



[TANA] -19.52558 169.25175

14.5 km

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

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Dates des images satellite : 23 déc. 2005 - 5 févr. 2007

lat -19.494426° long 169.351780° élév. 439 m

Altitude 48.73 km



[TANA] -19.52558 169.25175

Image © 2009 DigitalGlobe

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1145 m

Date des images satellite : 24 déc. 2005

lat -19.528438° long 169.259216° élév. 5 m

Altitude 3.96 km



[TANA] -19.52558 169.25175

Image © 2009 DigitalGlobe

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226 m

Date des images satellite : 24 déc. 2005

lat -19.525793° long 169.255186° élév. 14 m

Altitude 783 m




 [TANA] -19.52558 169.25175

Image © 2009 DigitalGlobe

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54 m

Date des images satellite : 24 déc. 2005

lat -19.525356° long 169.252401° élév. 9 m

Altitude 188 m 

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: TANNA GPS MARK 4-Char ID: TANA Station ID #: TANA
 Location: ON BEACH NEAR LENAKEL City: _____ Country: VANUATU
 Site Address (if applicable): N/A
 Reported By: D. S. COCK / M. M'KAY Agency: UNISA Tel#: (08) 302 322 0 (AUSTRALIA)

Approximate Geodetic Coordinates GPS Mark Inscription: STAINLESS STEEL "BEVIS PIN"
 Latitude: S 19° 31' 32.18 Datum: WGS 84 Current Magnetic Declination: 12° E
 Longitude: E 169° 15' 06.31 Source of Position: _____ Rate & Direction of Change: _____
 Height: 72.8 Source of Declination: UNAVCO
 Topographic Map or Aerial Photo Showing Location _____ Time offset from UTC _____
 Name: _____ Scale: N/A Standard: +11/15 Daylight _____
 Agency: SEE VANUATU DEPT OF LANDS Date Completed: _____ No seasonal time changes observed ☐

Information Included in this report (Check all that apply)

- ☒ How to Reach the Station & Site Description
☒ Site Vicinity Sketch
☒ Local Map Showing Site Location
☒ Ancillary Information Form (MR J. BEAR'S 1990 REPORT)
☒ Horizon Mask Diagram

- ☐ Site Survey & Information /Results
☐ Photos of all Marks (Label Photos)
☐ Photos of Station from Reference Points
☐ Photos of Landmarks from Station
☐ Other (Specify)

Site Ownership/Permission

Who owns the site? IATA SAMAIKA
(LAND OWNER)
 Primary Site Contact: AS ABOVE
 Title: LAND OWNER
 Address: LOUKATAI STATION
LENAKEL WEST TANNA
 City, State, Zip: TAPEA REGION (TANNA)
 Country: VANUATU
 Tel#: _____ Fax: _____

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

VISIT LAND OWNER DIRECTLY
OR ASK PEOPLE NEAR THE GPS
SITE FOR HIS WHEREABOUTS.
*MUST PAY "PROTECTION" FEE
OF 6000 VATU *. HE IS QUITE
FRIENDLY BUT FEE IS EXPECTED

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? DEPT OF LANDS VANUATU
 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: THIS IS EXPECTED TO BE DONE DURING
THE LATER LATTER PART OF 1992. (MIKE SHARP - ADVISER
AT VANUATU LANDS LEAVES IN JANUARY 1993)

Station: TANADate: 9/8/92

PROJECT NAME

Summary of On-Site Geodetic				See Code Below Add Comments if Needed			
Agency	Inscription	Approx. Location from Station Dist (m) Azimuth		Mark Type	Condition	Mark Setting	Soil Type
DEPT OF LANDS	STEEL PIN IN CONCRETE						
	PAD INSCRIBED "TNY 2"			(NOT KNOWN)			
	N.B NO CONNECTION MADE						
	AS AT 9/8/92						

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
 O = Other (Specify)

Condition (include all that apply)
 S = Mark solid in soil
 L = Loose in soil
 M = Mark is marred
 U = Mark is Un-marred
 C = Center point is unreadable
 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 Sedi.
 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 factors 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.

THIS IS A SUBSTANTIAL CONTROL MARK WITH ANOTHER PIN "SUPPOSEDLY" BELOW IT. PLUS 4 WITNESS MARKS (SCREWS SET IN CONCRETE) AT APPROX POSITION N, S, E & W OF MAIN CONTROL MARK.

* N.B MUST CONTACT MIKE SHARP AT PORT VILA FOR DATA IF NOT ALREADY OBTAINED.

Site Survey * NOT GPS MARK! ONLY "TNY 2"

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: _____

TANA

Date: _____

9/8/92

PROJECT NAME _____

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.

IT IS A LONG WALK FROM THE GOVT GUEST HOUSE AT ISANGEL WHERE THE CHEAPEST ACCOMMODATION WITH POWER etc EXIST (2000 VATU / NIGHT). BEST TO TRY & ORGANISE A VEHICLE FROM PUBLIC WORKS OR VIA LANDS DEPT OR ORSTOM.

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?

NO POWER, WATER, BUILDINGS ETC.

THE RECEIVER MUST STAY EXPOSED ON AT THE CORAL TERRACE. THEREFORE WE EMPTIED OUR LARGE YELLOW BOX & PLACED THE "RX" IN THE BOX WITH A STICK TAPED ON THE FRONT OF THE LID. THIS PREVENTS THE LID CRUSHING THE CABLES BUT ^{MAKES} THE "RX" WATERPROOF etc. OUR TENT WAS ABOUT 50 METRES N.B HIGH TIDES CAN COVER

attach additional sheet if necessary

FROM THIS RECEIVER.

GPS SITE !!!!!

Power:

Is AC power available on-site?.....

NO

☐ Yes☒ No

Voltage _____ V. Frequency _____ Hz.

Distance from power source to receiver: _____

Meters

Comment on stability and reliability:

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

MUST CHARGE "GEL CELL" BATTERIES AT GOVT GUEST HOUSE. MUST HAVE SOLAR PANELS. THESE WERE INVALUABLE.

Batteries:

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

CAR BATTERIES — BUT DIFFICULT TO FIND £10,000 VATU PUBLIC WORKS LENT US FREE ONE (1) TRUCK BATTERY. WE RENTED ONE (1) CAR BATTERY FROM "TANNA BEACH RESORT" FOR 5000 VATU. WE ALSO FOUND 2 USEABLE "ORSTOM"

Where can batteries be charged (try and include several options, and indicate best option)? GEL CELLS AT THE GOVT. GUEST HOUSE

240 VOLT POWER AVAILABLE 07^h → 12^h 00^m, 13^h 00^m → 17^h 00^m and 18^h 00^m → 22^h 00^m (LOCAL TIME)

Is a generator or solar panels needed at this site?.....

