Phase I Report Ili'ili Water Tank
Site Il #1

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American Samoa Power Authority

2/6/1995

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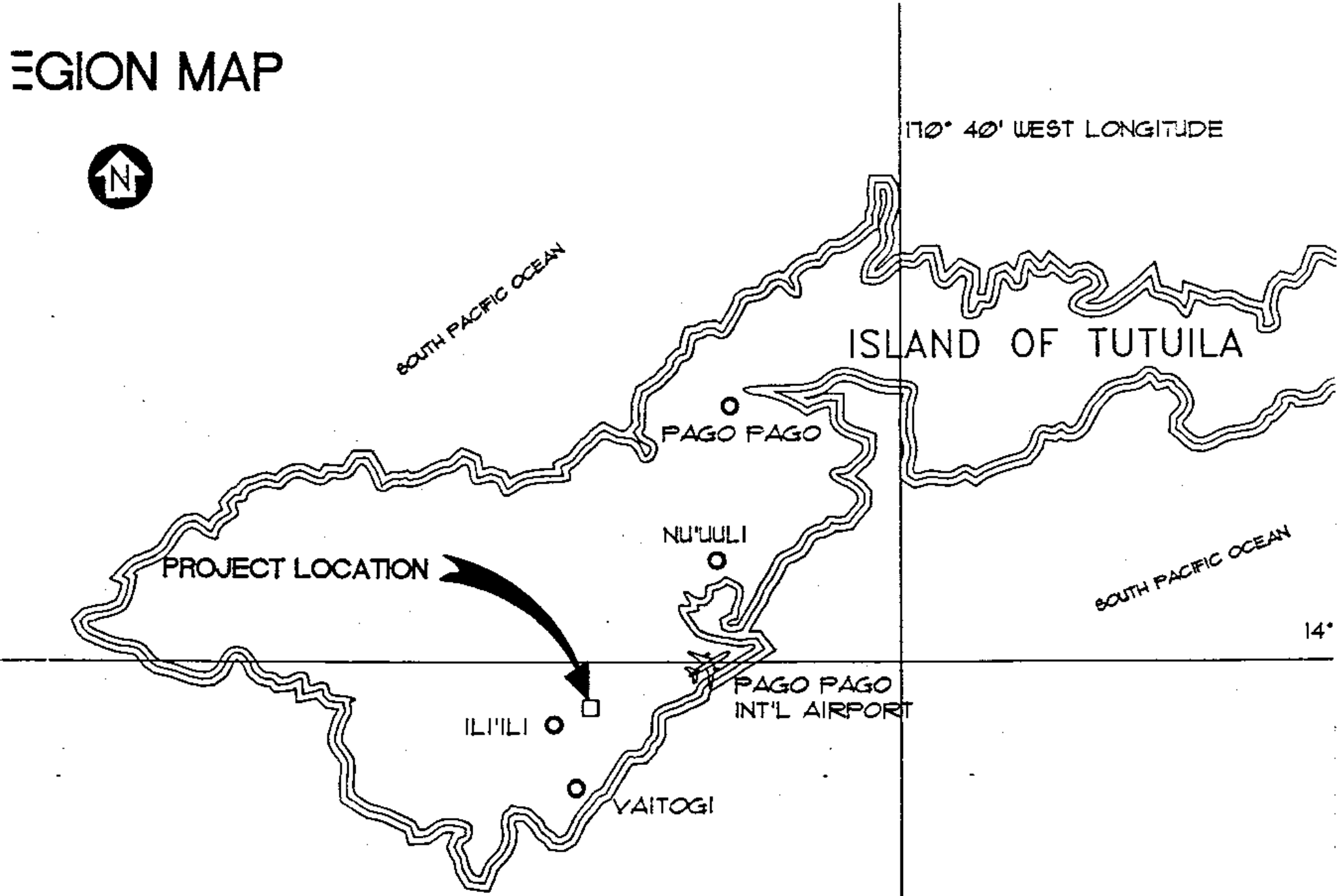
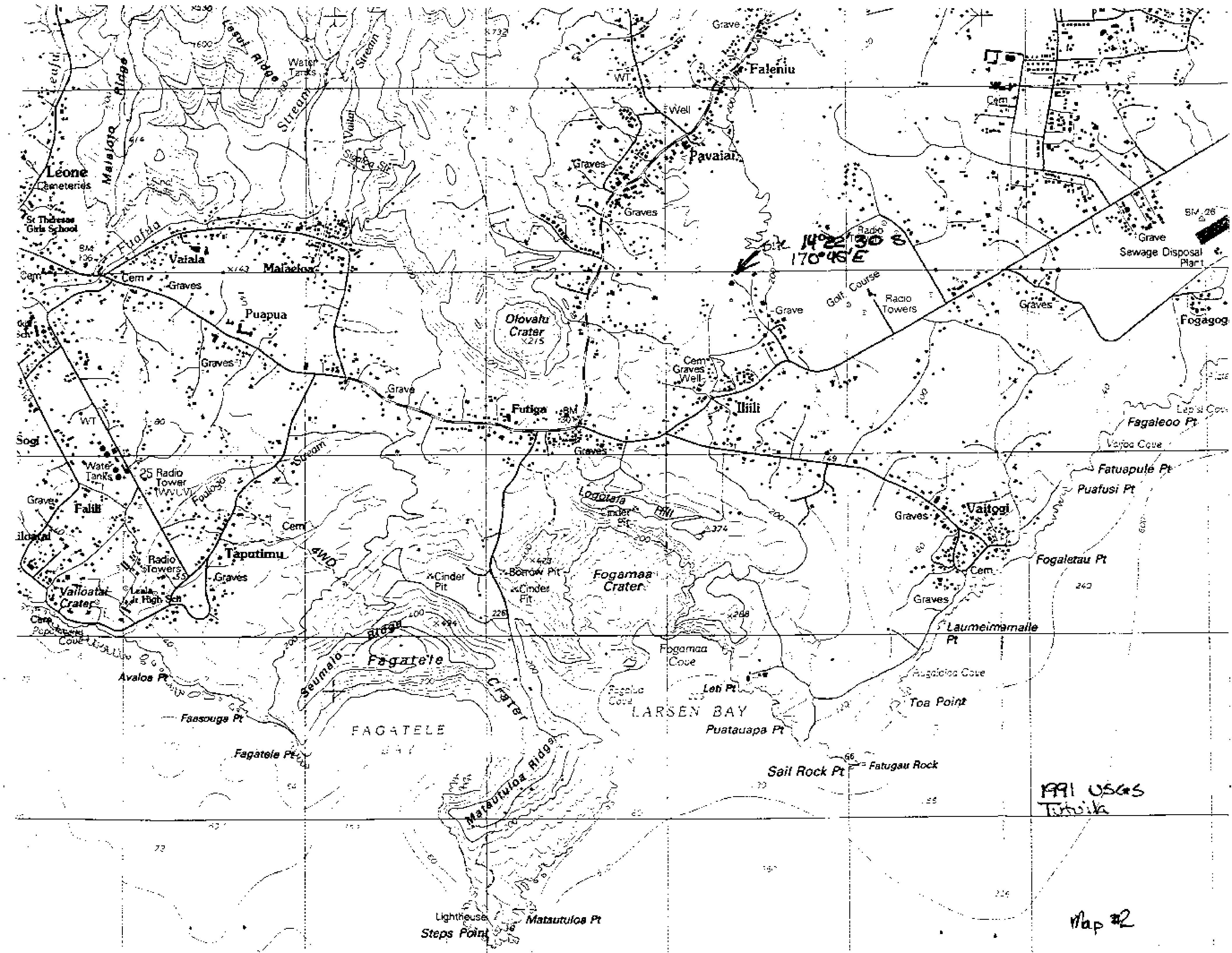
EGION MAP



MAP#1


Leone
Cemeteries
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Puafusi Pt
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Site 14°22'30 S 170°46'E
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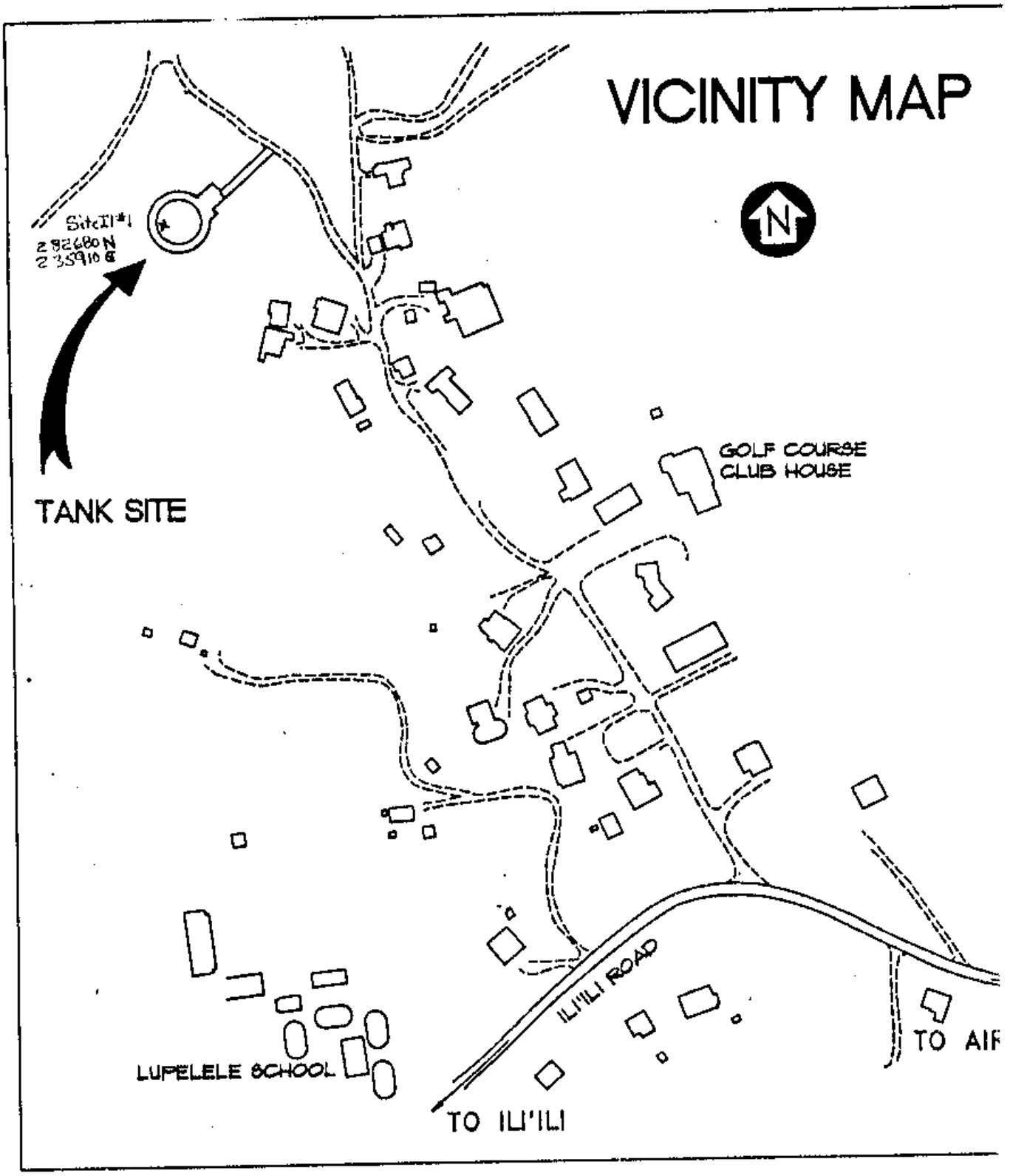
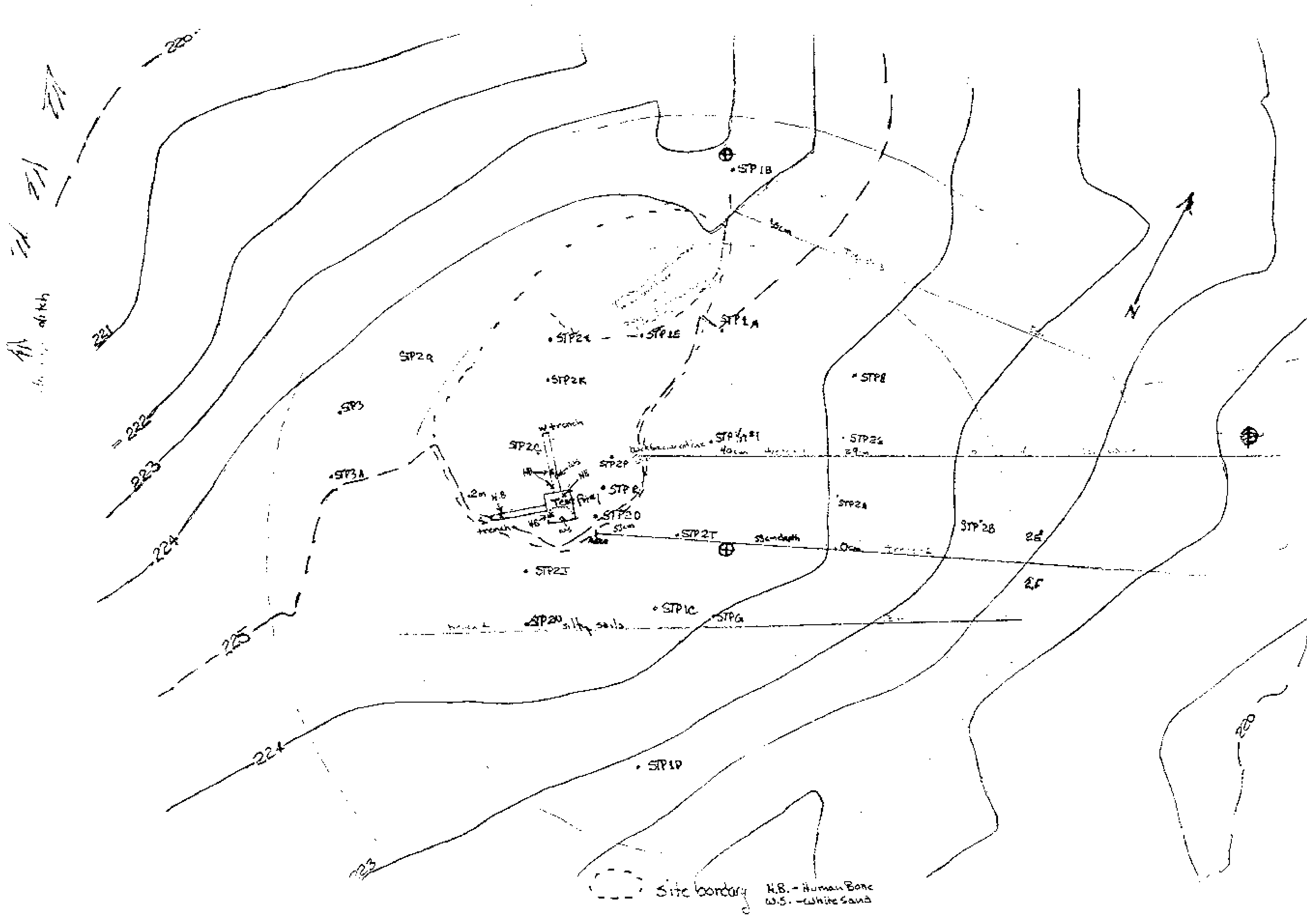

