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## CHAPTER 12

### ARCHAEOLOGICAL RESOURCES

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#### **12.1 Introduction**

In compliance with the EIA and Terms of Reference for the establishment of Well sites, pipelines, and the construction of gravel roads for the Belize Natural Energy (BNE), the authors were asked to conduct an archaeological impact assessment in the areas that are to be affected by the development. The properties concerned are the areas where two prospective wells and connecting pipes in Spanish Lookout proper, are to be established. The principal features are the two wells, with connecting pipes in the San Marcos area, a pipe system to run the petrol from the San Marcos Well to the tank farm on the main road into Spanish Lookout, and the continuation of the construction of a feeder gravel road to the San Marcos wells.

The purpose of the assessment is to identify and document archaeological remains and/or features (as defined by the National Institute of Culture and History Act, Chapter 331 Revised Edition 2000) that are there and to place these in their given geographic location in the areas of study. The report will also offer recommendation/s for the protection and or mitigation of any such remains prior to the implementation and as a result of the civil works during the project. The report will include in it an archaeological impact assessment, a description of the study area (Spanish Lookout and periphery including San Marcos), a section explaining the methodology of the assessment), a discussion on the type of survey and reconnaissance applied, the results, and recommendations and mitigations for the findings.

The Archaeological assessment and survey will be conducted with full awareness of and adherence to the National Institute of Culture and History Act, Chapter 331 Revised

Edition 2000.

## **12.2 Description of Areas**

The areas of study include:

- 1) small areas within the Spanish Lookout community and
- 2) the San Marcos village area.

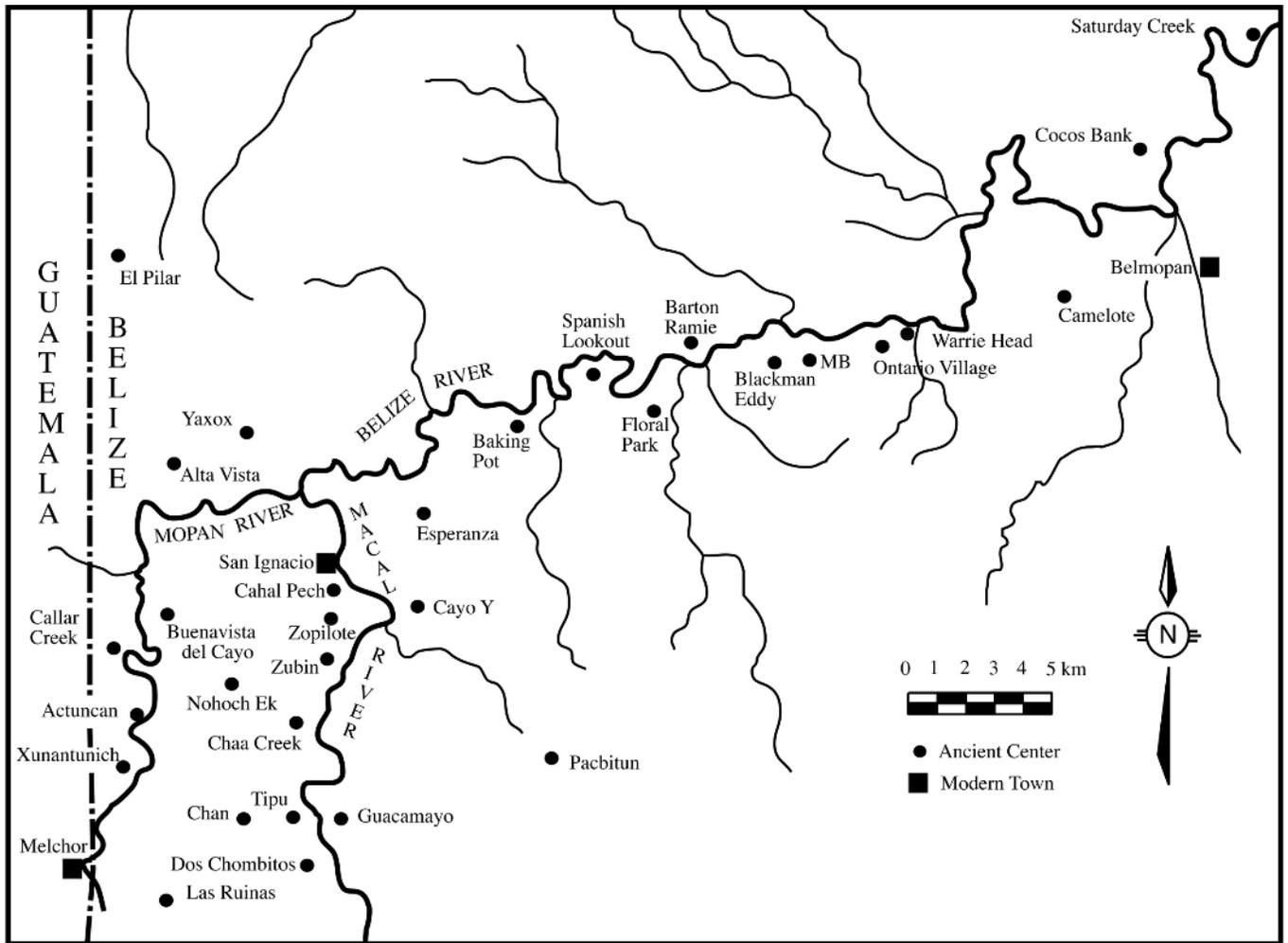
The Spanish Lookout community lies on the western bank of the upper Belize River and is within the archaeological zone known Upper Belize River Valley which extends from Cocos Bank in the east to Benque Viejo in the western border (Willey 1965:309) (Fig. 12.1). The Belize River, along which several communities lie, including Spanish Lookout, divides the geology of Belize into two general contrasting zones. The northern half is relatively flat limestone with sluggish meandering rivers and marsh areas. In contrast to the north, the south is typified by hilly to mountainous terrain, sharp ridge, and fast flowing rivers originating in the Maya Mountains (Wright et al. 1959:22). The immediate sustaining area of the Spanish Lookout community lies just north of the limestone hills in the relatively flat northern zone (Fedick 1989:217). The relief of this area is relatively negligible as compared with the southern periphery.

