

# 1 Introduction

## 1.1 Scope of Work

PT Dairi Prima Mineral (DPM) commissioned CSA Global Pty Ltd (CSA) to produce a Mineral Resource estimate for zinc and lead mineralisation in the Anjing Hitam deposit in North Sumatra province, Indonesia. The Anjing Hitam deposit forms part of DPM's Sopokomil prospect within the Dairi Contract of Work project area.

DPM supplied all geological and sampling data to CSA as well as all information on drilling completed, drilling and sampling procedure, data capture and management. CSA staff have undertaken site visits to the project area.

The scope of work included but was not limited to:

- Inspection and loading of resource drilling data.
- Digitising and wireframe sectional interpretation based on a nominal lower Zn + Pb head-grade cut-off of 3 % to build a mineralisation model.
- Analyse drill-hole statistics and determine modelling parameters.
- Construct block model, estimate grades and assign bulk density.
- Validate results, classify, and report the Mineral Resource.
- Compile a report documenting the resource estimation process.

## 1.2 Location and Access

DPM's Anjing Hitam deposit is located in the Regency of Dairi, Province of North Sumatra. The Dairi Contract of Work (CoW) is located about 120 km southwest of the provincial capital Medan and 25km northwest of the Regency seat of Sidikalang. It is centred at about 2° 47' N, 98° 08' E. The project is accessed by bitumen road from Medan to Sidikalang and by lower grade provincial roads to the village of Sopokomil.

Located in the rugged Barisan Ranges, which form the backbone of Sumatra, the project area rises from a northwest sloping valley terrace level of 300-500m ASL to over 1300m ASL to the southwest.