VICINITY MAP
N
Site#1
2 82680 N
2 35910 E
TANK SITE
GOLF COURSE
CLUB HOUSE
LUPELELE SCHOOL
ILI'ILI ROAD
TO ILI'ILI
TO AIF

Map 25

CIVIL


ditch
220
221
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223
224
225
STP1B
STP1A
STP2E
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STP2Q
STP3
STP3A
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2E
2F
trench
silty soils
N
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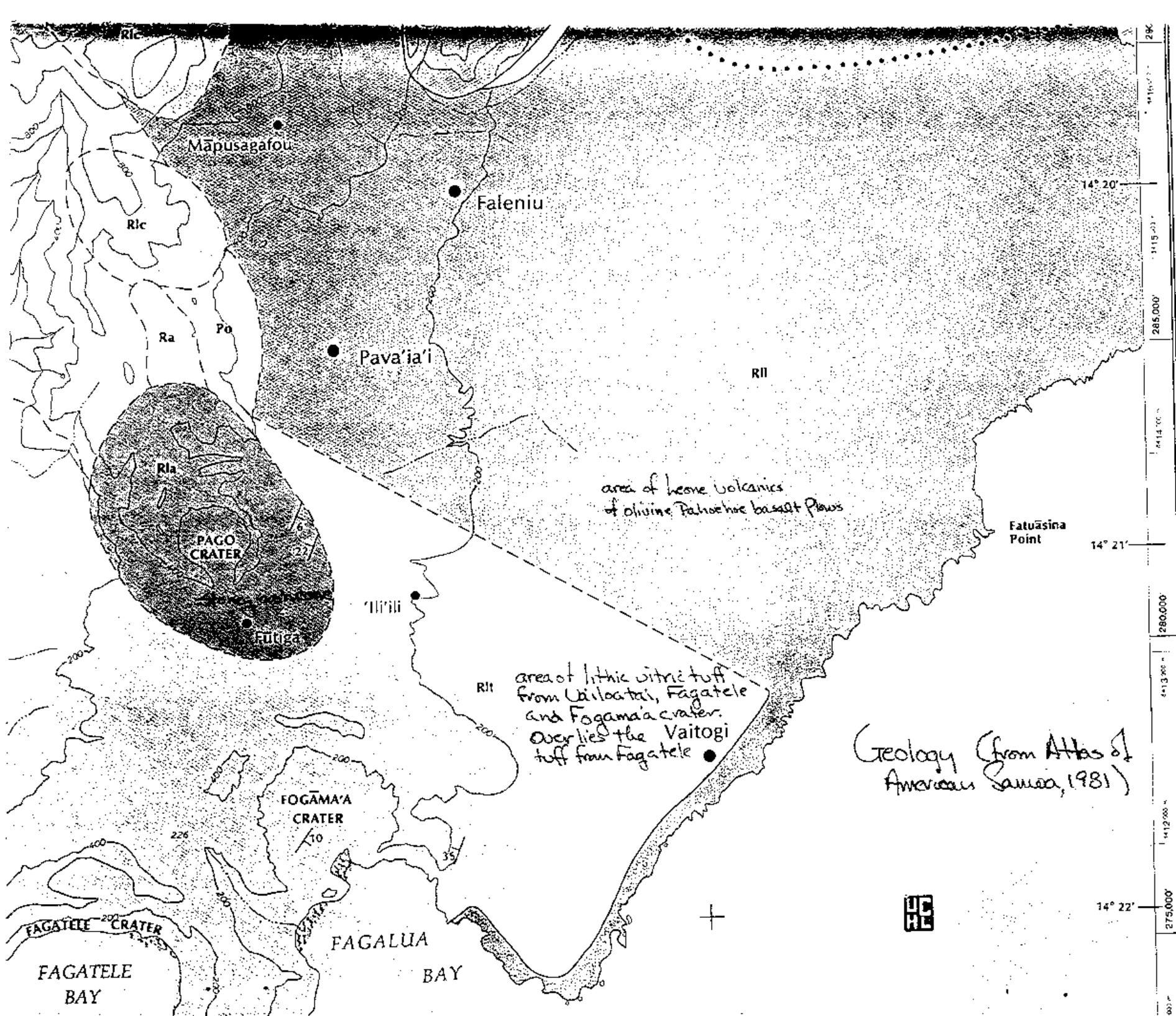
Rlc
Māpusagafou
Faleniu
Rlc
Ra
Po
Pava'ia'i
Rll
Rla
PAGO CRATER
Futiga
'Ili'ili
area of Leone volcanics of olivine Pahoehoe basalt flows
Fatuāsina Point
14° 20'
14° 21'
14° 22'
285,000'
280,000
275,000'
Rlt
area of lithic vitric tuff from Vailoatai, Fagatele and Fogama'a crater. Overlies the tuff from Fagatele
Vaitogi
Geology (from Atlas of American Samoa, 1981)
FOGĀMA'A CRATER
FAGATELE CRATER
FAGATELE BAY
FAGALUA BAY
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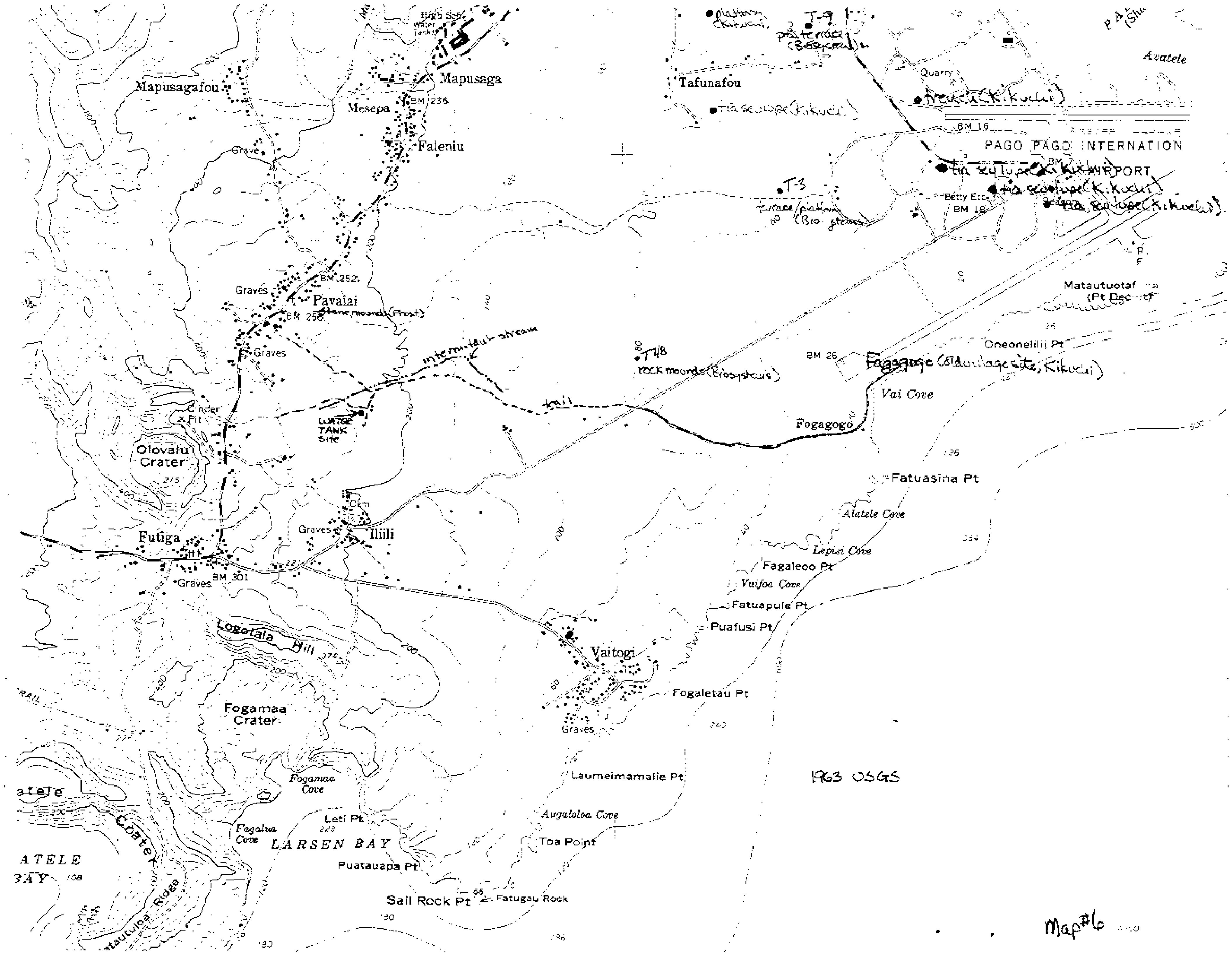
Mapusagafou
Mapusaga
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Graves
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BM 256
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intermittent stream
Cinder Pit
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Fogamaa Crater
Fogamaa Cove
Fagalua Cove
Leti Pt
LARSEN BAY
ATELE BAY
Puatauapa Pt
Sail Rock Pt
Fatugau Rock
Toa Point
Augaloloa Cove
Laumeimamalie Pt
Vaitogi
Fogaletau Pt
Puafusi Pt
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Quarry
Avatele
PAGO PAGO INTERNATION AIRPORT
BM 16
BM 18
Betty Ecc
1963 USGS
Map#6

In order to carry out a Phase 1 testing for subsurface historic properties,in September 1994 Epi Suafo'a placed 35 shovel test pits (STPs) in the general area of a proposed 1 million gal water tank with adjoing parking lot and access driveway.(see map #3,4 ,note:original mapping errors based on the positioning of test bore holes and pipes being inconsistent with map positions,the use oftrue north on the map and the use of magnetic north by the archeologists,as well as probable compass error due to massive rock formation.Hopefully,corrections have placed the STPs close to their correct locations.)
While STPs did not fully indicate the presence of a site, the distribution of lithic materials did suggest a possible feature in the southwest corner of the research area. A burial was established with a 1mx1m test pit. An unfortunate set of circumstances led to the removal of the burial. Two trenches emenating from the test pit
confirmed that the original burial was not an isolated find. Backhoe trenching was used to confirm the site boundaries. The site
,although heavily impacted by long term agricultural use and by grading with large equipment by the land owners,is still be an excellent candidate for the National Register. Impacts on the site
can be prevent by the shifting of the proposed water tank to the north or east where extensive backhoe trenching and shovel test pits have been carried out.