Given the low relief and periodic flooding of the immediate alluvial plains, the soil at the Upper Belize Valley is among the deepest and most fertile in the region (Birchall and Jenkins 1979; Fedick and Ford 1990) and under normal circumstances, supports a broad leaf forest. Combined with the limestone foothills of the south, the region provides a habitat for flora and fauna. This may have been a decisive factor for the establishment of prehistoric settlements and modern farming communities such as Spanish Lookout, Central Farm, Baking Pot and other surrounding communities.

The areas of impact for the first two proposed wells and connecting pipes are situated in the Spanish Lookout community proper. The first well site ( Fig. 12.2), Well #7 situated at GPS reading of 286841E – 1907422 N, is approximately 375 metres due west of Well MU

# 2, just off the junction of route 20 and Center Road. The area consists of a small marsh creek running parallel to the property due north along the eastern limits of the elevated pasture and surrounding buildings. The proposed size of land to be used is 50yd x 80yd, an area of about 4,000 sq. yd. It is proposed that pipeline connecting these two wells will run in a straight line due east from Well #7 to Well MU # 2.

The Second drilling site, (Fig. 12.3) MU # 8, is also located in the Spanish Lookout community proper with a GPS reading of 286427 E – 1906459 N. This proposed site is



**Fig. 12.1:** Map of Upper Belize River Valley

located southwest of MU Well #1 at a distance of approximately 300 metres in a cleared cattle grass pasture. The pipeline connecting the two wells will run in a northerly direction and turns at a right angle due east to connect with MU Well #1 (Fig. 12.3).

In contrast to the immediate rich alluvial flood plains of the Upper Belize Valley and the Spanish Lookout area, the immediate higher terrain of the northeastern upper region of the Belize River is characterized with a mixture of thin scrub forest of pine-oak and palmetto, intermittent broken ridge and rolling hills. The soil supporting the pine-oak and palmetto are predominantly sandy with a mixture of chert nodules, quarts and some batholiths (Fedick 1985, 1988 and 1989). The soil is acidic and is not suitable for agricultural activities. The resources of this type of soil are restricted to aggregates (sand and gravel) and cattle pastures – precisely what it is being used for by the community today.

