PHASE III ARCHAEOLOGICAL DATA RECOVERY, AREA C
PROPOSED SHELBY CRUSHED STONE QUARRY EXPANSION
TOWN OF SHELBY, ORLEANS COUNTY, NEW YORK

OPRHP FILE 13PR0334

Prepared for
Shelby Crushed Stone, Inc.
19830 Blair Road
Shelby, New York 14103

Prepared by
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Report CA684D-2-1-17
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INTRODUCTION

The existing Shelby Crushed Stone, Inc. quarry is located south of Blair Road in the Town of Shelby, Orleans County, in the western part of the State of New York. The Shelby Fort Site has been known to European Americans since the seventeenth century. The site was reported in published sources as early as 1851 (Squier 1851: 71-72). It was later identified as first an Iroquois village (Beauchamp 1900: 132) and then more specifically as a Neutral village (Parker 1920: 632). More recently, it was described by White (1961, 1977). The northern, eastern and southern portions of the site are among the lands owned by Shelby Crushed Stone, Inc. Archaeological surveys have been carried out for areas to the east, northeast and west of what was the palisaded village core in connection with previous quarry expansion over the past three decades (Hale-Pierce and Niemczycki 1986; Hartner and Perrelli 2007a,b; Hartner 2008).

OVERVIEW OF PREVIOUS ARCHAEOLOGICAL INVESTIGATIONS

A Phase IB site identification survey performed in 2007 for the area to the east, southeast and northeast of the village core identified "a low to moderately dense scatter of prehistoric lithics and ceramics in what appear to be plowzone soils" (Hartner and Perrelli 2007a: 21). Twenty-seven finds were recovered from 11 of the 202 screened shovel tests systematically placed across the site. This Phase IB survey recommended additional archaeological investigation of the western approximately 2.0 acres (0.8 hectares) of this parcel if continued avoidance were not feasible so as to be able "to suggest a practical limit for a planned buffer zone around the earthwork/village" (Hartner and Perrelli 2007a: 15). Plans to expand mining operations six years later made it no longer feasible to avoid impact to this area, which constitutes a segment of the outer portion of the Shelby Fort Site and represents only a fragment of the archaeological remains associated with this Late Woodland Neutral village. Consequently, in light of proposed impact, this acreage was included in a 2013 archaeological investigation of proposed mine expansion areas as Area C and a Phase II archaeological investigation was carried out here as part of that effort (Oberon 2013).

The relatively undisturbed area to the north, west, and northwest of the visible remains of the earthwork represents roughly one quarter of what was the village core. As a significant cultural resource, this area is protected from all impact. Archaeological investigation of the portion of Area C proposed for quarry expansion and lying contiguous to the core area was able to sample less than one sixth of what would have functioned as the outlying portion of this cultural landscape.

The Native American material encountered in the 2007 Phase IB survey had consisted of 16 ceramic sherds, eight reduction flakes, two of which were burned, two ground stone manos, and one core, along with a large grinding stone that was not collected. The area from which this cultural material was recovered extended between 250 and 300 feet (76.2 and 91.4 meters) outward (i.e., east, southeast and south) from the remains of the earthworks that define the village proper. Cultural material was recovered from two clusters of shovel tests: one along the northern limits of the parcel and the other near its southwestern border.

Relative density of cultural remains is seen as indicating a location where cultural activity is likely to have taken place. The subareas characterized by such distribution patterns and considered likely to have been associated with more focused cultural activity were seen to have an elevated potential for containing intact remains of cultural features and/or possible structural remains that might have been preserved beneath the zone of agricultural disturbance. The potential was also recognized for such patterns to point to the presence of one or more very localized, specialized activity areas, such as lithic

workshops, which may well have been located outside the village core, as represented by the area within the earthworks. Such nodes of lithic resource procurement and/or stone tool production might represent ongoing activities but may also reflect the efforts of one or two individuals over a very short time period, in which case these loci may be characterized by relatively dense concentrations of lithic debitage restricted to one or more very small areas.

Encountering intact parts of sub-plow zone cultural features an/or traces of structures that have been protected from subsequent cultivation-related disturbance has the potential to yield significant cultural information about the indigenous inhabitants of this site. Those locations where food processing and preparation, tool manufacture and repair, and other activities that complemented the residential life within the village core were carried out are most likely to contain cultural information that can prove useful in adding to existing knowledge regarding the lifeways of past populations. Deposits of cultural material that reflect patterns of daily life provide valuable cultural information to augment what is derived from written records and oral accounts, which both usually ignore such ordinary daily events. Encountering intact parts of cultural features such as production and processing areas and refuse deposits could yield significant cultural information about the residents of the village and possible antecedent occupation.

The goal of the Phase II study in Area C was to collect information regarding the spatial extent of the deposits of Native American cultural material and the quantity and nature of cultural information likely to be present. On the basis of these findings, the Field Services Bureau of the New York State Office of Parks, Recreation and Historic Preservation (OPRHP) would be able to determine what additional investigation, if any, would be appropriate to mitigate the effects of proposed mining.

Thirty three standard archaeological test units were executed in the 2013 Phase II study. Based on the rationale outlined briefly above, these units were placed in locations indicated by the results of the 2007 Phase IB survey as most likely to contain evidence of focused cultural activity as well as several control locations. Test units were spaced somewhat irregularly across Area C. Subareas characterized by surface rock outcropping and clusters of mature trees and/or tree stumps were avoided, as was the southernmost portion of Area C where more poorly-drained and densely organic soils were noted to be present. Soil mapping for this part of Orleans County indicates the boundary between well-drained Ontario loam and poorly-drained Palms muck soils crosses Area C at approximately this location (USDA 2011: 54-58). Observation of existing field conditions pointed to the southern portion of Area C being characterized by seasonal inundation. Oral accounts by local residents describe this area as typically being flooded for several months each year.

A relatively small amount of cultural material, consisting of a biface scraper, ceramic fragments, chert debitage, and eight hammers, was recovered. Seven units were found to contain no cultural material and ten others yielded three or fewer items. One unit (Test Unit 11) produced 12 pieces of chert debitage and another (Test Unit 18) contained 20 ceramic sherds. Following the completion of these 20 test units and after consultation with OPRHP, an additional five units were dug in the former exclusion zone in the northwestern portion of the parcel. Three of these units produced debitage. Two units (Unit 20 and Unit 24) were dug in the vicinity of the large grinding stone identified in the Phase IB survey in an effort to test whether this subarea had been a focus of intensive cultural activity. A small amount of cultural material was recovered, including one broken mano.

After further consultation with the OPRHP reviewer, eight additional test units were executed in the formerly excluded area in the southwestern part of Area C outside a 30-foot- (9-meter-) wide buffer adjacent to the visible earthwork remains. One of these units (Test Unit 30) yielded a relative

concentration of 24 ceramic sherds, along with one secondary chert reduction flake. A second (Test Unit 31) was found to contain a concentration of ash and charcoal, along with two pieces of fire cracked rock. Once this fire pit feature was identified, it was preserved in place for possible future excavation. The chert reduction flakes observed on the surface of the ash and charcoal deposit were not removed. The remaining six test units dug in this southwestern group produced no cultural material.

As part of their review of the Phase II report, OPRHP requested an additional 15 test units be dug to clarify the findings of the 2013 study as an archaeological data recovery effort. These units were to be placed in subareas where Phase II findings implied the greatest potential for focused cultural activity. They were executed in the autumn of 2014 and are the subject of this Phase III report.

METHODOLOGY

In order to most efficiently amplify the 2013 study, the previously laid-out 12-meter grid across the portion of Area C identified as constituting the exterior portion of the Shelby Fort Site would again be used to place and identify test units. The grid extends between 200 and 250 feet (61 and 76 meters) to the east, southeast and south from the earthwork remains that delineate the village core, encompassing roughly three acres (1.2 hectares) of dense woodland. Subareas characterized by surface rock or large trees would again be excluded, as would the east/west-oriented roadway crossing the northern portion of the test parcel and other locations where obvious disturbance to upper soils from previous logging activity had been observed in site reconnaissance.

Test units would again be dug using arbitrary 4-inch (10-centimeter) levels as well as natural levels based on changes in soil color and/or texture in order to maximize control of the vertical distribution of any cultural material recovered in a setting of inconsistent plow disturbance to upper soils.

Test units would measure 40 inches (1 meter) on each side, would be excavated using hand tools. Their contents would be screened through 1/4-inch (6.25-millimeter) hardware cloth to maximize the recovery of smaller cultural items. Plans and profiles of test units would be drawn to scale and each unit would be photodocumented when completed. Any cultural features encountered would be drawn to scale and photodocumented, then stabilized in the field to preserve their contents for possible later excavation and analysis as part of data recovery to mitigate project impact. Screening of excavated soil would take place away from the test unit locations to facilitate enlarging or supplementing test units if warranted.

CONTEXT AND 2014 FIELD INVESTIGATION

The field component of the Phase III data recovery was performed in September and October of 2014 by the Principal Investigator assisted by archaeological field technician Randy Lang. Recovered cultural material and field notes are stored at the Columbia Heritage repository in Old Chatham, New York. No problems were encountered that might have affected the execution or outcome of any portion of the Phase III field investigation.

The goal of the data recovery involved attempting to further clarify the extent and the character of the archaeological deposit identified in the Phase IB and the Phase II investigation. As was noted previously, it was assumed that relative density of cultural material present indicates relative intensity of cultural activity.

Twenty archaeological test units had been placed within the 40-foot- (12-meter-) interval grid discussed in the previous section as having been laid out across the area defined by the results of the Phase IB survey as constituting the exterior portion of the Shelby Fort Site.

The Phase II site evaluation study for the most part produced evidence consistent with what had been recovered during the Phase IB survey: a light scatter of Late Woodland Period ceramics and lithics. The density of cultural material recovered was noted to decrease with increased distance from the earthworks remains and the village core they defined. Test units dug in the southern and south eastern portions of the study area produced no cultural material. A correlation was observed between the absence of cultural remains, the decline in elevation, and the transition from moderately well drained to more poorly drained soils approaching the wetland that borders the parcel on the south.

Two test units dug in the vicinity of the large grinding stone identified during the Phase IB survey were found to contain small amounts of cultural material but produced no evidence that this had been a locus of intensive cultural activity. No doubt such a stationary stone tool would have been the focus of considerable traffic during repeated use while the village was occupied. However, based on the results of these two test units and the Phase IB shovel tests dug near the stone, it appears what refuse might have been produced as bi-products of grinding at the stone has decayed, as would be expected of organic matter. The research potential of the vicinity of the grinding stone was considered likely to be minimal (2014: 17).

In contrast to the results of the Phase IB sampling, which produced only scattered cultural material, two relative concentrations of ceramic sherds, one relative concentration of lithic debitage, and one cultural feature were encountered in the more intensive Phase II investigation. Two test units (TU 11 and TU 18) that produced 12 pieces of chert debitage and 16 ceramic sherds, respectively, lie within roughly 40 feet (12 meters) of one another and some 80 and 40 feet (24.4 and 12.2 meters), respectively. from the visible remains of the earthworks that surrounded the village core. Test Unit 30, from which 25 ceramic sherds were recovered, is situated some 33 feet (10 meters) from Test Unit 31, which was identified as containing the remains of a probable fire pit. These test units are located some 100 and 70 feet (30.5 and 21.3 meters), respectively. from the surveyed earthwork remains.

The four test units placed nearest Test Unit 11 and Test Unit 18 produced little cultural material. Two test units (TU 32 and TU 33) were dug to the southwest and northeast respectively of Test Unit 30 and 31 in order to gather information regarding the possible extent of this activity locus in those

directions. These test units failed to yield any cultural material at all. On that basis, it appears that the cultural activity associated with these two loci was spatially quite restricted. All four of these test units are located a short distance from the earthworks protecting the village core. It is not clear whether the activities that produced the ceramic sherds and the debitage encountered in the Unit 11/ Unit 18 locus are related. Evidence for a relationship between the ceramic sherds and the fire pit found in the Unit 30/Unit 31 locus was also lacking.

The ceramic sherds in both test units were interpreted as likely to have been produced by single incidents of unintentional vessel breakage. The relative concentration of chert debitage in Test Unit 11 points to small-scale stone tool manufacturing or repair having taken place at this location. However, the absence of similar material occurring in the surrounding test units argues against this portion of the site having been a focus of stone tool production. The likely fire pit may have been associated with the heat treatment of stone tools or with some aspect of food preparation not considered appropriate for the vicinity of the living areas. Alternatively, it may relate to an earlier occupation of the site prior to the Late Woodland Period.

The remains of food processing and small-scale stone tool manufacture and/or repair were encountered in both the Phase IB and Phase II investigations, consistent with what would be expected to be present in such a setting. Better-drained outlying areas to the north and west can be considered likely to have contained evidence of other, more intensive cultural activities and could well have been characterized by structural remains associated with the smoking of meats and fish and denser and more extensive chert debitage produced by larger-scale stone tool production. The potential of the remainder of Area C for containing significant cultural information was considered low and consequently no further archaeological investigation was recommended there.

