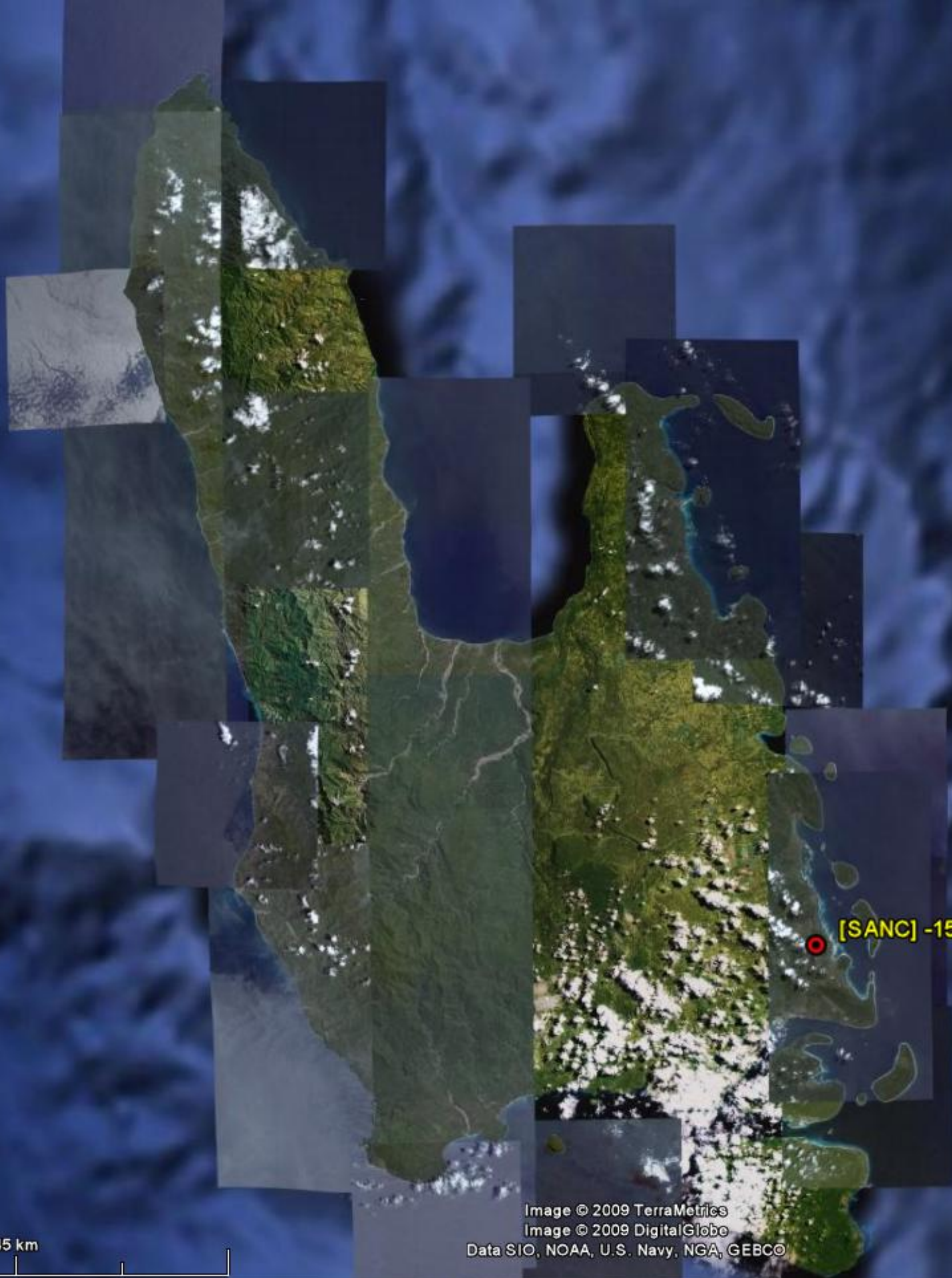




[SANC] -15.44714 167.20320

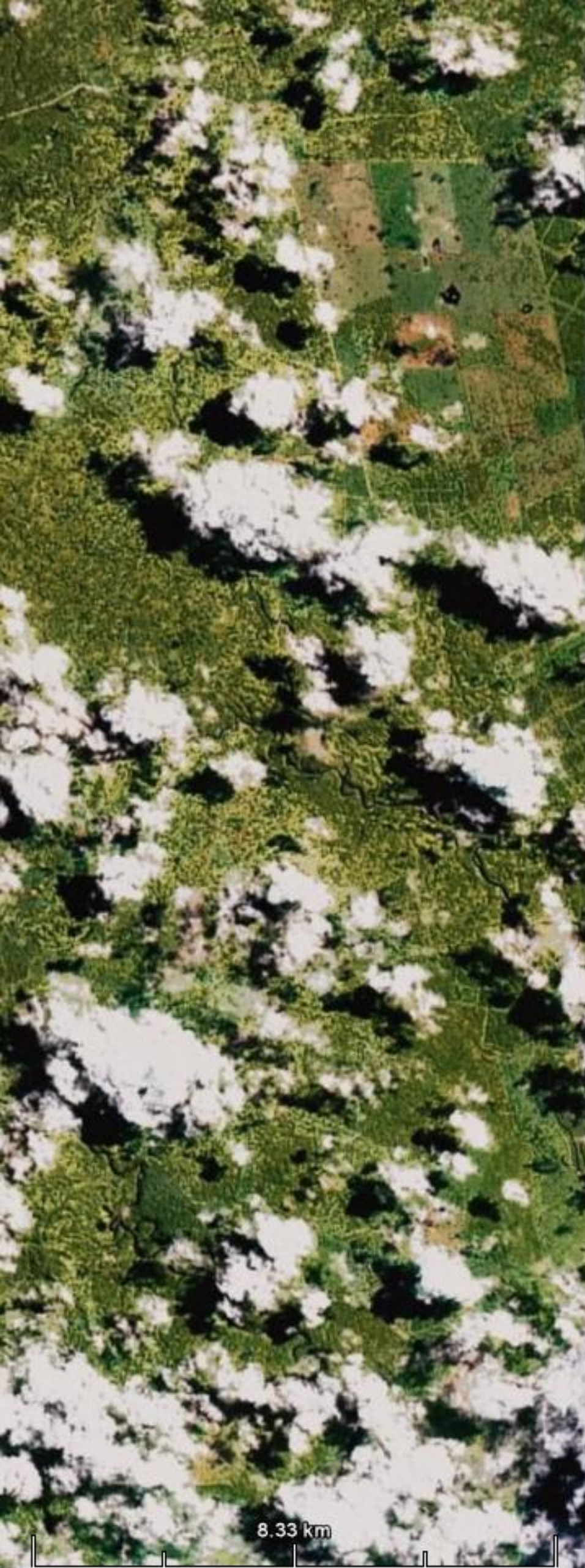
45 km

Image © 2009 TerraMetrics
Image © 2009 DigitalGlobe
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

©2009 Google™

lat -15.178126° long 167.021100° élév. 276 m

Altitude 150.34 km



8.33 km

Image © 2009 TerraMetrics
Image © 2009 DigitalGlobe
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

©2009 Google

Dates des images satellite : 16 août 2005 - 17 août 2005

lat -15.448143° long 167.224774° élév. 0 m

Altitude 29.11 km



[SANC] -15.44714 167.20320

Image © 2009 DigitalGlobe

©2009 Google

1953 m

Date des images satellite : 17 août 2005

lat -15.443426° long 167.214025° élév. 17 m

Altitude 6.87 km



[SANC] -15.44714 167.20320

Image © 2009 DigitalGlobe

©2009 Google

343 m

Date des images satellite : 17 août 2005

lat -15.445809° long 167.209834° élév. 14 m

Altitude 1.34 km

IRHO SANTO VANUATU

Lat: 15⁰26 S

Lon: 167⁰12 E

H: 110 M

STATION PERMANENTE.

Situe a IRHO Station experimentale des oleagineux distance de 10kms de LUGANVILLE. Prendre la route vers PORT OLRV.

Contact: Mr NAKEDAU DAVID agent orstom santo tel: 00678 36360

ou IRHO fax:00678 36355. TEL:36320

SURVEY DEPT tel:00678 36330 fax:00678 36560.

Avant d aller au site, avec la station sismologique, prevenir l administration IRHO de votre passage.

La station GPS est a l interieur de la plantation derriere les logements sur un plateau bien degage. Dans un enclos a mouton. Bien fermer les portails a chaque passage.

on peut se rendre en voiture normale par temp sec.

On peut se loger a la maison de passage, voir la secretaire.

Acheter sa nourriture a luganville.