Continuing northwest of the pine-oak ridge and beyond the upper banks of the Belize River, are rolling hills and plains with numerous small creeks and drainage system. Most of this area is being used for agriculture; cultivation of temporary crops or for pastures.

The vegetation of this area is dominated by low grass pastures, old or abandoned agricultural plots and secondary broad leaf forest with canopy, which continue to the San Marcos community and the area for the proposed San Marcos Well site # 1 ( Figs. 12.5, and 6). This is where the proposed main pipelines will be laid from the main Farm Tank (Depot) situating at GPS 291 781 E - 1907756 N, off the Blackman Eddy/Spanish Lookout road to Well # 1 in San Marcos at GPS 290680 E - 1911556 N (Fig. 12.7).

Two well sites will be developed at San Marcos. San Marcos Well #1 is located at GPS 290680 E – 1911556 N and is situated approximately 4 km north northwest of the main Tank Farm and 2 km northeast of the small community of San Marcos. The actual site sits on a small savannah (Fig. 12.7) and is buffered to the north by higher canopy vegetation. That vegetation continues northwest to the proposed San Marcos Well #2. Amidst the canopy between the two well sites are low, secondary vegetation and a number of creeks and drainage systems (Fig. 12.8). An old truck ‘pass’ runs generally parallel to the seismic line and connecting San Marcos Well #1 to Well #2 located at GPS reading 291363 E –

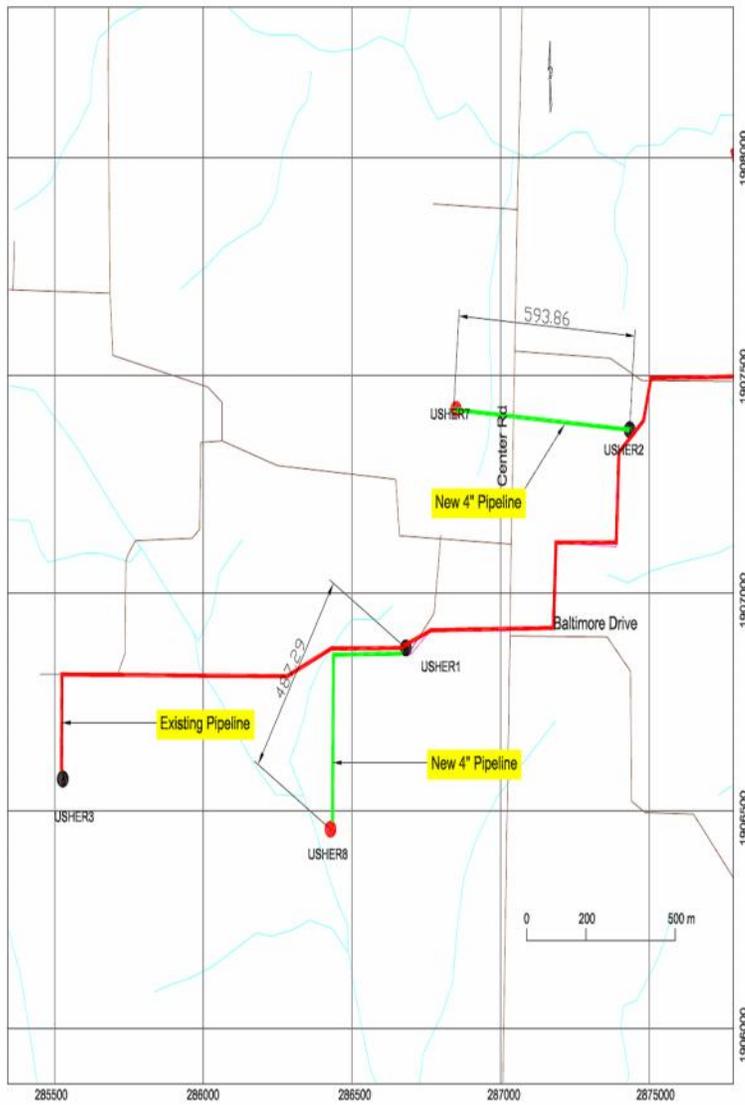
1911966 N. It is proposed that the old truck trail be improved to provide access between the San Marcos wells and to link the main road that is at the front of the property and



