

54th ASPNG Congress 2022

Kokopo ENB Province

54th ASPNG Congress 2022

Theme:

Addressing PNG's Rapidly Rising Development Challenges,
Through the Embracing of new Survey Technology and Methods

Title: Densification of Border Monuments

Presenter: Michael A. Gideon

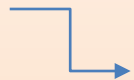
National Mapping Bureau

Department of Lands, Physical Planning & Urbanization

Highlight of this Presentation



Purpose of Presentation



Brief highlights about the International Land Border Between Independent State of PNG and Republic of Indonesia -
- Survey and Mapping Project -2022 – 2026 (5 Year Program)



Brief - DLPP Mandated Functions



[Directive Instruments](#)

Sovereign Statehood – Self Government 1973

Border Treaty #:26 of 1974

Independence State of PNG 1975

Border Basic Agreement - PNG/RI 1993

Survey Coordination Act 1996

-Border CBDRF (Common Border Datum Reference Frame)



Inter – Agencies roles in supporting Border Survey Exercise

- # Sandaun Provincial Admin.
 - Lands Division
 - Vanimo Green District Admin
 - Wutung-Onei-Bewani LLG
 - Ward Councilors – Org Youth for *Logistics and clearance*

- # Provincial Local Level Govt Affairs
 - Border Liaison
- # Foreign Affairs – Diplomatic Issues

- # Security
 - PNGDF
 - PNGRC
 - NIO
- # Customs and Immigrations – Cross over to RI

- # NACIA

This exercise came about because of the Government PIP Funding appropriation in 2022 - 2026

The PIP Submission was prepared and submitted in 2021 with
Support from:

- ❖ Secretary – Department of Lands, Physical Planning & Urbanization
- ❖ Secretary – Department of Provincial and Local Level Government Affairs
- ❖ Secretary – Department of National Planning