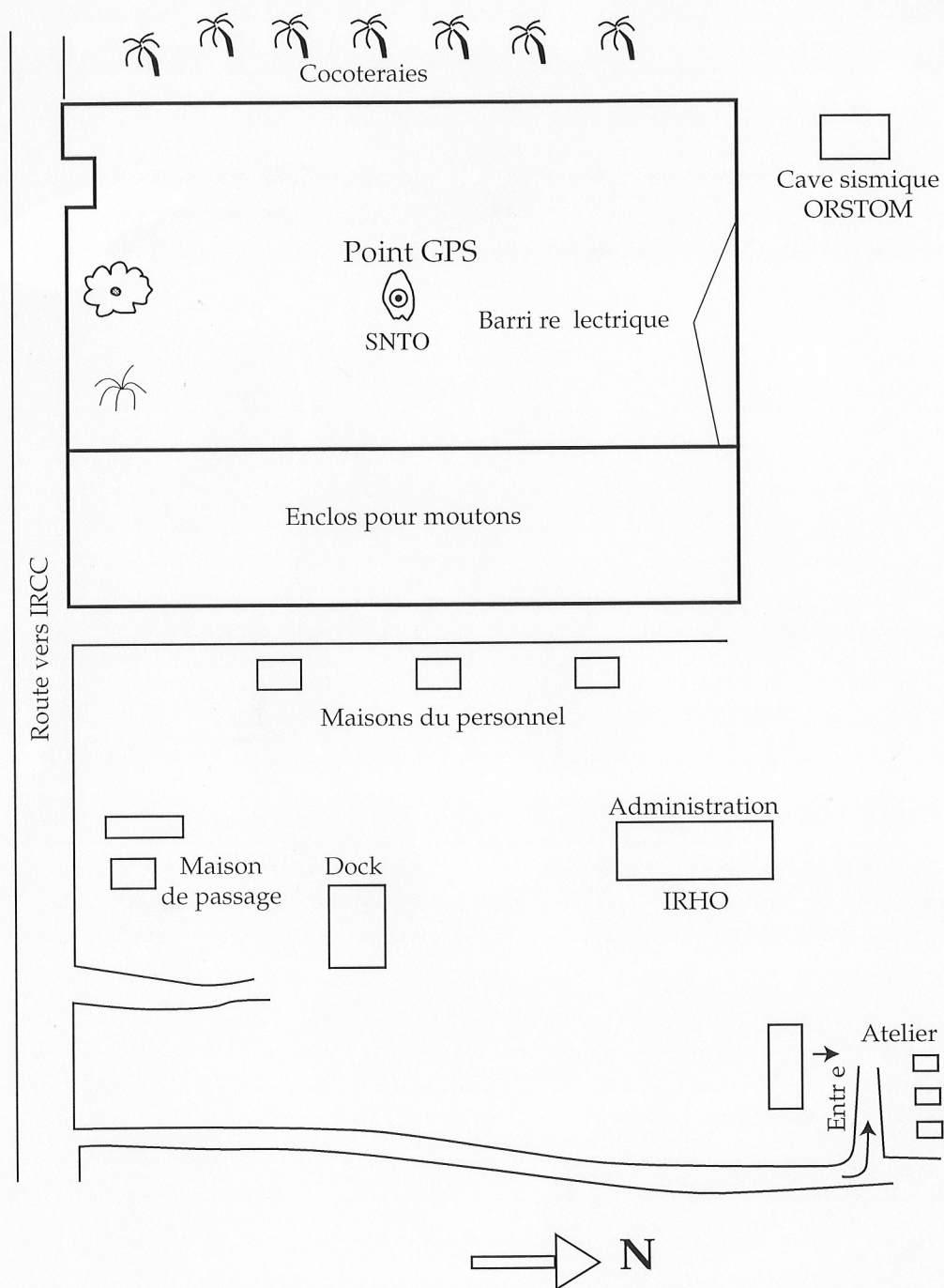
Pas de probleme pour l eau et electricite.

Au campement du personnel il y a un petit magasin

ACRONYME : SNT0

Lieu dit : Irho

Ile : SANTO (Vanuatu)



UNAVCO

GPS Site Description Log

version 2.0 May, 1991

University Navstar Consortium

PROJECT NAME SWPP 92 Organization's Name

This report should be completed in DETAIL to provide uniformity in data essential to station occupation and GPS experiment planning. It also aids in station recovery and reoccupation. Please provide the requested information.