The Phase II investigation of the portion of Area C identified as representing an outlying portion of the Shelby Fort Site produced evidence of focused cultural activity in Test Unit 31, along with a relative density of chert debitage in Test Unit 11 and a relative concentration of ceramic sherds in Unit 18 and Unit 30. The 12 pieces of chert debitage probably reflect a single episode of stone tool production or, more likely, repair. The ceramic material, in both cases consisting solely of undecorated ceramic sherds, may well represent the remains of two vessels shattered in two unrelated events.

The ashy feature noted to contain lithic flakes encountered but not excavated during the 2013 study, was seen as possibly associated with the heat treating component of lithic tool manufacture, the feature and to have the potential to yield information regarding the spatial distribution of cultural activities in and around this Late Woodland village. The feature was also seen to have the potential to yield radio carbon or other temporally diagnostic information that might help resolve questions relating to the time period during which this site was occupied and its regional context, which have been explored over the past half century (White 1961, 1977; Herter 2001).

Following consultation with OPRHP, an additional 15 archaeological test units were executed in order to further clarify the picture developed as a result of the Phase IB and Phase II investigations. Test units again measured 40 inches (1 meter) on each side and were executed in arbitrary 4-inch (10 centimeter) levels to maintain better control over the vertical distribution of cultural material, as well as in levels based on natural variations in soil color and/or texture. For this same reason, the interface between the upper soil stratum and the subsoil was treated as a distinct level during field sampling. Test units were dug using hand tools and contents were screened through 1/4-inch (6.25-millimeter) hardware cloth to facilitate the recovery of smaller cultural items. Excavated soils were screened in locations either outside the area subject to Phase III sampling or where surface rock outcroppings or other features precluded the placement of test units.

Five test units (TU-39 and TU-45 through TU-48) were placed in the northernmost portion of Area C, north of any Phase II units. Between one and eight pieces of cultural material were recovered from these test units: eight from TU-47, one from TU-45, four each from TU-46 and TU- 39, and five from TU-48. TU-47 was placed along the northern margin of the site and a short distance north, northeast and northwest of three units (TU-2, TU-3 and TU-22) which had produced one, five and two cultural items, respectively. The eight items recovered from TU-47 consisted of ceramic (3), chert debitage (3), a core, and a hammerstone. TU-45 contained a single piece of undecorated ceramic. TU-46 yielded four pieces of debitage: two secondary reduction flakes and two finishing flakes, all of chert. Two secondary reduction flakes, a finishing flake and two pieces of fire-cracked rock were recovered from TU-48 while TU-39 produced two pieces of undecorated ceramic, a secondary reduction flake, and a hammerstone. These latter two test units were placed in the vicinity of the grinding stone discussed earlier. What relatively little cultural material they contained cannot be seen to be associated with a focus of cultural activity. The results of these five test units reinforces the impression created by previous sampling of limited and unfocused cultural activity in this portion of the site. Once again, material evidence remaining from the use of the grinding stone was lacking.

Five test units (TU-40 through TU-44) were placed in the east-central portion of the site in order to further investigate the apparent locus of cultural activity represented by the relative concentration of cultural material (20 pieces) previously recovered from Test Unit 18. Situated just east of the 30-foot (9-meter) buffer around the visible palisade remains, this cluster of units sampled areas to the east, north and south of TU-18 while avoiding the many rock outcroppings that are present in this part of the site.

Test Unit 41, placed 40 inches (one meter) to the south of TU-18, yielded 46 pieces of undecorated ceramic. Test Unit 40, located contiguous to Test Unit 41, had produced none. Test Unit 43, placed 40 inches (1 meter) to the east of TU-40, produced only four. Surface rock prevented placing a test unit immediately east of TU-18 or TU-41. In contrast to TU-41 but consistent with TU-40, Test Unit 42, dug 40 inches (one meter) to the north of TU-18, was found to contain no ceramic although it did yield a chert biface and three secondary reduction flakes. TU-44, executed 40 inches (one meter) to the north of TU-17, which had produced no ceramic, yielded 35 pieces. Surface rock prevented an additional test unit being dug between TU-40 and TU-44.

A third cluster of additional test units, containing Test Unit 34 through Test Unit 38, was placed in the southwestern portion of the affected area, south of the 30-foot (9-meter) buffer around the visible palisade remains. In addition, the ashy soil anomaly containing two visible lithic flakes, previously noted in Test Unit 31and protected for later investigation, was excavated.

A cluster of three test units (TU-34, TU-35, and TU-36) was placed immediately to the south of and then adjacent to TU-31, where the ashy feature had been encountered, and just northwest of TU-30, from which 25 pieces of undecorated ceramic had been recovered. Somewhat surprisingly, these test units produced only five pieces of undecorated ceramic and five pieces of chert debitage, the latter all recovered from TU-34. Three pieces of fire-cracked rock were encountered in TU-37, along with three pieces of chert debitage. TU-38 produced two pieces of undecorated ceramic, one piece of chert debitage, and a hammerstone, Excavation of the ashy anomaly, designated Feature 1, showed it to represent a shallow deposit of ash mixed with soil containing no flecks of charcoal or cultural material in addition to the two chert flakes noted on its upper surface during the Phase II investigation. Passing the recovered contents through window screen and water flotation produced no seeds or other material from which clues regarding the function of the feature could be hypothesized.

CONCLUSIONS

Phase III archaeological investigation of three subareas of Area C produced information reinforcing the results of previous archaeological surveys and the conclusions and interpretation presented in the earlier Phase II study. Nineteen undecorated ceramic pieces were recovered from two test units placed 26 feet (8 meters) apart and 65 feet (20 meters) north of the grinding stone in the northernmost portion of the affected area, along with a hammerstone, scattered chert debitage and a small awl. This pattern speaks to a relative lack of focused cultural activity producing non-organic remains in this part of the site,

The additional test units excavated in the west-central portion of Area C reinforced the picture of very focused deposition of ceramics noted previously. The relatively dense distribution of 68 and 35 undecorated sherds in two locations (TU-18/TU-41 and TU-44) surrounded by four test units producing four or fewer pieces implies breakage of as few as two vessels during the normal course of usage rather than focused deposition of broken vessel remains. The lack of debitage, tools or other cultural material in this area also argues against this having been the site of focused cultural activity.

The supplementary sampling of the southwestern portion of Area C also produced results that appear consistent with earlier findings. Very few lithic or ceramic items were recovered from the five test units placed here, reinforcing the impression that the 25 ceramic pieces encountered in Test Unit 30 represented a single episode of vessel breakage rather than focused cultural activity. The lack of cultural or organic material recovered from Feature 1 and the very localized aspect of the ashy deposit itself are inconclusive in establishing its function or temporal association. The feature still may represent the remains of heat tempering of stone tools or of a completely different purpose such as assisting an individual to keep warm while performing another task.

The scattered nature of the assemblage recovered from this small portion of the exterior of the Shelby Fort Site is also reflected in the distribution of cultural material in general, as shown by the Phase IB findings and the results of 48 test units executed during the Phase II and Phase III. Spatially restricted relative concentrations of chert debitage are likely to represent the remains of individuals finishing or more likely repairing tools. This, and the lack of correlation between the locations from which hammerstones were encountered and where lithic debitage was recovered, is seen as an indication that large-scale stone tool production is not likely to have taken place in this sector of the occupation area. As was stated previously, this points to the focus of what cultural activity took place outside the palisaded village core having occurred elsewhere around its perimeter.

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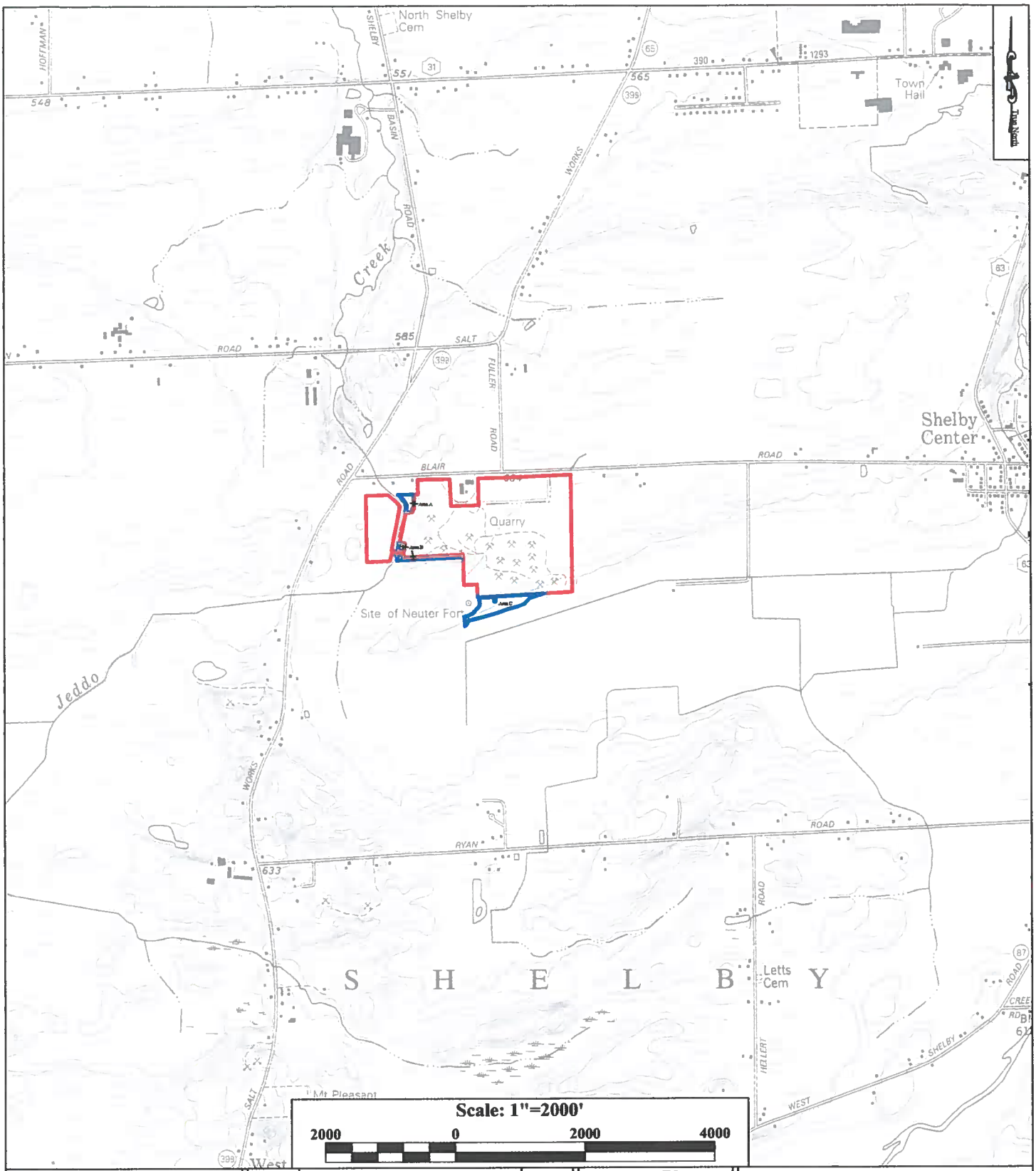
APPENDIX A