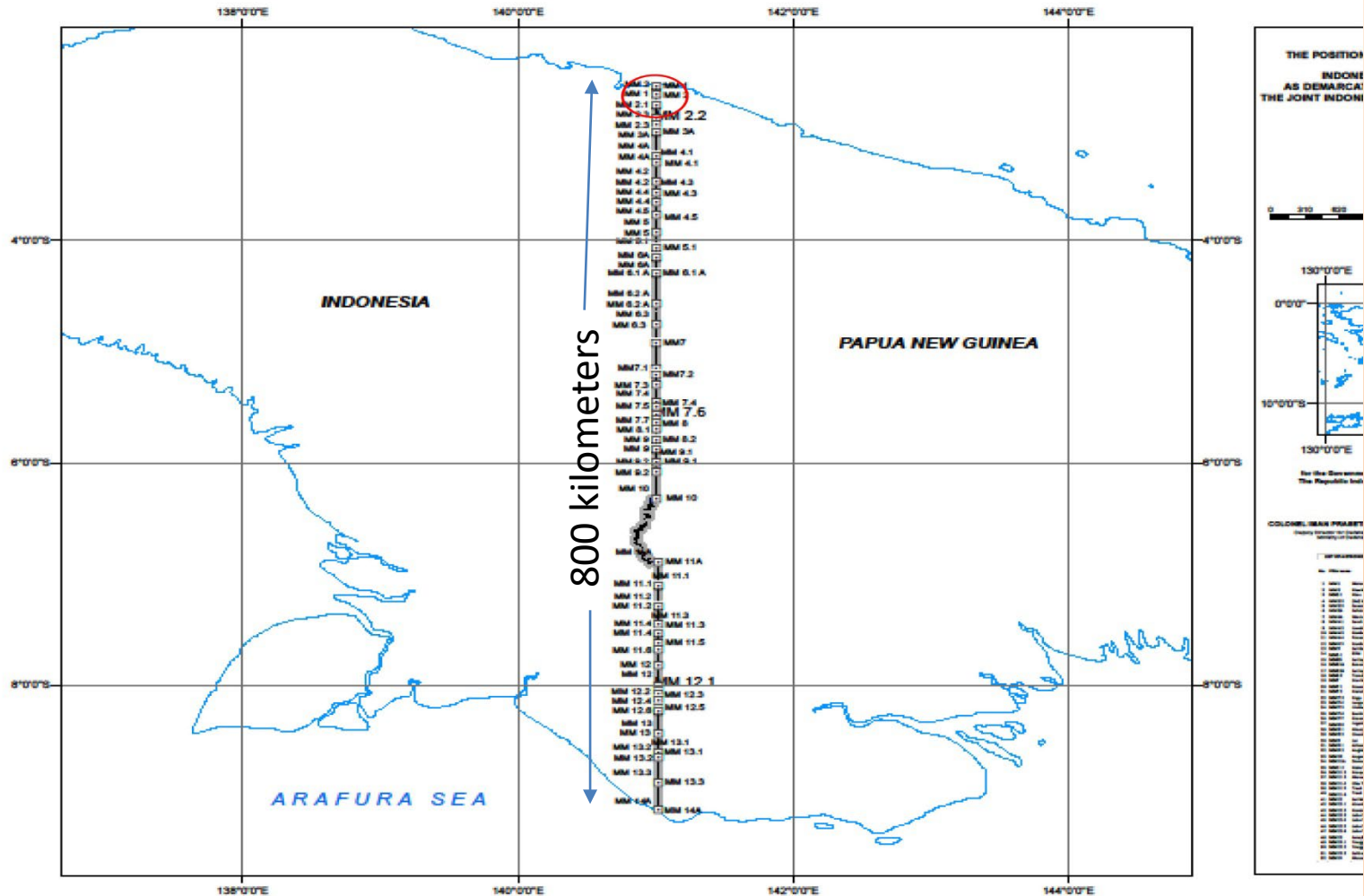
**JOINT PNG - INDONESIA
BORDER DENSIFICATION
SURVEY - 2022**

PNG –RI LAND BORDER DENSIFICATION SURVEY

MERIDIAN MONUMENT (MM) APPROXIMATING 141°00 '00 "Meridian at the North of the Fly river bulge and 141° 01'10"at the South.

MM1 to MM 14 the original treaty.

At present there are 52 MMs between MM1 to MM14B with fixed coordinates as declared by both Countries in 2019.



Densification of Border Pillars

Dense - means having parts close together

Densification in this context of border markers- means placing or installing more intermediate or smaller markers/pillars exactly along the boundary line between the existing Meridian Monuments (MMs)

Densification of intermediate Type A and Type B Pillars



Type A Pillar will be placed at 7kilometers interval between MMs
Example; distance between MM 2.2 and MM3A is 28km, the Type A Pillar will be Placed at 7km location, 14km location and 21km location – a total of 3 Type A Pillars

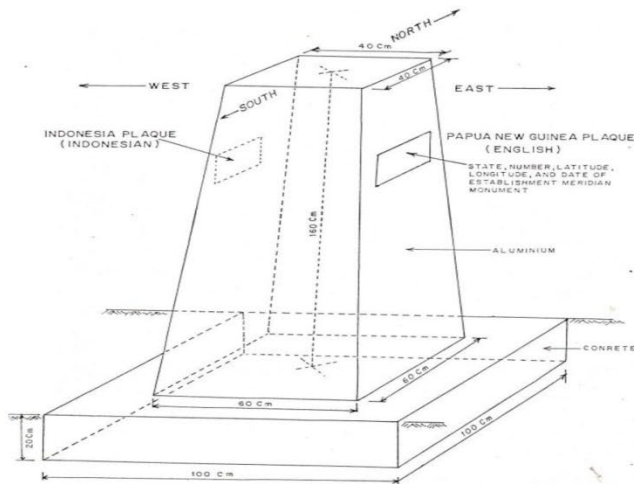


Type B Pillar will be placed at range of 500 meters – 1km interval between MMs
Example; distance between MM 2.2 and MM 2A1 is 7km - there will be 6 Type B Pillar Placed at 1km interval locations - Total Type B 27 Pillars