☐ Yes☒ No

Any comments?

SOLAR PANELS A MUST !!!
FOR 22 hours / day observations.

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

- * BEST TO HAVE VERY LONG CABLE eg at least 30 metres but this is not enough! (60 metres would be realistic BUT NOT PRACTICAL?)
 - * TIDE TABLES - BECAUSE WITH POOR WEATHER PLUS SPRING TIDES etc. THE MARK IS UNDER \approx 1.5 METRES OF SURF
 - TENT A MUST BUT WELL ABOVE TIDE LEVEL (SEE ATTACHED)
 - A STOVE WOULD BE USEFUL FOR COOKING SKETCH
- attach additional sheet if necessary

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.

- NOTHING AT SITE !!!
 - INTERNATIONAL CALLS / LOCAL CALLS AT POST OFFICE CLOSE TO GOVT. GUEST HOUSE.
 - 2 POSSIBLE FAX CONTACTS
 - a) PAT LLOYD (COFFEE PROJECT)
FAX (1)-(678)-68617.
 - b) TANNA BEACH RESORT - FAX (1)-(678)-68610.
- 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.

- * HIGH TIDES ! A CONSTANT VIGIL IN POOR WEATHER CONDITIONS IS NEEDED AS A WIND FROM THE ~~WIND~~ WEST PRODUCES VERY HIGH SWELLS. THIS CAN MAKE 22 HOURS/DAY OBSERVATIONS A LITTLE "WORRISOME"!

N.B EVEN TIDE TABLES DO NOT SUGGEST THE POSSIBLE EXTREMITY OF TIDE. UNDER NORMAL CONDITIONS MARK (GAS) IS NEVER COVERED

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 rolls and include institutions, mailing addresses, telephone and fax numbers, etc. (include yourself)

- 1) MIKE SHARP - DEPT OF LANDS AT VILA (BUT HE LEAVES JAN 1993)
DEPT OF LAND SURVEYS
P.O BOX 57 PORT VILA Ph(W) 22427
- 2) FRANCIS BONDOUX - ORSTOM
BP 76 PORT VILA
EFATE FAX 23276 Ph(W) 22268.
- 3) ON TANA 2 FAX CONTACTS DESCRIBED ABOVE!

attach additional sheet if necessary

Station: TANA Date: 9/8/92 PROJECT NAME

Station Name: <u>TANNA GPS MARK</u>	4-Char ID: <u>TANA</u>	Station ID #: <u>TANA</u>
Location: <u>ON BEACH NEAR LENAKEL</u>	City: _____	Country: <u>VANUATU</u>
Site Address (if applicable): <u>N/A</u>		
Reported By: <u>M. MCKAY, D. SLOCUM</u>	Agency: <u>UNISA</u>	Tel#: <u>(W) 302 3220</u>

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).

(SEE ATTACHED DESCRIPTION)
ON MR J. BEHR'S 1990 REPORT.

attach additional sheet if necessary

Station: TANA

Date: 9/8/92

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.

(SEE ATTACHED SKETCH)

#1

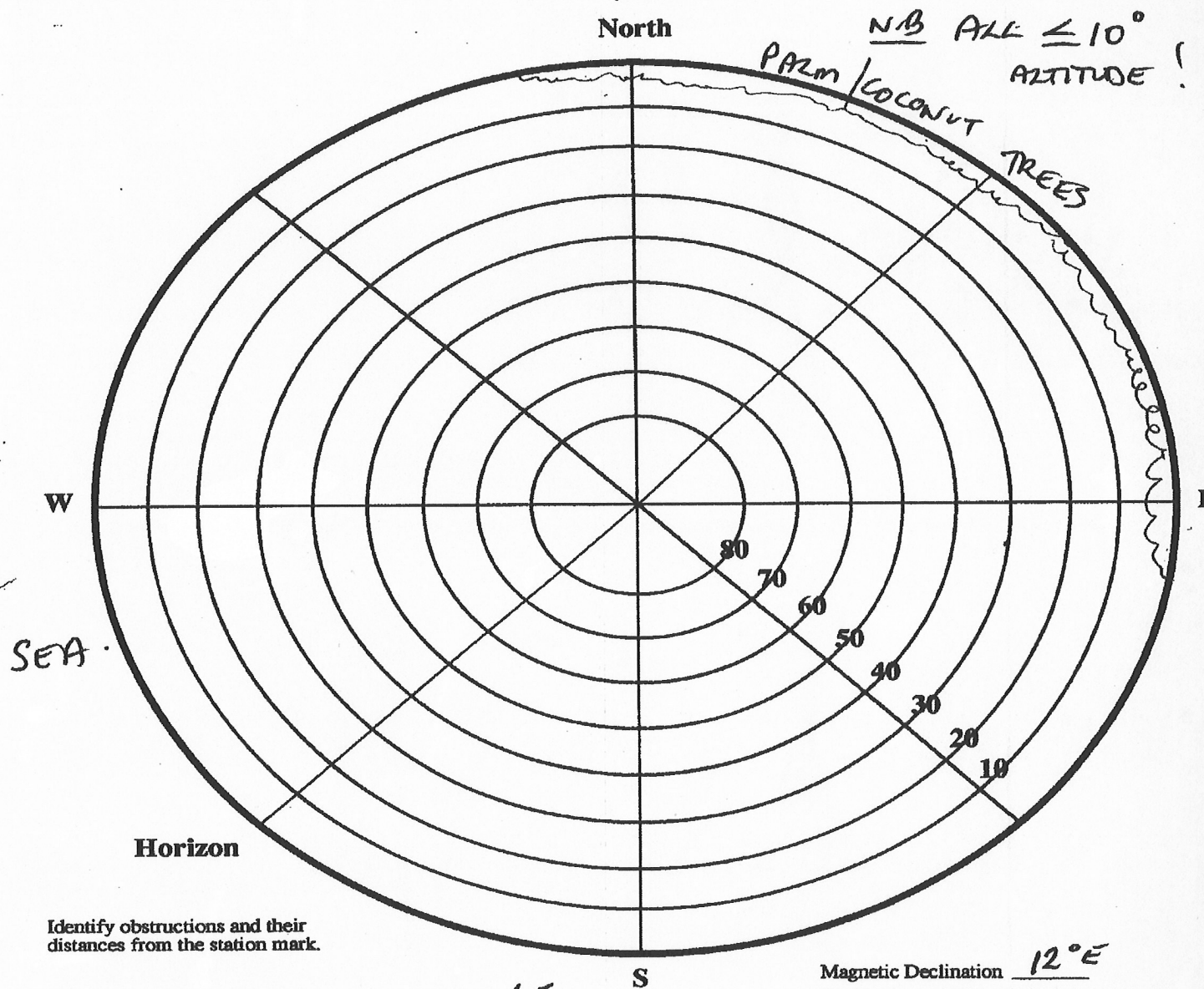
& #2 & #3.