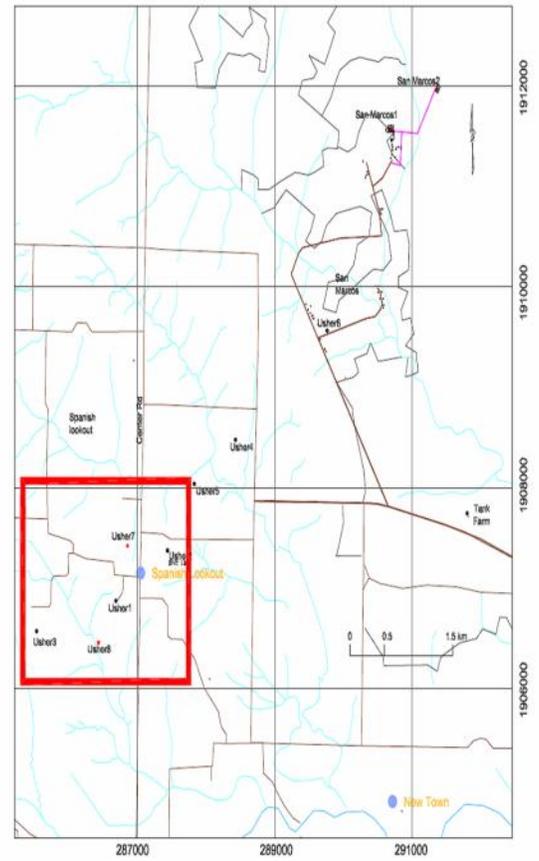
**Fig. 12.2:** Proposed site for MU Well # 7



**Fig. 12.3:** Proposed site for MU Well # 8



**Detail A: Proposed Micheal Usher Well # 7 & # 8**  
 Scale= 1":300m



**Project Location**  
 Scale= 1":1.3 Km

- LEGEND**
- Roads
  - Proposed New Road
  - Creeks & Tributaries
  - New wells
  - Existing wells