A Type Pillar



A Type Pillar Specifications



TYPE A MONUMENT

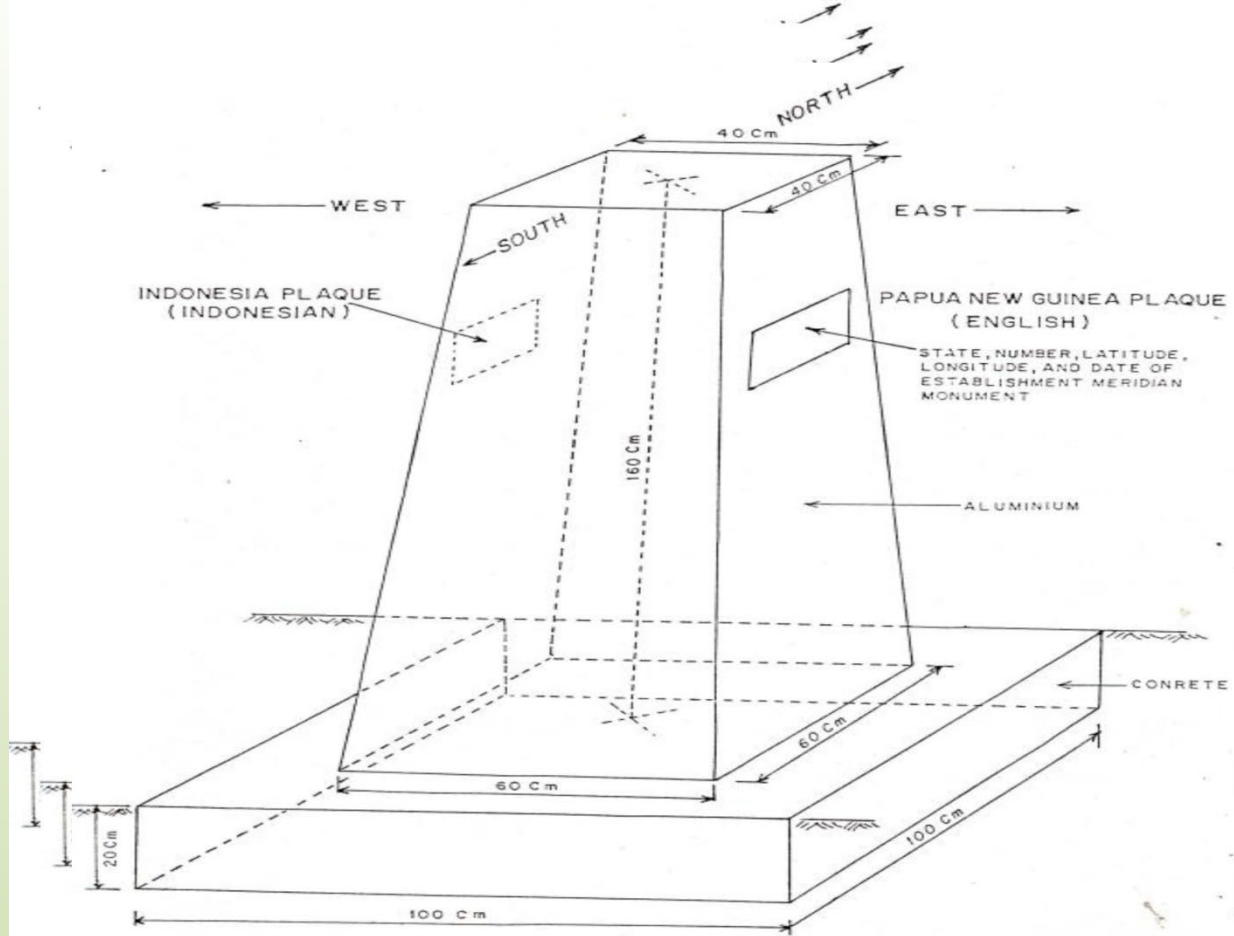
TRUNCATED PYRAMIDA, MADE OF CONCRETE OR WELDED ALUMINIUM

TOP : 40 CM X 40 CM

BASE : 60 CM X 60 CM

HEIGHT : 160 CM

CONCRETE BASE : 100 CM X 100 CM X 20 CM



TYPE A MONUMENT

TRUNCATED PYRAMIDA, MADE OF CONCRETE OR WELDED ALUMINIUM

TOP : 40 CM X 40 CM

BASE : 60 CM X 60 CM

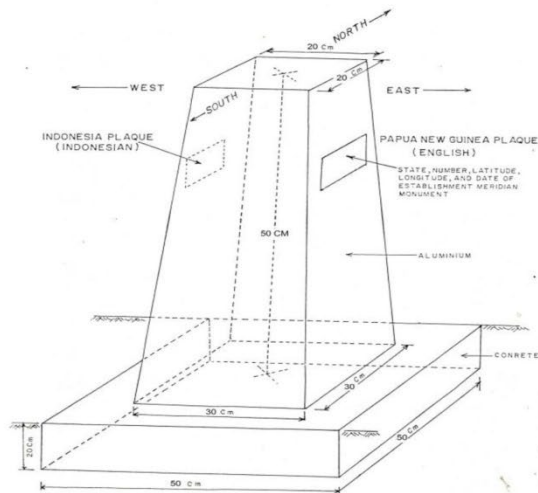
HEIGHT : 160 CM

CONCRETE BASE: 100 CM X 100 CM X 20 CM

B Type Pillar