The area of a proposed water tank with associated parking lot,access driveway, and subsurface waterlines to the main road, lies in the central Tafuna Plains, east of Olovalu Crater and north of the community of Ili'ili near the golf course. The site
is flanked by a small(several acre) forest with a drainage to the south and coconut and banana plantation to the northeast.However,this is a small forest/garden which area surrounded by houses.

Soils
The site is located on Sogi-Puapua clay loams on 0-6 percent slope uplands.Generally the elevation ranges from sea level to 400 feet,with the site at 225 feet.Mean annual rainfail of the Tafuna Plains is 120 to 160 inches a year. In this area are outcrops of tuff on knolls and outcrops as well as low-lying areas that become ponds during rainfalls.Soils are underlain by a hard volcanic tuff.
The 1982 Soil Survey states that these soils become dry during the dry season and crops may be effected.Deep rooted crops are restricted by the shallow soil depths above hard tuffs.
Just to the east is an extensive area of Iliili extremely stony mucky clay loam on 3-15 percent slopes.Typically the surface is covered in rock fragments and 1 inch of black,decomposed organic material.The surface layer is very dark grayish brown extremely stony mucky clay loam 5 inches thick. The subsoil is very dark grayish brown extremely stone clay loam 4 inches thick. Lava is at a depth of 9 inches. Again, permeability of the soil is rapid,effective rooting depth is shallow.
During excavations and backhoe trenching we found, with the exception of one area with a thin dark stained greasy soil
,the soil was dominated by a brown /orange silty soil with 5-10% of both angular vesicular

basalt and finer-grained water worn basalts(5cm average). Soils also contained orange sandstone inclusions. An area of fine sandstone bedrock 5-15cm thick overlays a recent vesicular basalt flow. We saw many instances of basalts decomposing into orange or purplish granular soils.

Vegetation

Originally the Tafuna Plains were covered by lowland forests of Pomentia pinnata(tava),Planchonella torricellensis('ala'a), and species of Dysoxylum(maota). The early forests of Tafuna were similar to existing lowland forest of the Ole Pupu-Pu'e National Park on Upolu.

Only very small stands of mixed forest exist on the Tafuna Plains. Coconut plantations(a nondominant tree which cannot survive shading competition)replaced much of these stands and most recently, housing for an exploding population(one of the fastest growing populations in the world).(Whistler,A.,1992)

Geology

The site is located on a recent volcanic area of lithic vitric tuff from Vailoatai,Fagatele, and Fogama'a. These flows overlie earlier tuff from Fagatele crater. To the north and along the coast are older Leone volcanic flows of olivine Pahoehoe basalts.The the west is Pago Crater,a stoney ash cone(see map#5).

Hydrology

The area of the eastern Tafuna Plains is notably lacking year round streams. In an interview with ChiefSagapolutrle ,he noted that after people had moved south into the Ili'ili area during the period of military construction activity and road building in the Tafuna area,the largest problem they had to face was the lack of water and the difficulty of hauling water from 'long distances. This raises the question about water sources for the scattered populations who lived in this area prior to the 1940s as well as the prehistoric period.Kikuchi (1963) mentions a well in eastern Tutuila but to date no wells have been reported for the Tafuna area.Currently, modern wells provide water for the' fastest growing area of Tutuila.A 1963 USGS map shows a single intermittant,season stream just north of the site.(see map #6)

Archeology

The importance of archeological investigations in American Samoa centers around a number of broad scientific,historical, and philosophical questions. These include but are not limited to 1)the chronology of settlement patterns,lithic tool and ceramic technologies 2)the dynamics of geomorphology and its relationship to human habitation and adaptation 3)the continuum of cultural impacts upon the island environment from the small groups of pre- Polynesian settlers to the settlement patterns and environmental impacts of the burgeoning populations of Samoans today from populations of 5000 in 1900 to 30,000 in 1985 to 50,000 in 1995.

The site identified in this report raises questions about the use of the eastern Tafuna Plains, an area of limited water and inland from coastal resources. The site presents the potential to understand an area with little previous archeological data. The long term goal is in the

understanding of the function of the various cultural components of Tafuna Plain settlements.

Previous Archeological Work

Samoan Islands

The history of research in the Samoan Islands has been summed up by countless authors(Kirch;1993,Clark;1988 to name a few).Suffice it to say that research in the Samoan Islands was carried out initially in Western Samoa with only limited work occuring in American Samoa beginning with Kikuchi(1963), Frost(1978) and Clark(197). The Historic Preservation Dept sponsored research in the 80s with the most significant being Leach and Witters work on the quarry of Tataga Matau. The 90s has been marked by reports carried out for federal historic properties protection during the development of the various utilities(roads,sewer,water) though some studies such as Kirch and Hunt(1993) and Clark and Herdrich have been strictly research oriented. The projects,in general, have been site surveys,inventories,excavations addressing chronologies and settlement patterns,quarry sites addressing specialized use areas and lithic technologies, and with Kirch and Hunt's most recent work in the Manu'a group,a multidisciplinary study employing geomorphology,paleozoology,cermamics and lithics analysis.

Tafuna Plain

Kikuchi had no reported sites in the immediate area of Ili'ili.On the Tafuna Plain in general he notes about 17 sites;an abandoned village of Fagagogo on the coast north of Vaitogi,8 pigeon mounds,or tia seu lupe,in the forest(2 of which he reports have been previously destroyed),additional pigeon mounds in the vicinity of the airport, a six foot deep defensive trench to the north of the airport and a tia seu lupe to the southeast of Tafunafou(if his very general mapping(1963,18) is used.

Frost (1978,64-75) located and described eight stone mounds near Pa'vai'ai north of the site.

Clark and Herdrich(1993) surveyed areas of the Tafuna Plain

Only several tia'ave and possibly a few high house platforms have been reported for the plain itself, although coastal settlements were present(Kichuki 1963; Frost 1978).The eastern portion of the plain is very rocky, with exposed a'a volcanics in some areas and thin soil elsewhere,and stream absent. Historically the eastern plain has lacked residential settlement similar to those of WesternSamoa.Dispersed settlement could have existed over the western portion of the Tafuna Plain, in the area centered on Ili'ili nu'u...In addition there may have been communities dispersed around the inland margin of Tafuna Plain,similar to the situation that existed historically (until recently),though perhaps less nucleated.In this area,streams meet the plain and sediments have accumulated... At this point, we hypothesize that soil fertility and water availability were important considerations for dispersed settlement in Tutuila(171-172). Best (1992) carried out a surface survey of Tafuna Plain Sewer System and identified 13 archeological sites on the Tafuna Plain and 1 in the Malaeimi Valley to the north. Features included nine stone mounds or terraces,two stone-faced earthen mounds,a rock wall and a WWII coral road or taxiway.

Biosystems(1994) identified 8 new sites. Features include terraces,platforms,rock mounds,lithic scatters with pottery fragments,rock alignments and rock walls. Approximately 1 mile to the

northeast of the proposed water tank, are T7/8,T-3(terraces and mounds)Further to the north approximately 2 miles,on the north extent of the Tafuna Plain and at the base of Tau Mtn are T-11 through 15. Unlike the proposed water tank site these sites are adjacent to two year-round streams,Taumata and Vaitele. In this complex of sites listed as terraces,platforms and lithic scatters is the consistent presence of both thin and thick ware pottery. Recent test pits by Suafo'a(personal communication) located dense pottery fragments associated with hearths. This finding provides an exciting potential for dating the sequence of pottery styles in the local cultural/environmental isolate of Tafuna, and the larger picture of pottery use and evolution on Tutuila,the Samoan Islands and within the Polynesian culture area in general.Previosly, pottery finds on Tutuila have been limited to Aoa site on the northeast coast and date back 3000BP.Noncoastal village pottery is also unique.

Lastly, a 1963 USGS map shows a gravel road from the old abandoned village of Fagagogo running to the airport highway where it turns to a trail continuing west near the intermitant stream course and just north of the proposed water tank site,splitting off to a group of 3 houses adjacent to the water tank site,a northern branch continuing on to Pavaiai and a southern branch to isolated homes north of Olovalu Crater.It is interesting to speculate how old this trail is.There are no existing roads in the trail path and this trail may still exist.If this is an old trail and it connects to the water tank site, it is possible that additional interviewing could shed light on the history of the site.As the 1963 map shows,this is a sparsely settled area. As Clark and Herdrich suggest it probably always has been sparsely settled.

What function the isolated sites had may be answered by excavation of the water tank site. These may have been strictly burial areas,isolated gardening areas limited by the seasonal aridity and soil types,or perhaps strategically located fales along important travel routes.

Military

The only military features in the immediate area of the site is a cave which, according to the wife and daughter of the late Matai Sagapolutele on 9/29/94,was used for storing weapons and equipment.

The Tafuna area was, of course, the site of intensive military building activity prior to and during the WWII.The main road and the airport being the main locationsThe Samoan Atlas shows concrete bunkers on the east foot of Lolvalu Crater.

Findings

33 STPs were dug in the area of the proposed Ili'ili water tank which required approximately 80 diameter with additional 40 feet for fencing and an access road.(see map 4 for location of STPs)

A ploting of lithic debitage showed the possibilty of a feature in the southwest area. STP 2 I recovered a human cranial fragment reported at 45cmbs. Suafo'a noted a distinct area of white sand on the north side of the STP.

On 1/17/95 ASPA archeologist D.Eisler,and two crew members excavated a 1mx1m test pit in order to determine if there was in fact a burial. The south wall of Test Pit #1 bisected STP 2 I. Human skeletal remains were located at 25cmbs and the excavation ceased.

The data recovered suggested that there were two individuals and that one burial had been excavated into a preexisting burial. An earlier burial of a robust adult of approximately 40 years was represented by a thick illium and well worn molars. Cranial thickness of the young adult

was .4cm. A polished basalt adze was plotted in situ 9cm above the white sand which covered and surrounded the cranial fragment.The presence of one 18cmx22cm boulder in the central east wall and several smaller rocks in the southwest corner approximately at the level of the top of the white sand mound suggests the possibility of the remains of a rock alignment. These associations,the adze and the white sand , along with the statements from land owners(Sagapolutele family) who could not recall any structures or burials in that area and recall that land as always being garden land,makes a strong case for the burial being at least 70years old and perhaps several hundred years if stone tool grave goods represent the polished stone adze period of the Tatanga Matau and Alenga quarries of 1400 to 1700.Small carbon samples were collected on 1/17.

By 3:00PM we had completed clean up and note taking.I contacted Wilfredo Carreon and told him of the burial and asked if ASPA had a policy for burials and that this was not the typical burial next to a house.Because ASPA has had a written policy applied to previous phase I projects which states that ASPA will contact the Village Chiefs,Wilfredo called Chief Motu who was to contact the village chiefs. I then contacted SHPO David DeFant and we agreed to wait for several days to consider options.The next morning at 8:30AM Motu(right-of-way-specialist for ASPA) told me that the chief was waiting for me and had some boys waiting at the sight to take out the burial. I went immediately to the site to find that most of the bones had been removed. I decided that the site had already been compromised and that I would assist in removing the remainder and collect as much data as possible. Because the Chief had instructed the young men to bring the bones to his guest house as soon as possible for a woman who was to place special oils on them prior to reinturnment, we worked fairly quickly. The following additional data was obtained during the removal on 1/18/95:

An excellent carbon sample was collected from the very top of the white sand(the north sloping face). A broken polished basalt adze was plotted in situ situated directly on the white sand layer on the west sloping side.A fragment of either a pigs tooth or a dog canine tooth was recovered suggesting a pendant grave good.Bones were photographed(in haste) and dental totals confirm two indivuals.No more than 50% of the skeletal remains of the two burials was retrieved. A small percentage appeared as soil stain.

On 1/25/95 in order to determine whether this burial was an isolated feature, we excavated two 30cm x2m trenches from the south wall and west wall of the somewhat decimated Test Pit #1.At level 2 in both trenches we encountered human skeletal remains and we stopped our work.From the south trench we recovered 3 basalt flakes and 1 broken polished adze,and left a mid section of a femur in situ.In the west trench we encountered a human bone frag in the wall at 3cmbs and a possible cranial section and mandible with tooth(inverted)from 10cmbs to 20cmbs and on the trench floor at 20cmbs undetermined human bone.Also,beginning at 10cm and well defined at 20 cmbs,the top of a white sand mound indicating a high liklihhod for a similar burial. Charcoal samples were collected in the east extent of the trench at 20cmbs.Four operculum (2 in each trench) were located in level 2 and may possibly represent a grave good.