attach additional sheet if necessary

Station: _____ Date: _____

PROJECT NAME

GPS Station Horizon Mask



Station Name: <u>TANNA GPS MARK</u>	4-Char ID: <u>TANA</u>	Station ID #: <u>TANA</u>
Location: <u>ON BEACH NEAR CENAKEL</u>	City: _____	Country: <u>VANUATU</u>
Site Address (if applicable): <u>N/A</u>		
Reported By: <u>D-SILCOCK / M. MCKAY</u>	Agency: <u>UNISA</u>	Tel#: <u>(W) 08 3023220</u>

Station: TANADate: 9/8/92

PROJECT NAME

Station Name: TANNA GPS MARK4-Char ID: TANAStation ID #: TANALocation: ON BEACH NEAR LEAKA

City:

Country: VANUATU

Site Address (if applicable):

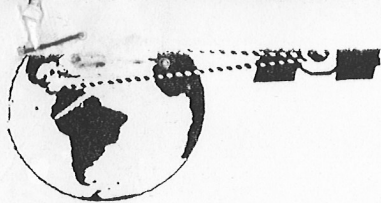
Reported By: M. MCNAY, D. SILLICKAgency: UNESATel#: (LV) (618) 302 3221Additional sheet if necessary: ADDENDUM TO "MR. J. BEN'S 1990 REPORT"

THE GOVERNMENT GUEST HOUSE APPEARS TO HAVE IMPROVED QUITE A LOT SINCE 1990. IT IS NOW VERY CLEAN WITH NO RATS, MOSQUITOS AND COCKROACHES ARE STILL FOUND IN LARGE NUMBERS THOUGH. WATER IS TURNED OFF SUNDAY AND THURSDAY MORNINGS FOR MAINTENANCE. ONLY SAW THE SECRETARY TWICE, BOTH TIMES HE CAME TO TAKE DISHES FOR HIS PRIVATE PARTY.

THE PEOPLE AT TANNA BEACH RESORT CAN BE HELPFUL, BUT WILL CHARGE FAIRLY WELL. THE RESORT IS A GOOD PLACE TO GO FOR A MEAL WHEN YOU FEEL LIKE SOMETHING OTHER THAN YOUR OWN COOKING, AND IS A GOOD PLACE FOR A FEW DRINKS. THE RESORT RUNS A NIGHT TIME VOLCANO TOUR WHICH IS SOMETHING THAT SHOULD BE TAKEN IF AT ALL POSSIBLE.

WE FOUND PAT LLOYD WHO RUNS THE TANNA COFFEE PROJECT AND HIS CUSTOM WIFE SANDRA SUMRALL, AN AMERICAN PEACE CORP TEACHER, ALSO GOOD PEOPLE TO HAVE A DRINK WITH AND WILLING TO HELP IF WE HAD A PROBLEM.

THE LANDOWNER, IATA SAMAIKA, IS ALSO VERY FRIENDLY ONCE HE GETS HIS FEE, OR PART OF IT. HIS FAMILY AND HE WILL STOP AT THE TENT OFTEN TO ENSURE YOU ARE OKAY AND HAVE FOOD. HE EVEN OFFERED TO GET HIS WIFE TO WASH OUR CLOTHES.



Project

UNA VCO 1

UNA VCO GPS Station Description

Station occupied by Name Barbara Perin
Address 3433 1/2 4th St Boulder CO 80304
Phone (303) 442 4494

Jean-Claude Willy
ORSTROM
Vila
VANUATU

Date 7-31-89

Station Name TANNA

4 char. ID TANA

Latitude S 19.52567

Source of Position _____

Longitude E 169.31817

Elevation 1.5m

Station Location 5 km N of Lenakel, 1 km N of Lighthouse, W COAST, TANNA, VANUATU

Other Names _____

Topographic maps showing location _____

Magnetic Declination 12° E

Site owner/contact Name MR. SAMAIKA

Address LOUKATAI, Lenakel

Phone _____

Road log description of route to station mark (include mileage from well known location in the nearest town).

FROM ISADGEL it is 4.7 km to site.
FROM TAFEIA COOPERATIVE STORE go North past
DISCO on left to turn off on left 1.2 km past
store. AT end of road is the beach (5 km).
Mark is approx 100 feet from ~~beach~~ water
& 8 metre at bearing of N46°E from large
concrete pad (TNY 2P). Mark is located in canal
& is a steel pin.

Mise a jour Cout Rest House 2000 VT/5

- Pas possible de monter une tente a moins de 30m de l'antenne - Prevoir caine + bache pour le GPS wild.
- Prevoir un chargeur de 6 Amp au moins pour charger la batterie en 10/12 h (peut etre moins si par une groupe de pendant le week end).
- Prevoir des batteries costands (60 A). - Eventuellement, on peut "emprunter une batterie DORIS (reservi aux ORSTOMIENS.)

Site Description

Distance and azimuth between reference and station marks.

Reference 1

Name UNAVCO GPS
 Bearing (mag) N 70° E
 Distance (m) 1185

Reference 2

Name TNY 2 (convector pad)
 Bearing (mag) N 46° E
 Distance (m) 8 M

Reference 3

Name _____
 Bearing (mag) _____
 Distance (m) _____

Other information (can the site be accessed by car, how many lengths of cable are needed, is there external power, what is needed at the site to make the operator more comfortable? ect.)

You can drive onto beach to locate tent. Need 2 cable lengths to get off coral onto sand but use only ~ 130ft. Need batteries. Site cannot quite cold - We measured 16°C & was told it cannot to 11°C.

Local Accommodations

STORE was great!
 Government Guest House - 1000/two/night Isangel

Places to charge batteries

Charged in government guest house, Island Power
 on 05³⁰ - 11³⁰, 13³⁰ - 17⁰⁰, 18²⁰ - 22⁰⁰