B Type Pillar Specifications



TYPE B MONUMENT

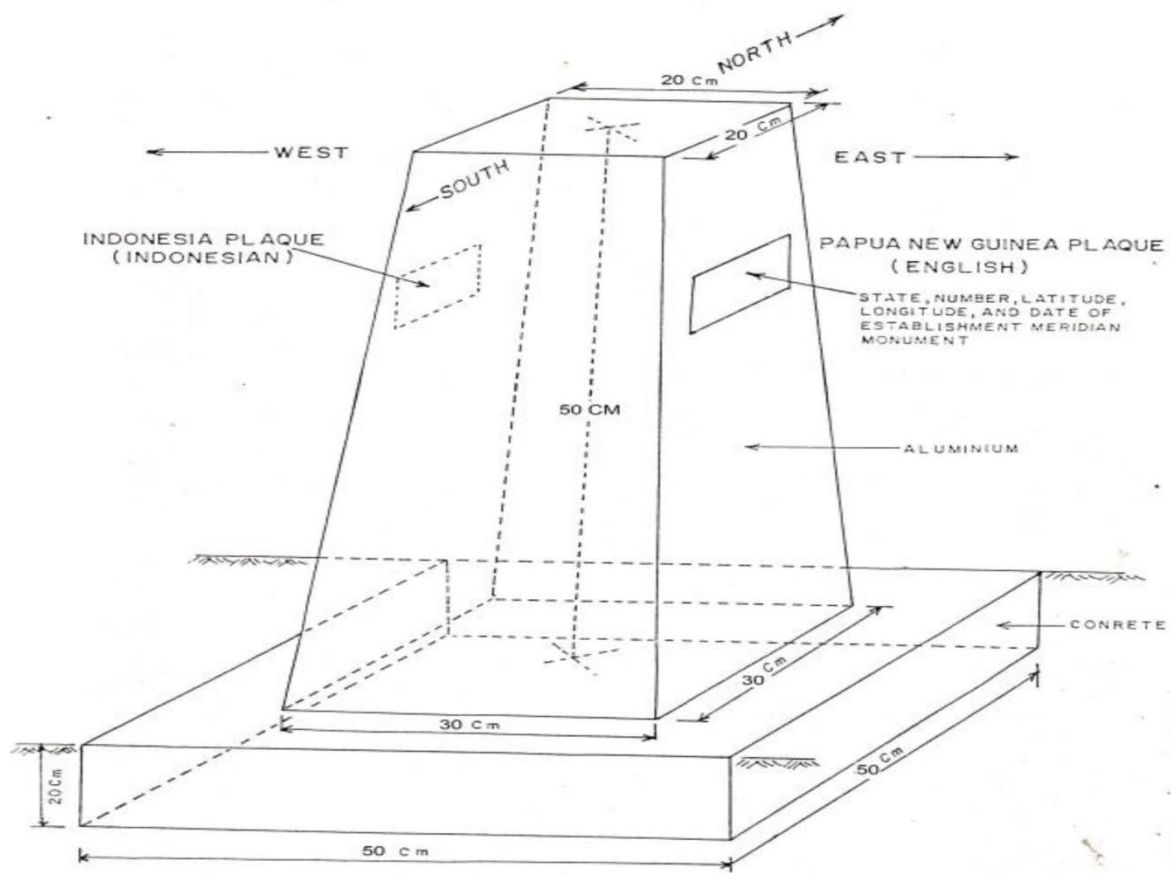
TRUNCATED PYRAMIDA, MADE OF CONCRETE OR WELDED ALUMINIUM

TOP : 20 CM X 20 CM

BASE : 30 CM X 30 CM

HEIGHT : 50 CM

CONCRETE BASE : 50 CM X 50 CM X 20 CM



TYPE B MONUMENT

TRUNCATED PYRAMIDA, MADE OF CONCRETE OR WELDED ALUMINIUM

TOP : 20 CM X 20 CM

BASE : 30 CM X 30 CM

HEIGHT : 50 CM

CONCRETE BASE : 50 CM X 50 CM X 20 CM

Planned Densification Survey 2022

Location: Between MM2.2 – MM3A

(Sengi River to Bewani River)