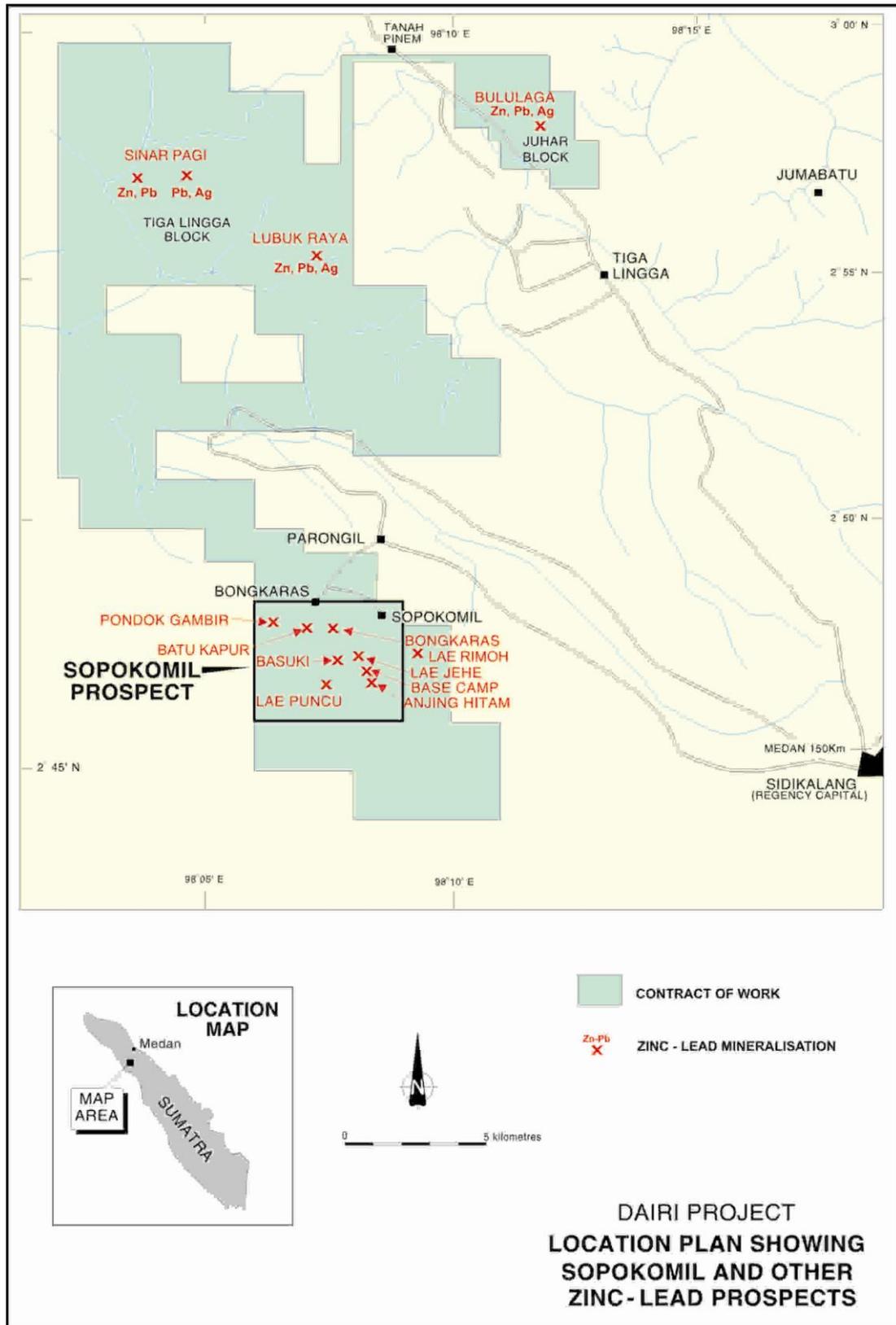


Figure 2. Location of Anjing Hitam Project

## 2 Geology and Mineralisation

### 2.1 Regional Geology

The Anjing Hitam Project is situated within the Tapanuli Group, a mixed sequence of flysch and carbonate lithologies assigned to the Carboniferous-Permian based on limited macro-fossil localities. The Tapanuli Group forms the oldest known basement sequence exposed in northern and central Sumatra and has suffered polyphase deformation and low grade metamorphism as part of the Permo-Triassic Indosinian event.

### 2.2 Project Geology, Structure and Mineralisation

The project area is centred on the Sopokomil Dome, an antiformal structure which exposes black shale and carbonate units underlying a calciturbidite sequence of the Tapanuli Group. The Anjing Hitam deposit occurs as a large shale-hosted massive sulphide Zn-Pb system within polyphase-deformed rocks assigned to the Kluet Formation. The stratabound massive sulphide mineralisation has been interpreted as predating deformation and may have formed during sedimentation or early diagenesis.

The Tapanulli Group in the Sopokomil Dome area has been subdivided into informal local stratigraphic units by DPM as shown in Table 2. The majority of the mineralisation drilled to date occurs within graphitic siltstone and shale of the Julu Unit, cut by early NW and ENE trending structures within a fault bounded sub-basin on a platform margin.

The rocks have suffered polyphase deformation, including two major phases of fabric forming penetrative deformation, D1 and D2, with D3 and D4 producing more open folding, bedding slip and brittle faulting. However due to the lateral variations and facies changes within lithostratigraphic units and the lack of well-defined marker horizons it is difficult to decipher the detailed effects of the D1 – D4 deformation phases on the Anjing Hitam resource. In effect the Main Mineralised Horizon (MMH) unit is often the most consistent and laterally continuous stratigraphic unit.

The limited deformation within the thick MMH largely reflects the fact that most of the strain has been taken up by the carbonaceous shale host rocks, especially the hanging wall “pinstripe shales”. Mineralisation within the MMH is characteristically fine grained, massive and banded with compositional bands which are brassy (pyrite dominant) or bronzy (sphalerite dominant).

Where the MMH becomes thinner at the margins and in the minor mineralisation in the hanging wall, structural complexity is more common with zones of bifurcation occurring on the western and northern margins of the deposit.

Two faults were modelled within the deposit; the Jaluk Fault and the South Fault, with an inferred late stage fault bounding the deposit to the north. The Jaluk Fault (Figure 12 and Figure 13) is a significant north south striking normal fault zone which dips steeply to the east. It offsets the MMH by approximately 15-20m vertically and has been intersected down hole in SOP144D. The South Fault (Figure 13) strikes at approximately 260°, dipping vertically. This fault has not been intersected in any drilling and has been inferred to explain the offset of the MMH.

**Table 2. Local Stratigraphy at Anjing Hitam**

Group	Unit	Sub-Unit	Description
Tapanuli Group	Dagang Unit		Dolomitic shales, argillaceous dolomitic siltstones and sandstones
	Julu Unit	Upper Julu	Laminated dolomitic carbonaceous shales, dominated by the “pinstripe shales”. Sulphide bands may occur.
		Middle Julu	Carbonaceous siltstones, shales and coarser wacke beds. Thinly banded siliceous siltstones and black shales with abundant pyrite which occur within the main sulphide horizons and may also occur below the main sulphide horizon. Strongly deformed shale units.
		Lower Julu	Dolomitic carbonaceous shale, with poorly defined banding, gradational with overlying unit. Characterised by well-developed pyrite-dolomite segregation veining and “spotting”.
	Jehe Unit		Massive thick-bedded pale to dark grey dolostones with brecciation and veining. Bedding generally obscure. Carbonate and quartz veining occurs throughout the unit ± sulphides.
	Sopokomil Unit		May be part of the Jehe Unit, possibly reflecting facies variation.
	Bongkaras Unit		Defined on the basis of massive dolostones beneath mapped Sopokomil Unit, limited to the south central part of the Dome. In outcrop it is deeply weathered and hosts secondary Zn + Pb.