Station Name: IRHO 4-Char ID: IRH0 Station ID #: IRH0
Location: IRHO centre City: Lugerville, Santo Country: Vanuatu
Site Address (if applicable):
Reported By: Stephane CALVERT Agency: ORSTOM Tel#: (687) 2610 00

Approximate Geodetic Coordinates GPS Mark Inscription: stainless steel pin
Latitude: 15° 26' 57.13" S Datum: Current Magnetic Declination: 12°
Longitude: 167° 12' 14.22" E Source of Position: GPS Rate & Direction of Change:
Height: 10 m Source of Declination:

Topographic Map or Aerial Photo Showing Location

Name: Scale: Agency: Date Compiled:

Time offset from UTC

Standard: +11 Daylight 6-18
No seasonal time changes observed ☐

Information included in this report (Check all that apply)

- | | |
|--|--|
| ☐ How to Reach the Station & Site Description | ☐ Site Survey & Information /Results |
| ☐ Site Vicinity Sketch | ☐ Photos of all Marks (Label Photos) |
| ☐ Local Map Showing Site Location | ☐ Photos of Station from Reference Points |
| ☐ Ancillary Information Form | ☐ Photos of Landmarks from Station |
| ☐ Horizon Mask Diagram | ☐ Other (Specify) |

Site Ownership/Permission

Who owns the site? IRHO centre
Primary Site Contact: Mr. MORINAC Mr CALVEZ
Title: director of IRHO
Address: IRHO
City, State, Zip: Lugerville, Santo
Country: Vanuatu
Tel#: Fax:

Explain procedure required to obtain permission to occupy this particular site:

ask to director.
It is better to be announced
in advance (room booking).
If pigs, sheeps, it is possible to
ask that they are removed.

Existing Geodetic Ties

Is this part of an existing Geodetic Network? ☐ Yes ☐ No ☐ Unsure
If yes, what type of network is it? ☐ Horizontal ☐ Vertical ☐ 3-D
What agency is responsible for the network?
What is the accuracy classification of this network?
What other space geodetic systems use this site? ☐ Fixed VLBI ☐ Mobile VLBI ☐ SLR
☐ None ☐ Unsure
What agency is responsible for the other system's operation?
Has a survey tie been made to the GPS station? ☐ Yes ☐ No
Comments: I asked to the topo dept to tie the GPS marks to the top
auxiliary marks.

Station: 1 R 4-0Date: 25th July 1992PROJECT NAME
SWP 92

Summary of On-Site Geodetic				See Code Below Add Comments if Need			
Agency	Inscription	Approx. Location from Station		Mark Type	Condition	Mark Setting	Soil Type
		Dist (m)	Azimuth				

Mark Type (include all that Apply) J = JPL Rod and Cap R = Steel Rod Only B = Brass Cap P = Other Cap M = Magnetic Material in Point Q = Other (Specify)	Condition (Include all that apply) S = Mark solid in soil L = Loose in soil M = Mark is moved U = Mark is Un-moved C = Center point is unreachable N = Center point not well defined O = Other (please specify)	Mark Setting (Include all that apply) P = In poured concrete form or post D = In concrete in depression in rock C = Cemented into drillhole in rock M = Mounted on mast or pier (Specify) S = In concrete structure, i.e. foundation (specify) O = Other (specify)	Soil Type A = Alluvium/Soil B = Boulder C = Compact Soil R = Rock outcrop U = Bedrock under soil O = Other (Specify)
---	---	---	---

Comments where necessary on: Mark type, condition, stability and setting. Soil type and condition. Geological setting and any factor that may affect the stability of the mark. (i.e. land slides or erosion). If constructing a monument describe what is underground and construction details. Use sketches and attach additional sheets if necessary.

Site Survey

Has a survey been performed to determine the relative, 3-D locations of the station and reference marks? ☐ Yes ☐ No ☐ Unsure

If yes, what type of survey was it? ☐ GPS ☐ Conventional

What is the expected/achieved accuracy of the survey? _____ Date of Survey: _____

Which agency performed the survey? _____

Who has the original field notes or data? _____

Who performed the data reduction and adjustment? _____

Comments on the site survey: _____

Attach all available survey information to this report

Station: IRH-0

Date: 21st July 1992

PROJECT NAME
SWPP 92

Site Access: What type of transportation is needed to gain access to the site (boat, 4WD, 2WD, inaccessible by vehicle, etc)? Please comment on the effort required to reach the site (long hike, assistance needed to carry gear, pack mule). If assistance is needed make recommendations.

a 2WD car is enough -

attach additional sheet if necessary

On-Site Facilities: Discuss any on-site facilities available to support GPS operations. Can the receiver be placed in a building? Is the building safe? How far is the building from the station? Is office or storage space available?

the site is within a research center. It can provide support in room, electricity, safety ---

attach additional sheet if necessary

Power:

Is AC power available on-site?

☒ Yes

☐ No

Voltage 230 V. Frequency 50 Hz. Distance from power source to receiver: 300 Meters

Comment on stability and reliability:

ONLY ~10 hours/day.