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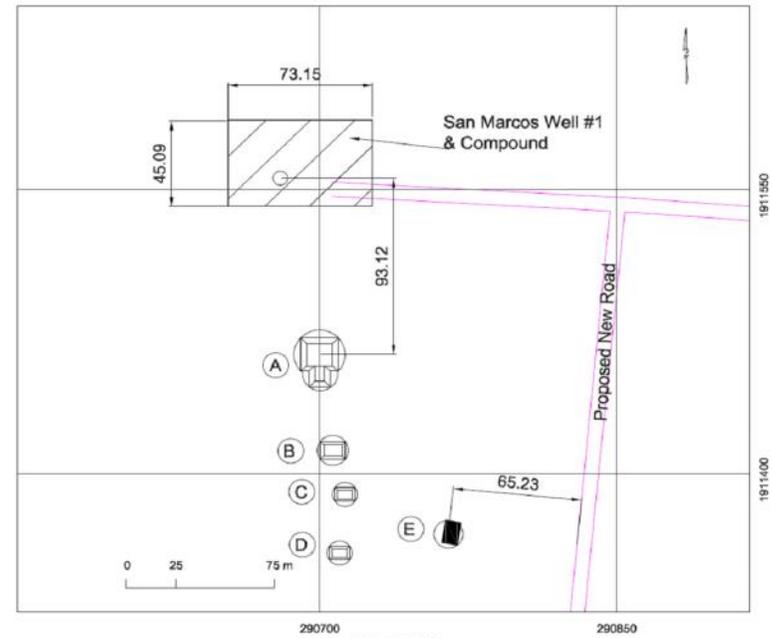
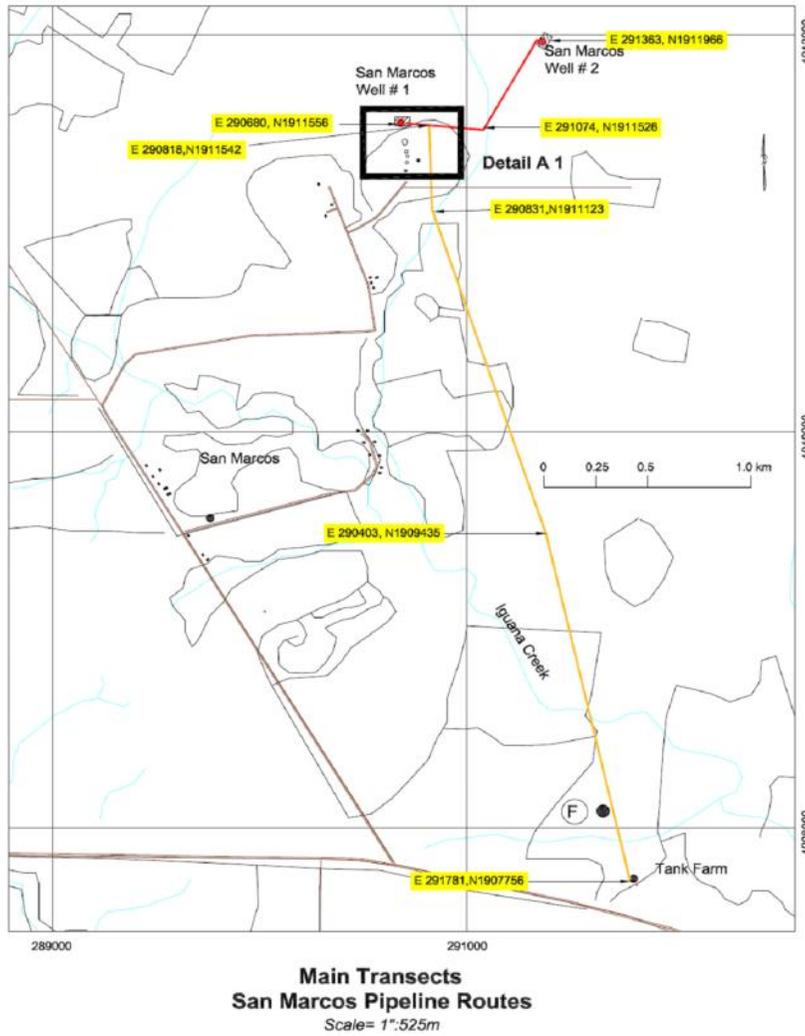
**Fig. 12.4: Map of Proposed MU Wells # 7 & 8**



**Fig. 12.5:** Landscape/Cattle Pasture



**Fig. 12.6:** Over-Grown Agriculture Field With Higher Cohune And Broadleaf Canopy In Foreground



**LEGEND**

- Roads
- Proposed New Road
- Creeks & Tributaries
- Transect # 1 (± 0.9 km)
- Transect # 2 (± 4 km)

**Archeological Mounds Location**

ID	E	N
A	290700	1911452
B	290709	1911410
C	290715	1911389
D	290710	1911358
E	290765	1911368
F	291656	1908087

Projection are UTM NAD 27  
Dimensions are Meters

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**Fig. 12.7:** Map Showing Prospective San Marcos Wells #1 & #2 Connecting Pipe Route, Proposed Road and Main Transect For Pipe From Well #s1 and 2 to Tank Farm. Inset Provides A Map Of The Isolated Mound Group With GPS Readings.

homes to the south.

### **12.3 Review of Literature on the Spanish Lookout Areas**

Spanish Lookout is within the sphere of the upper Belize River Valley (Fig. 12.1) Studies have shown however, that there are far more occurrences of prehistoric settlements south of Spanish Lookout than there are in the north. In addition, archaeological records show several major sites such as Baking Pot, Barton Ramie and Blackman Eddy which, together with their peripheral settlement and sustaining areas, dotted the rich and fertile alluvial plains of the upper Belize River Valley. These sites are near the Spanish Lookout area. Baking Pot archaeological site is approximately 8 km up stream from Spanish Lookout and is located on the southern banks of the Belize River.

The upper Belize River Valley sub-region of the Cayo District has been the focus of archaeological investigations between 1924 and 1961 by the Carnegie Institute of Washington, U.S.A. Although no extensive excavations were conducted, the site was mapped, and an assessment of its settlement area was done (Ricketson 1931:4).