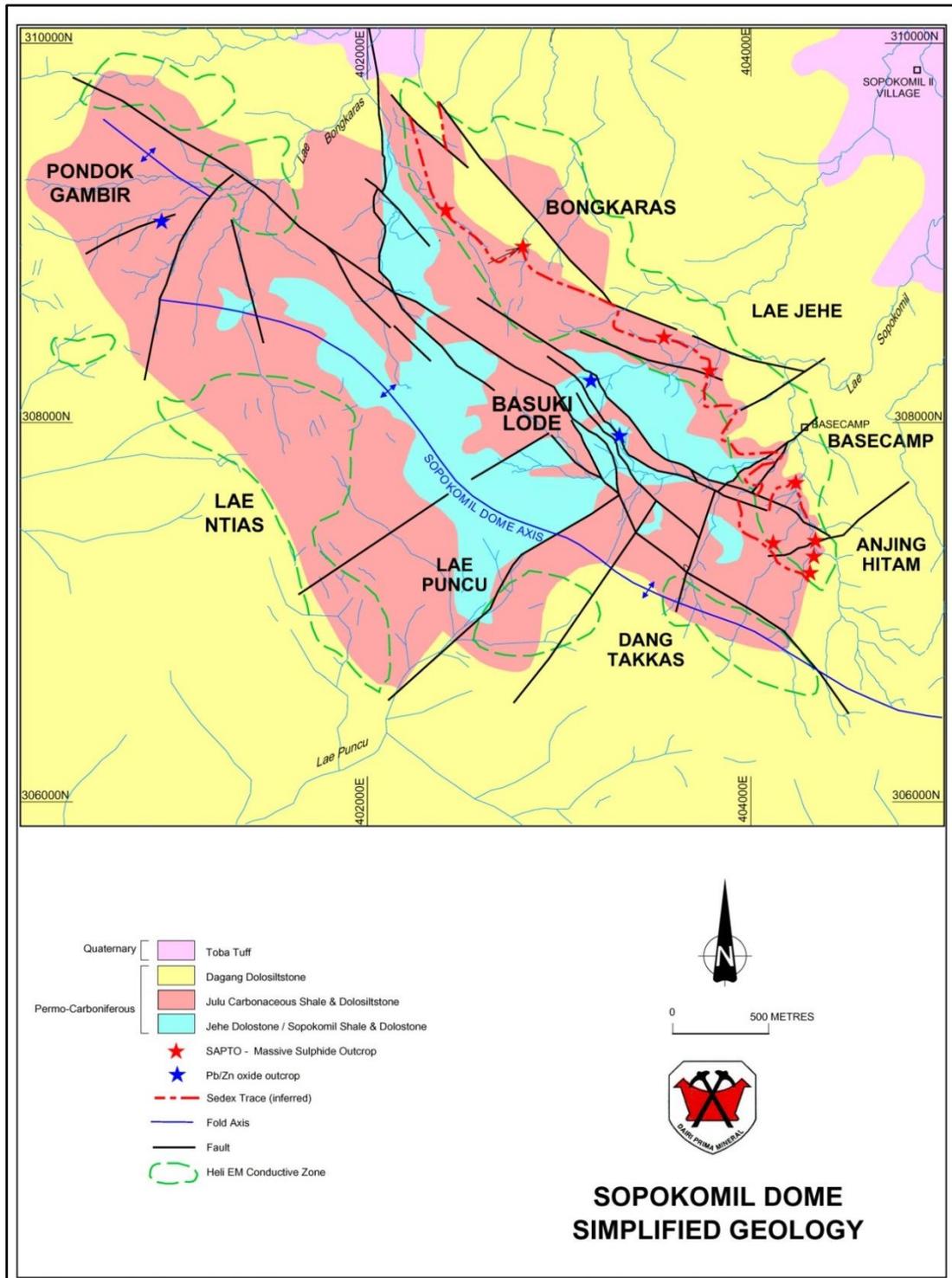


Figure 3. Summary geology of the Sopokomil Dome with location of Anjing Hitam and other target sectors