Discuss any special equipment that may be required, describe outlets (sketch if needed) and state any costs if required.

outlets OK with the surge suppressor provided by UNARCO -

Batteries:

Where can batteries be purchased (try and include several options, comment on type and costs)?

several shops in town Luganville - (~10 km far)

~\$80 US a 50 Ah battery

Batteries can easily be borrowed from Public Works and other places (reliability 50/50!)
Ask the Topo dept about this

Generators can be borrowed from Topo dept or rented (\$4000/1 day), Ask Topo

Where can batteries be charged (try and include several options, and indicate best option)?

at IRH-0 (at part time) or at topo dept, ~10 km far (in town)

Is a generator or solar panels needed at this site?

☒ Yes

☐ No

Any comments?

in case of emergency, IRH-0 or ORSTOM can give one.

Station: 1R(f2) Date: 21st July 92

PROJECT NAME
SW PP

Equipment Recommendations: List ancillary equipment that may be useful at this site (antenna cable length, tent, etc.)

Since the mark ~~is~~ in a hole, a longer string and longer
plumb rope would allow an easier positioning of the tripod.
It is very dangerous to even check if the crosshairs are on target
after heavy rain. T.C.

Recommended - Hammer 3 steel pipes (2 inch diam) in ground to support tripod
Feet. This is not 100% efficient. T.C. attach additional sheet if necessary Length 2 55-60cm for 2 of them
40cm for the other.

Communications: What modes of communications are available at or near the site (telephone, fax, telex, radio, mail, indicate locations)? State the best mode of communication. Make recommendations and give instructions. Supply all relevant numbers or radio frequencies. Access quality, operating hours, frequency of delivery.

phone at 1R40:

phone at TOSO (more reliable):

public phones at Vanitel, Laganville (15 km).

fax

attach additional sheet if necessary

Adverse Conditions: Discuss any conditions that could adversely affect operations. Include things like potential sources of multipath, radio frequency interference, cultural or political sensitivities, adverse weather conditions, etc.

The field may be occupied by sheep or cows.
Worse than that, it may be occasionally visited by sheep in search
of "Freedom" (sheep don't have the reputation to be smart!). Shirley Chansatt
(OE Bust #2) (T.C.)

attach additional sheet if necessary

Other Site Contacts: List all possible persons providing assistance at this site. Include all those visiting the site with you, other local contacts providing assistance, US embassy contacts etc. Indicate roles and include institutions, mailing addresses, telephone and fax numbers, etc. (include yourself)

David Nokedan, ORSTOM (contact at ORSTOM, Port Vila or
1R40 itself)

Albert Bue, Topo dept of Vanuatu, Laganville (Quite Reliable)
T.C.

Charles Lakoa " " " "

attach additional sheet if necessary

Station:

IRH-0

Date:

21st July 92

PROJECT NAME

SW V G

Station Name:

IRH-0

4-Char ID:

IRH-0

Station ID #:

IRH-0

Location:

IRH-0, Luganville

City:

Luganville

Country:

Santo Sp

Site Address (if applicable):

Reported By:

S. Calmant

Agency:

DASTON

Tel#:

(687) 26 10 00

Verbal Site Description: Describe how to reach the site from an identifiable location such as a city, town, major intersection or landmark. Include street names, distances and direction of travel. Verbally describe the site. Indicate relative locations of all monuments and the monument locations relative to landmarks. Describe each monument (what it is set in, what it is, inscription and condition).

In Luganville (main town of Santo), take the main road eastward turn left at the police station. Pass the hospital, then the cemetery Drive about 5 km. When arrived at a small village on the sea side, select the left road. About 1h after, stay on the left at the cross road (leave the truck in front of you). When arrived at the IRH-0, ask for the director, Mr. Colvez or Mr. Dorin. If not, take the track climbing to the plateau in direction of IRCC. The GPS mark is located in the second field on your right, just before the coconut plantation. (white gate) -

In the field, walk about 120 ~ N40 and look for 3 holes dig in the ground (20 cm deep) -