On 1/28/95 In order to determine the extent of the site we placed 5 backhoe trenches to bedrock running from north towards the site.These trenches clearly established the north boundary of the site.Only one artifact was recovered. In trench 2 a polished adze fragment at the south end of the trench within .3m from the 225' elevation line which roughly delimits the site. Soils on the

south extent were silty and deep(up to 56cm.)some waterworn gravels appear at 40cmbs follwed by angular basalt from the underlying lava flow.Soil depth decreases to 0 to 10cm over 10-30meters moving to the northeast.In the deepest soil profiles we found a 4-10cm thick sedimentary rock lying directly on top of the basalt bedrock.The data suggests that this area was heavily flooded and filled in with fine silts and occasional waterborn pebbles. The trenching did uncover some fire cracked rock at surface along trench 3 south end amidst a black greasy surface soil devoid of charcoal. The data suggests that the site is possibly a single habitation site,though all we can confirm is that it is a burial area. I would speculate that there may have been a single fale and umu area and burials within a 10m x 10m rise denoted by the 225' contour line.

Site Impacts: Evidence suggests that this site has been impacted over a long period of time. A circular area of disturbance in the north part of the white sand area of Test Pit #1, where white sand has been replaced by the typical strata of reddish,clay,loam with inclusions of sandstone and charcoal flecks,suggests that activities associated with taro or banana planting have disturbed the burials. Also, the presence of skeletal material in Test Pit #1 and the west trench extension,which is clearly not articulated or even in close association with appropriate adjacent parts,suggests site disturbance. Most importantly,there is the loss of what may be up to 20 or 30cm of overlying soil along with the surface features of rock alignments or lithic debitage. This loss acounts for the shallowness of the burials at a mere 20cmbs.Landowners stated that the area had been bulldozed on several occasions,most recently to build a house on the site. Surface to 5cmbs yeilded windowpane glass,marbles,nails and a glass nodule fragment and indicated recent site use and soil mixing. In discussions with ASPA backhoe operator,Larry Tuia, who also did the last clearing of vegetation from the site,there were few large rocks left on the surface in the area.Suafo'a 's interview with the wife of the late Matai Sagapolutele on 9/29/94 ,she was told that since she(the wife) was fai'ava(aperson married into the family)she only knew that the area was used for planting sugar cane and pandanus(laufala) for mats and for roofing.She also stated that the family decided to' put a rd in the area to facilitate building future houses.

Recommendations

ASPA engineers feel that the tank can be moved so that the designed outer perimeter fencing is approximately 20 feet from the site boundary. If the area is either fenced off from construction equipment or a 1-2 foot thick layer of cinders placed over the site, there should be no effect on the site. The latter seems preferable given the shallowness of the site. Impacts have already occured due to an undetermined loss of data from the uncontrolled removal of the burial in Test Pit #1. However,data was retrieved and additional burials are present.We can be confident that the relocation of the proposed tank in the area trenched and shovel tested will have no effect on historic properties.As well,the subsurface water line running from the access road to the airport road,will have no effect on historic properties.We have visually examined that area and found that there are little or no soils on the road due to erosion.The road is predominantly bedrock. The site appears to be a candidate for the National Register because there are no other burial excavations for the early contact period of Samoa. Kikuchi(1963,108)describes numerous forms of traditonal' burial. with rank and status an important factor for the type of burial.He states that "Prehistoric burials were nearly always aligned in a east-west direction with the head facing the east because of the belief that

spirits passed after death to Pulotu,their mythological homeland in the west."...A commoner was simply buried,with little elaboration of his grave. In some cases, a low mound of rocks and pebbles outlined his grave. No markers of any sort indicated his occupation. The many low graves of commoners usually found near houses or old house foundations were in time covered with additional layers of rock pebbles and coral pebbles so the grave merged and became a large paved platform.....The grave of a chief,which was usually 4 feet deep,was aligned with the head toward the rising sun and the feet toward the west.Deposited in the grave were things used while the chief was ill.Mat were placed over and under the body as lining for the grave. After interring the wrapped body,a layer of white sand was deposited over the mats and then the grave was filled with dirt.A high heap of stones was built one to two feet over the grave.(Kikuchi;108-111). How soon after contact the pandanus mat/white sand burial practice was replaced with coffins is not known.At this time,despite the indicators for a burial of at least 70 years BP without results from carbon 14 dating which should be the best determinant for site age.

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Iliili Water Tank Project
Artifact List
September 27, 1994

SITE	STP	CULTURAL MATERIALS	DEPTH	DATE
South of first target				
	Center	1b. flake	0-10cm b.s.	9/22/94
	Center	1b. flake	30-45cm b.s	9/22/94
	1	1b. flake	0-10cm b.s	9/20/94
	1B	1b. flake	at 20cm b.s	9/22/94
	2D	1preform, 1marple	at 15cm b.s	9/22/94
	3	1broken preform	at 25cm b.s	9/23/94
	3A	1b.flake	at 25cm b.s	9/23/94
	2M	2b. flakes	25-45cm.b.s	9/29/94
	2I	Human bone fragment 1b. flakes 3b. flakes	45-62cm.b.s 15cm.b.s.	9/29/94
	2N	2b. flakes	From 25-45cm b.s	9/29/94
	2O	1b. flake 1b. flake 1 Broken Polished B.Flake	Surface Collection at 15cm b.s	9/29/94 9/29/94
	2Q	1 Water Worn Stone	at 15cm b.s	9/29/94
	2R	2b.0 flakes	from 25-40cm b.s	9/29/94
	2S	1b.flake	at 25cm b.s	9/29/94
	T.P#1	2 flakes, 1 preform	0-10cmbs	1/17/95
		1polished adze 3 flakes bone fragments,teeth 1 polished basalt adze fragment 1 tooth(pig or dog) Human skel.materials reintered 1/18/95	 10-20cmbs 20-30cmbs 25-35cmbs	 1/17/95 1/17/95 1/18/95

Test Pit #1

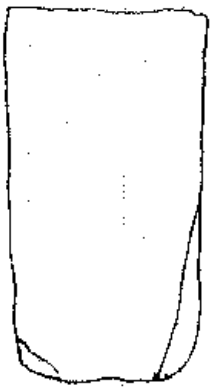
South Ext.	femur, in situ	20cmbs	1/25/95
West Ext.	cranium, tooth, undetermined bone	3-20cmbs	1/25/95
	both trenches back-filled with bone insitu		

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS & PLANNERS

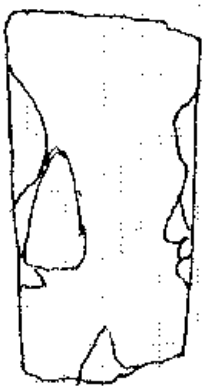
TELEPHONE RECORD

DATE:	TIME:	FILE:
TO/FROM:	REPRESENTING:	
JOB NO.:	PHONE NO.:	FAX NO.:
PROJECT/SUBJECT:		

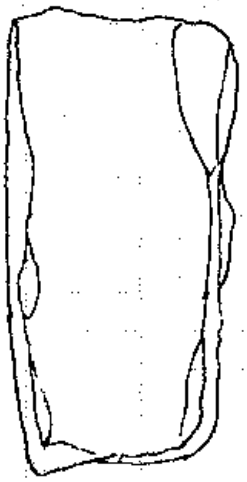
I | #1 Test Pit #1



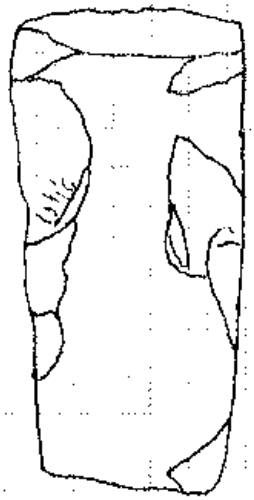
25cmbs



skeletal removal extension NE T.P. #1



10cmbs T.P. #1



canine tooth

approx 25cmbs

dog? pig?

BY: _____

AMERICAN SAMOA HISTORIC PRESERVATION OFFICE
SITE/FEATURE FORM (SFF)

- Please use continuation sheets for comments or for any additional information you need or want to include with this form.
- Each SFF **must** be accompanied by a scaled and oriented Site/Feature plan and section or elevation where appropriate.

I. IDENTIFICATION

SITE DESIGNATION: 60-____-_____ **FEATURE DESIGNATION:**_____
Previous Designation: I1 #1 **ASHPO Project Number:**_____
Site Name:_____
County Name: Tualauta
Village Name: Iliʻili
Landowner:_____ **Phone:**_____
Address:_____

II. LOCATIONAL DATA

UTM Easting:_____m **UTM Northing:**_____m
AS Coord./Easting: 235910 ft. **AS Coord./Northing:** 282680 ft.
Verbal Locational Description: Accessed from the golf club road off of Airport Rd Approximately 1/2 mile north on Golf Club road to a Y,bear left,continue several hundred feet. The site is located in a small mixed forest/garden/plantation area with numerous houses along the road side.

III. ENVIRONMENTAL DATA

Lowest Elevation: 225' 70 m **Highest Elevation:** 225' 70 m
Distance to Sea: 1.5 mile m **Distance to Potable Water:** unknown m
Direction to Sea: SE 135 deg. **Direction to Potable Water:**_____deg.
Minimum Slope: 0 deg. **Maximum Slope:** 0 deg.
SCS Soil Type: Sogi-Puapua clay loams
Geology: Holocene volcanic lava delta,Recent tuffs from volcanics to the southwest
Geomorphology: the east half of the Tafuna Plain
Vegetation: Mixed forest,grassland,plantation,Mango,coconut,breadfruit,banana,papaya

IV. DESCRIPTIVE INFORMATION

Formal Site/Feature Type: burials on a natural rise
Formal Site/Feature Description: I1#1 is a multiple burial site located on a small natural rise. At least three individuals (two already removed)buried on the site. White sand and polished basalt adzes,basalt flakes,dog(or pig) tooth associated with the burials. The surface features have been removed along with and unknown amount of soils.Some fire-cracked rock and thin black soils located on west extent.
Number of Features: one
Portable Remains: basalt flakes,polished adzes,animal tooth,shell,some human bone fragments
Absolute Date: n/a **Lab Number:**_____
Dating Method:_____
Area: 200 m2 **Max. Length:** 20 m **Max. Width:** 10 m
Max. Depth: 35 m **Max. Height:** surface m
How was depth determined (HDEE): Excavation

V. INTERPRETATIONS

Functional Site/Feature Type: human skeletal remains with lithics and white sand
Functional Site/Feature Interpretation: burial site
Temporal Interpretation: traditional type burial,1700 or 1800
Cultural Affiliation: Samoan

VI. REFERENCES

Survey Report: Phase I Report,Ili'ili Water Tank Site 11#1 2/6/95
Evaluation Report:
Mitigation Report:

VII. STATUS

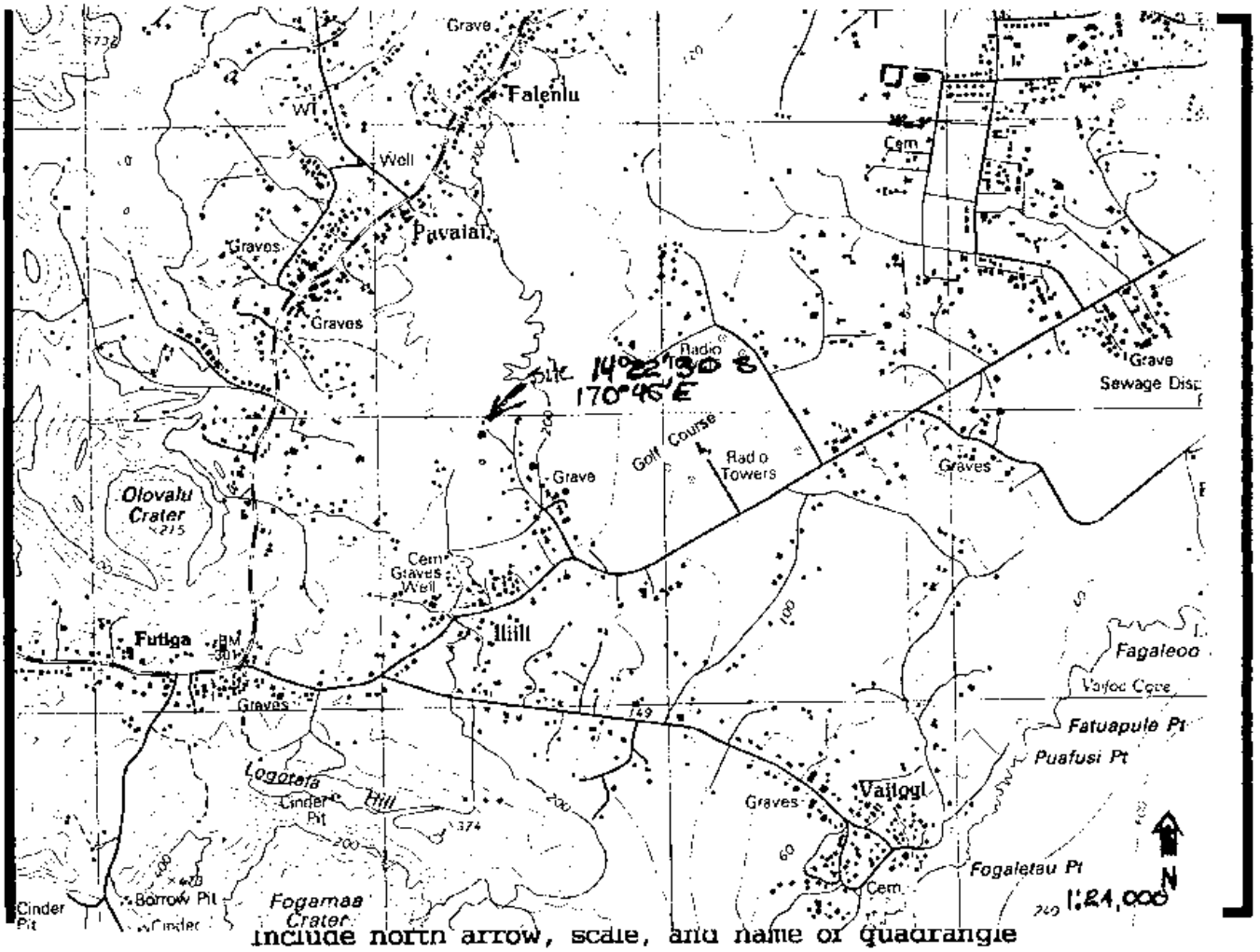
Condition: Site has been moderately impacted by gardening and land clearing(heavy equip)
National Register Eligibility: eligible under critereon "d",if carbon dates warrent
Recommendations: Site must be protected by fencing or overfill