Bewani Wutung Onei Ilg

Bewani Govt.Stn /Skotia

Base Camp for the Survey Party will be Bewani gov't station/Skotiau

MM2.2 – MM2.3 is approximately 6.4km for 6 type B pillars

MM2.3 – MM3A is approximately 8km for 7 type B pillars

Total of 13 type B pillars at 1km intervals

PNG-INDONESIA INTERNATIONAL LAND BOUNDARY DENSIFICATION SURVEY 'A' AND 'B' TYPE BOUNDARY MARKERS TO BE CONSTRUCTED AND INSTALLED

5 year programme, 2022 – 2026

MM	A TYPE PILLAR	B TYPE PILLAR	DIST .KM	Year to be Surveyed	
MM1-MM2		7	7.8	28 pillars-2022	
MM2-MM2.1	1	9	11		
MM2.1-MM2.2		11	12		
MM2.2-MM2.3		6	6.4	34 pillars-2022	
MM2.3-MM3A		7	8		
MM3A-MM4A	2	19	22		
MM4A-MM4.1		6	7	93 pillars-2023	
MM4.1-MM4.2	2	17	19.6		
MM4.2-MM4.3		10	10.6		
MM4.3-MM4.4		8	8.3		
MM4.4-MM4.5		12	13.5		
MM4.5-MM5	1	15	16.3		
MM 5-MM 5.1	1	12	14		
MM 5.1-MM6A		8	9		
MM 6A-6.1A	1	13	15		81 pillars-2024
MM6.1A-MM6.2	4	26	31		
MM6.2A-6.3	2	16	19		
MM6.3-MM7	2	17	20		
MM7-MM7.1	3	21	25	69 pillars-2025	
MM7.1-MM7.2		5	6		
MM7.1-MM7.3		9	10		
MM7.3-MM-7.4	1	15	17		
MM7.4-MM7.5		3	4		
MM7.5-MM7.6		6	7		
MM7.6-MM7.7		4	5		
MM7.7-MM8		2	3	72 pillars-2026	
MM8-MM8.1		5	6		
MM8.1-MM8.2		8	9		
MM8.2-MM9		8	9		
MM9-MM9.1	1	10	12		
MM9.1-MM9.2	1	10	12		
MM9.2-MM10	3	23	27		
				Total - 377 pillars	

BEWANI IMAGE MAP

YAUKONO

Aprox Distance By Road (KM)	
Bewani Station - Vanimo	= 50
Bewani Station - MM2.2	= 36
Bewani Station - MM2.3	= 40
Bewani Station - MM3A	= 22

Aprox Distance By Air (KM)	
Bewani Station - Vanimo	= 40
Bewani Station - MM2.2	= 23
Bewani Station - MM2.3	= 20
Bewani Station - MM3A	= 18

VANIMO FOREST BLOCK & BASE (PKW)

▲ MM2.2

▲ MM2.3

▲ MM3A

Sinanu Villages

Sawan

Onei

ELUP

BABIANG/SKOTIAHO

SKOTIAHO (BASE CAMP)

Temara

IDOLI

Bewani

Tentative Schedule Task for Survey and Pillar Construction Party

Date	Task	No of pillar	Remarks
26/09/22	Mobilise logistics in Vanimo *Agencies -Police,PNGDF *Ground Transport, Fuel drums, *Chopper *Purchase rations, camping materials *Briefings		Transport cargo to Bewani by road
	Reconaitent and clearing Helipad		Navigate to MMs and pre densification points and clearing (Advance Party)
	Densification Pointa. Pre cords and construction of B type pillars	13 B type pillars constructed	Two survey parties at the same time and construction party/ clearing party
	Joint Static Observations of densified pillars/Rovers	13 type B pillars constructed	GPS base station @ MM12.2 Vanimo/Pom, Jayapura (WGS 84)
	Processing and calculation of reports. Final coordinates and Mapping. Also send GPS Rinex data to Indonesian counterparts		Ready for JTSC-SDM 2022 retorting

Logistics in Vanimo

Date	Task	Remarks
	State agencies on the ground. Communications	
	Access road and transport	
	Identify villages for bush clearing and helipad.(labourers)	X30
	Monument construction / survey materials and camping.	
	Border Security, PNGDF/Police	X12
	PNG-Indonesia Protocol/Diplomacy.	
	Food rations	camping



SUKSES DAN TERBUKANYA EKSTINGUISHOR
INDONESIA
TAMBAH BAHAN
PANGKALAN
PANGKALAN
PANGKALAN
PANGKALAN





END OF PRESENTATION

EM TASOL!
BAMAHUTA!