FIGURES



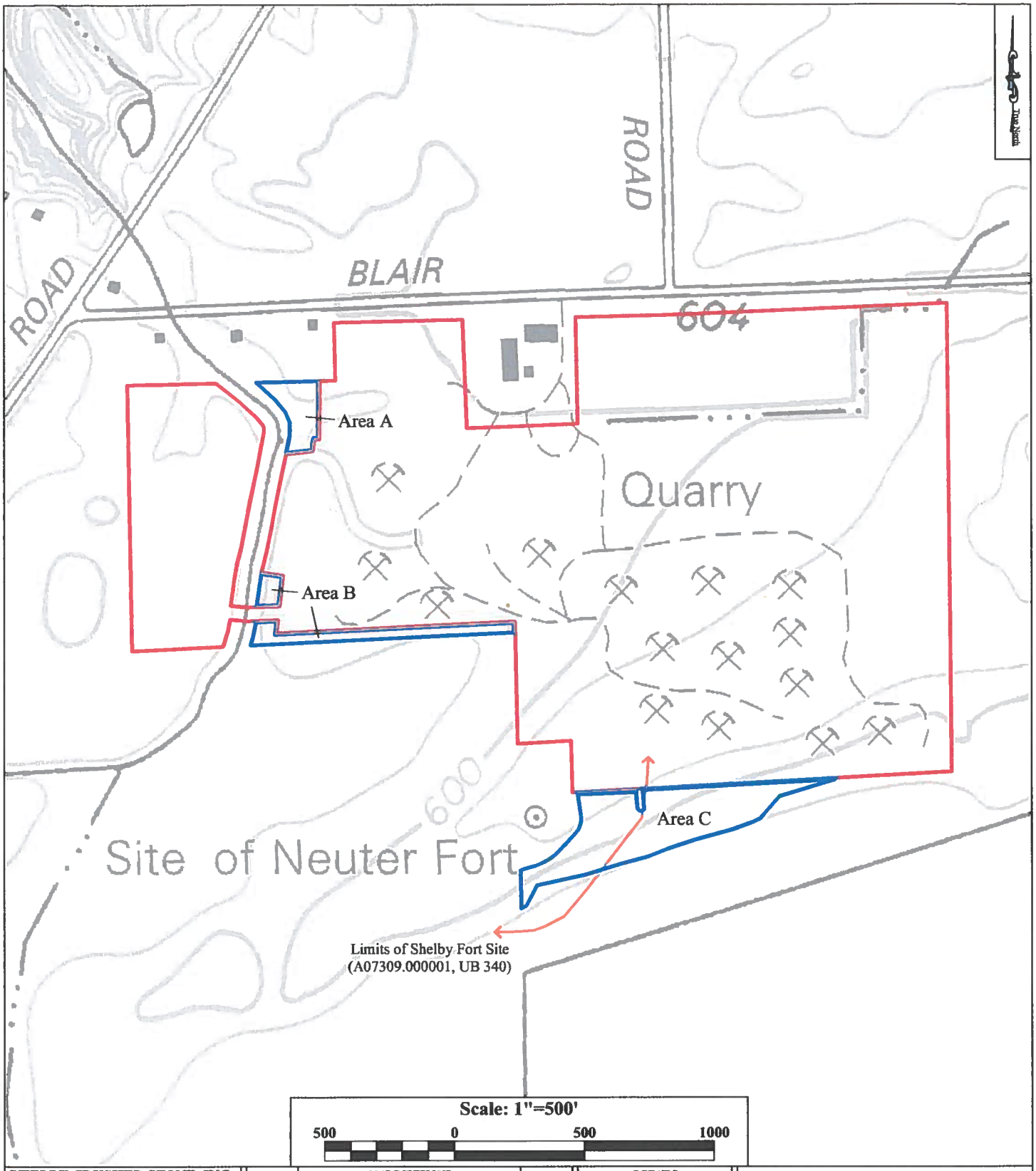
SHELBY CRUSHED STONE, INC. **Medina Mine Site** Town of Shelby, Orleans County, New York ***LOCATION MAP (Extended)***	**MAP REVISIONS** BY / DESCRIPTION / DATE	**DETAILS** Date: 1/13/17 Scale: 1"=2000' Contour Interval: 5' Datum: MSL USGS Base: Medina 7.5' Project Manager: IRW Drafted by: IRW Checked by: PHG Base Map(s): 1)

LEGEND

- Lands to be added to the life of the mine.
- Lands currently within the life of the mine.

Griggs-Lang Consulting Geologists, Inc.
8 Brunswick Road Troy, NY 12180
Phone: (518) 270-5920 Fax: (518) 270-5922

LOCATION OF PROJECT AREA ON USGS MEDINA, NY QUADRANGLE



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SHELBY CRUSHED STONE, INC.	
Medina Mine Site	
Town of Shelby, Orleans County, New York	
LOCATION MAP	

Griggs-Lang Consulting Geologists, Inc.
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MAP REVISIONS		
BY	**DESCRIPTION**	**DATE**

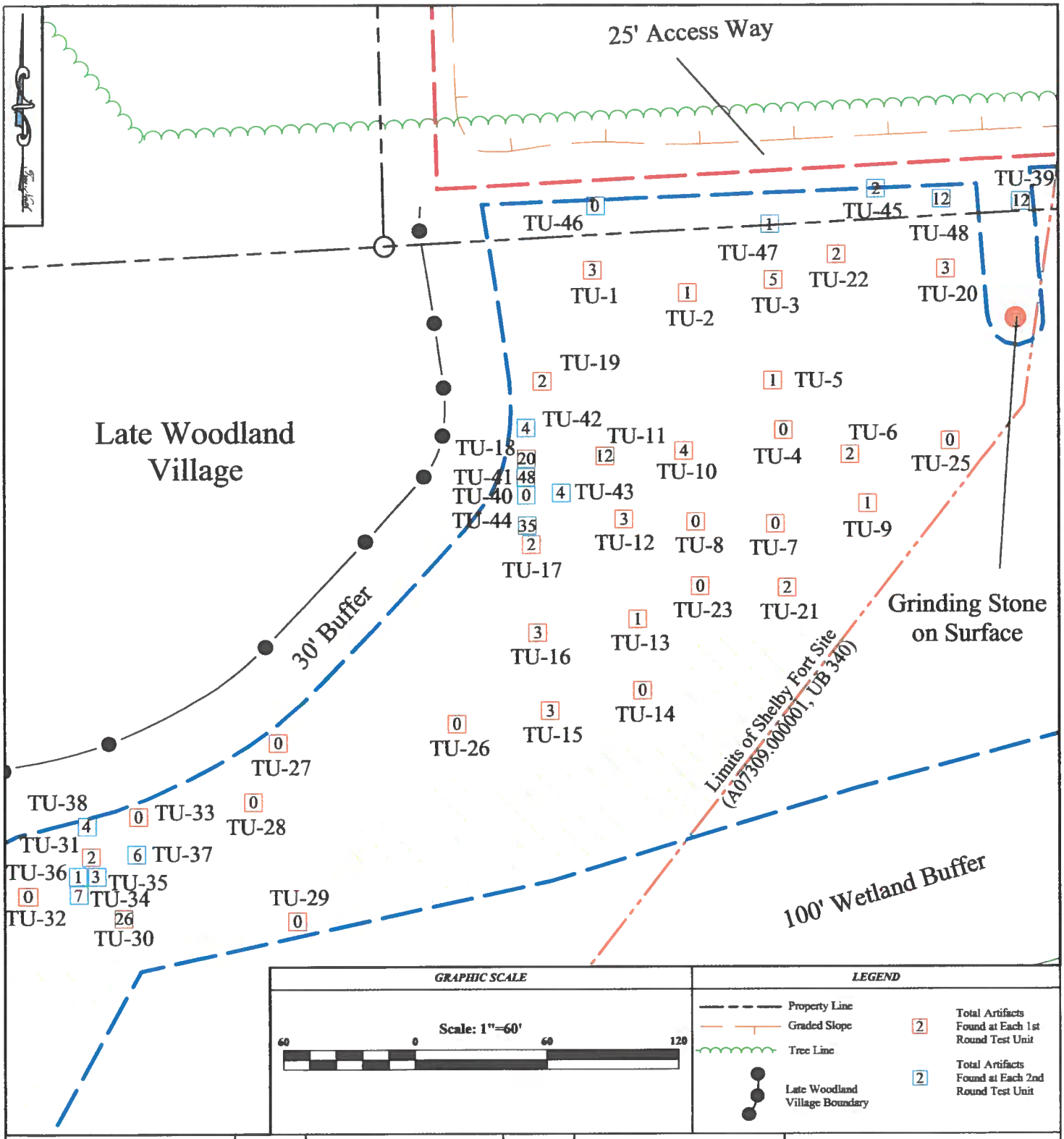
DETAILS
Date: 1/13/17
Scale: 1"=500'
Contour Interval: 5'
Datum: MSL
USGS Base: Medina 7.5'
Project Manager: IRW
Drafted by: IRW
Checked by: PHG
Base Height: 0

LEGEND

Lands to be added to the life of the mine.

Lands currently within the life of the mine.

DETAIL OF PROJECT AREA LOCATION SHOWING DEFINED EASTERN LIMITS OF FORT SHELBY SITE



GRAPHIC SCALE

Scale: 1"=60'

60 0 60 120

LEGEND

- Property Line
- Graded Slope
- Tree Line
- Late Woodland Village Boundary
- 2 — Total Artifacts Found at Each 1st Round Test Unit
- 2 — Total Artifacts Found at Each 2nd Round Test Unit

SHELBY CRUSHED STONE, INC.

Medina Mine Site

Town of Shelby, Orleans County, New York

ARTIFACT DENSITY & DISTRIBUTION IN AREA C

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MAP REVISIONS

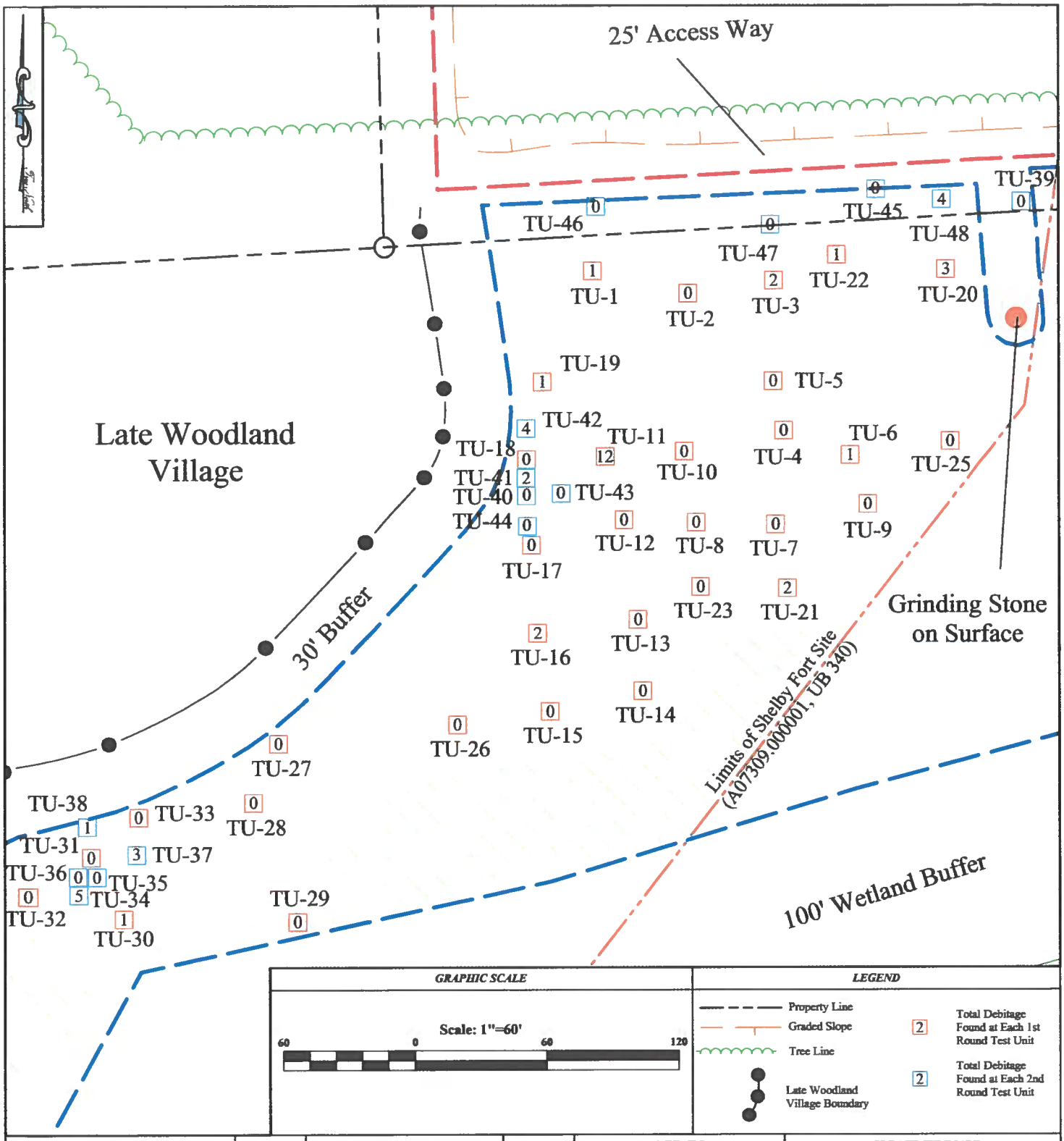
BY	DESCRIPTION	DATE

DETAILS

Date: 6/9/14
Scale: 1"=60'
Contour Interval: NA
Datum: MSL
USGS Base: Medina 7.5'
Project Manager: SRO
Drafted by: IRW
Checked by: SRO
Base Map(s): 1) Mining Plan Map dated 8/20/12.

ACREAGE SUMMARY

- Lands to be added to the life of the mine.
- Lands currently within the life of the mine.
- Areas of outcrop or dense trees/stumps.
- Areas of poorer soils.