Local contacts

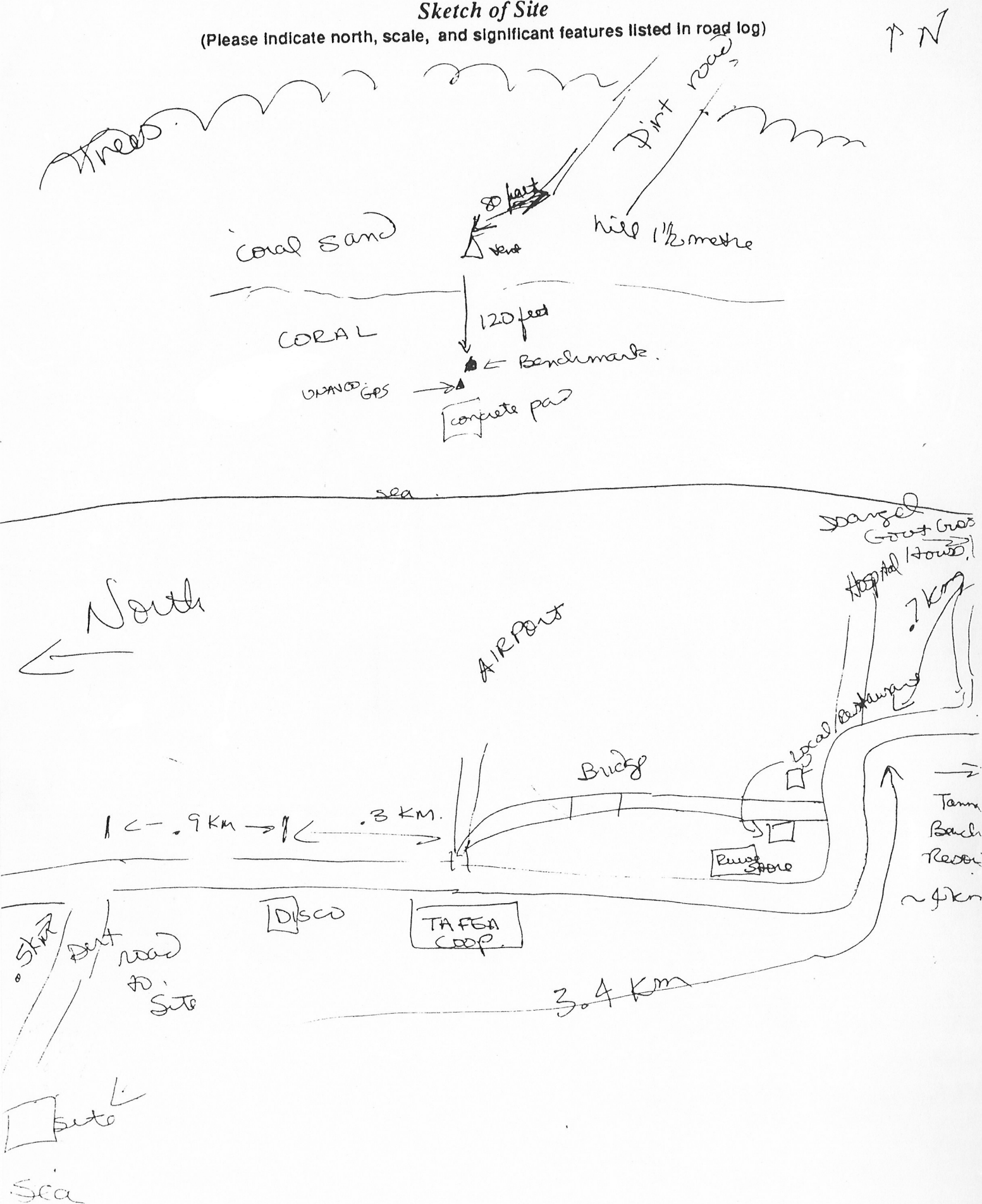
TANNA - GOvt phone 2038 730 - 16³⁰
 MR Phillip Shing Secretary
 MR JOE DARGAR Asst Secretary
 MR. LUKE KAMSEK Treasurer

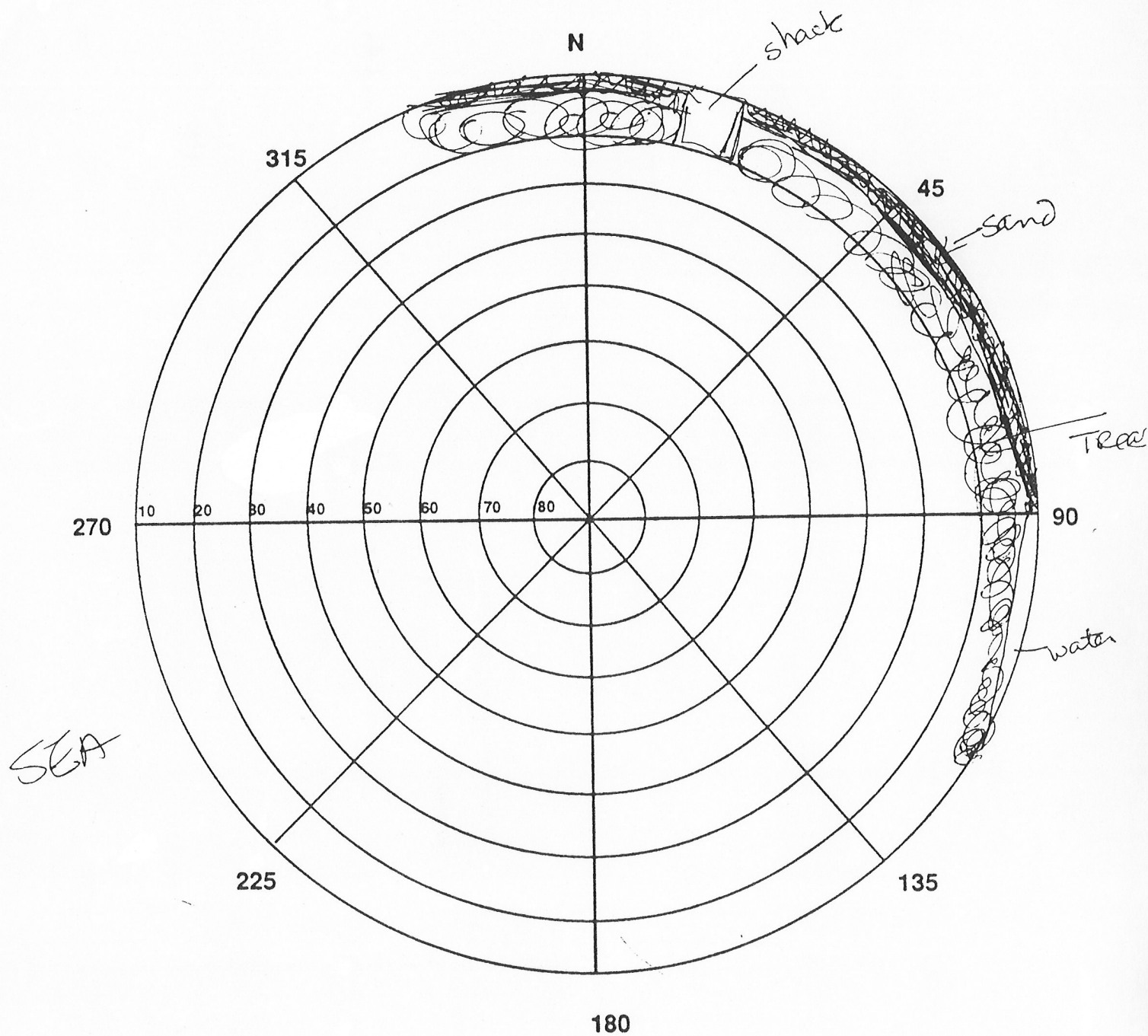
Vila.