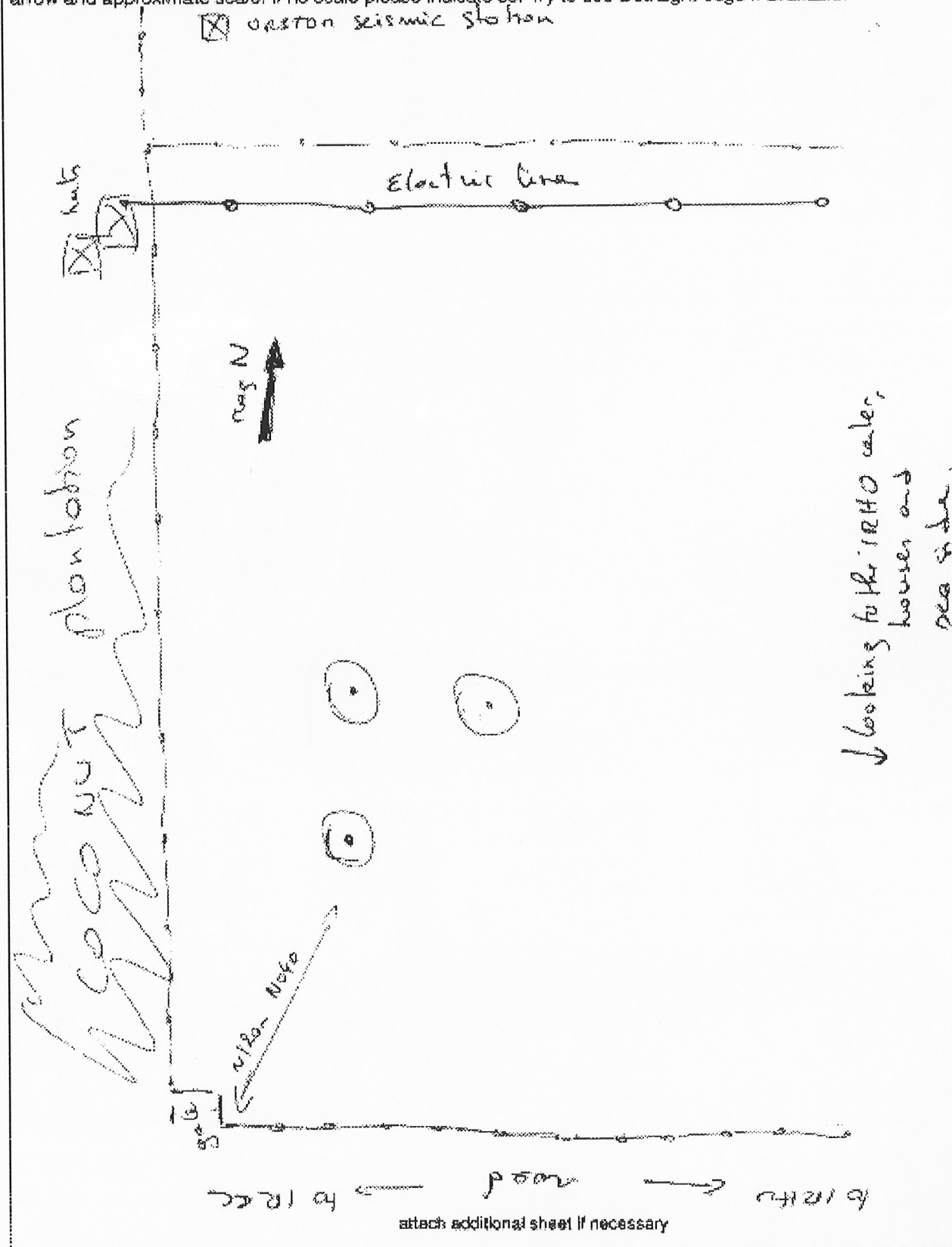
The one used for the SWPP 92 survey is the one the furthest of the coconuts, i.e. the closest to the houses.