GRAPHIC SCALE	LEGEND
Scale: 1"=60' (60 0 60 120)	Property Line; Graded Slope; Tree Line; Late Woodland Village Boundary; 2 Total Debitage Found at Each 1st Round Test Unit; 2 Total Debitage Found at Each 2nd Round Test Unit

SHELBY CRUSHED STONE, INC.
Medina Mine Site
Town of Shelby, Orleans County, New York

DISTRIBUTION OF DEBITAGE IN AREA C

Griggs-Lang Consulting Geologists, Inc.
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MAP REVISIONS		
BY	DESCRIPTION	DATE

DETAILS	
Date: 6/9/14	
Scale: 1"=60'	
Contour Interval: NA	
Datum: MSL	
USGS Base: Medina 7.5'	
Project Manager: SRO	
Drafted by: IRW	
Checked by: SRO	
Base Map(s): 1) Mining Plan Map dated 8/20/12.	

ACREAGE SUMMARY	
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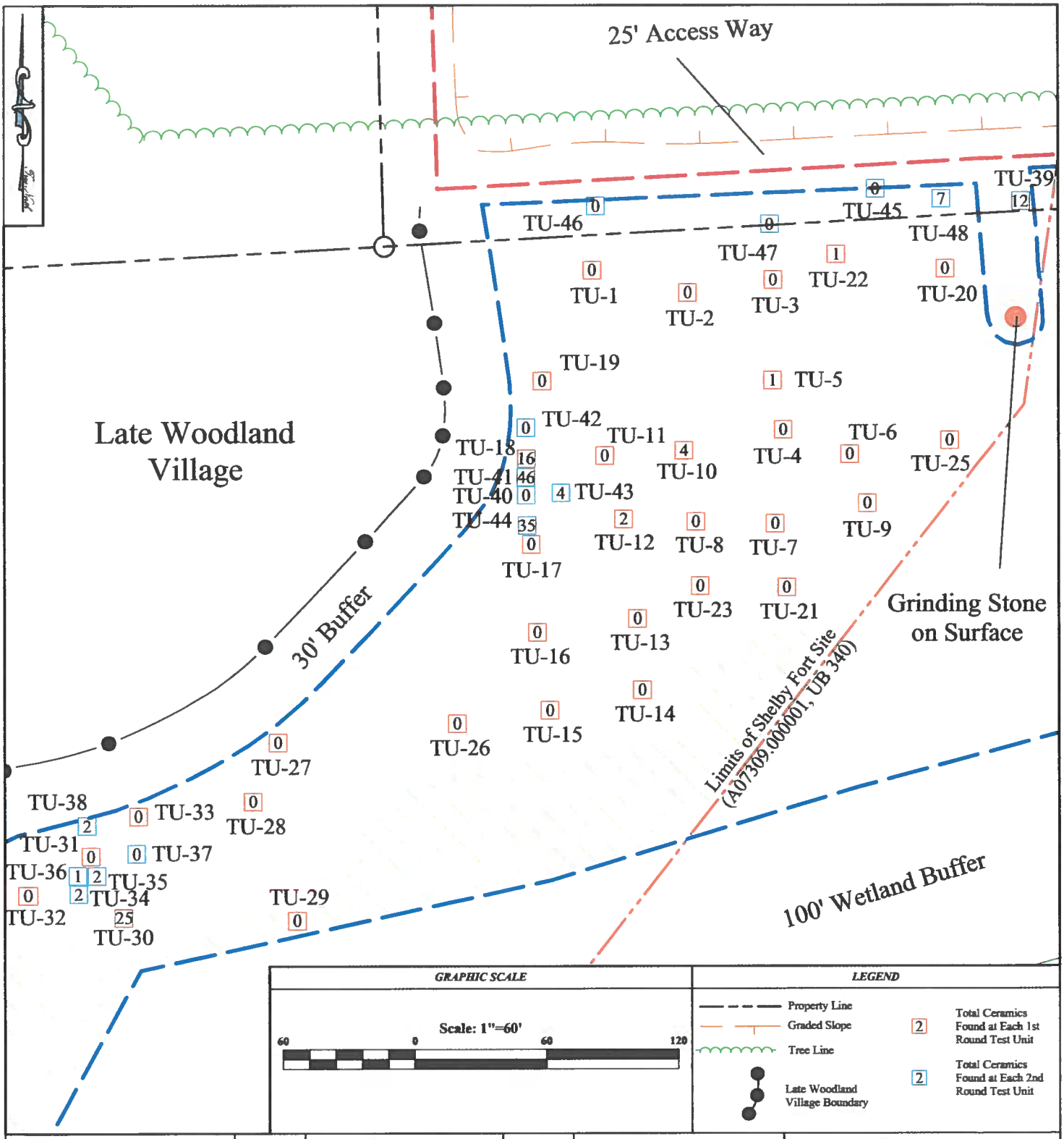
	Lands currently within the life of the mine.
	Areas of outcrop or dense trees/stumps.
	Areas of poorer soils.



GRAPHIC SCALE

Scale: 1"=60'

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LEGEND

- Property Line
- Graded Slope
- Tree Line
- Late Woodland Village Boundary
- 2 — Total Ceramics Found at Each 1st Round Test Unit
- 2 — Total Ceramics Found at Each 2nd Round Test Unit

SHELBY CRUSHED STONE, INC.

Medina Mine Site

Town of Shelby, Orleans County, New York

DISTRIBUTION OF CERAMICS IN AREA C

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MAP REVISIONS

BY	DESCRIPTION	DATE

DETAILS

Date: 6/9/14
Scale: 1"=60'
Contour Interval: NA
Datum: MSL
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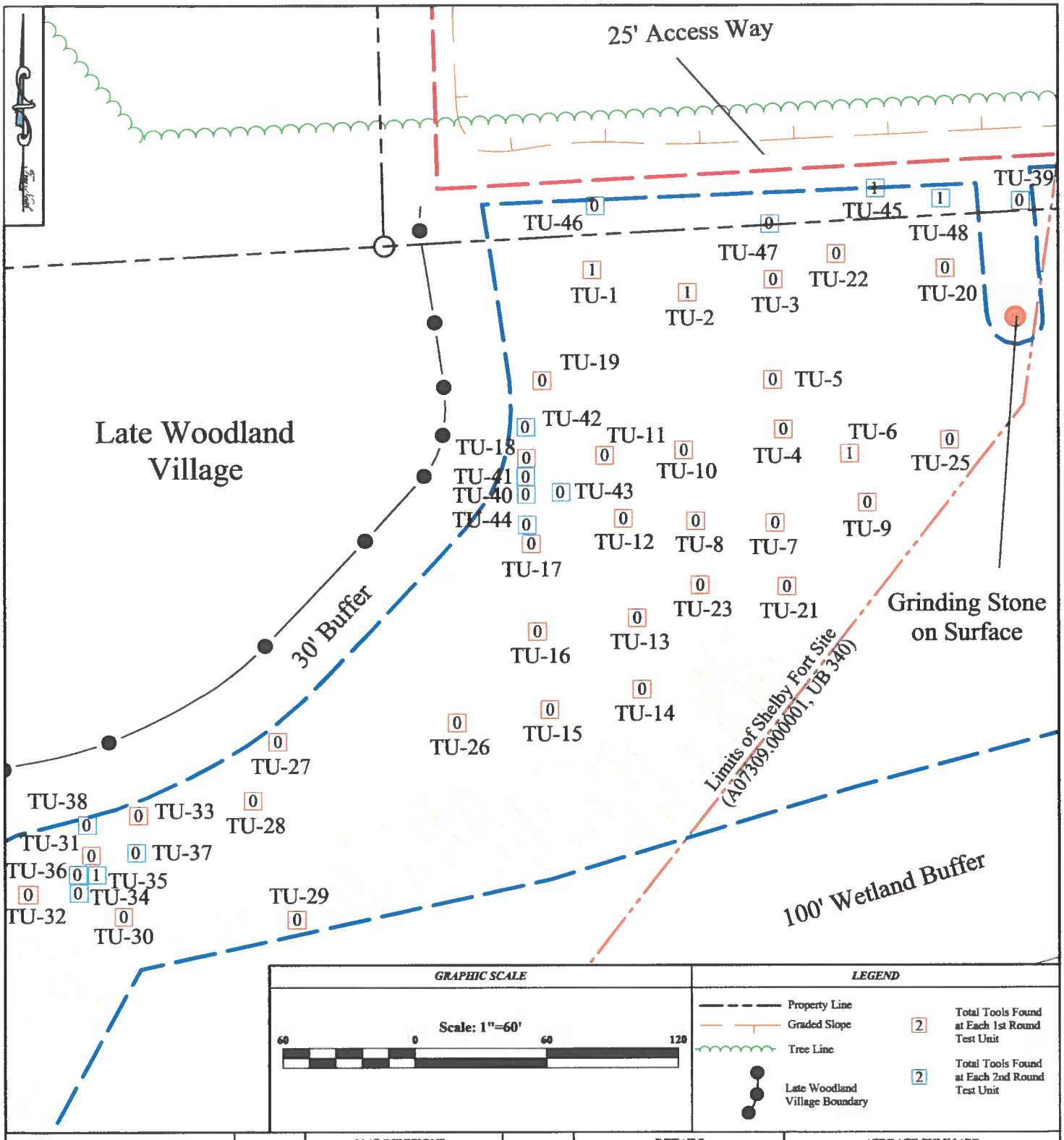


GRAPHIC SCALE

Scale: 1"=60'

60 0 60 120

LEGEND

- Property Line
- Graded Slope
- Tree Line
- Late Woodland Village Boundary
- 2 — Total Tools Found at Each 1st Round Test Unit
- 2 — Total Tools Found at Each 2nd Round Test Unit

SHELBY CRUSHED STONE, INC.

Medina Mine Site

Town of Shelby, Orleans County, New York

DISTRIBUTION OF TOOLS IN AREA C

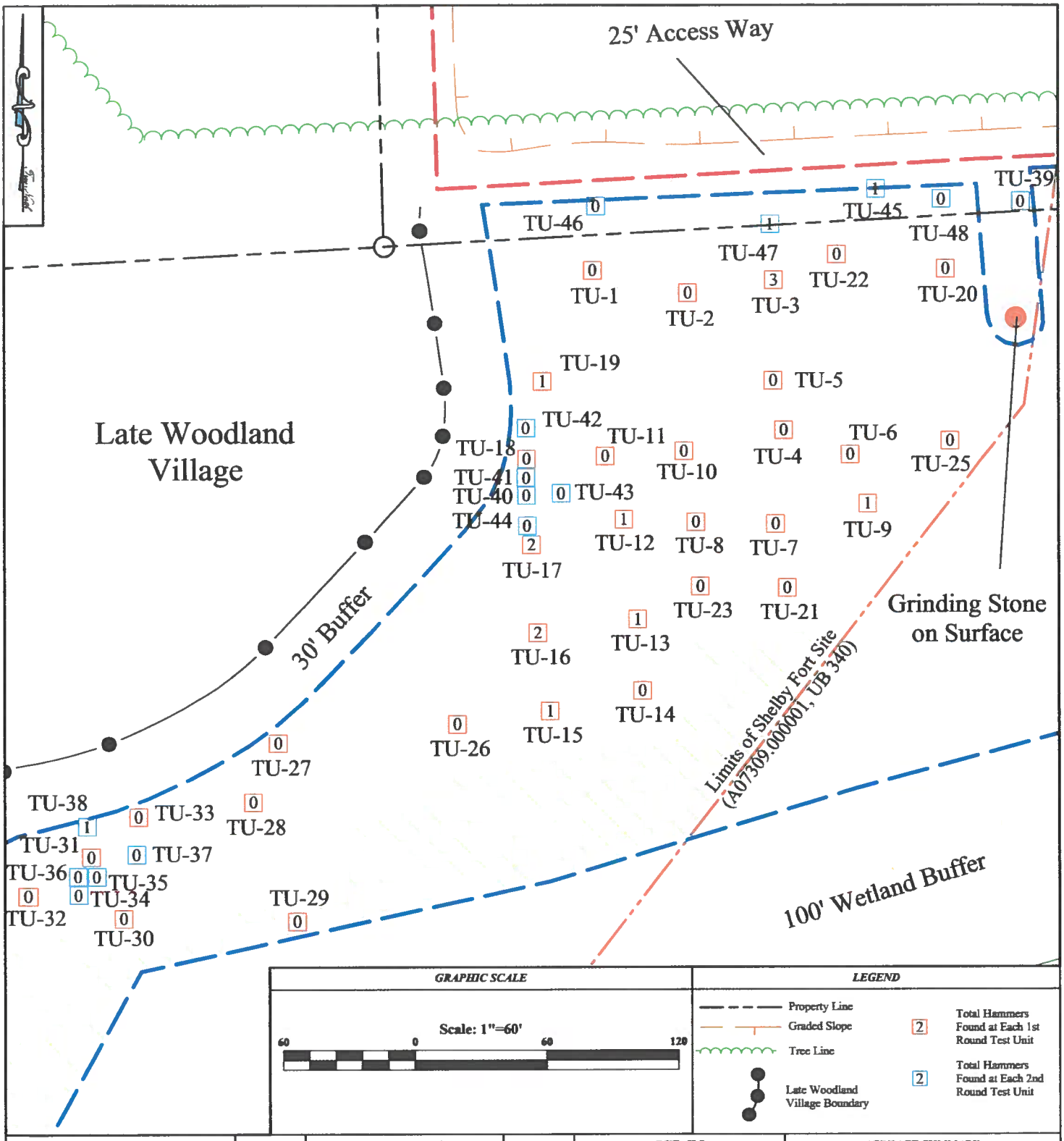
Griggs-Lang Consulting Geologists, Inc.
8 Brunswick Road Troy, NY 12180
Phone: (518) 270-5920 Fax: (518) 270-5922

MAP REVISIONS		
BY	DESCRIPTION	DATE

DETAILS	
Date:	6/9/14
Scale:	1"=60'
Contour Interval:	NA
Datum:	MSL
USGS Base:	Medina 7.5'
Project Manager:	SRO
Drafted by:	IRW
Checked by:	SRO
Base Map(s):	1) Mining Plan Map dated 8/20/12.