VIII. RECORDER INFORMATION

Report Title: Phase I Report,Ili'ili Water Tank Site 11#1
Name of Recorder: D.Eisler **Organization:** A.S.P.A
Address: P.O.Box PPB,Pago Pago AS
Project Name: Ili'ili Water Tank **Date Recorded:** 1/17/95

IX. LOCATION MAP

(Attach, below, a copy of the section of the USGS Quadrangle showing location of the historic property documented on this form)



Include north arrow, scale, and name of quadrangle

Photo #1 Il.#1 TestPit#1 End level 2 20cmbs

2 Il.#1 TestPit#1 " " 3 20-30cmbs

3 " " bones removed from T.P.#1 1-18-95

4 " " selection of cranial frags. robust adult

5 " " mastoid processes of robust adult

6 " " vertebra

7 " " selection of cranial frags. young adult

8 " " selection of femur, humerus frags

9 " " selection of rib frags

10 " " mandible, in two sections showing extreme wear-through cusps with one molar missing an opposing occlusion

11 " " molars of young adult

12 " " selection of 58 teeth recovered

13 " " South trench extension showing insitu mid femur 20 cmbs

14 " " West trench extension showing undetermined human bone and white sand at 20cmbs

15 " " West trench showing inverted cranium with tooth - Southwall

16 " " West trench Northwall showing White sand at 20 cm bs

17 Backhoe trench #2 looking south showing deep silts to area near T.P.#1

18 Backhoe trench #1 looking south showing thin soils on basalt bedrock becoming deep silts towards TP#1

19 Soil profile showing loamy silts merging from brown to reddish soils with some waterworn pebbles changing to angular basalts on top of decomposed black basalt.

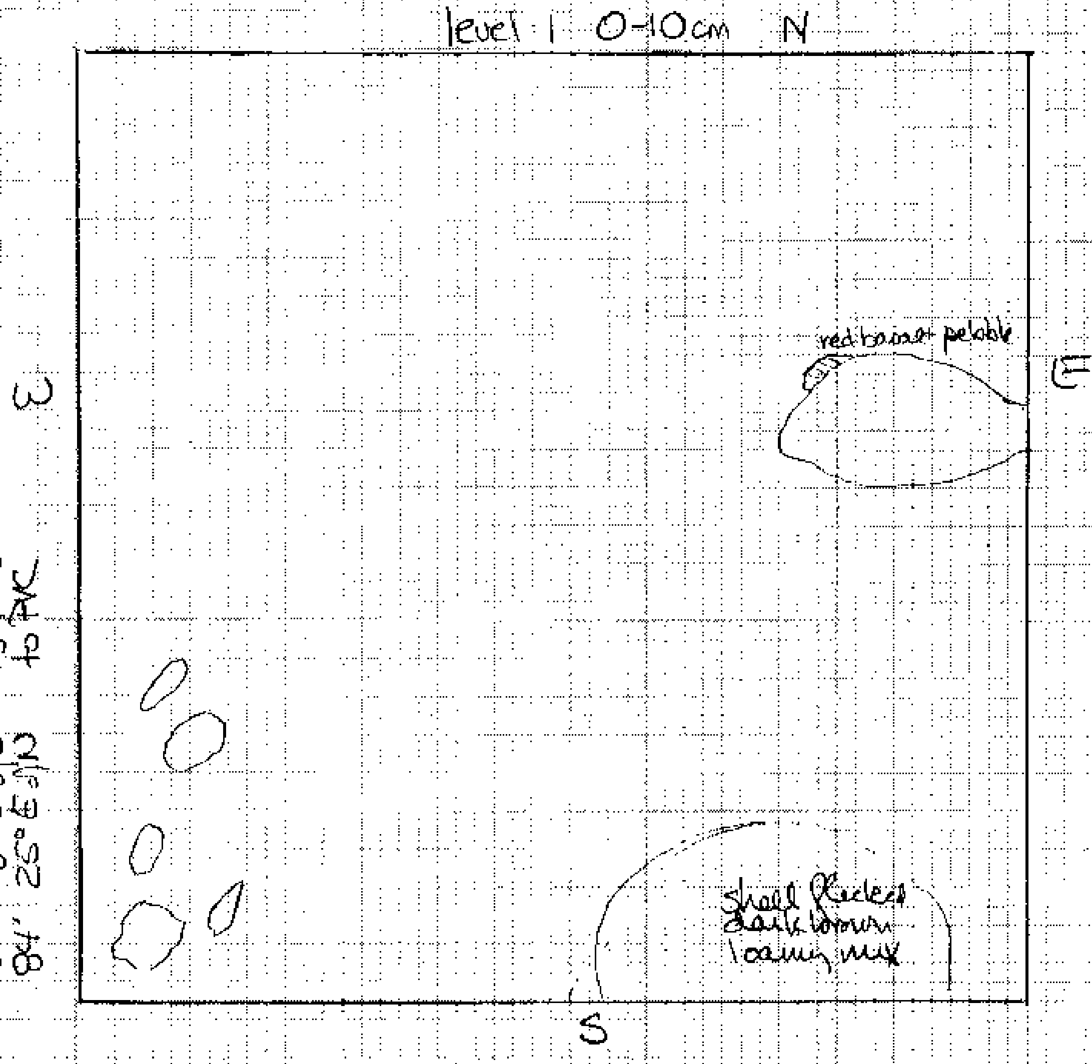
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS & PLANNERS

Iliili Water Tank
Test Pit #1
11/17/95

TELEPHONE RECORD

DATE: TIME: FILE:
TO/FROM: REPRESENTING:
JOB NO.: PHONE NO.: FAX NO.:
PROJECT/SUBJECT: E 235922 N 282664 elev: 224.8'

level 1 0-10cm



43' 51° W N to PVC
32' 0° S to STP
36' 78° E of N to STP center
81' 78° E of S to PVC
84' 25° E of N to PVC

surface layer was shovel cleaned approx 2 cm of overlying backfill from STP soil light br. with orange sandstones 2-4 cm. Soil is hard packed. Charcoal fleck 1 cm 1%. level 1 has rootlets, earthworms glass (surface) waterworn + fractured basalts pebble to cobble
2 flakes, 1 preform

BY: DE.

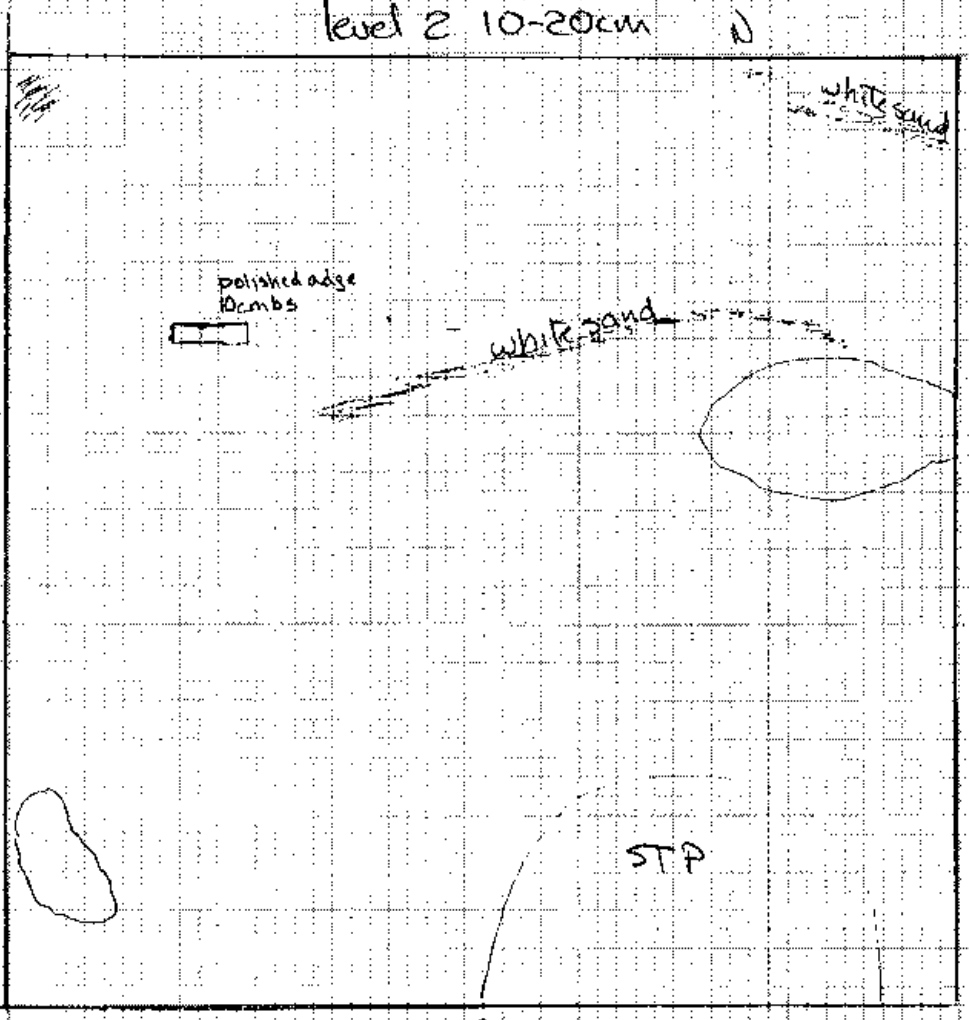
Level bag 2 flakes
1 preform
1 angular pebble?

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS & PLANNERS

Hill Water Tank
4/17/95
Test Pit #1

TELEPHONE RECORD

DATE:	TIME:	FILE:
TO/FROM:	REPRESENTING:	
JOB NO.:	PHONE NO.:	FAX NO.:
PROJECT/SUBJECT:		



dark brown with orange sandstone 1-2cm prism
compacted soils slightly clayey. This level ending is the
transition to the white sand layer.
charcoal flecks, 3-8cm basalt, waterworn + angular