Claude Reichenfeld ORSTROM
 2268 (w) 2776 (h)

Sketch of Site

(Please indicate north, scale, and significant features listed in road log)





Other station information

Fill out as time permits

Communication at site**1) Types and location of communications (Telex, Teletype, radio)**

Post Office Telephone 7³⁰ - 16⁰⁰
 Battery phone Tanna Beach Resort & phone in Phillip Slung
 Home

2) Overseas communication

- Location Post Office
- Quality and cost \$ 480 / min to US good quality
- Operating hours 7³⁰ - 16⁰⁰
- Time difference from UNAVCO +17 hr (Daylight saving)
- Country, state, and town long distance codes _____

3) Transportation

- Airport - Types and frequency of flights, cargo offices, price per kilo shipments - 2 flights per day AIR Melanesia - 1 morning & 1 afternoon
- Cargo 45 v 1 kg.
- Transportation from airport to site (type and availability)
Govt vehicle & taxi - 300 vatw.

4) Other Local contacts - Name address and phone number of people providing assistance and the type of assistance provided.

5) Power

- Type of power, voltage variance, and stability. 230 V.

- Location of stores to buy batteries, price of batteries, voltage and amp hrs available. TAFEa Coop

12V 120 amp 116800 vathw.

12V 40 amp 6680 vathw.

- External power available, distance from power to receiver

No external power.

- Best place to charge batteries Best in our sleeping quarters

6) Repair and maintenance facilities

- Local hardware stores TAFEa Cooperative & Government

7) Lodging and restaurants

- Local hotels recommended and prices in U.S. \$.

TANNA Beach Resort - 4000 \$ / night - May bargain a weekly rate

Govt Rest House - 1000 \$ / night cooking, no fridge, no hot water, sometimes (raw) no

- Restaurants- the good, the bad and the ugly water, rats, cockroaches, dirty

1 western restaurant - TANNA Beach Resort - 400-600 \$ lunch 800-1200 \$ vathw dinner

2 local restaurants in Lanakel (see map) island food 60 vathw lunch, 80 vathw dinner

8) Local sanitation conditions

- Can you drink the water? best to filter, although did drink some

- Mosquitoes and other bugs? some mosquitoes (malaria here)

* Market near TAFEa Coop Mon ^{FRI} ~~8:00~~ morning
near Lanakel in Jan " " "
near Dargel Wed morning

9) Medical clinics or doctors

- Are emergency medical services available (location and type)?

Hospital near Lanelkel (~3 km inland)
 stayed with 2 doctors from England &
 "custom" doctors.

- Local phone number which could be called in case of emergency

(i.e. local contact familiar with the project)

Claude Reichenfeld, ORSTOM, VILA 2268(w), 2716(h)
 MR Phillip Shing, Secretary, TANNA 2038 -

10) Contact at the Local U.S. Embassy or consulate

11) Time of year and climate during site occupation. What clothing do you recommend for operator comfort and a successful survey. Any other equipment which would make the stay more enjoyable (camp stove, radio etc.).

16° - 23° C

Need rain gear & warm clothes

Stove was great

12) Location of banks, hours of operation, exchange rate - Vila open 7:30 - 400 M-F

118.59 vatu / \$1 US

TANNA - VANUATU SAVINGS BANK - 8-11, 1:30 - 3:00 M-F

114 vatu - \$1 US

- Name and address of bank where money can be wired.

- Is it proper to tip? If so how much? No need to tip

• How much for a cold beer? 100 V from store, 230 V
 TANNA Beach Resort

13) Are the people friendly. Do you feel you and the equipment were safe? Any other conditions that could adversely effect operations

People friendly but shy. But custom landowner
 wanted more money. Paid guard 500 vatu
 per day. Felt equipment was safe.

UNAVCO Day 209

GPS Station Description

University Navstar Consortium

UCAR, Boulder, CO., USA

Station Name: PORT RES 4-Char ID: GPS2 Station ID #:
 Location: PORT RESOLUTION TAINA ISLAND Country: TAHITI
 Observing Monument Inscription: GIP (GALV. IRON PIPE IN CONC.) Project: SW Pacific

Approximate Geodetic Coordinates:

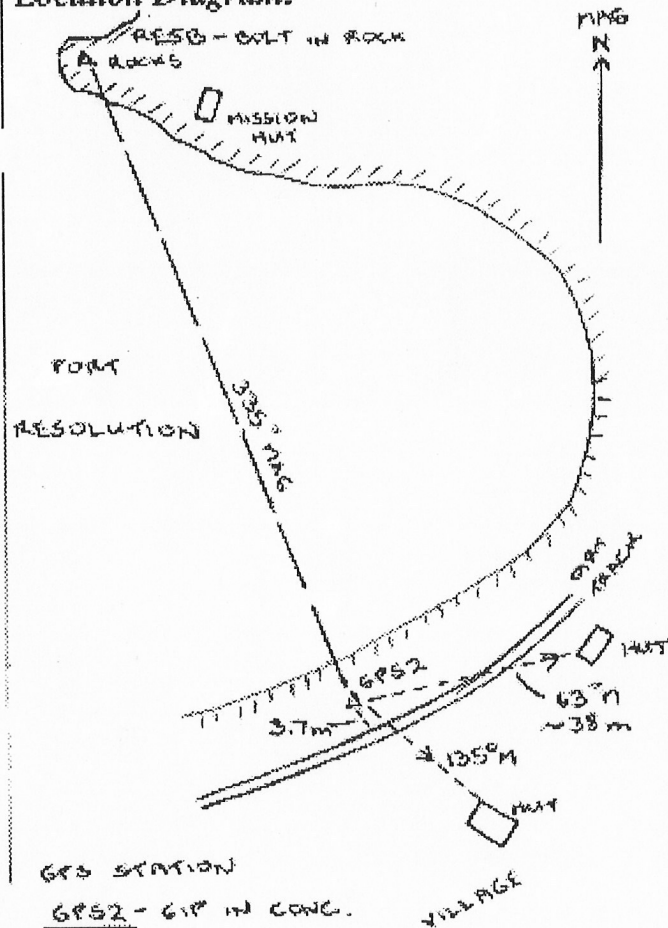
Latitude: S 19° 31' 36.9" Datum WGS 84 Magnetic Declination 12° E
 Longitude: WE 169° 30' 03.4" Source of Position GPS Rate & Direction of Change
 Height: + 318.677 Source of Declination

Site Personnel:

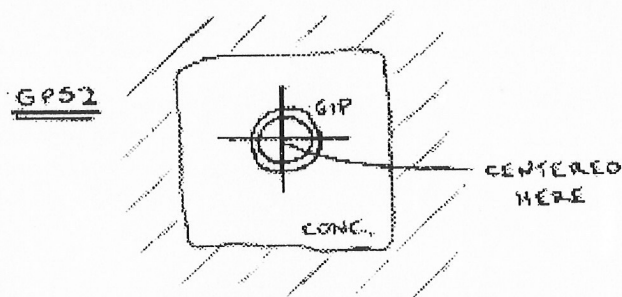
Name	Agency
<u>DAVID JERICHO</u>	<u>LANDS SOUTH AUST.</u>
<u>MIKE SHARP</u>	<u>LANDS SURVEY TAHITI</u>

Access Notes:

Location Diagram:



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



NOTE: THERE ARE MANY HEAVY PALM TREES ELEVATIONS UP TO 40' AT TIMES 60-70'. THIS IS NOT A GOOD GPS SITE UNLESS SOME CLEARING IS PERFORMED.

Station GPS2 UTC Start Date 27 JULY 92 UTC Start Day 209

Station Name: TANNA GPS MARK 4-Char ID: TANA Station ID #: TANA
Location: ON BEACH NEAR LENAKEL Country: VANUATU
Observing Monument Inscription: _____ Project: SW Pacific

Approximate Geodetic Coordinates:

Latitude: S 19° 31' 32" 18 Datum WGS 84 Magnetic Declination 12° E
Longitude: E 169° 15' 06" 31 Source of Position RECEIVER Rate & Direction of Change ?
Height: 72.8 Source of Declination UNAVCO

Site Personnel:

Name	Agency
<u>D. SILCOCK</u>	<u>UNISA</u>
<u>M. MCKAY</u>	<u>UNISA</u>
_____	_____

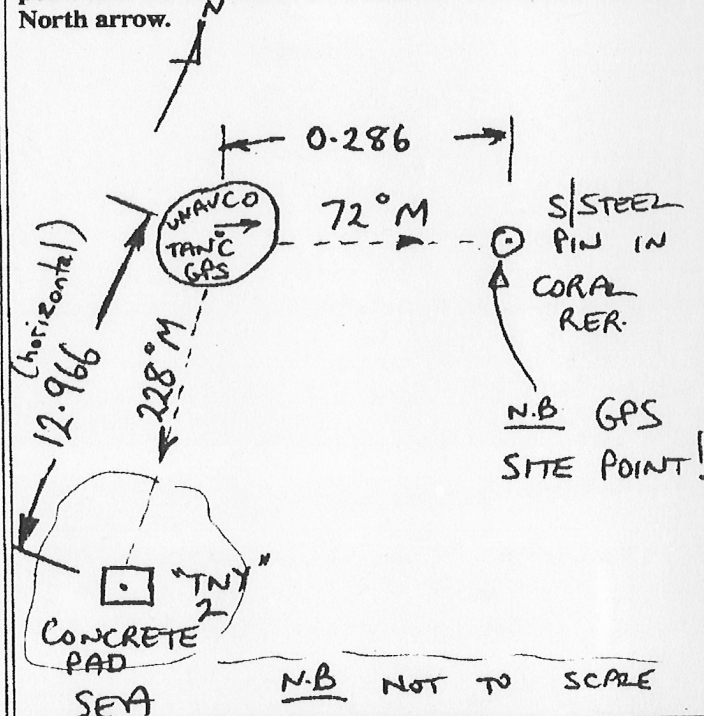
Access Notes:

(SEE MR J. BEHR'S
1990 REPORT
ATTACHED !)

Location Diagram:

(SEE ATTACHED SKETCH #1)
SEE ATTACHED SKETCH #2
SEE ATTACHED SKETCH #3

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



Station TANNA GPS MARK "TANA" UTC Start Date 30 JULY '92 UTC Start Day 212



Project: MK J. BEHR'S 1770 REVISOR

Southwest Pacific 1990

UNAVCO 1

Version 1.1

N.B

AMMENDMENTS !!!

UNAVCO GPS Station Description

Station occupied by Name Jeff Behr
Address 1520 Pine St; Boulder, CO.
Phone 303 - 492 - 5411

209
653

57 1/6

RES B.

Date August 7, 1990

Station Name Tanna

4 char. ID TANA

Latitude 19° 31' 48" S

Source of Position GPS

Longitude 169° 15' 00" E

Country Vanuatu

Elevation 1.5 m

Station Location In coral terrace, 3 km N of Lenakel, Tanna Island

Other Names _____

Topographic maps showing location _____

Magnetic Declination 12° E

Site owner/contact

Name Iata Samaika

Address Loukatai, Lenakel

Phone _____

Road log description of route to station mark (include mileage from well known location in the nearest town).

From Tafea coop, the road leading along the coast, out of town to the north, is followed for 1.2 km to a dirt road on the left. Follow the dirt road for .5 km to the beach. The mark is almost straight out from where this road reaches the beach, embedded in the uplifted coral.

From the gov't town of Isangel, follow the coast road to the north to Lenakel and on through town past the Lenakel and Tafea coop stores. If you go the alternate route (past the public stadium/playing field) east of the town centre, turn left after the bridge. This will take you to the Tafea Co-op.

****Attach all maps notes and drawings for this station and do not forget the camera.****

Site Description

The mark is a steel pin in coral with a UNAVCO/GPS reference mark a few inches away. ($11\frac{1}{4}''$ at $546\text{ S } 72^\circ\text{ W}$)
 The mark is about 12 meters from a concrete pad further out in the coral with the letters TNY 2 on it.
 The mark is at about $N 46^\circ E$ from this pad

From where the dirt road leading to the beach ends the mark is about 32 m directly out from the road to the ocean across the coral. That is ≈ 32 m from where the coral begins to where the mark lies

Distance and azimuth between reference and station marks.

928. 1992

Reference 1

Name TANC
 Bearing (mag) 072°
 Distance (m) 286 m ($11\frac{1}{4}'$)

Reference 2

Name TNY 2 (concrete pad)
 Bearing (mag) $046^\circ 48' M$
 Distance (m) ≈ 12 m

Reference 3

Name _____
 Bearing (mag) _____
 Distance (m) _____

12.966 (horiz)

Other information (can the site be accessed by car, how many lengths of cable are needed, is there external power, what is needed at the site to make the operator more comfortable? ect.)