ACREAGE SUMMARY

- Lands to be added to the life of the mine.
- Lands currently within the life of the mine.
- Areas of outcrop or dense trees/stumps.
- Areas of poorer soils.



GRAPHIC SCALE

Scale: 1"=60'

60 0 60 120

LEGEND

- Property Line
- Graded Slope
- Tree Line
- Late Woodland Village Boundary
- 2 — Total Hammers Found at Each 1st Round Test Unit
- 2 — Total Hammers Found at Each 2nd Round Test Unit

SHELBY CRUSHED STONE, INC

Medina Mine Site

Town of Shelby, Orleans County, New York

DISTRIBUTION OF HAMMERS IN AREA C

Griggs-Lang Consulting Geologists, Inc.
8 Brunswick Road Troy, NY 12180
Phone: (518) 270-5920 Fax: (518) 270-5922

MAP REVISIONS

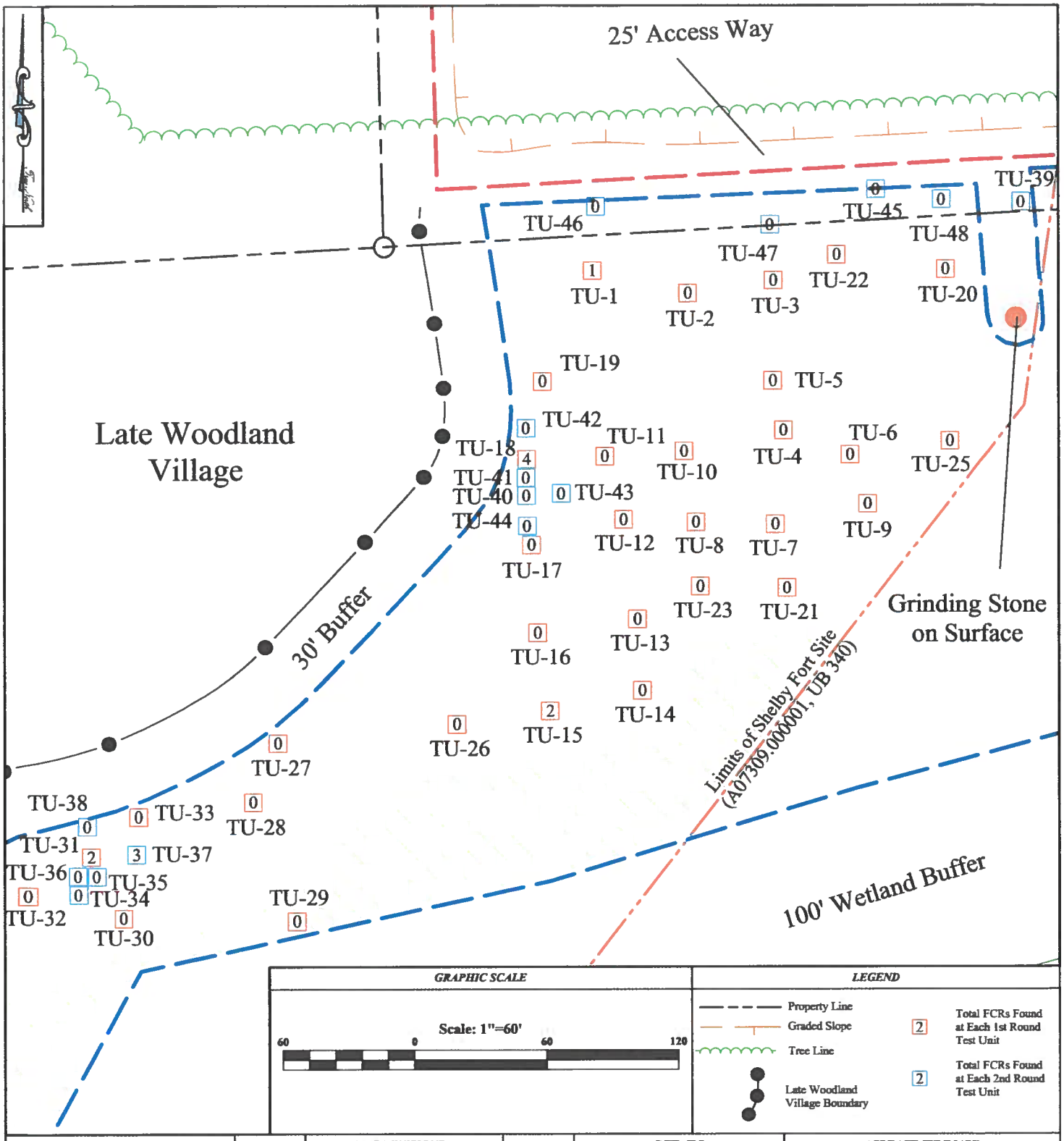
BY	DESCRIPTION	DATE

DETAILS

Date: 6/9/14
Scale: 1"=60'
Contour Interval: NA
Datum: MSL
USGS Base: Medina 7.5'
Project Manager: SRO
Drafted by: IRW
Checked by: SRO
Base Map(s): 1) Mining Plan Map dated 8/20/12.

ACREAGE SUMMARY

- Lands to be added to the life of the mine.
- Lands currently within the life of the mine.
- Areas of outcrop or dense trees/stumps.
- Areas of poorer soils.



GRAPHIC SCALE

Scale: 1"=60'

60 0 60 120

LEGEND

- Property Line
- Graded Slope
- Tree Line
- Late Woodland Village Boundary
- 2 — Total FCRs Found at Each 1st Round Test Unit
- 2 — Total FCRs Found at Each 2nd Round Test Unit

SHELBY CRUSHED STONE, INC

Medina Mine Site

Town of Shelby, Orleans County, New York

DISTRIBUTION OF FCRs IN AREA C

Griggs-Lang Consulting Geologists, Inc.
8 Brunswick Road Troy, NY 12180
Phone: (518) 270-5920 Fax: (518) 270-5922

MAP REVISIONS		
BY	DESCRIPTION	DATE

DETAILS	
Date: 6/9/14	
Scale: 1"=60'	
Contour Interval: NA	
Datum: MSL	
USGS Base: Medina 7.5'	
Project Manager: SRO	
Drafted by: IRW	
Checked by: SRO	
Base Map(s): 1) Mining Plan Map dated 8/20/12.	

ACREAGE SUMMARY

- Lands to be added to the life of the mine.
- Lands currently within the life of the mine.
- Areas of outcrop or dense trees/stumps.
- Areas of poorer soils.