Level bag #1 polished adze
3 pcs. flakes
* 2 samples pink sedimentary rock

BY: _____

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS & PLANNERS

Iliʻili Water tank
1/17/95
Test Pit #1

TELEPHONE RECORD

DATE: | TIME: | FILE:
TO/FROM: | REPRESENTING:
JOB NO.: | PHONE NO.: | FAX NO.:
PROJECT/SUBJECT:

level 3 20cm →

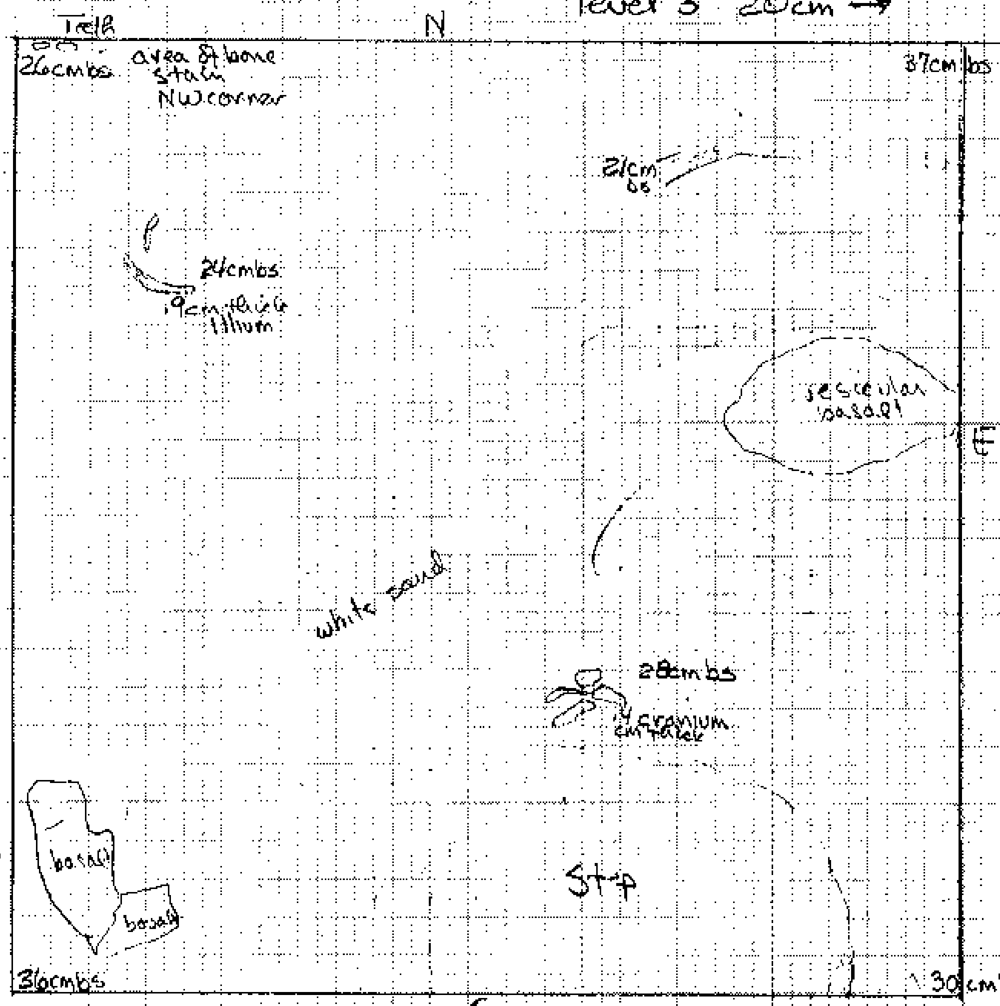


photo # 18 to N
#19 to E

sand sample taken at 27cmbs with 1/2% mixing of soils (black flecks)

Strata 1 (from surface) dark br. with slight red sandy/loamy soil with waterworn + angular basalt - some heat or weather cracked pebble/cobble
charcoal flecks → 1/2 - 1cm, pebbles 2-10+cm
orange sandstone 2-6cm rock + small possible umu rock but no charcoal stains
coarse granular white sand with small shells + small coral frags 1%
1cm + pink/orange sandstone
vesicular basalt 18cm x 22cm ~~BY: ~~under left pedestaled~~~~
troweled along the sand contour: highest point is 450cm from S + 50cm from W./slopes down to SE corner. The sand appears to have been dug through in NE 1/4   Level bag: bone frags and 2 teeth NW corner

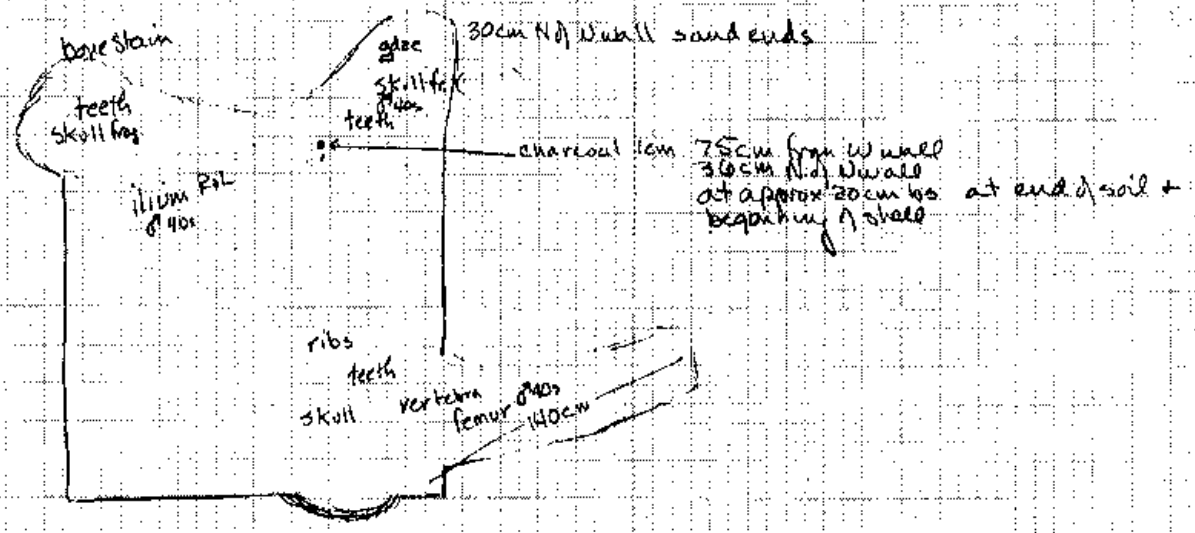
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS & PLANNERS

TELEPHONE RECORD

Mill water tank
1/18

DATE:	TIME:	FILE:
TO/FROM:	REPRESENTING:	
JOB NO.:	PHONE NO.:	FAX NO.:
PROJECT/SUBJECT:		

post skeletal removal 1/18/95 11:30 AM



largest femur frags
14x3
12x2
8x2
7x3+ lat. brkn.
5x3

58 Teeth total
23 4cusp molars
14 bicuspids
4 frontal sup. incisors
14 lower incisors

shells (1 limpet, 1 whelk, 1 pig tooth frag. 1 polished edge frag
edge frag 20cm deep, at edge of sand/soil (ie on top of sand?) 20cm N of line
21cm from E line in area of skull frags
sand ends at 32cmbs in N5 ext. and ends 30cm N of line

est. of 40yr robust jaw, large very worn molars, large femurs .6 skull frags
large occipital condyle, prominent orbit
young adult 4 molars (bluish tinged stipple from roots, sharp cusps, med size teeth, thin skull .4cm

Approx 50% or less of skeletal material present - no phalanges carpel, metacarpels, BY: few vertebra

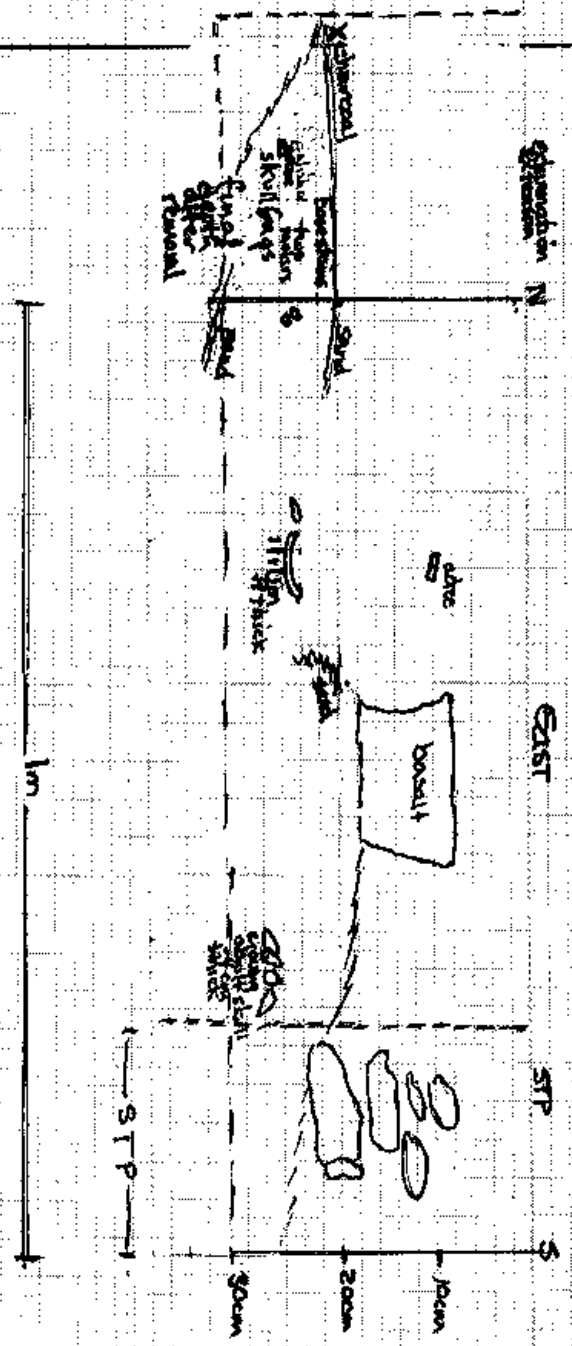
level bag "removal" 1 polished bone edge frag
1 limpet type shell
1 tooth - pig (dog-large?)
1 cortex flake

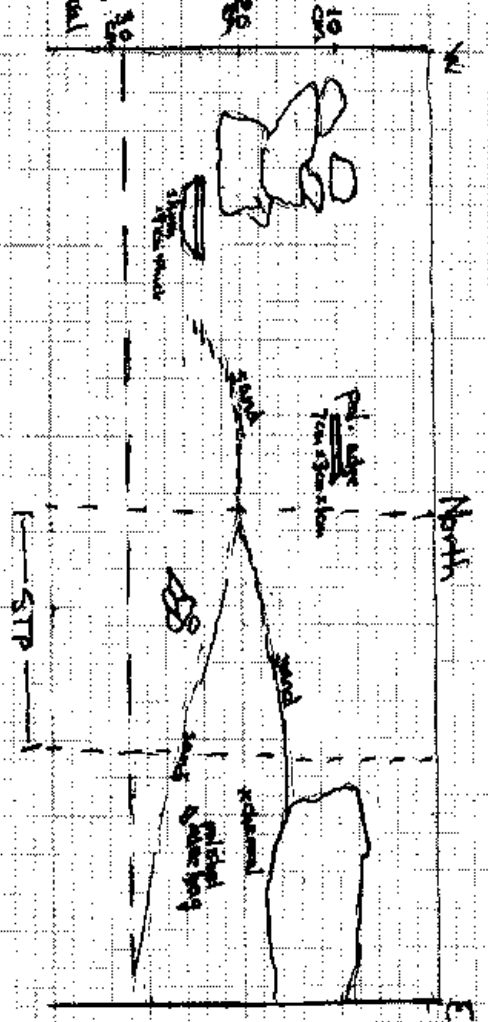
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS & PLANNERS

Illili Storage Tank
Test Pit #1
1/17/95

TELEPHONE RECORD

DATE:	TIME:	FILE:
TO/FROM:	REPRESENTING:	
JOB NO.:	PHONE NO.:	FAX NO.:
PROJECT/SUBJECT:		





TP #1 Test Pit #1

BY: _____

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS & PLANNERS

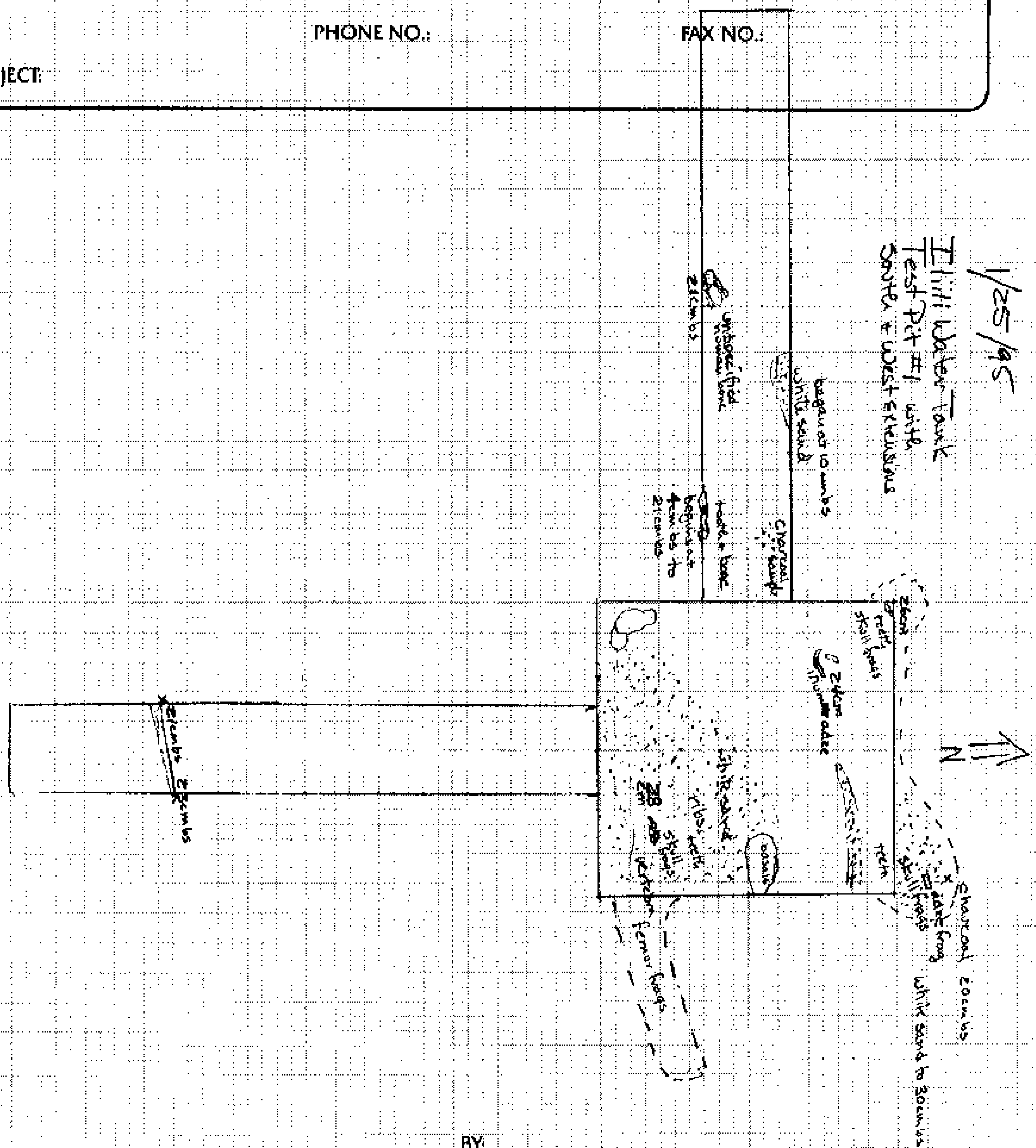
TELEPHONE RECORD

DATE: TIME: FILE:

TO/FROM: REPRESENTING:

JOB NO.: PHONE NO.: FAX NO.:

PROJECT/SUBJECT:



BY: ______________________

Project name: Iliili Water TANK

Site: I #1 **Area:**

Grid: TP#1 SEXT **Spit:**

Stratum: #level 0-10cm **Date:** 1/25/95

Sieved: Dry ✓ Wet **Size:** 1/4 **Depth:** 10cm **Surface Datum** ✓

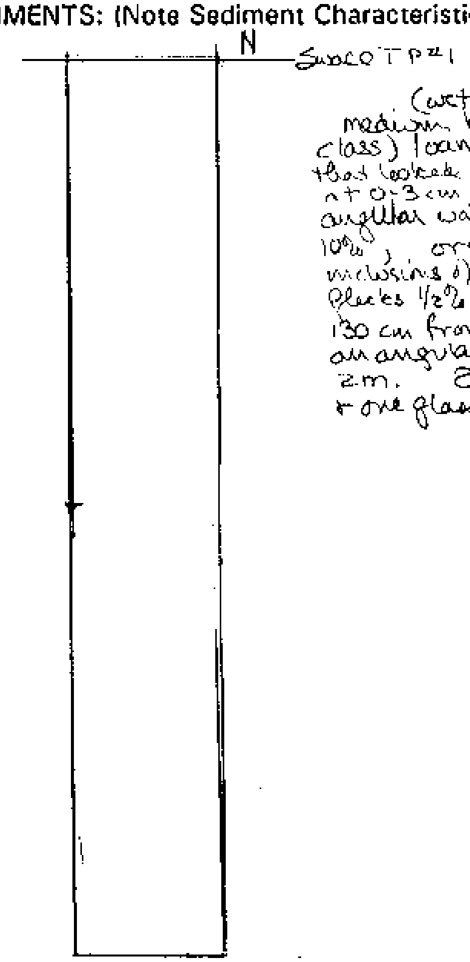
Start Levels

Mean End Z + ____

End Levels

Mean End Z + ____

COMMENTS: (Note Sediment Characteristics, Color, Disturbances, Samples Taken, and Special Problems):



(wet)
medium brown clay(less class) loam, glass frags that looked like disursion (?) found at 0-3cm from surface. angular waterworn 6cm pebble 10%, orange sandstone inclusions 1-4cm 2%, charcoal flecks 1/2%. A 15cm boulder 130 cm from SwwcoTP and an angular 10cm rock at 2m. 2 basalt flakes + one glass nodule

obj	X	Y	Z	Description
1				
2				
3				
4				
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8				
9				
10				
11				
12				
13				
14				
15				
15				

Recorder: [illegible signature]

Party:

c:\333458\tank\arch01.wk3

Project name:	Ili Ili Water tank	Site:	I1 #1	Area:	
		Grid:	TP#1 W Ext	Spit:	
		Stratum:	level #2 10-20cm	Date:	1/25/95

Sieved: Dry ✓ Wet Size: 1/4 Depth: Surface ✓ Datum

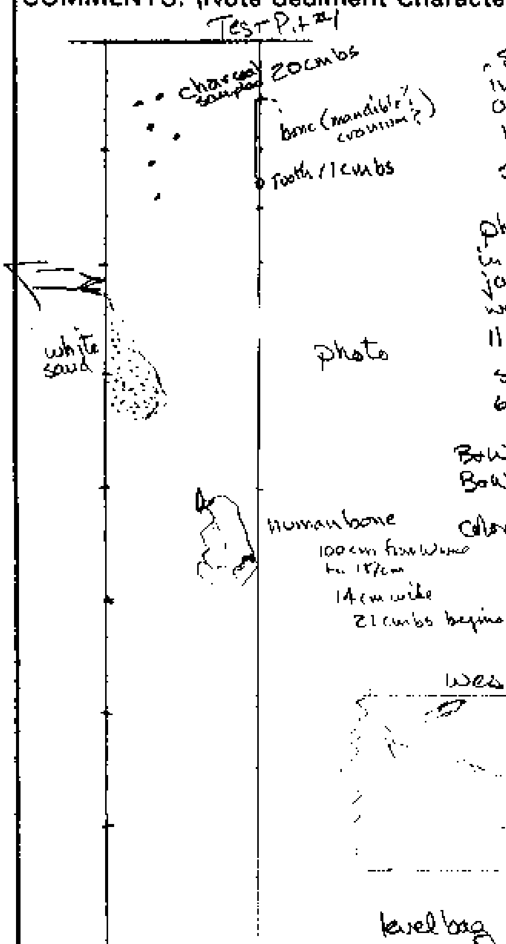
Start Levels

Mean End Z + ____

End Levels

Mean End Z + ____

COMMENTS: (Note Sediment Characteristics, Color, Disturbances, Samples Taken, and Special Problems):



photo

soil continues with increase in small angular + waterworn pebbles of 1cm size at least 4 operculum in S... trench - why?

photo 15 looking S in EXT W at skull? jaw? tooth 34cm west of TP#1
11cmbs

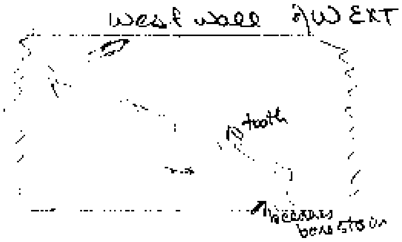
sand lens begins 67cm from TP#1

B&W #4 skull
B&W #5 TP#1 ExtW to W.

Color 15 TPExtW to S?
16 flash TPExtW to W

1 soil sample of black stain fr. level 1

West wall of W EXT



level bag 1 flake
bone frags
1 operculum
2 shell
1 coral

obj	X	Y	Z	Description
1				
2				
3				
4				
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6				
7				
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9				
10				
11				
12				
13				
14				
15				
15				

Recorder: [signature]
Party:

c:\333456\tank\arch01.wk3

Project name: Ili'ili Water Tank | Site: I/#1 | Area:
Grid: TP#1 W.Ext | Spit:
Stratum: level #1 0-10cm | Date: 1/25/95

Sieved: Dry ✓ Wet | Size: 1/4 | Depth: Surface ✓ Datum

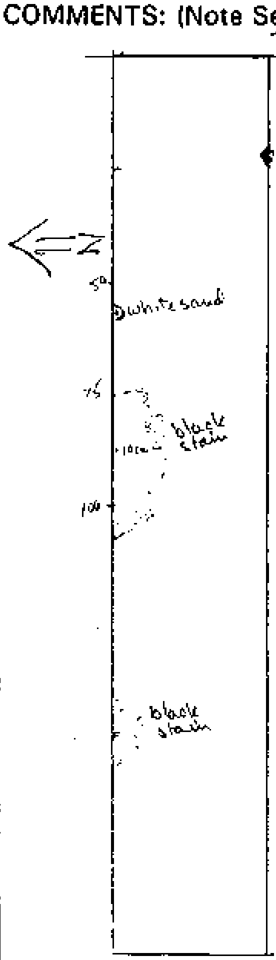
Start Levels

Mean End Z + ____

End Levels

Mean End Z + ____

COMMENTS: (Note Sediment Characteristics, Color, Disturbances, Samples Taken, and Special Problems):



87cm from W wall to 110cm is a "charcoal" (not really) and orange-red rock stain with 1 cm charcoal flecks to to W 10cm at 11cmbs not a post hole, not a hearth

dark brown loamy soil with water worn pebbles 5%

human bone shows up in S wall of SExt 25cm west of TP#1 4cm from surface, bone frags in level bag. also 1 flake, Zopercolum. Also found glass in this level,

charcoal and several non-distinct black stain one at 150cm from Test pit in N wall of extension

black stain areas (soil sample taken in level 2) are thin 3cm max

obj	X	Y	Z	Description
1				
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15				

Recorder: [signature]
Party:

c:\333456\tank\urch01.wk3

Project name: Iliilik Water Tank Site: I | #1 Area:

Grid: TP#1 S. EXT Spit:

Stratum: level #2 10-20cm Date: 1/25/95

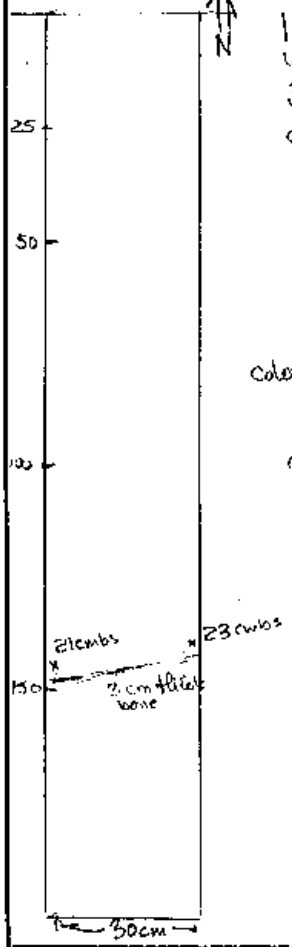
Sieved: Dry / Wet ✓ Size: 1/4 Depth: 10-20cm Surface Datum ✓

Start Levels

End Levels

Mean End Z + ____ Mean End Z + ____

COMMENTS: (Note Sediment Characteristics, Color, Disturbances, Samples Taken, and Special Problems):



(dry) light brown loamy soil with water worn pebbles 3-4cm 2%.
3 flakes, 1 adze preform, 1 fingernail
charcoal flecks 1%
human bone at 21cmbs (femur? humerus?) 150cm from S wall of TP bone is 3cm wide
Wall profile shows consistent soils - no change

color photo 14 to NW at TP#1 EXT S.
photo 13 to S at TP#1 EXT S "human bone"

Bow #1 to S at S EXT
#2 to S at S ext
#3 to NE at TP#1

3 flakes
1 broken polished adze?

obj	X	Y	Z	Description
1				
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15				
16				

Recorder: _____

Party: _____

c:\333456\tank\arch01.wk3

SHOVEL TEST UNIT LOG

Project Ilili Water Tank Date 1/17/95

Excavator Siosi Datum 24' N of Test Pit #1

Unit Diameter 60 cm

Test Unit #	Stratum	Depth	Observations
1/17/STP #1	#1	0-41cm	dark brown clay/loam with gravel (1-2cm), intrusions of sandstone, Charcoal flecks in hard packed soils with "bubbly" basalt cinder rock 7-12cm in 5% of soil small b. pebbles ≤5% no cultural materials ended at lava flow bedrock

Comments

Recorded by D.E.

Level bag - sample of red "stained" angular fractured rock "oma"? rock. From 28 cmbs

SHOVEL TEST UNIT LOG

Project Ilili H_2O Tank Proj. Date 9/22/94

Excavator AFU FILISI Datum 9.5m South of 1st Target.

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
60 x 60 diameter. STP-CENTER	I	0-35cm.b.s	soil color & texture: 10YR, 3/2. Very dark grayish brown. Found ① b.f flake at 10cm b.s. & 30cm b.s. Sandy loamy clay, mixed w/ rock pcs.
	II	35-55cm	rootlets/ faunal (worms) + dilirated leaves. 5YR, 3/2, dark reddish brown
			Very coarse sandstone ① b.f flake at 45 cm. b.s. Culturally neg. Flakes are not enough to be significant. Hit sandstone bedrock. reddish

Comments STP CENTER is located in the center of the proposed tank. It is also located 2m SW side of mango tree. This mango tree is young & not close to center.