Local Accommodations

Govt Guest House - 2000 vt/nt (SAME 1992)
~~Local Secretary's Guest House - 1000 vt/nt (N/A 1992)~~
 Tanna Beach Resort - 4000 vt/nt for a bungalow
 9000 vt/nt 1992

Places to charge batteries

In your local accommodations. Power is only on about 12 hrs a day, however. 240 V, bring adaptors. Electric hours vary but are around 7:00-12:00, 1300-1700, 18:00-22:00 ✓

Local contacts

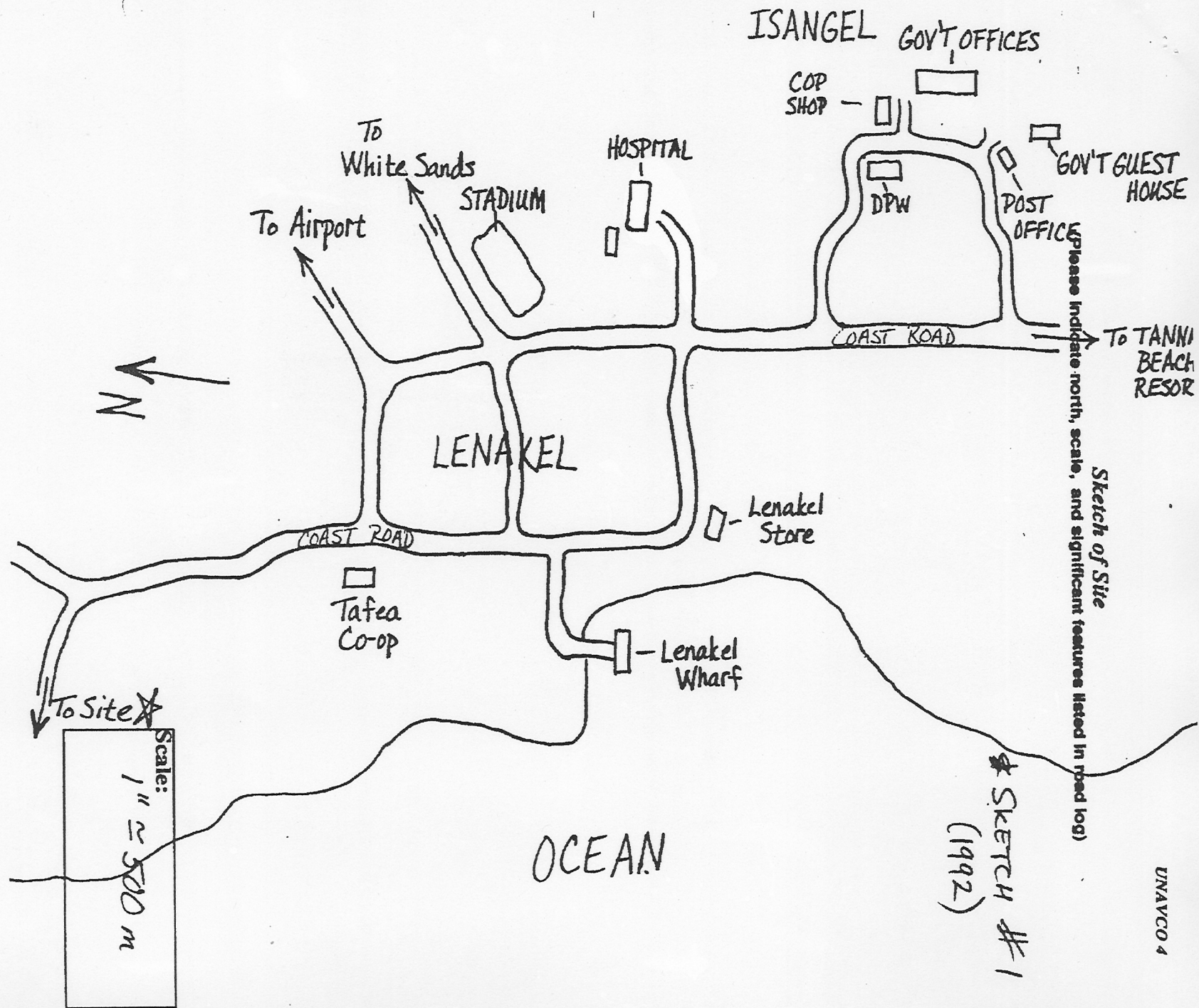
N/A 1992

Phillip String - Secretary of Tanna Island - (will probably resign post in 1991)

(Tanna government offices phone # 2038)

Claude Reichenfeld in Vila may have others (ORSTOM-2268)

SEE MY REPORT 1992 928.



Other station information

Fill out as time permits

Communication at site

1) Types and location of communications (Telex, Teletype, radio)

Post office radio telephone, Gov't office, ~~Phillip King's residence~~

2) Overseas communication

- Location Post Office
- Quality and cost VERY GOOD, 45 MIN. 250 VARY. CHARGE FOR COLLECT CALL. NOT SO GOOD NOW, NO SATELLITE LINK (HEAT TAP)
- Operating hours 7:30 - 1200 13:00 - 16:00 - Island time!
- Time difference from UNAVCO +17 hours
- Country, state, and town long distance codes _____

3) Transportation

- Airport - Types and frequency of flights, cargo offices, price per kilo shipments Van Air 2 flights to and from Vila, daily 10:45 and 15:45 - subject to change Flights to Futuna, also
- Transportation from airport to site (type and availability) Taxis ~ \$400 Vatu 600 - taxis are expensive in Tanna. Make arrangements with the gov't people for shuttling. This will save ~ 50%.

4) Other Local contacts - Name address and phone number of people providing assistance and the type of assistance provided.

Russell Wilson - Engineer with Dept. of Public Works
can assist with charging by providing backup batteries
- he may also be leaving Tanna, however, by '92

SEE 1992 REPORT

5) Power

- Type of power, voltage variance, and stability. 240 V on ~ 12 hrs/day
700-1200, 1300-1700, 1800-2200 but varies.
- Location of stores to buy batteries, price of batteries, voltage and amp hrs available. Tatea co-op 12 V, 40 Ah ~ \$800 rate
10,000
Ask for backup at Dept. of Public Works
- External power available, distance from power to receiver ~~1000~~ ~~1000~~
No external power
- Best place to charge batteries In guest house
Public works has a battery charger.

6) Repair and maintenance facilities

- Local hardware stores Tatea co-op store

7) Lodging and restaurants

- Local hotels recommended and prices ~~1000~~ ~~1000~~. If there are two or more people a Tanna Beach bungalow would be nice for a day or two. Don't recommend Gov't guest house @ 12000 vt.
Do recommend Secretary's guest house if available @ 1000 vt.
The site on the beach is the best!
- Restaurants- the good, the bad and the ugly
I find Tanna Beach has excellent food: lunch ~ 500 vt
dinner 1000-1500 vt. total. OVERPRICED
H-H restaurant + Lenus Lapin - basic but good meat, rice and vegies for ~ 150 vt.