attach additional sheet if necessary

Station: IRHO Date: 21st July 92

PROJECT NAME

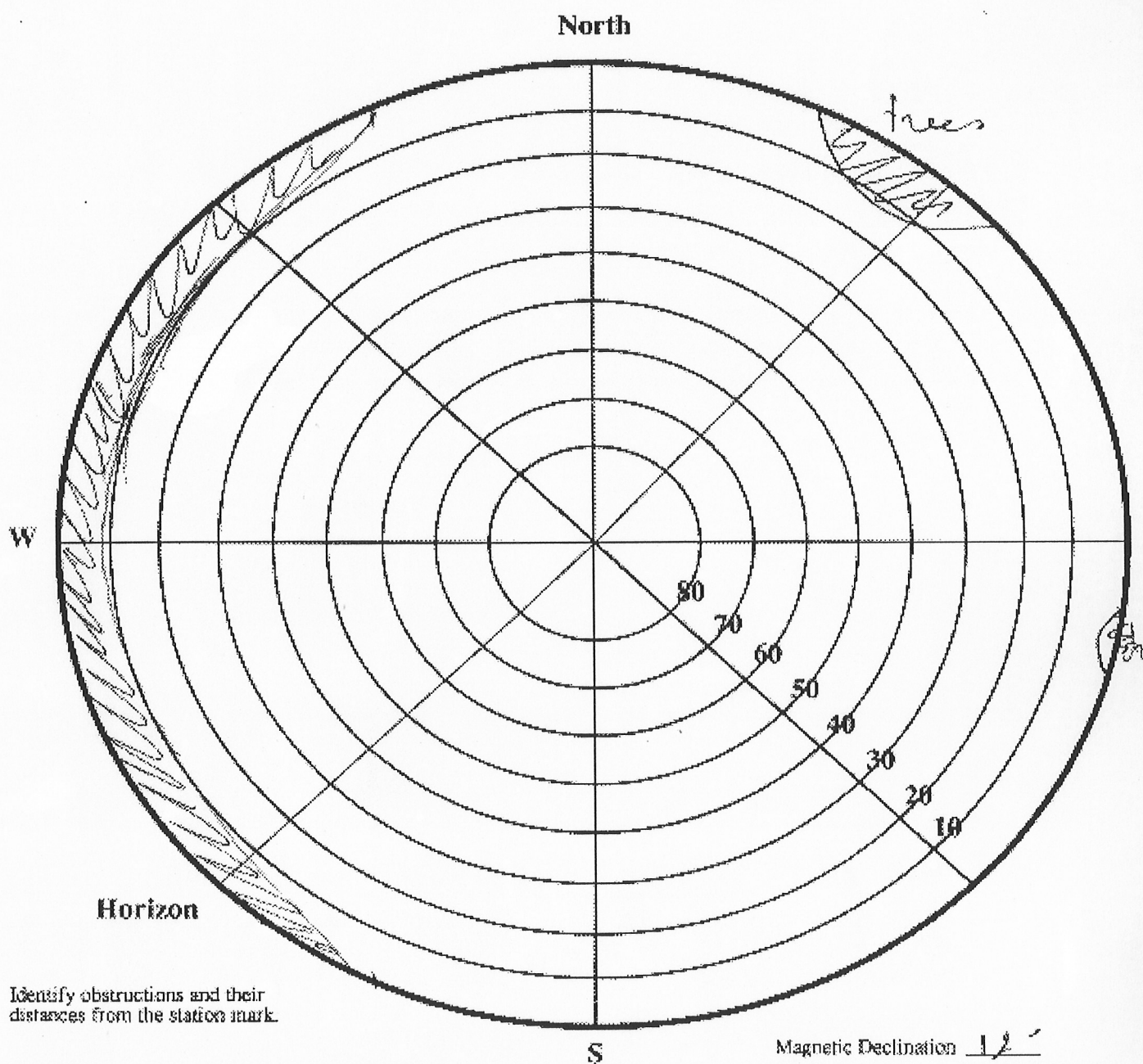
Site Sketch: Sketch the site vicinity. Show all features, landmarks and the relative locations of all markers. Include a North arrow and approximate scale. If no scale please indicate so. Try to use a straight edge if available.



Station: _____ Date: _____

PROJECT NAME

GPS Station Horizon Mask



Station Name: <u>IRHO</u>	4-Char ID: <u>IRHO</u>	Station ID #: <u>IRHO</u>
Location: <u>IRHO</u>	City: <u>Luganville</u>	Country: <u>Vanuatu</u>
Site Address (if applicable): _____		
Reported By: <u>S. Colmant</u>	Agency: <u>ORSTOM</u>	Tel#: <u>(687) 261000</u>

UNAVCO

GPS Station Description

University Navstar Consortium

UCAR, Boulder, CO., USA

Station Name: IRHO 4-Char ID: IRHO Station ID #: IRHO
 Location: IRHO, Sargautu, Santo Country: VANUATU
 Observing Monument Inscription: Stainless Steel Pin Project: SW Pacific

Approximate Geodetic Coordinates:

Latitude: 15° 26' 56.18"S Datum _____ Magnetic Declination 12 E
 Longitude: 167° 12' 13.96"E Source of Position _____ Rate & Direction of Change _____
 Height: +015.8 m 15 m Source of Declination MAP

