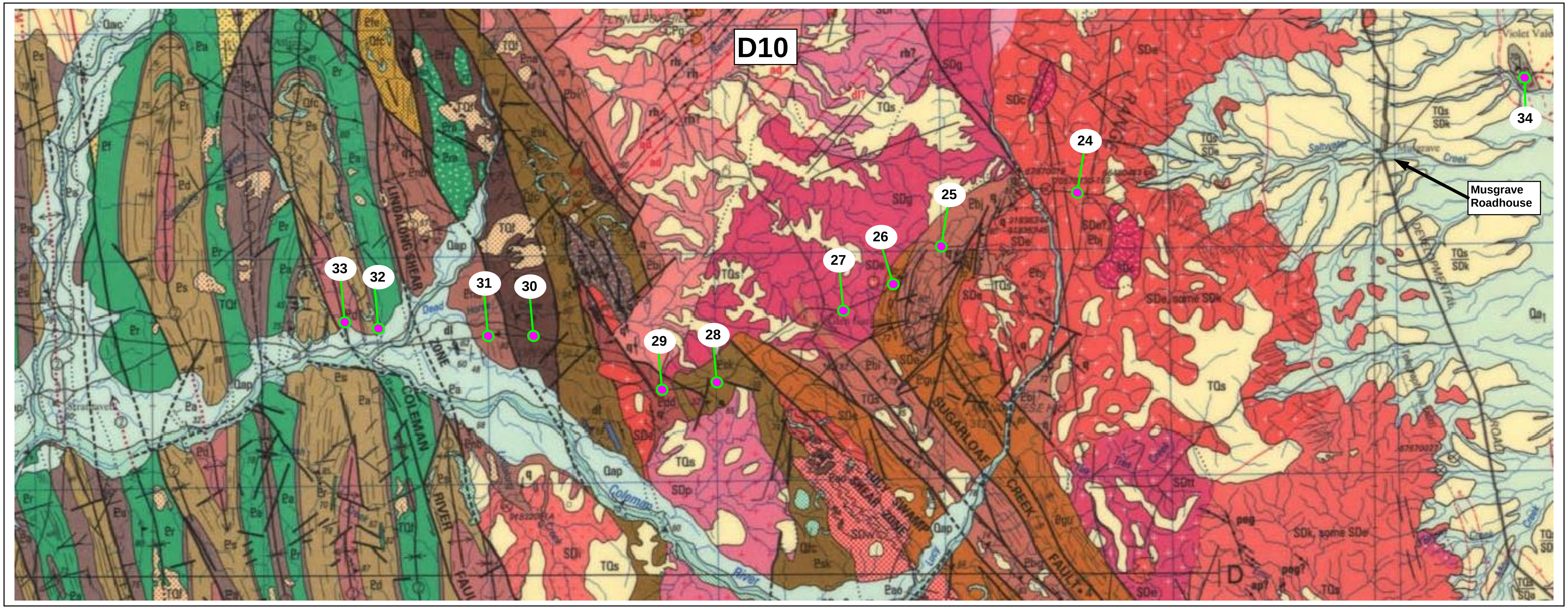


D4



D6




D10
Musgrave
Roadhouse
24
25
26
27
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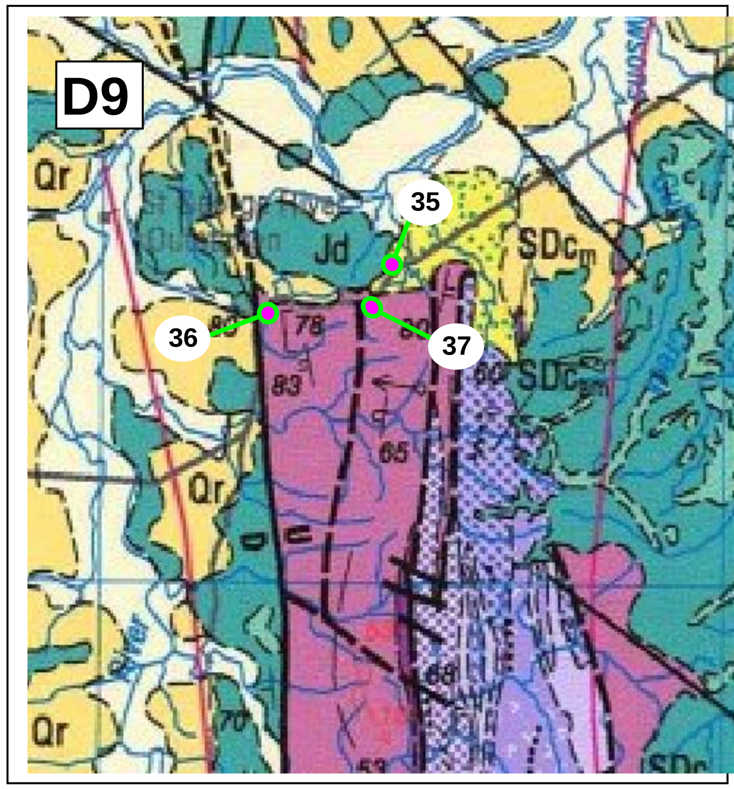
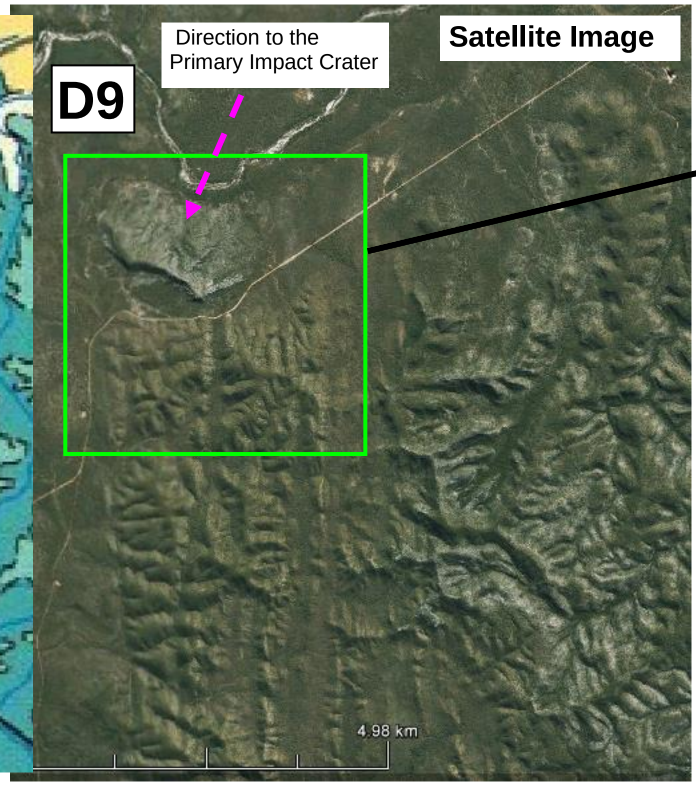
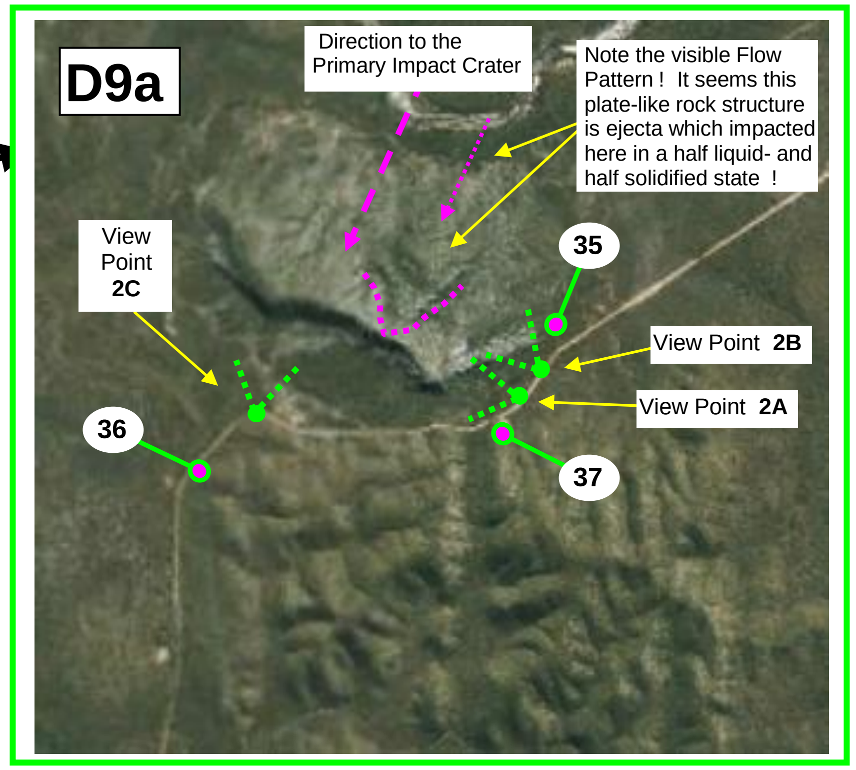
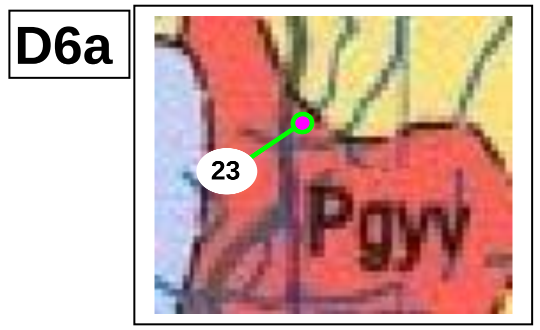
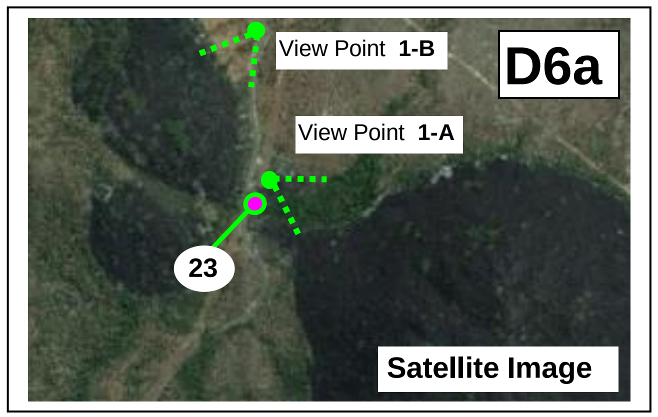
31
32
33
34
LINDALONG SHEAR
COLEMAN
RIVER
SUGARLOAF
CREEK
FAULT
DEVELOPMENTAL ROAD


D9
35
36
37
Qr
Jd
SDc


D9
Direction to the
Primary Impact Crater
Satellite Image
4.98 km


D9a
Direction to the
Primary Impact Crater
Note the visible Flow Pattern ! It seems this plate-like rock structure is ejecta which impacted here in a half liquid- and half solidified state !
View Point 2C
35
View Point 2B
View Point 2A
36
37


D6a
23
Pgyv


View Point 1-B
D6a
View Point 1-A
23
Satellite Image