8) Local sanitation conditions

- Can you drink the water? Yes; the Tannese are pretty good about water quality control
- Mosquitoes and other bugs? Mosquitoes, yes! Can get malaria + tengu fever.

9) Medical clinics or doctors

STAFF HELPFUL BUT
QUALITY OF SERVICE
DUBIOUS. SERVICE IS
FREE.

- Are emergency medical services available (location and type)? Hospital
is atop hill which is reached by paved road
at intersection of coast road and stadium/airport
road. - up from Lenakel co-op.
- Local phone number which could be called in case of emergency
(i.e. local contact familiar with the project) Phillip Shing 2038

10) Contact at the Local U.S. Embassy or consulate

11) Time of year and climate during site occupation. What clothing do you recommend for operator comfort and a successful survey. Any other equipment which would make the stay more enjoyable (camp stove, radio etc.).

Winter time, temp. range 16-28°C - can be cooler.
Can also be windy - damp - a sleeping bag is good here
Bring rain gear and warmer clothes.
Camp stove is handy but could only find low quality
here - try to bring white gas from Vila.

12) Location of banks, hours of operation, exchange rate

Bank in Tafea
Co-op \$1.00 U.S. = 112 rate - store houses
Banks in Vila \$1.00 U.S. = 117 rate

- Name and address of bank where money can be wired.

- Is it proper to tip? If so how much? Didn't tip. Don't know
where I would have.

- How much for a cold beer? 1200 ¹²⁰ vt. at Gov't store
275 rate at Tanna Beach
300

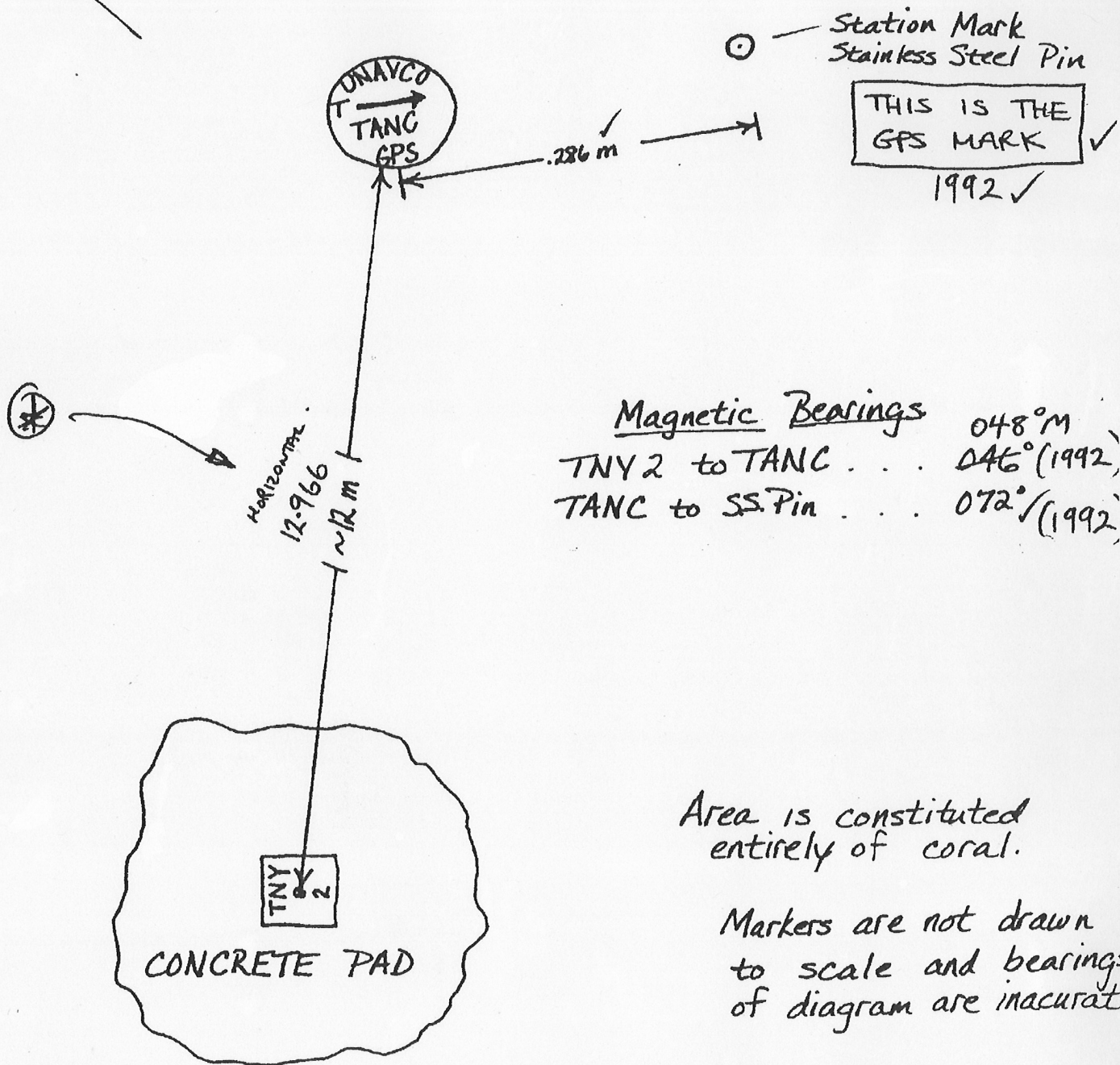
13) Are the people friendly. Do you feel you and the equipment were safe? Any other conditions that could adversely effect operations

People here are
great. Some will try to get money from you
but tell them 'no' and life's O.K. Tell equipment
was pretty safe. The landowner and his family
will keep pretty good tabs on the eqpt., but some
Tanvase steal, so be careful.

SKETCH #3 (1992)

UNAVCO 9

STATION MARK "RUBBING" and a UNIQUE DESCRIPTION



SKETCH OF
STATION AREA

INCLUDE MARK and all
references)

TANWA
VANUATU.

SKETCH AT 1:1 (1:1)

UNAVCO 10

JOE SAMAIKA'S
NEW HOUSE

N
TRUE

COAST ROAD
~0.5 km

1.2 km
to Tafea Co

ROAD

~0.5 km

ACCESS

1992 TENT SITE * ~0.5 km
NOW GONE
SHELTER

BUSH

BEACH ROAD
CUT SLOPE
~1 m

CORAL SAND
BEACH

NOT POSSIBLE
* 1992
Tent Site

CORAL
TERRACE

TANC

TNY2

CORAL
TERRACE
(~1.5m ASL.)

PIT

* 1992 TIDE HIGHEST
CORAL SAND
BEACH

BUSH

SCALE: 1" ~ 20m

NORMAL LIMIT OF HIGH TIDE

OCEAN