In 1949, salvage excavation was done by A.H. Anderson, then Archaeological Commissioner for Belize (Moore 1999). In 1956, Gordon Willey (1965) of Peabody Museum, as part of his Belize River Valley Settlement Survey, conducted a series of small excavation at Baking Pot. Willey's survey of the Belize River Valley determined numerous prehistoric settlements dotting the upper Belize River Valley that later attracted further and more detailed research to the area.

Since 1961, no archaeological research was conducted in the area until 1992, when The Belize Valley Archaeological Reconnaissance Project (BVAR), under the direction of Dr. Jaime Awe of the University of New Hampshire, started considerable excavations within the site core of Baking Pot, and at several settlement clusters in the periphery (Awe 1993). Around the same time, Dr. James Garber of the Texas State University at San Marcos began archaeological work at Blackman Eddy (Garber 1991). The research by Awe and Garber at Baking Pot and Blackman Eddy respectively, are still ongoing and have provided considerable information on this section of the Belize Valley.

The results of all the investigations show that human activity in this sub-region in Belize, goes back 10,000 to 8000 B.C. during what is known as the Paleo-Indian period. For the subsequent Archaic Period (7000 to 1500 B.C.), several Lowe and Sawmill type projectile points have been recorded in the area extending from Spanish Lookout to the Mountain Pine Ridge (Lohse et al. 2006). Cahal Pech, Barton Ramie, and Blackman Eddy (Awe, Healy, Garber et al., and Willey et al.) have produced considerable data on the earlier phases; Preclassic period (1000 – 300 B.C. ). In contrast, Baking Pot and Spanish Lookout are predominantly Classic Period (300 – 900 A.D.) sites extending into the Post Classic period (1000-1400 A.D.)

Settlement surveys by Willey et al. (1965) have further noted that Maya settlements in the area are concentrated along the fertile alluvium on the north side of the Belize River, or on the alluvium and foothills on the south side of the river. In contrast, there is a marked absence of Maya settlements within the scrub forests of pine, palmetto and oak that border the alluvial valley to the north of the river. The likely reason for the difference in settlement pattern is that the scrub forest lies in areas of sandy soils with outcrops of flint. The acidic nature of these soils is not conducive to agriculture, and was also unappealing to the agrarian Maya. This however, did not mean that the ancient Maya disregarded these areas completely.

There is evidence at the site of Colha in northern Belize that the Maya exploited these chert-bearing zones for flint to make projectile points, scrapers and other tools. On the east side of the New River lagoon there is evidence which suggests the ancient Maya collected pine resin and wood for incense, fuel and torches, and that they intentionally burnt the pine ridge to attract deer who feed on the new grass that regenerates thereafter

But while there is relatively little evidence for ancient Maya utilization of pine ridge environments, the same is not true for Archaic people and Paleo-Indians. Evidence for these early inhabitants of Belize has been found in the sandy scrub forests of the country. This is so in the Belize and Orange Walk Districts (see Lohse et al. 2006) where Preceramic

(10,000 –1500 B.C.) artifacts have been found in the sandy pine-oak-palmetto scrub forests and savannahs. Supporting this apparent distribution is the discovery of an Archaic period Lowe Point in a pine covered scrub forest just west of Spanish Lookout. The projectile point fragment was discovered on the surface next to a small roadside quarry by members of the BVAR project. It is probable that similar finds could be made in the area therefore developers must be cognizant of this situation.

#### **12.4 Survey and Research Methodology**

Prior to visiting the proposed sites, research was conducted at the Institute of Archaeology (IOA) to review maps and records of the study area and to put it into archaeological perspective. The objective of the research at the IOA was to see if there was any record or report of archaeological material on or around the area of influence.

Following the research at the IOA, a survey of the area, which lasted two days, was embarked upon to specifically determine, record and map, any archaeological remains or features that might be in the areas of the proposed development. These would include evidence of Pre-Maya, ancient Maya, Historic-Colonial Period occupation and any other artifacts or features that may qualify under the NICH Act.