APPENDIX B

PHOTODOCUMENTATION

View of Test Unit 34

View of Test Unit 35

View of Test Unit 36

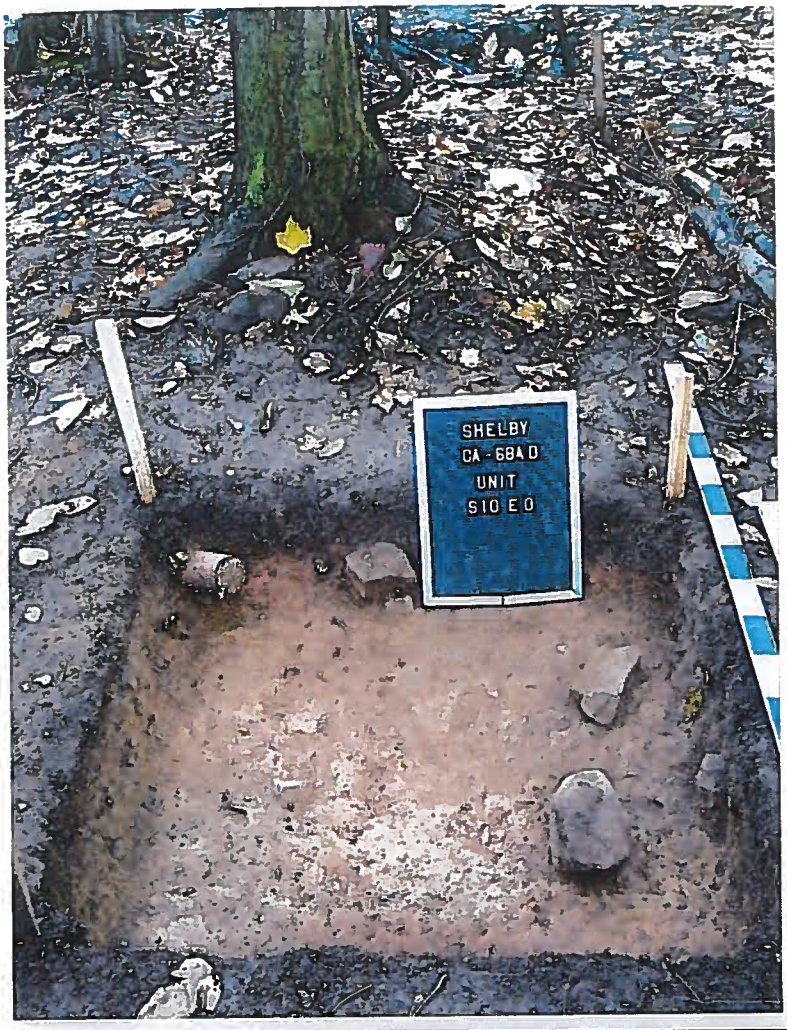
View of Test Unit 37

View of Test Unit 38

View of Test Unit 39

View of Test Unit 40

View of Test Unit 41

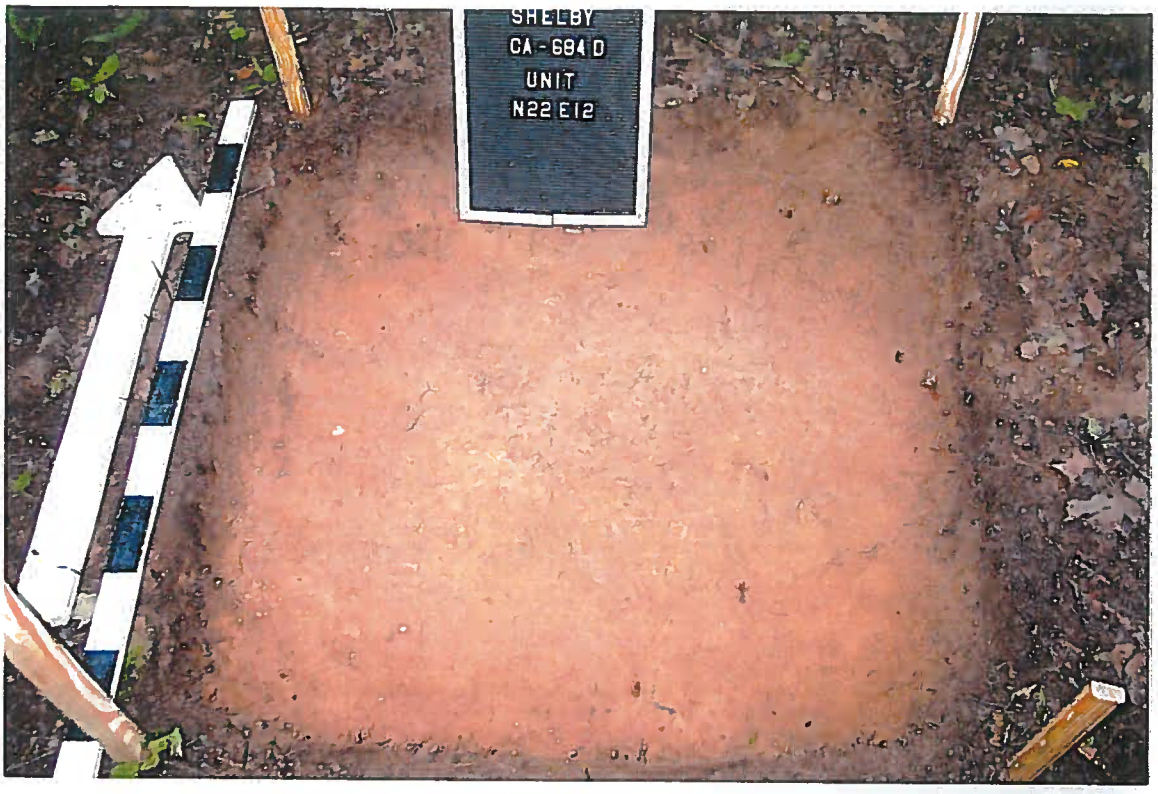


View of Test Unit 42

View of Test Unit 43

View of Test Unit 44

View of Test Unit 45



View of Test Unit 46

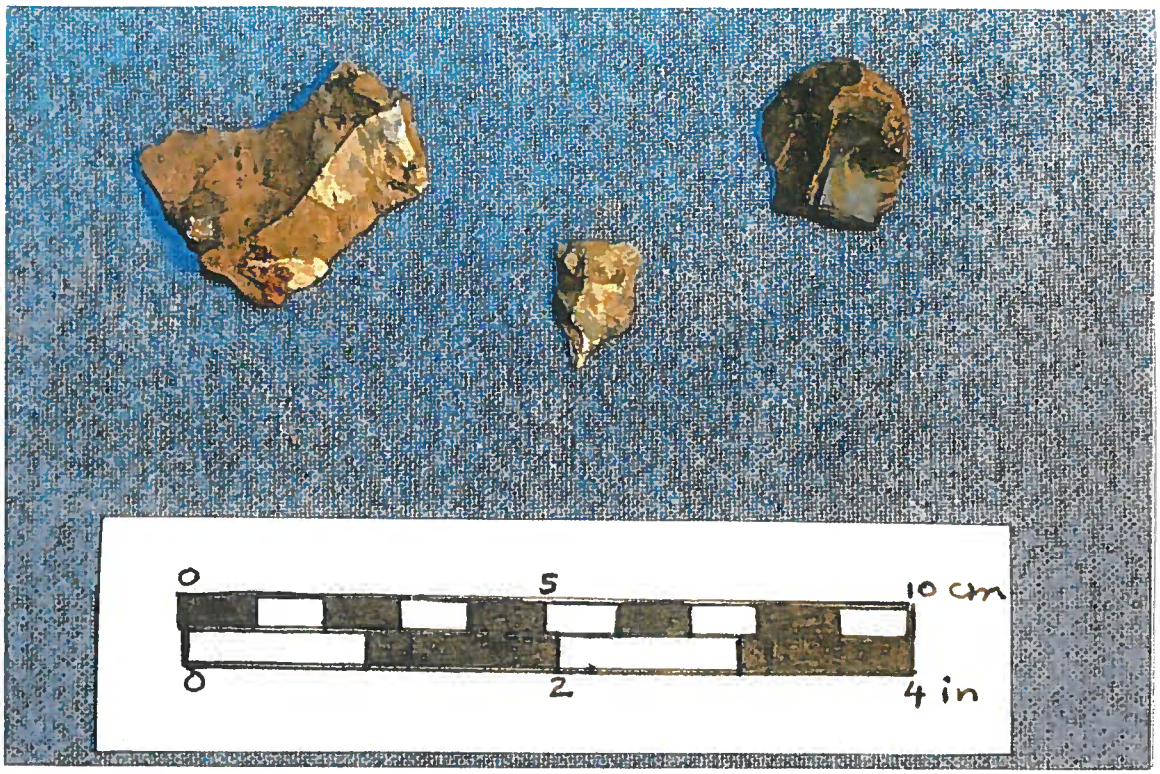
View of Test Unit 47

View of Test Unit 48

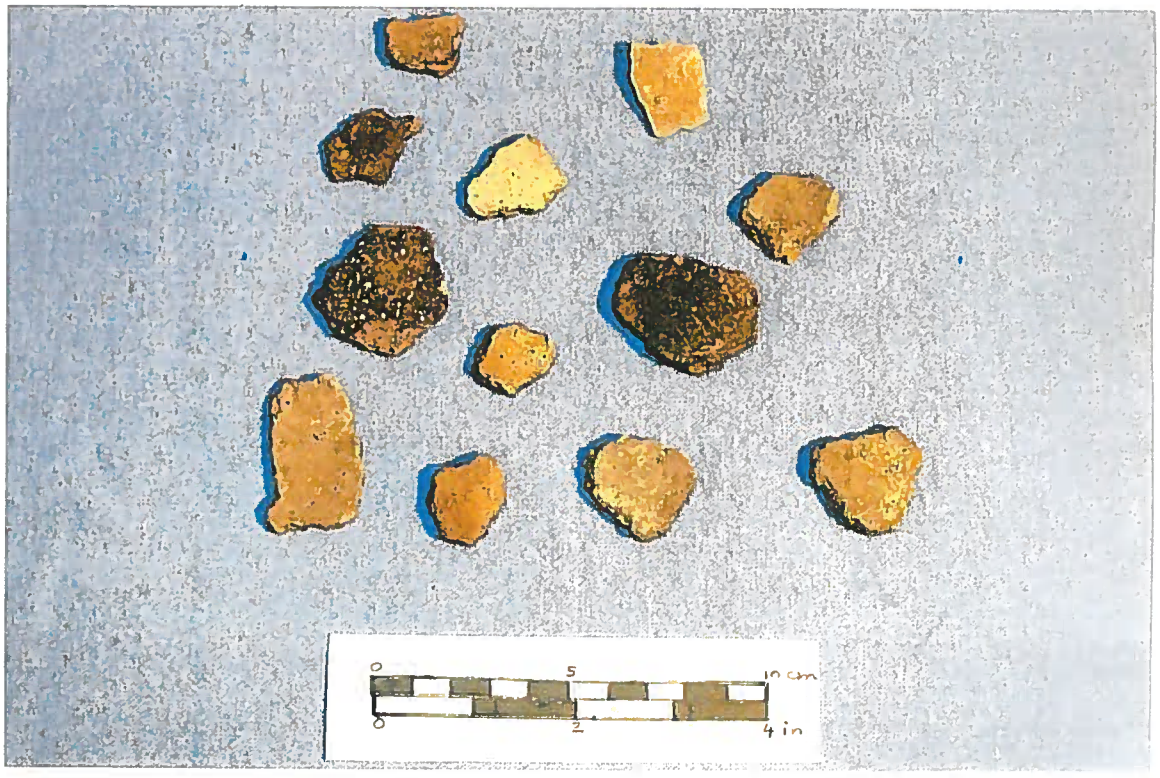
Outline of Feature 1

View of Feature 1 in cross-section

Detail of Feature 1 in profile



Recovered chert tools



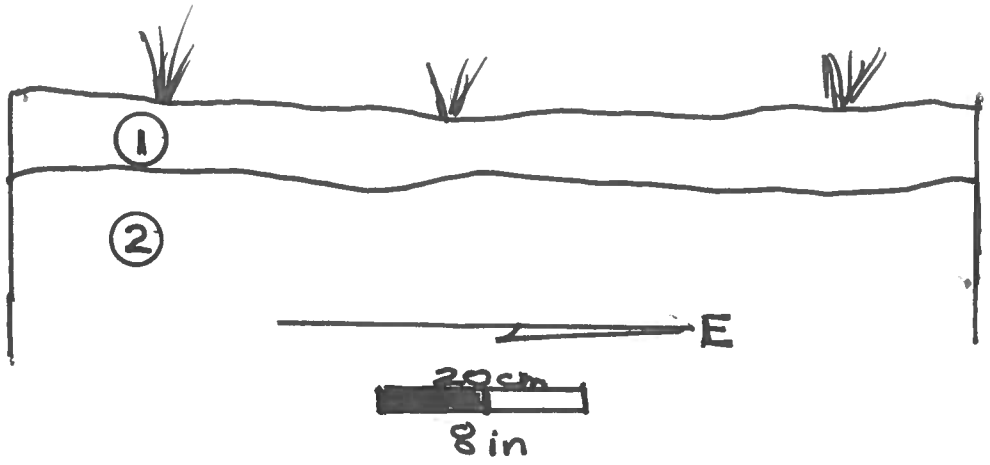
Sample of recovered native ceramics

Recovered hammers

APPENDIX C

SUBSURFACE SAMPLING RECORD

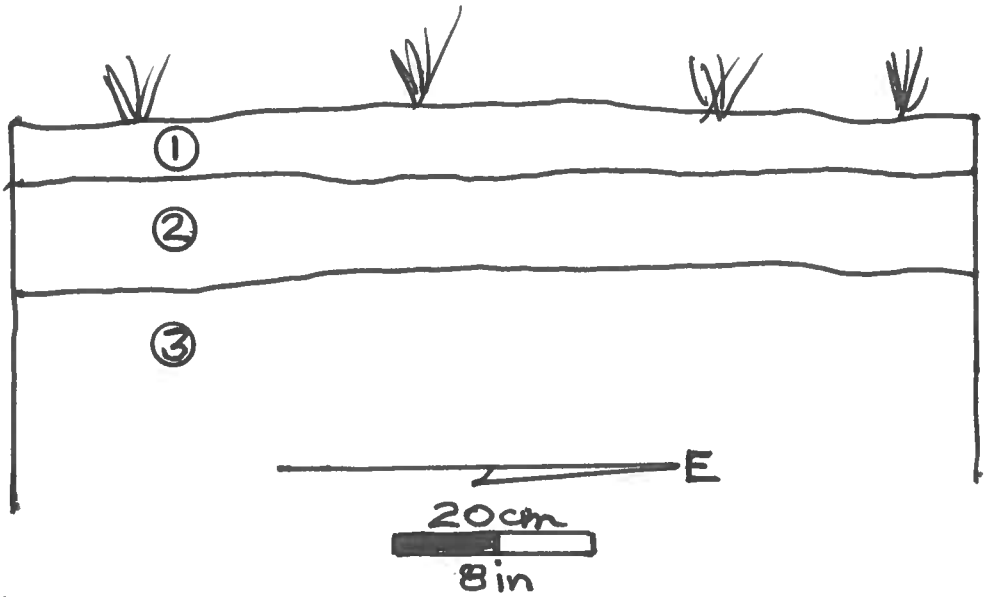
UNIT 34



① - DARK GREY BROWN SANDY SILT

② - YELLOW BROWN SAND

UNIT 35

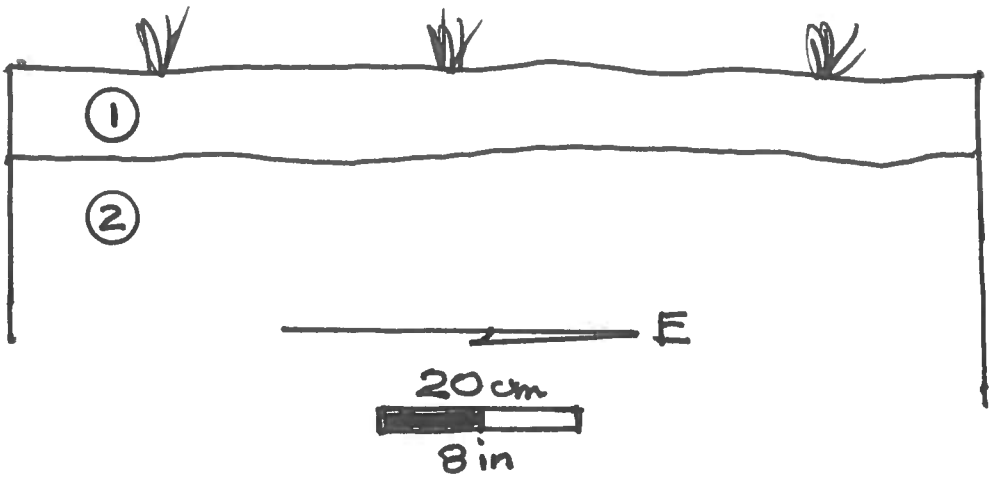


① - DARK GREY BROWN SILTY SAND

② - GREY BROWN & YELLOW BROWN SILTY SAND

③ - YELLOW BROWN SILTY SAND

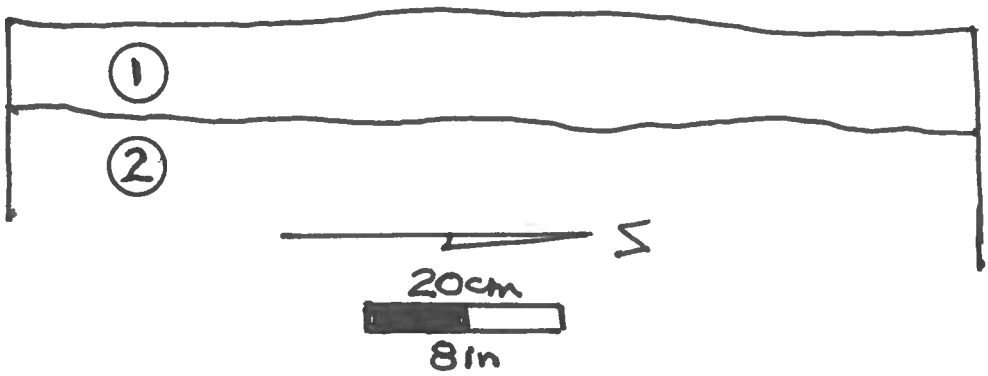
UNIT 37



① - DARK GREY BROWN SANDY SILT

② - YELLOW BROWN SANDY SILT

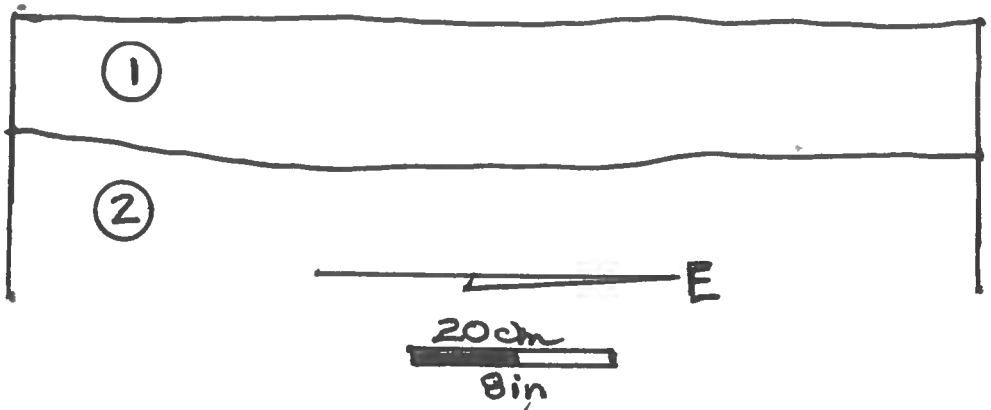
UNIT 38



① - DARK GREY BROWN SILTY SAND

② - YELLOW BROWN SILT

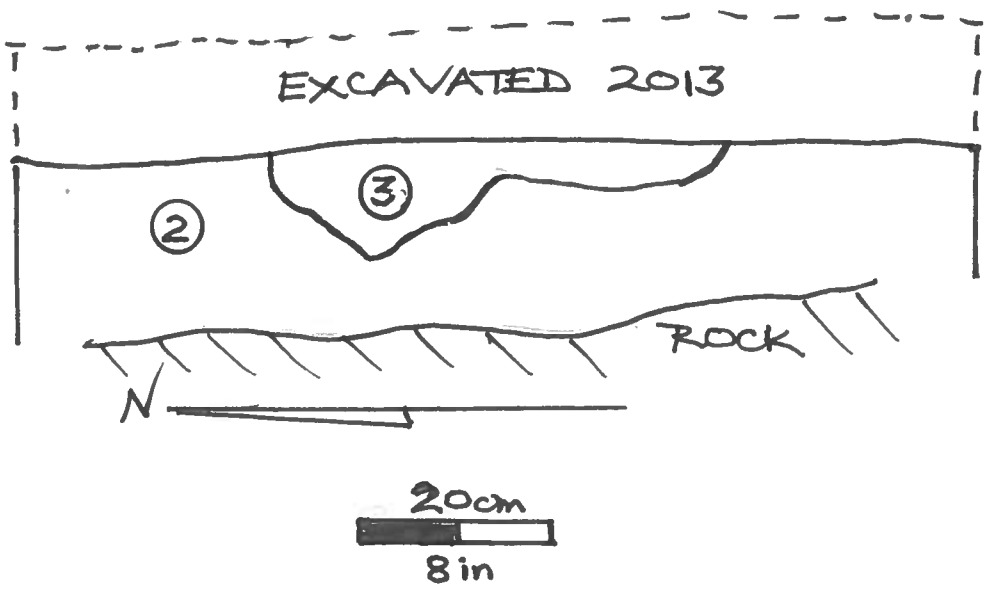
UNIT 36



UNIT 35

① - DARK GREY BROWN SILTY SAND

② - YELLOW BROWN SAND

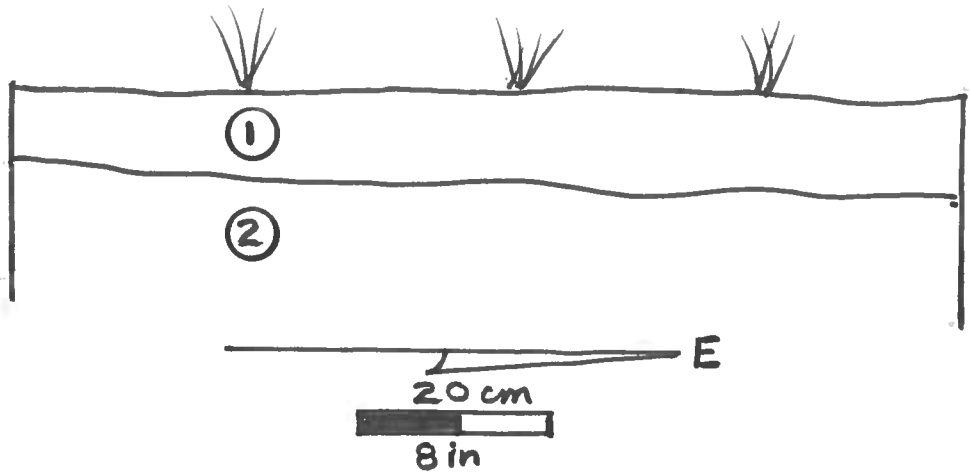


② - YELLOW BROWN SANDY

③ - LIGHT GREY ASH / YELLOW BROWN SAND

FEATURE 1 - PROFILE

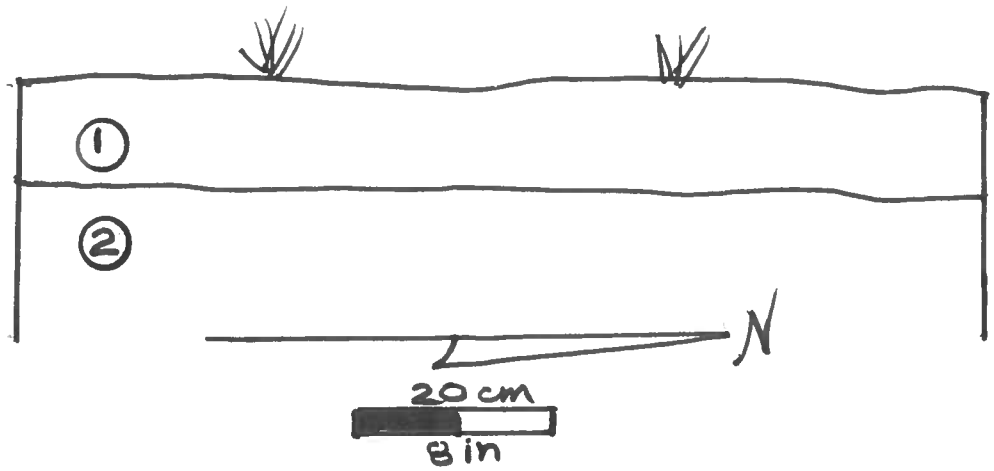
UNIT 39



① - GREY BROWN SILT, SOME SAND

② - VERY COMPACT YELLOW BROWN SILT

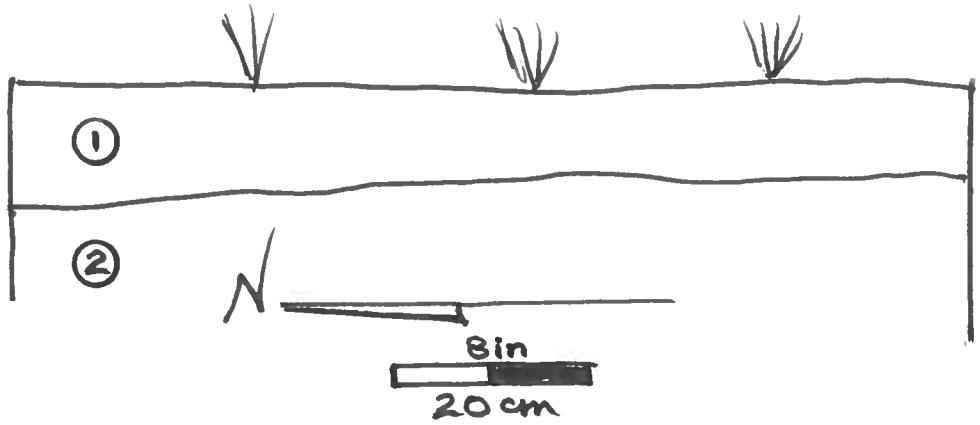
UNIT 48



① - DARK BROWN SANDY SILT

② - YELLOW BROWN COMPACT SILT

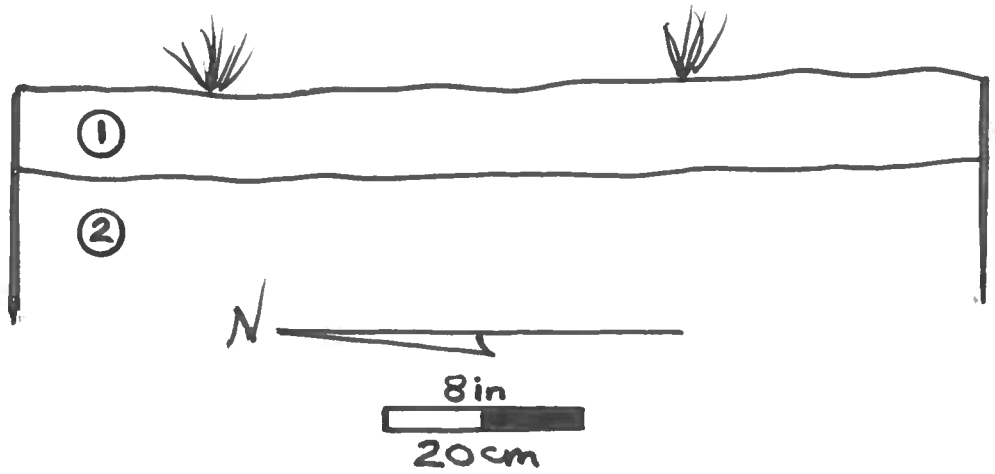
UNIT 44



① - DARK GREY BROWN SANDY SILT

② - YELLOW BROWN SILT

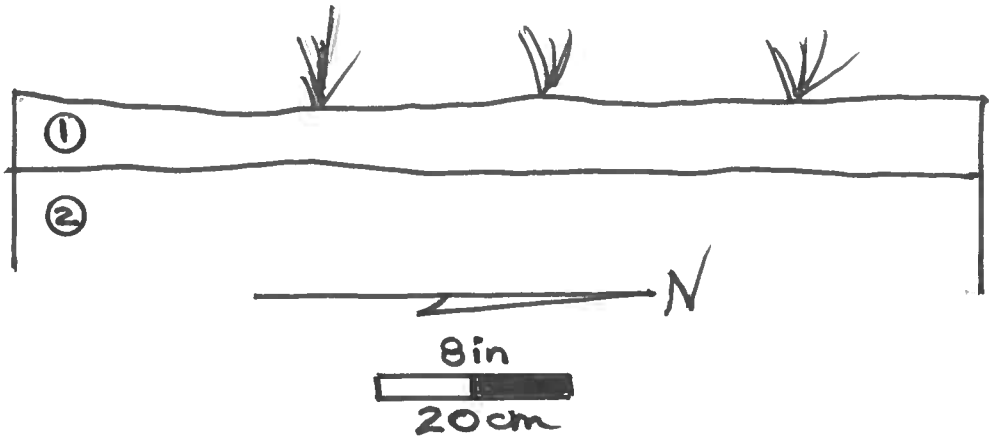
UNIT 42



①-DARK GREY BROWN SILT, SOME SAND

②-YELLOW BROWN VERY COMPACT SILT

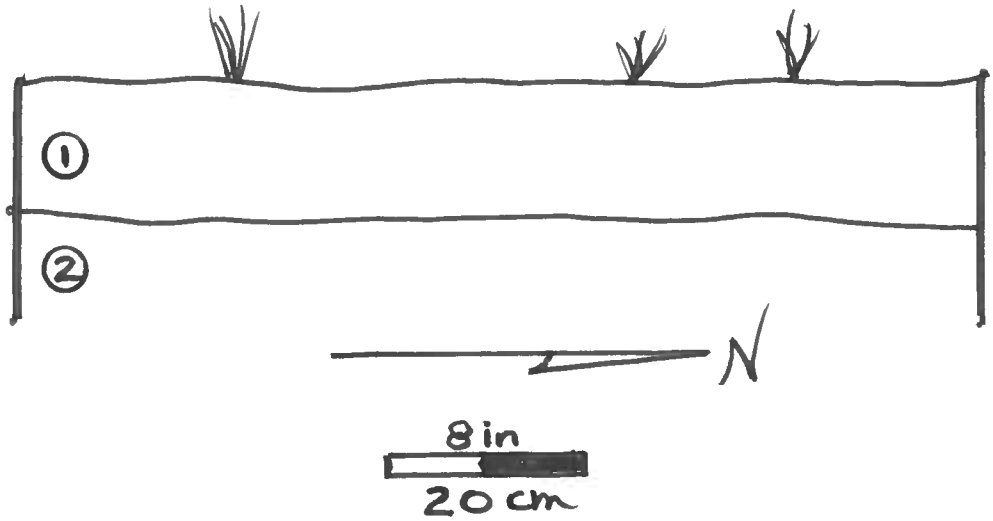
UNIT 40



① - DARK GREY BROWN SILT, SOME SAND

② - YELLOW BROWN SILT

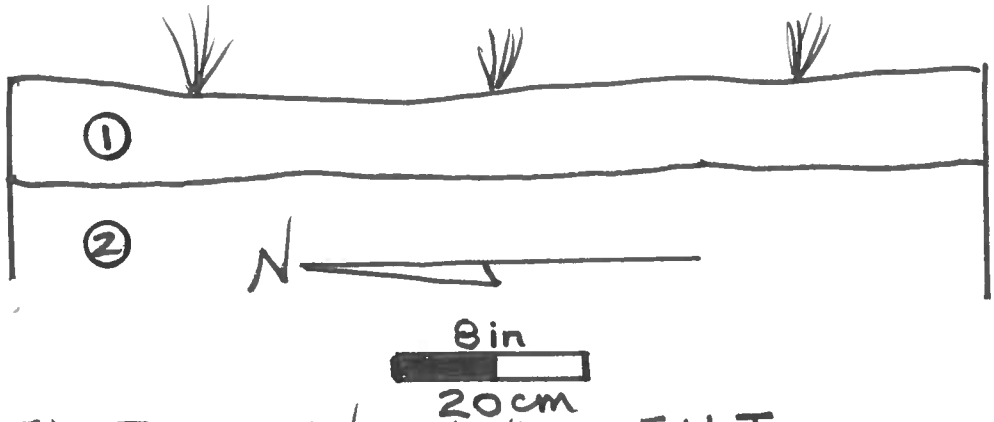
UNIT 43



① - DARK GREY BROWN SILT, SOME SAND

② - YELLOW BROWN COMPACT SILT