SHOVEL TEST UNIT LOG

Project Ili'ili H_2O Tank Proj.   Date 9/27/94

Excavator AFU FILISI   Datum 1m E of B-3

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70 cm diameter STP1A	I	0-35cm	Soil color & texture: Very dark grayish brown. Sandy loam clay. Do have cobble & pebble
			size ili'ili bones & rocks. Culturally neg. Hit mango roots + a'a boulders.
60 x 60 cm diameter STP1B	I	0-25cm	Soil color & texture: Very dark grayish brown. Sandy loam clay. Do have pebble size of
			a'a [illegible] rocks. Found (1) b. flakes at 20cm bs. Culturally neg.
			Hit sandstone bones type [illegible].

Comments STP1A is located 12m N of STP Center, 1.20m N of N-target, + 10m S of STP1B.

STP1B is 10m N of STP1A + 2m N of 4" PVC pipe.

SHOVEL TEST UNIT LOG

Project Iliili H2O Tank Project.

Date 9/22/94

Excavator AFU FILISI

Datum NE of B-2

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 X 70 cm diameter STP 1C	I	0-15cm	very dark grayish brown
			Loamy sand w/ little clay, mixed w/ ditsurated roots, [illegible] Do have cobble, vasicular rocks
			Cult. neg. Hit sandstone bedrock.
70 x 70cm diameter STP 1D	I	0-40cm	very dark grayish brown
			Sandy Loam w/ no clay. mixed w/big roots from some of lau-papata trees, Also have faunal remains, Culturally neg.
			Hit basaltic boulders.

Comments

STP1C - is located 10m, 180°N of STP CENTER.

STP1D is 10m, 180° South of STP1C, more into the thick forest area, 7m N of land drop.

SHOVEL TEST UNIT LOG

Project Tiili H_2O Tank Proj Date 9/22/94

Excavator AFU FILISI Datum SW of BERM -880 ft.

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
60 x 60cm diameter STP2A	I	0-40cm	10YR 3/2, very dark grayish brown, Sandy Loamy clay mixed w/ pebble size ka rocks.
			Culturally neg. Hit reddish brown pahoehoe bedrock
65 x 65cm diameter STP2B	I	0-35cm	Brown Sandy Loam, Found only a few cobble size but mostly pebble size Vesicular, light gray basalt rocks, Soil also affiliated w/ roots, leaves & vines + faunal (ants & worms) Red & black - Loam

Comments

STP2A is a unit 5cm higher than STP2B, 10m, 112° E from STP CENTER.

STP2B is a unit located 10m, 112° E from STP2A, alot closer to B-2.

SHOVEL TEST UNIT LOG

Project Ili'ili H_2O Tank Proj.　　Date 9/22/94

Excavator AFU FILISI　　Datum S of N282700 line

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
65 x 65 cm diameter STP2C	I	0–50cm	Very dark grayish brown
	II	50–60cm	Loamy Sand, 1/2% clay, mixed w/dead roots & ants. Found cobble size light gray lava (a'a) rock. Reddish brown
	III	60–80cm	More sand therefore Loamy Sand. Found cobble to pebble size sandstone (orange!) rocks. Yellowish brown
			Loamy Sand. Sandstone rocks. Culturally neg. Hit red sandstone bedrock.
70 x 70 cm diameter STP2D	I	0–30cm	black. silty clay.
			Do have cobble to pebble size of a'a rocks mixed rootlets. Vine. Hit pahoehoe bedrock. cult. positive. At 15cm. b.s. found (1) nodule (3) flakes

Comments STP2C 10m 292° V of STP CENTER. Right on an open field.

STP2D is located 1.70m E of 4" PVC pipe, 10m W of STP2C.

No wonder, this ~~are~~ place is called "Ilili." Since Afu & myself began excavating in this complex, the ~~whole~~ area have ilili (sharp, rough) lava b. rocks, It's quite easy to penetrate during excavation.

SHOVEL TEST UNIT LOG

Project Ilili H_2O Tank Proj.   Date 9/23/94

Excavator AFU FILISI   Datum SW of BERM - 640 FT. N of B-4 (BORING LOCATION)

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70 cm diameter STP2E	I	0 - 35cm	very dark grayish brown Silty Sand
	II	35 - 45cm	Reddish ~~brown~~ - 5YR, 3/2
			~~San~~ Fine coarse sand. Culturally neg. Hit sandstone bedrock.
65 x 65 cm diameter STP2F	I	0 - 30cm	Soil Color & Texture is similar ~~Color of soil ne~~ to STP2E, STRAT I but more cobble SANDSTONES than rough, rugged lava rocks.
			Culturally neg.
			Hit dark gray solid sandstone.

Comments

STP2E is 5m distant, 76° E of STPB, immediately at thick ~~forest~~ area.

STP2F is 5m distant, 180° South of STPB

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Proj. Date 9/23/94

Excavator AFU FILISI Datum 20+ Sidy BERM -880' check field map.

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70 cm diameter STP2 G	I	0-30cm	5YR, 3/2 reddish brown silty clay, more pebble size iliili rocks than cobble. Soil, ~~is~~ excellent for farming.
60 x 60 cm diameter. STP2 H	I	0-3cm	Dark grayish iliili. Very, very coarse, cinders & natural. Hit cinder bedrocks Culturally neg

Comments STP2G is located 5m distant, 344° N from STP2B.

STP2H is 5m, 344° N of STP2A

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Proj. Date 9/23

Excavator AFU FILIS1 Datum Roughly 12' SW of B-1 check map.

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70 cm diameter STP3	I	0 – 25cm	Very dark grayish brown Silty sand w/ rootlets &
	II	25– 30cm	Brown. Sandstones
	III	30+	light gray – aa – type of rock. Appears to be blister (tube like) Unit terminates due to natural tube w/out no end. Just like a natural drop. At 25cmb.s. found ④ b. flakes. Culturally negative.

Comments STP3 is 5m, 266° West of STP2D. & 3.25m west of 4" PVC Verticle pipe.

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Date 9/23/94

Excavator AFU Datum 10m S & 7m E-1 Refer to Map.

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
65 x 65 cm diameter STP3A	I	0 - 20cm	dark grayish brown.
		20 - 55cm	Very Coarse Sandy loam. Found ① b. flake, ① Contemp. car glass frag. Reddish brown. Silty Sand.

Comments STP3A is located 5m, 182° South of STP3.

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Proj Date 9/29/94

Excavator AFU FILISI Datum N + S of B-2

Unit Diameter > 30 cm

Test Unit #	Stratum	Depth	Observations
60 x 60cm diameter STP2N	I	0 - 10cm	10YR, 3/1, black
			Sandy loam mixed w/ cobble size iliili - da type of rock.
	II	10 - 45cm	Brown, Sand loam w/ little clay. Roots & rootlets still show in this layer. Found ② possible, tiny b. flakes
			from 25 - 45 cm. b.s.l
			Cult. ? positive. Only two tiny b. flakes. to determine positive ?
			Unit stops due to iliili bedrocks.
60 X 60 cm diameter STP2M	I	0 - 30cm	- Very dark grayish brown Silty loam mixed w/ roots,
			cobble to pebble size iliili, da rocks. Hit iliili bedrock. Cult neg.

Comments STP2N is located 5 m, 180° West of STP2I. Also located SW of B-2, 4" PVC.

STP2M is located 5 m, ? South of STP1

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Date 9/29/94

Excavator AFU FILISI Datum NE of B2

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
60 x 60 cm diameter STP 20	I	0 - 15cm	Found ① medium size b. flakes on surface. Very dark grayish brown.
			Silty clay w/ little sand mixed in. Do have more pebble size iliili, type of rock than cobble.
	II	15 - 35cm	FOUND ① broken polished flakes from an adze, ① broken preform. Reddish brown. Sandy loam.
			More pebble, iliili stone in this layer. Rootlets still are visible.
	III	35 - 55cm	Oxidized Red. Sandy loam. More cobble size sandstone.
			Very moist. Hit pahoehoe bedrock. Cultrually positive

Comments STP 20 is located 5m east of STP I, 5m South of STP 2E

SHOVEL TEST UNIT LOG

Project Iliili Proj. Date 9/29/94

Excavator AFU FILISI Datum SW of B-2

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
65 x 65 cm diameter			
STP2P	I	0 - 22cm	Very dark grayish brown
	II	22 - 30cm	mixed w/ more iliili type of stones, silty clay w/ little sand. grayish brown
			Mixed w/ more rootlets, sandy loam More pebble, iliili type stones. Hit
STP2Q	I	0 - 35cm	Black
	II	35 - 75cm	Sandy loam w/ little clay mixed w/ roots & dead branches + iliili pebble size rocks. cobbles. FOUND H_2O-WORN STONE at 150cm. b.s. Dark grayish brown
			Silty clay! Roots still show Hit pahoehoe, vascular bedrock

Color

Comments STP2P is at 10 m N from STP2 O. + 5m, same Transect line STP2O

STP2Q is located 5m, 360° N of STPO

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Proj. Date 9/29/94

Excavator AFU FILIS1 Datum NE of 8-2

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70cm diameter STP2R	I	0-20cm	grayish brown silty clay mixed w/ pebble & coarse iliili rock.
	II	20-45cm	Brown Sandy Loamy mixed w/ more pebble size, iliili rock. Found 2 small pieces of b. flakes at 25-40cm. b.s.
	III	45-70cm	Yellowish brown More coarse sandy loam mixed w/ iliili, cobble sandstones rocks
STP2S	I	0-20	gray ish brown Silty clay mixed w/ few cobble size to pebble iliili rocks. Found 1 b. flake at 25cm. b.s.
	II	20-40	brown sandy loam More pebble rocks than cobbles. Hit iliili size sandstone bedrock. Cult. positive ?

Comments

STP2R is located 5m, 346° N of STP20. STP "R" is also an extension for STP2 "I." to N.

SHOVEL TEST UNIT LOG

Project Iliili H_2O PROJ Date 9/29/94

Excavator AFU FILIS Datum NE of B-2

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
STP2T	I	0-50cm	BROWN
			silty clay Pebble to ~~a~~ cobble size of Iliili rocks.
			Found a piece of rubber (possible rubber slipper) at 30cm. b.s.

Comments

STP2T is 5m S of STP CENTER + 5m N of STP 1A.
Purpose of this STP is to do radii extension from STP20"

SHOVEL TEST UNIT LOG

Project Ilili H_2O Tank Date 9/29/94

Excavator AFU FILI 81 Datum S of B-14 N of B2

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
STP1E	I	0–10 cm	Very dark grayish brown silty sand mixed w/ pebble size illdi rocks Hit Andic, lava cinder bedrock.
			Cult. neg.

Comments STP 1 E is located 5m, W of STP 1 A.

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Proj. Date 9/27/94

Excavator AFU FILISI Datum Between 2M & 20

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70 cm diameter STP2I	I	0-35cm	Very dark grayish brown. Found ③ possible b. flakes at 15cm. b.s. Silty clay mixed w/ cobble to pebble size za rocks.
	II	35-45cm	White pale yellowish sand. →
	III	45-62cm	Reddish brown. Very sandy
			Hit SANDSTONE BEDROCK.
			Grand total of finding s ① b. flake at 30cm. b.s. w/ bone frag
			+ ③ b. flakes at 15cm. b.s.
			④ b. flakes + bone fragments.
			Culturally positive.

Comments STP2I is located 5m, 18° S of STP2C. Also 5m, 360° N of STP1. Found bone frag (possible human) at 30-35cm. b.s w/ white, medium coarse sand. Bone fragments basically recovered at the N side of unit where white sand densely situated.

SHOVEL TEST UNIT LOG

Project Ili'ili H_2O Tank Proj Date 9/27/94

Excavator AFU FILISI Datum E of B-2 => STP2J
NE of B-2 => STP2K

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70 cm diameter STP2J	I	0 - 25cm	10YR 3/1 black w/ silty ~~sand~~ clay. Charcoal mixed
			Only pebble size, 'a'a rocks in this unit.
〃	II	25-55cm	10YR, 3/2 Very dark grayish brown
			Do have sparsed charcoal, Silty Sand. Hit vasicular reddish 'a'a bedrock. Cult. neg.
70 x 70 cm diameter STP2K	I	0 - 15cm	dark grayish brown, Dusty Dusty sand. Hit basaltic
			boulders. Only discovered pebble size b. rocks. Cult. neg.

Comments STP2J is located 5m, 180° S of STP2I, 5m West of STP2C, closer to the south side forest.

STP2K is located 5m, 360° N of STP2C.

SHOVEL TEST UNIT LOG

Project Iliili H_2O Tank Proj. Date 9/27/94

Excavator AFU FILISI Datum N of B-2 & S of B1

Unit Diameter >30 cm

Test Unit #	Stratum	Depth	Observations
70 x 70 cm diameter STP2L	I	0 - 25cm	dark grayish brown, dusty dusty sandy loam, mixed w/ mange roots, Also have vesicular size rocks Hit pahoehoe, sandstone bedrock. culturally neg.

Comments STP2L is located 5m, 360° N of STP1K, under mangoe tree, which is West of target.