As a result of the nature of the areas of study, particularly in the Spanish Lookout community, cutting of transects lines was not required because the areas are in low grass pastures among residential homes. GPS readings were obtained and the areas were visually reconnoitered. The areas of impact measure about 50yd x 80 yd (4,000sq yd) each. Similarly the 15 foot-wide pathway or right of way for the pipelines connecting the wells were walked and visually surveyed. The proposed well sites in the San Marcos area were likewise traversed and GPS reading were obtained. The pipeline routes connecting the two wells were also examined visually.

Road alignments for the proposed road connecting San Marcos Well #1 to San Marcos Well #2 were traversed. GPS readings were obtained at key areas along the alignment (Fig. 12.7 Main Transect Route). The other proposed road alignment will connect the present San Marcos road to the San Marcos Well #1. It is a relatively short distance that

will run east around the farm houses on pasture land to Well #1, for a distance of approximately 1 km. The lack of vegetation of the areas allowed a thorough examination and recording of suspected archaeological features.

The final area that was examined was the 15 foot-pathway that is to accommodate the right of way for the main pipe line that is to be connected from the western flank of the farm house to San Marcos Well #1 in a straight line due north northwest.

### **12.5 Result of Survey and Recommendation/mitigation**

The proposed sites that are to be impacted upon by the establishment of drilling sites and wells are relatively small and isolated from each other. Two of them are situated in the Spanish Lookout community proper and the other two at San Marcus village. The two well sites at Spanish Lookout will be connected to old established wells. The new Well # 7 will be connected by pipelines to the already existing operating wells designated as Well Michael Usher (MU) # 2 and the new Well MU #8. Similarly, approximately 4km from the Tank Farm, situated on the Spanish Lookout /Blackman Eddy road, and oriented in a north northwest direction, two new well sites will be prepared for future prospecting in this area. The two sites are located in the same Spanish Lookout Oil Field. These two wells, San Marcos #1 and San Marcos #2 will be connected to each other by a pipeline and connected to a manifold to the main pipeline that empties into the main depot at the Farm Tank. Perhaps due to the nature and physically special limitations of these small, but sometime narrow areas on which work is projected, as in the case of the pipelines, no evidence of prehistoric or any other cultural remains were encountered on any of the well sites, pipelines or road alignments.

The survey shows however, that at a distance approximately 50 m off and immediately south of San Marcos Well #1, there is an isolated mound group containing a total of five mounds – four are aligned in a north-south orientation and the fifth mound is situated east, approximately 40 m from the most southerly mound (Fig. 12.7). This mound (mound C) contains a relatively large looters trench approximately 1.5 m long by a meter deep running partially through its spine. Mound E on the other hand presently serves as the foundation

on which one of the land owner's houses is built. The mounds were designated A to E and GPS coordinates were obtained for each (Fig. 12.7). These mounds will in no way be affected by the activities of the Wells or the construction of the road as both activities are located outside the confines of the mounds. The road has been re-routed and is now aligned at an east-west direction, around the houses (approx. 200m) through the pasture and on to the well site.

There is however, a questionable feature that was observed and recorded located on the Farm Tank/San Marcos transect. It is a small, isolated mound of pine ridge cobbled located in the pine ridge palmetto environment. It has a diameter of approximately 5 metres and 0.5m high. It is located at 291656 E – 1908087 N, being north northwest of the Tank Farm at about 5m off the transit line.

Although no other evidence of prehistoric remains was located during the survey caution should be taken when preparing all well sites, in particular the San Marcos Well site # 1. The existence of mounds nearby dictates that caution be exercised when working in that area because of finding archaeological features beneath the surface is possible. Likewise the opening of trenches for pipelines and the construction of all roads must proceed with caution. Should any archaeological features are encountered the operation must be halted and to inform the Institute of Archaeology immediately to determine and recommend and or execute a course of action. In general therefore, it would be prudent to recommend that all excavations whether for wells, pipeline trenches, road construction building foundations and the likes be treated with due diligence as archaeological materials may exist anywhere especially giving it relative proximity to the prehistoric settlements along the Upper Belize River Valley.

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**Appendix A**



**1. San Marcos Well Site # 1**



**2. San Marcos Well Site # 2**



**3. Creek/Drainage South of San Marcos Well Site # 2**



**4. Archaeological Mounds – San Marcos**



**5. Looted Mound (Mound C on Map)**



**6. Residential House On Mound**