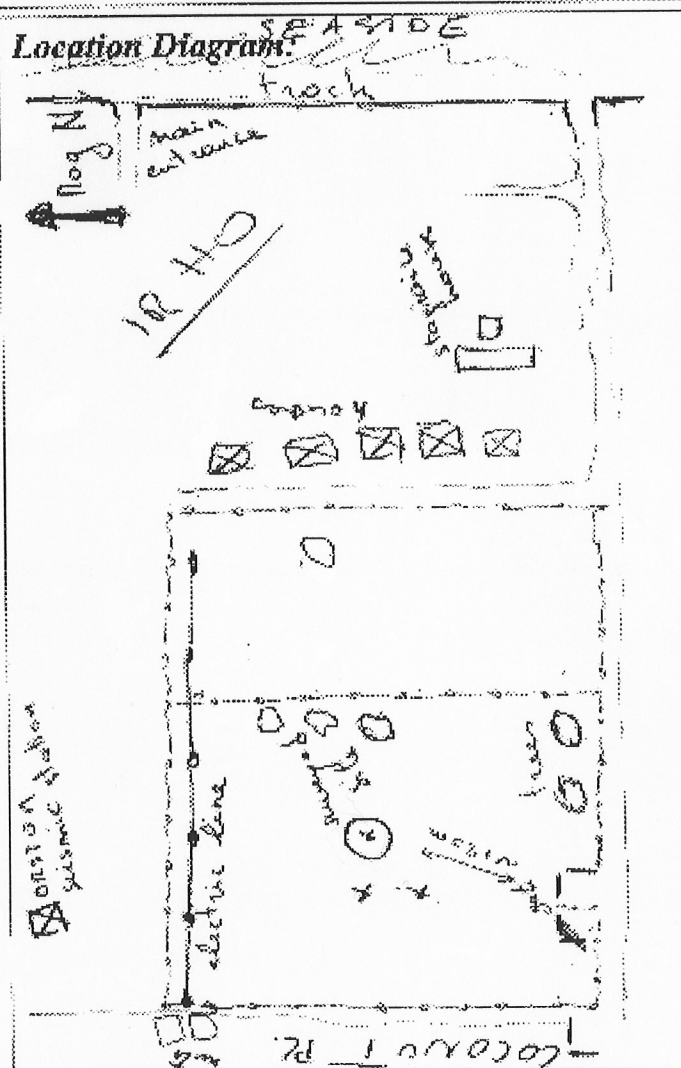
Site Personnel:

Name	Agency
<u>S. CALMANT</u>	<u>ORSTOM</u>
<u>A. BUE</u>	<u>TOPO, SANTO</u>

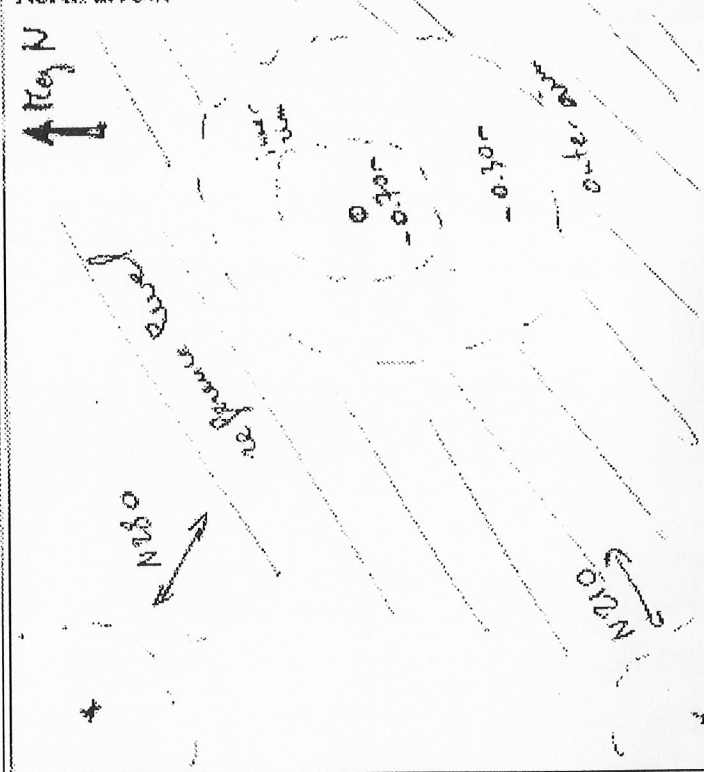
Access Notes:

Need a car to transport big yellow box and car on trunk batteries (very steep slope from IRHO). After heavy rain, it is very hard for a two whe drive car to go from the road to the marks through the field. In such a case, use special tires or even four wheel drive.

Location Diagram:



Rubbing or Photo of Monument: Indicate the exact point that the instrument was centered over and include a North arrow.



Station _____ UTC Start Date _____ UTC Start Day _____