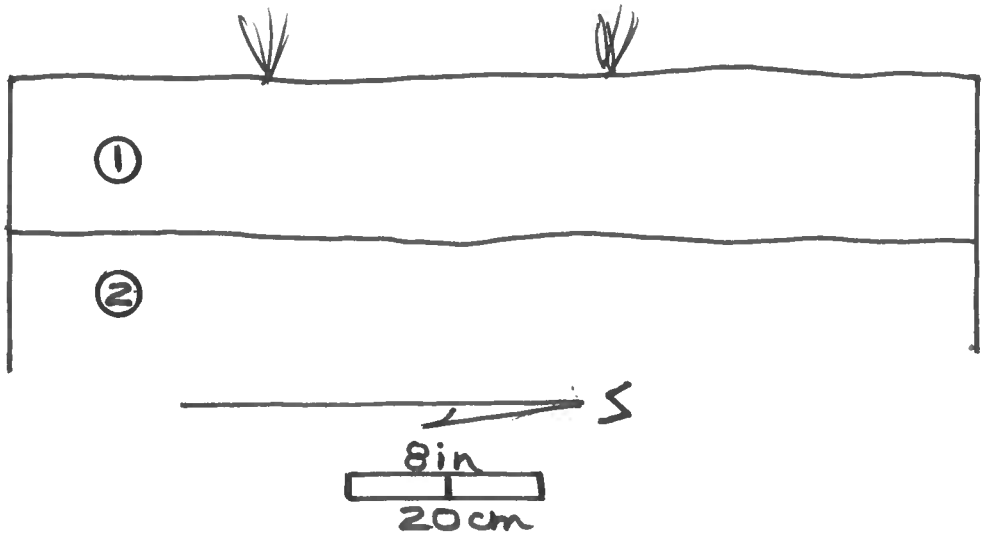
UNIT 46



① - GREY BROWN SANDY SILT

② - YELLOW BROWN SILT

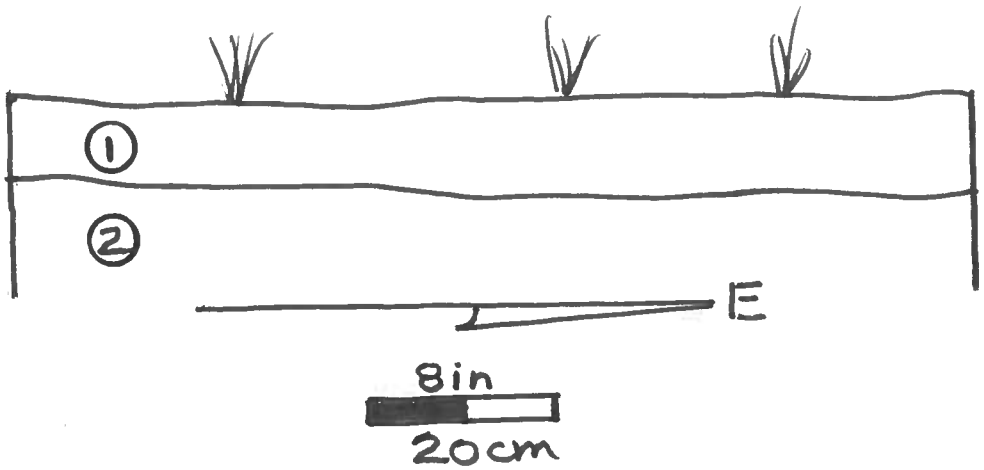
UNIT 41



① - DARK BROWN SILT, SOME SAND

② - YELLOW BROWN SILT

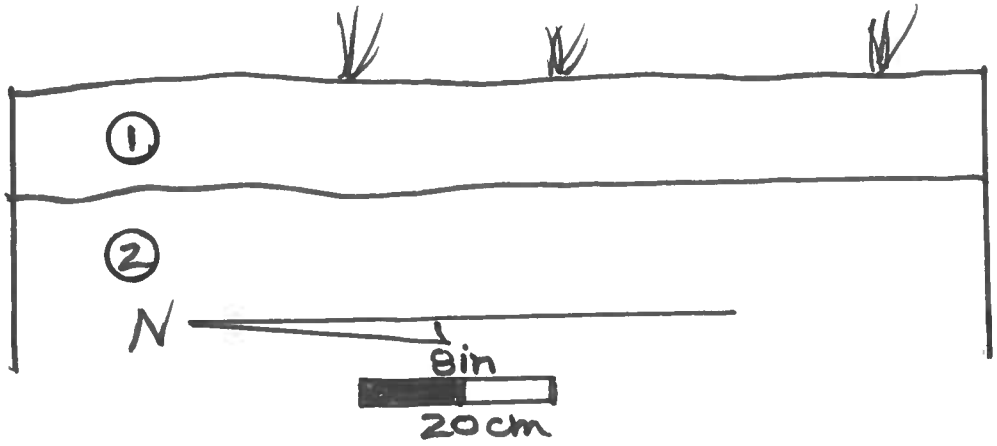
UNIT 45



① - DARK BROWN SILT, SOME SAND

② - VERY COMPACT YELLOW BROWN SILT

UNIT 47



① - DARK BROWN SANDY SILT

② - YELLOW BROWN SILT

APPENDIX D

ARTIFACT CATALOGUE

SHELBY MINE EXPANSION - AREA C

PHASE II ARTIFACT CATALOGUE

QUANTITY	DESCRIPTION	PROVENIENCE
1	fire-cracked rock	Unit 1 Level 1
1	biface scraper	Unit 1 Level 2
1	secondary reduction flake	Unit 1 Level 2
1	biface scraper (broken)	Unit 2 Level 1
1	hammer	Unit 3 Level 1
1	secondary reduction flake	Unit 3 Level 2
2	hammers	Unit 3 Level 2
1	trim flake	Unit 3 Level 2
1	plain rim sherd	Unit 5 Level 1
1	biface scraper	Unit 6 Level 2
1	secondary reduction flake (retouched)	Unit 6 Level 2
1	adze?	Unit 8 Level 2x
1	hammer	Unit 9 Level 1
3	plain body sherds	Unit 10 Level 1
1	plain body sherd	Unit 10 Level 2
4	tertiary reduction flakes	Unit 11 Level 2
4	secondary reduction flakes (retouched)	Unit 11 Level 2
4	secondary reduction flakes	Unit 11 Level 2
1	hammer	Unit 12 Level 1
2	plain body sherds (cross-mended)	Unit 12 Level 2
1	hammer	Unit 13 Level 1
1	hammer	Unit 15 Level 1
2	fire-cracked rock?	Unit 15 Level 1
1	secondary reduction flake	Unit 16 Level 1
2	hammers	Unit 16 Level 1
1	hammer	Unit 17 Level 1
1	hammer	Unit 17 Level 2
1	plain body sherd	Unit 18 Level 1
15	plain body sherds	Unit 18 Level 2
4	fire-cracked rock	Unit 18 Level 2
2	hammers	Unit 18 Level 2
1	secondary reduction flake (utilized)	Unit 19 Level 2
1	hammer	Unit 19 Level 2
2	secondary reduction flakes	Unit 20 Level 1
1	trim flake	Unit 20 Level 2
1	secondary reduction flake (utilized)	Unit 21 Level 1
1	core w/cortex	Unit 21 Level 1

QUANTITY	DESCRIPTION	PROVENIENCE
1	plain body sherd	Unit 22 Level 1
1	secondary reduction flake w/cortex	Unit 22 Level 1
1	secondary reduction flake	Unit 24 Level 1
1	fire-cracked rock	Unit 24 Level 1
1	mano (broken)	Unit 24 Level 1
1	secondary reduction flake	Unit 30 Level 1
25	plain body sherds	Unit 30 Level 1
2	secondary reduction flakes	Unit 31 Level 1W
1	fire-cracked rock	Unit 33 Level 2

PHASE II TOTALS

cultural items - 109
biface tools - 3
ceramics - 49
adzes - 1?
manos - 1
hammers - 14
secondary reduction flakes - 23
tertiary reduction/trim flakes - 4
(retouched/utilized flakes - 7)
cores - 1
fire-cracked rock - 13

PHASE III ARTIFACT CATALOGUE

QUANTITY	DESCRIPTION	PROVENIENCE
1	hammer	Unit 34 Level 1
2	plain body sherds	Unit 34 Level 1
2	ground stone	Unit 34 Level 1
2	plain body sherds	Unit 34 Level 2
1	core	Unit 34 Level 2
1	secondary reduction flake	Unit 34 Level 2
1	plain body sherd	Unit 35 Level 3
1	tertiary reduction flake	Unit 36 Level 2
3	secondary reduction flakes	Unit 36 Level 2
1	secondary reduction flake	Unit 37 Level 1
1	tertiary reduction flake	Unit 37 Level 1
3	fire-cracked rock	Unit 37 Level 2
2	plain body sherds	Unit 38 Level 1
1	secondary reduction flake	Unit 38 Level 1
1	hammer	Unit 38 Level 2
9	plain body sherds	Unit 39 Level 1
3	plain body sherds	Uint 39 Level 2
2	plain body sherds	Unit 40 Level 2
46	plain body sherds	Unit 41 Level 2
2	secondary reduction flakes	Unit 41 Level 2
1	biface (scraper?)	Unit 42 Level 1
3	secondary reduction flakes	Unit 42 Level 1
1	ground stone?	Unit 43 Level 1
4	plain body sherds	Unit 43 Level 1
19	plain body sherds	Unit 44 Level 1
18	plain body sherds	Unit 44 Level 2
1	secondary reduction flake	Unit 45 Level 1
1	hammer	Unit 45 Level 2
9	plain body sherds	Unit 46 Level 1
1	plain body sherd	Unit 46 Level 2
1	hammer	Unit 47 Level 1
1	secondary reduction flake	Unit 47 Level 1
1	tertiary reduction flake	Unit 48 Level 1-2
3	secondary reduction flakes	Unit 48 Level 1-2
1	utilized flake (awl)	Unit 48 Level 1-2
7	plain body sherds	Unit 48 Level 1-2
2	tertiary reduction flakes	Feature 1 Level 1

PHASE III TOTALS

cultural items - 155
biface tools - 1
ceramics - 125
hammers - 4
awls - 1
secondary reduction flakes - 15
tertiary reduction/trim flakes - 5
(retouched/utilized flakes - 1)
cores - 1
fire-cracked rock - 3

COMBINED TOTALS

cultural items - 264
biface tools - 4
ceramics - 174
hammers - 18
manos - 1
adzes - 1?
awls - 1
secondary reduction flakes - 38
tertiary reduction flakes - 9
(retouched/utilized flakes - 8)
cores - 2
fire-cracked rock - 16